
Chapter 5

THE GREAT WHEEL

The tanks of Task Force 1-37th Armor charged forward to lead the 3d Brigade, 1st Armored Division, against the Tawakalna. Sergeant First Class Anthony Steede, a platoon sergeant in Delta Company, was riding high. His crew had already killed two enemy tanks as his tank, Delta 24, began rolling forward from the firing line. In the few minutes it took to reach the ridge to its front, Delta 24 had fired six more main-gun rounds, striking T-72s or BMPs with each shot. As Steede crested the ridge, he was amazed by the number of fresh targets popping up all around him. Enemy machine-gun and tank fire and rocket-propelled grenades came toward him in angry waves but did virtually no damage. In the darkness the Iraqis were firing wildly at muzzle flashes of American tanks shooting on the move.

Steede's tank anchored the left flank of the battalion line. He tried to pay special attention to his flank, swinging the turret around to sweep the area with his thermal sights. Burning Iraqi vehicles made the once dark battlefield so bright that Steede's thermals momentarily "whited out." The temporary blindness permitted a lone T-72 to stalk Delta 24 from amidst the burning Iraqi tanks now drifting away to his left rear.

His company commander, Captain Dana Pittard, radioed that some Iraqis were surrendering to their front. Steede groaned to himself when he spotted a group of Iraqis near a burning BMP a few hundred meters away. No tanker sergeant worth his salt wants to stay behind during a tank fight. Let the infantry deal with the prisoners when they caught up; they were better equipped to handle them.

As the Americans drew closer to the flaming BMP, the Iraqi soldiers stood sullenly together, their leader waving a weapon with a white flag attached to it over his head. To Steede's dismay, many of these would-be prisoners still carried weapons. As Delta 24 stopped, Steede used the radio to argue his way out of the prisoner detail. Just then, the nearby burning Iraqi hulk silhouetted his tank just long enough for an unseen

T-72, 1,000 meters off, to draw a bead. The Iraqi had a perfect sight on the most vulnerable part of any tank's side—the ring where the turret joins the hull.

In a white-hot flash that lasted less than half a second, a 125mm round from the T-72 blew through the turret ring and into the crew compartment. The excessive pressure generated by the exploding shock wave launched Steede out of the tank like a cork out of a bottle. Specialist John Brown, the loader, had just ducked back inside the turret, and his legs caught the brunt of the blast as jagged metal shards carved chunks of flesh from his bones. Steede landed hard on the sponson box attached to the right outside wall of the turret. He was stunned but alive. As his senses returned, he felt his arms, legs, body—all seemed intact. Numbed but feeling little pain, he turned over on his stomach and crawled back to his hatch. He knew Delta 24 had been hit by an enemy tank round, but he had no idea who or what had fired it. The Halon fire-suppressant system in the tank had activated just a fraction of a second after penetration and smothered the flash of hot gases. Although nothing was burning, Steede had to get the rest of his crew out. To his left he saw Brown struggle out of his hatch, then roll over the left side of the turret and disappear out of sight. The inside of the turret still smoldered and the danger that a fire would reignite remained very real.

Smoke was pouring out of the hatch as Steede stuck his head over the opening, swung his legs around, and slipped back into the tank. As his feet touched, he bent his knees and dropped into a crouch, coughing in the thick fumes. One of the blue internal lights burned dimly through the haze, and he saw immediately that the blast door on the main-gun ammo rack was wedged open. The floor of the tank and everything attached to the walls were trashed. Then he saw the blackened form of Sergeant James Kugler, his gunner, trying futilely to claw his way out of his seat.

Steede squatted deeper and leaned forward, grabbing Kugler's chemical suit. Straining, he dragged Kugler out of the turret, then wrapped his arms around him as the two rolled overboard, landing hard on the desert floor. Leaving Kugler where he fell, Steede went around the back of the tank. There he found Specialist Brown, lying hurt beside the track. Steede and his driver, Specialist Steven Howerton, carried Kugler and Brown to safety some 50 meters away.

Kugler and Brown were both bleeding badly. As the crew's specially trained combat lifesaver, Howerton set about examining them while Steede climbed back inside the smoking turret for the aid bag.¹ Steede moved quickly, ever conscious that the main-gun rounds were no longer

separated from the crew compartment by the blast door that had been blown open. The rounds could cook off any second and turn him into a cinder. Digging around in the debris, he found the aid bag and took it to his huddled crew. Small-arms fire, which began to kick up sand around them, heightened the tension. All those would-be Iraqi prisoners had disappeared, and they still had weapons. While Howerton treated Kugler and Brown, Steede walked back around the front of his tank, hoping to restart it and drive off the battlefield. With armed Iraqi soldiers wandering around in the dark looking for targets, he didn't feel safe.

Steede swung into the driver's compartment, took his pistol out of his holster, and laid it on the slope in front of him. He was feeling very nervous about those Iraqi soldiers and his pistol was the only weapon the crew had until he could get the tank cranked up. Then he looked down at the gauges on the driver's panel. Hydraulic power, oil pressure, Halon fire suppressant, battery level, abort warning—all the warning and caution lights were lit up like a Christmas tree. He tried the starter. Although the engine turned over, it wouldn't catch. After several tries, he gave up and clambered out, then rejoined his crew, who warned him again to get down because of the small-arms fire ripping through the air all around them.

As he drew close to his crew mates, Steede peered back to the west. No more than 200 meters away was another M-1, kicking up a plume of sand as it rushed toward them. It was Sergeant Jeffrey Smith, Steede's wingman. Filter problems had stalled his tank a kilometer back, and he had only just gotten it started again when he saw Steede's tank begin to burn. Steede waved him down, then climbed up the front slope as Smith called for an ambulance to come forward to pick up the wounded. Smith reached out of his commander's hatch and shook Steede's chemical suit with both hands. He pointed toward a burning T-72 just 400 meters to the left front. "Damn, Sergeant Steede, I just popped that T-72; that's the one that fired you up." Through the dark, Steede could clearly see the burning hulk of his nemesis, its long, menacing tube pointed directly at him. Smith had saved his life.

When the ambulance arrived a few minutes later, Smith suggested that Steede join the rest of his crew en route to the rear. By now the battle had moved well beyond them. But Steede would have none of that. Like any good cavalryman with his horse shot out from under him, Steede looked for another horse—in this case, his savior's tank. Hastily demoting Smith to loader, Steede took the reins as tank commander and roared off to join the battle again.²

THE GROUND WAR

G-DAY: SUNDAY, FEBRUARY 24, 1991

[See Figure 5-1, "G-Day, February 24, 1991, Opening Situation," at the back of the book.]

No matter how frantically soldiers prepare for combat, at some point they can do nothing more than wait for it to begin. Time, that precious commodity always in short supply as last-minute orders are issued, inspections completed, and adjustments made, seems to stop as the moment of truth approaches. Practically all the young soldiers who waited in their assembly areas would make it through the campaign unscathed, but few shared that certainty as H-hour approached. To a person, they were gripped by a gut-wrenching fear of violent death that bound them in spirit to generations of young soldiers from Bunker Hill to Panama who had waited nervously for their first taste of battle. Because only a few officers and sergeants had combat experience, the burden faced by most leaders was made greater, for in addition to risking their own lives, they feared their lack of experience might cost the lives of their soldiers.

At 0400 on G-Day, February 24, two artillerymen hundreds of miles apart pulled the lanyards on their howitzers to begin the Desert Storm ground attack. Across the CENTCOM front, 620,000 soldiers, marines, and airmen from more than 37 nations attacked an Iraqi force then estimated at 545,000. Offshore in the Gulf, Marine amphibious forces threatened a seaborne landing as the Arab JFC-East, a Saudi-led combined Arab force, attacked up the Khafji-Kuwait City highway. On their western flank, Lieutenant General Walt Boomer's 1st and 2d Marine Divisions crossed the border to breach Fortress Kuwait. The "Tiger" Brigade with its newly issued M1A1s provided a Sunday punch for the more lightly equipped Marines. Once the Marines cleared a lane through the Iraqi defenses, the "Tiger" Brigade would take on Saddam's armored reserves. Farther west, the Arab JFC-North and VII Corps' 1st Infantry Division attacked the Iraqi security zone to clear out forward reconnaissance elements and artillery observation posts in preparation for the next day's attack against the main line of resistance. On the extreme western flank almost 400 kilometers from the coast, XVIII Airborne Corps attacked northward to seal off the theater.

XVIII AIRBORNE CORPS: G-DAY, 0400

French 6th Armored and the 82d Airborne

In the far western desert, General Luck reached out with steel fingers to strangle Highway 8. Sitting on the escarpment just across the border berm that the 82d Airborne had seized the day before, the French 6th Light Armored Division pushed north along MSR Texas with two brigades

abreast. The 2d Brigade of the 82d Airborne Division followed in trucks to assist the French in rapidly clearing the road. The French-led force moved quickly toward as-Salman and the Euphrates Valley. Because the asphalt road provided the only high-speed route available to transport supplies, seizing it was critical to XVIII Airborne Corps' plan.

The French knew that a brigade of the Iraqi 45th Infantry Division waited for them at Objective Rochambeau 50 kilometers into Iraq. Therefore, at 1100 the French commander, Brigadier General Bernard Janvier, prepped the Iraqi brigade with MLRS and 155mm howitzer batteries from the American 18th Field Artillery Brigade. Gazelle attack helicopters then struck the position with HOT wire-guided missiles before AMX-30 medium tanks from the 4th Regiment of Dragoons assaulted. Already weary from pre-G-Day raids, the Iraqis quickly surrendered. Meanwhile the 82d's 2d Brigade moved up and helped clear the objective. The next goal was Objective White, the town of as-Salman, and the airfield north of it.

The French continued to move north along MSR Texas. By midday, they had destroyed a company of T-55 tanks 30 kilometers south of as-Salman. In their wake, thousands of vehicles from nearly every unit in XVIII Airborne Corps clogged the supply route trying to move supplies forward on the single hard-surface road. This logjam became so much of a problem that Janvier asked XVIII Airborne Corps to close the road to most logistic traffic so the French could mount an effective attack against as-Salman. Luck agreed and gave priority of movement on the MSR to artillery, engineers, and fuel and ammunition carriers.³ Following this decision, the French enveloped Objective White with simultaneous flanking attacks to unhinge the Iraqi defenses oriented on the road. At 1410, the 6th French Division and the 2d Brigade, 82d Airborne Division, attacked following another massive preparation from the 18th Field Artillery Brigade. By 1800, as-Salman and the airfield were surrounded. Mounted on trucks, the 82d's 1st Brigade was prepared to clear any pockets of resistance to the south that the lead corps forces had bypassed as they attacked farther north.

101st Airborne: G-Day, 0600, to G-Day Plus 1, 1508

Meanwhile, in a valley 6 kilometers south of the Iraqi border, more than 200 helicopters, almost 1,000 vehicles, and more than 6,000 soldiers of the 101st Airborne Division waited. General Peay had assembled the largest air armada the United States had ever committed to a single air assault operation. Planning to seize a forward operating base 100 kilometers inside Iraq for his Apache attack helicopters, Peay would be the first of Luck's operational "fingers" to touch Highway 8. The air assault was to begin at 0600, but an early morning fog drifted across the desert, delaying the attack for one hour. When after a second delay a

reconnaissance aircraft reported a break in the fog, Peay seized the opportunity and ordered Colonel Tom Hill's 1st Brigade to lift off.

The order began a well-rehearsed sequence of actions throughout the division. Apache helicopters took off to clear the route to the objective, then hovered in ambush positions nearby. Under the protection of other Apaches, Peay's soldiers climbed aboard UH-60 Blackhawks for a 40-minute ride into battle. The 14 to 16 soldiers combat-loaded into each Blackhawk felt as if they had been stuffed into a sardine can. Other soldiers designated as hook-up teams ran across pick-up zones to stand atop their vehicles with clevises in hand. Chinook helicopters hovered over them, each fanning a small hurricane of 100-mile-per-hour winds underneath its rotors. With sand stinging their faces and hands, the soldiers secured the HMMWVs and howitzers underneath the squatting Chinooks.

At 0727, 66 Blackhawks and 30 Chinooks lifted off carrying the first 500 soldiers of Hill's brigade to FOB Cobra. After touchdown, the infantry fanned out from multiple landing zones and quickly secured the area. Artillerymen, using well-rehearsed battle drills, soon had their 105mm howitzers ready to fire. Just two minutes after the infantry hit the ground, Lieutenant Colonel John Broderick landed the first contingent of his 426th Supply and Transportation Battalion to begin establishing refuel points. Within minutes of the first aircraft touching down in Iraq, the brigade had staked out Peay's claim to a 15-mile-diameter circle of desert just south of the east-west road to as-Salman. But the claim was tenuous. Hill had only



The second lift of 101st Airborne Division soldiers waited for the return of Blackhawks to carry them 100 kilometers into Iraq on February 24, 1991.

a portion of the four infantry battalions on the ground and the weather was not promising. Two more lifts were required to insert the remainder of the brigade.

Hill had to make the FOB a secure nest for the division's attack birds by clearing out a few nearby Iraqi positions. Shortly before 1000, Captain John Russell of A Company, 1-327th Infantry, noticed Cobra attack helicopters from the 3-101st Aviation firing on a ridge 2 kilometers to the north. The Cobras had located an Iraqi infantry unit dug in along the east-west road. Russell contacted the Cobra company commander who landed next to him to confer on tactics and to confirm friendly locations. After a short situation report to the battalion commander, the Air Force liaison officer and artillery fire support officer came on the radio and quickly coordinated an impromptu joint air attack team (JAAT) mission. Russell, his fire support team leader, and a small infantry force crawled to a position where they could choreograph the combination of available aircraft, artillery, and infantry. Within minutes, Air Force A-10s arrived and in concert with the Cobras and artillery bombarded enemy positions. After a few convincing doses of firepower, the Iraqis caved in. Before long, Russell's men had control of the Iraqi position and had taken 340 prisoners.⁴

With the Iraqis neutralized, Hill reported at 1039 that FOB Cobra was ready to support Apache operations.⁵ Starting at 1330, Apaches flew north again to search for the enemy. The 1-101st Aviation (Apache) and



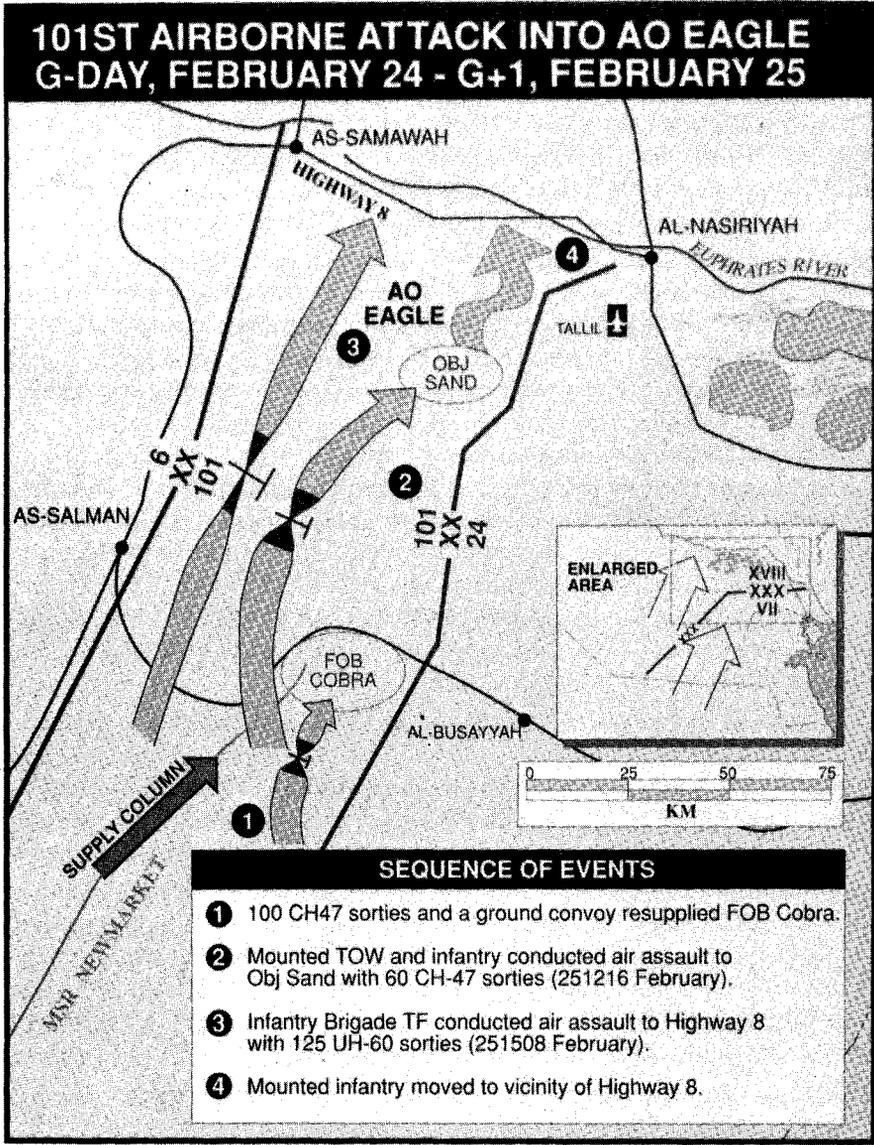
Apaches flew from FOB Cobra on February 24, 1991, to find enemy concentrations and the best sites for the final air assault to cut Highway 8.

one company from the 2-229th Attack took turns rotating Apache attack teams out of Cobra to take station near the Euphrates. The teams looked for the best sites for the final air assault to cut Highway 8.⁶

Peay remained concerned about the marginal weather. The forecast for the next two days was not encouraging, so he hastily moved the 2d Brigade to FOB Cobra and warned his 3d Brigade commander to be ready to attack early in the morning to seize Highway 8. That night, in buffeting wind and rain, Blackhawks inserted Team Jerry, the scout platoon from the 3-187th Infantry, in a very isolated landing zone to find a suitable spot for the brigade 80 kilometers farther north and just a few kilometers south of the Euphrates. Throughout the afternoon, Peay's soldiers built up supplies in FOB Cobra with continuous Chinook flights from supply bases along Tapline Road. Farther south, engineers worked to improve the ancient pilgrimage trail now named MSR Newmarket, clearing more than 100 miles of road in fewer than 24 hours. A long convoy began snaking slowly toward FOB Cobra. By dark its lead vehicles had reached the base, though the last of them had yet to leave the Saudi border.

An attack helicopter burns about 2.5 gallons of jet fuel per minute. Therefore, fuel is the lifeblood of the 101st, which made a ground link between Cobra and the rear supply bases increasingly important as the weather deteriorated. Seventy Chinook loads made the trip to Cobra, but the bad weather delayed 30 others until the next morning. Nevertheless, by the end of the first day the division had more than 200,000 gallons of fuel on the ground. With enough fuel on hand, attack helicopters could launch out of Cobra to maintain a continuous armed patrol along Highway 8, less than 100 kilometers away.⁷

The next step was to put troops on the ground astride Highway 8, but driving wind and rain on the afternoon of February 24 forced several delays in 3d Brigade's air assault. Team Jerry reported that the proposed landing zone was a sea of mud, so the scout platoon leader, First Lieutenant Jerry Biller, and his small body of scouts searched through the night until they found a dry spot free of enemy 10 kilometers to the west. Anxiety built as the soldiers waited for the weather to break. Finally the next day, the wind and rain abated just enough to launch, and Colonel Robert Clark ordered his brigade into the air. At 1216, 30 Chinooks carrying three antiarmor companies with TOW-equipped HMMWVs, in addition to critical communications and supply vehicles, set down in Landing Zone Sand, 40 kilometers south of the Euphrates River. At 1508 Blackhawks inserted the first 500 ground troops directly adjacent to Highway 8. The wheeled column linked up with the infantry the next day after slogging 40 kilometers through mud and sand.⁸ With his 3d Brigade straddling the key Iraqi Basrah-Baghdad lifeline, Peay had cut off most support to the KTO in just 31 hours. Only an air assault division could



have delivered such a lightning stroke. Meanwhile, the remainder of Schwarzkopf's forces were also moving with unexpected speed.

CENTCOM: G-DAY, MIDMORNING

At the other end of the CENTCOM-directed assault, the third-class Iraqi frontline troops had put up practically no resistance. Their artillery fire was sporadic and inaccurate. Friendly counterfire quickly silenced the Iraqi guns. The dreaded chemical attacks never came. Soldiers and

marines found positions empty and the world-class obstacle system uncovered by fire. Tactical armored reserves, crippled by air attack, failed to counterattack in any coherent fashion. Saddam's frontline infantry divisions collapsed into disorganized rabble. Almost immediately, the problem for advancing forces was to capture and tag enemy prisoners and herd them back toward Saudi Arabia like cattle.⁹

As reports of the opening moves filtered back, Schwarzkopf formed an unexpectedly encouraging view of the battlefield. That the Iraqis had not, as yet, retaliated with chemical or biological weapons brought the greatest relief. The Iraqi operational reserves—armored forces traditionally held back as a counterattack force—were caught off-guard by the crumbling of the forward defenses. Schwarzkopf wanted to accelerate the attack to exploit the Iraqi weakness, but changing the basic plan would mean shifting gears in a machine with more than 300,000 moving parts. Simply sticking to the plan was easier; changing it at the last minute was infinitely more difficult. However, as Schwarzkopf considered his options, electronic intelligence provided a key piece of information: confusion and disarray existed within the 3d and 4th Iraqi Corps in southern Kuwait. Armed with this information, Schwarzkopf called Yeosock and Luck to ask if they could mount their attacks on February 24 rather than February 25.

At ARCENT, General Stewart confirmed Schwarzkopf's view. JSTARS had tracked opening attacks into the Iraqi defenses. No Iraqi reaction had developed by the time the French had engaged south of as-Salman and the 101st had occupied FOB Cobra. In VII Corps, the 1st Infantry Division had penetrated and seized the Iraqi security zone without difficulty.

Yeosock relayed the question to Franks who conferred with his subordinate commanders. They agreed that, given minimum notice, their divisions could launch early without major problems so long as the attack occurred no later than 1400.¹⁰ They wanted to penetrate the Iraqi 26th and 48th Infantry Divisions' main line of resistance in daylight. Thus every hour of daylight gained on February 24 was crucial.

Meanwhile, Luck had called his heavy-force commanders, General McCaffrey of the 24th Infantry Division and Colonel Starr of the 3d ACR. Both said they could attack with two hours' notice. In the next phase of the corps battle, Luck's enemies would be terrain and time. The quicker he could get his armor linked up with the 101st, the better.

A single but important exception to the confident replies came from the Egyptian commander of JFC-North on the east flank of VII Corps. Meshing operational methods between armies is a classic problem in coalition warfare, especially when significant differences exist in doctrine and equipment. Schooled in the Soviet style of regimented operations, JFC-North's combined force of Egyptians, Syrians, Kuwaitis, and Saudis

was unable to react so quickly. Nevertheless, Schwarzkopf accepted the inherent risks and accelerated the attack timetable. All units would attack at 1500.

Adjustments were considerable but not impossible. Schwarzkopf told Colonel Jesse Johnson, the SOCCENT commander, to use his Special Forces advisors with JFC-North to help the Arabs. The British 1st Armoured Division had originally intended to use this last day to transport their armor into position on HETs. Having no time now to upload and download HETs, they conducted a grueling and mechanically debilitating 100-kilometer march across the desert to the breach site. Fuel tankers, previously positioned forward to top off the column just prior to the attack, had to race back to logistics bases along Tapline Road to finish the process. All across the CENTCOM front, thousands of soldiers changed plans and made adjustments as the pace dramatically quickened.

VII CORPS: G-DAY

Schwarzkopf's decision to attack early affected VII Corps more than any other unit because the corps had to move faster and farther to get into attack position. Since the breaching operation was very complex and time-dependent, any change in schedule, however small, would put considerable strain on those responsible for coordinating the overall effort. AirLand Battle doctrine, however, envisions initial combat orders as only a guide to be amended as required by the tactical situation, and the corps was accustomed to reacting to last-minute changes. The overall command intent was to strike quickly and to finish the enemy rapidly. The acceleration of the attack timetable supported that intent. Indeed, Colonel Holder's 2d ACR was already positioned 10 kilometers deep into Iraq ready to continue the advance. Administrative complications did arise, but subordinates used their own initiative to solve those problems. By 1430, the corps was on the march.

2d Armored Cavalry Regiment: G-Day

Holder's 2d ACR would be VII Corps' lead scout. Franks' mission to the regiment was twofold: to clear the zone in front of the 1st and 3d Armored Divisions and, most importantly, to discover the exact outline of the Republican Guard's main line of defense so that the two following armored divisions could aim directly toward it. For the most part only the Republican Guard possessed the T-72 tank, which meant that Holder would be able to pinpoint the center of gravity of the entire operation when his squadrons began to report engagements with T-72s.

At dawn on the 24th, the regiment was already positioned over the berm, arrayed across a 40-kilometer front. The corps screen would begin with a thin line of Bradleys and an aerial picket of Cobra helicopters from the 4th Squadron, which began to feel its way forward at 1430. Two

squadrons, the 1st and 3d, followed on-line 10 kilometers behind in a thicker formation of Bradleys and M-1s. Holder's direct firepower was augmented with three additional battalions of the 210th Field Artillery Brigade, in addition to the regiment's own three howitzer batteries. Eighteen Apaches, 13 OH-58s, and 3 Blackhawks of the 2-1st Aviation, borrowed from the 1st Armored Division, augmented the aerial eyes and killing power of the 4th Squadron. To be absolutely sure that he would not be surprised or outmatched by the Iraqis in his path, Holder established a remarkably effective distant aerial screen using Air Force A-10s. The aggressive regimental air liaison officer, Air Force Captain Chris Kupko, continually vectored A-10s toward on-call targets. When the lead scouts from 4th Squadron turned up targets, Kupko immediately directed fighter bombers to engage following a drill the regiment had worked out completely in training. Iraqis in the path of the regiment found themselves continually under devastating fire, first from aerial and ground scouts, then from the A-10s, and back again to the scouts.

Once across the line of departure the regiment moved swiftly, cutting a 40-kilometer path for the divisions behind to follow. Within two hours, the lead squadrons were 40 kilometers deep and swamped by hundreds of enemy prisoners. Resistance was light, although some of the lead troops fought fleeting engagements with Iraqi T-55s and BMPs throughout the rest of the day.

At 1700, fifteen ammunition tractors carrying the regiment's ammunition reserves got bogged down in the sand as they attempted to cross the berm. Holder called VII Corps, which turned to the 11th Aviation Brigade for an emergency aerial resupply. Immediately, two Chinooks from A Company, 5-159th Aviation, flew north loaded with tank ammunition. Forced back by a sandstorm, the two aircraft made a second attempt. The company executive officer, Captain Deborah Davis, led the determined pilots in a daring rendezvous with the cavalry by descending below 50 feet and crawling the Chinooks across the desert at 30 knots. Both aircraft spent the night laagered with the 2d ACR vehicles. The company launched another flight of four more CH-47s that afternoon, but the weather forced these aircraft to abort. At dawn, a tiny crease in the weather opened just long enough for them to get through and then closed immediately afterward.¹¹ Despite the ammunition problem, by the end of the day the regiment had captured or eliminated the remnants of a brigade of the 26th Infantry Division.

1st Infantry Division: G-Day, Midmorning

Fortunately, when the call came to move up the attack, General Rhame had already eliminated the Iraqi border outposts. Earlier that morning he had blinded the enemy along his breach area by seizing the security zone of the Iraqi 26th and 48th Infantry Divisions. By taking the Iraqi security

zone, an area south of the main enemy fortifications that contained enemy observation posts and local security patrols, he had eliminated the enemy's ability to place observed fire on the breach. At all costs, Rhame wanted to keep Iraqi artillery, particularly artillery-delivered chemicals, off his soldiers. At 0530, scouts from the 1st and 2d Brigades led their respective battalions into the security zone through 20 holes that divisional engineers had cut in the berm. 1st Brigade's TF 2-34th Armor and TF 5-16th Infantry moved forward on the left, and the 2d Brigade's TF 3-37th Armor and TF 2-16th Infantry advanced on the right.¹²

Each battalion task force spread across a 6-kilometer front, attacking north at about 0538. By the time the battle was over at 0915, Rhame's men dominated the Iraqi infantry in the security zone. If the Iraqis refused to surrender or fired on the Americans, Bradley machine gunners pinned them in their bunkers and trenches. Under cover of suppressive fire, tanks then rolled forward to collapse remaining positions with plows. Watching their comrades die in ever-increasing numbers as the morning wore on, Iraqi soldiers in the security zone simply threw up their hands and surrendered.

Like Schwarzkopf, Rhame sensed the imminent collapse of the Iraqi forward defenses. To take advantage of the situation and ultimately save American lives, he recommended to Franks that the 1st Infantry push on to attack the main Iraqi defenses without delay. Franks approved the

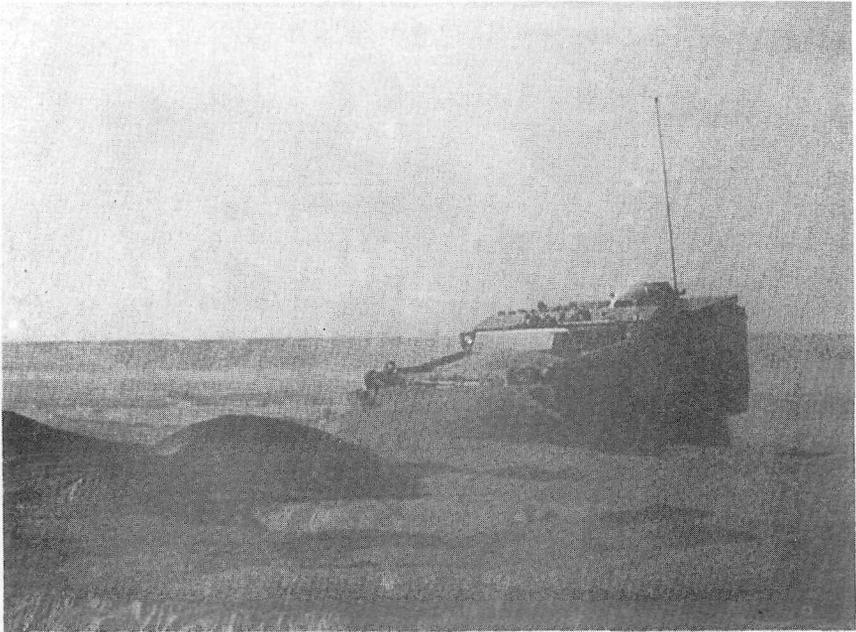


Preparation of the breach included an artillery bombardment that delivered more than 600,000 explosive bomblets on Iraqi positions within half an hour.

request after VII Corps received permission from Schwarzkopf and Yeosock to "go early." Rhame ordered his assault battalions to continue their advance at 1300, a time ultimately slipped to 1500.

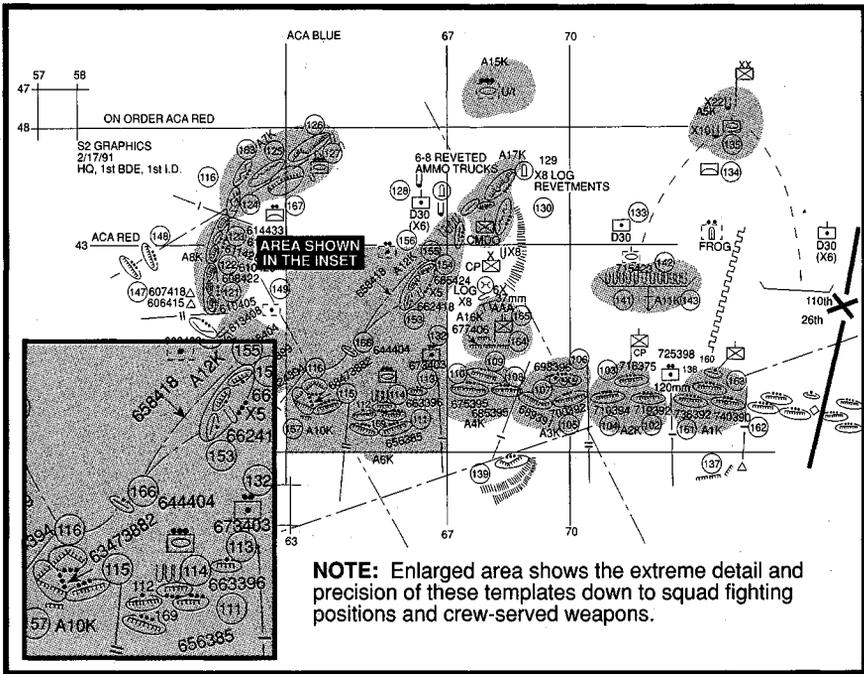
Getting the attack off at 1500 meant compressing a three-hour fire support program into 30 minutes. Colonel Mike Dotson's 1st Infantry Division Artillery scrambled to recompute the firing program in time to begin the revised preparation at 1430. The commander of the Iraqi 48th Infantry Division later stated that "the earth shook" as the barrage struck his division. General Abrams had allocated the 75th, 42d, and 142d Field Artillery Brigades, 2 divisional artillery groups, and 10 MLRS batteries to create a Soviet-style "strike sector" over the breach area. These units fired 11,000 rounds of artillery and 414 MLRS rockets, dispersing more than 600,000 explosive bomblets into the 20x40-kilometer sector. More than 350 howitzers covered the attack with 22 artillery pieces for each kilometer of the attack zone. The gunners blasted enemy positions along the main line of resistance, crushing the Iraqis' morale with firepower. Other artillery struck command and control facilities to deny the Iraqi 7th Corps commander any vestige of control and to eliminate any possibility of responding to Rhame's attack. At the same time, the enemy's tactical reserves came under sustained attack from the air. Finally, the preparation concentrated on eliminating the threat of artillery fire against the American assault troops. An unmanned aerial vehicle had taken a last look that morning and found 13 Iraqi artillery positions that the VII Corps' artillery preparation later totally destroyed. The Iraqi 48th Infantry Division Artillery Group, 100 cannons strong on January 17, lost 17 guns during the air operation. Following the 30-minute artillery preparation, every remaining artillery piece was destroyed. The bombardment was a fitting conclusion to the carefully planned indirect fire program begun prior to G-Day. Abrams used the strengths and capabilities of cannon artillery, multiple-rocket launchers, and large tactical missiles to complement fighter-bomber aircraft, attack helicopters, and psychological warfare.¹³

In the waning minutes before 1500, soldiers in the assault battalions of the "Big Red One" composed themselves for an attack, mindful of projections that suggested 40 percent of them would be killed or wounded. Though many joked that an attack against trenches was more of the same for the "Big Red One"—like D-Day in Normandy—they still wondered who would be left. Those in the plow tanks did not wonder at all. Rhame, too, considered casualties. As early as November, before he knew when, where, or against whom the 1st Division would attack, he focused his leaders on that very problem. Rhame articulated his intent clearly: the 1st Division would mass fires and concentrate on a very narrow front. Tongue in cheek, he told commanders the idea was to win quickly with "enough of us left to have a reunion."

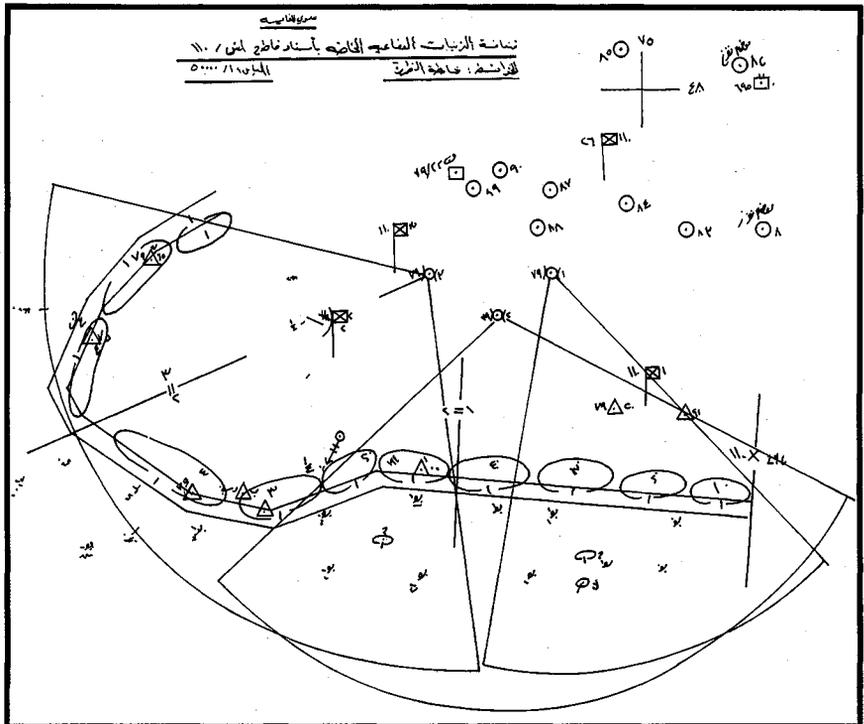


Success of the breaching operation depended on specialized engineer equipment. The armored combat earthmover (above) collapsed Iraqi trenches and bunkers. The mine plow (below), mounted on a standard M1A1, cleared lanes through minefields.





ITAC template used by the 1st Infantry Division (above) compares very closely with captured Iraqi diagram of the same position (below).



Planning focused on two problems: how to clear lanes through the obstacles and how to clear trenches quickly with minimum casualties. Tank plows and armored combat earth movers provided part of the answer. To hone its combat techniques, the division practiced supporting the ACE with fires. TF 2-34th Armor conducted the first mounted rehearsals on January 18. Rehearsing and learning continued as the intelligence picture became clearer. Eventually, the division massed 241 tanks and more than 100 Bradleys on a frontage of 6 kilometers. Simply put, battalions would attack single platoons at the points of penetration. Once a breach was achieved, units would roll out to attack adjacent platoons from the flanks and rear. Plows and blades down, tanks and ACEs would clear obstacles and flatten bunkers.

The division planned for in-depth fires to continue throughout the course of the attack. Colonel Bert Maggart's 1st Brigade targeted sections of trench using overlays built from imagery templates and UAV overflights. The scheme of maneuver and fires allowed targets within groups to be lifted so that friendlies could close within 200-300 meters of friendly artillery without shutting down a group of fires. Closing on the trenches with main guns firing and plows down, the division's troops believed they would win. Before the corps' epic bombardment ran its course, the division added its own chorus of mortar, tank cannon, and 25mm fires.

The 1st and 2d Brigades of the "Big Red One" attacked at 1500 as planned. While the artillery spectacle encouraged them, advancing soldiers were still burdened with some uncertainty. Lieutenant Colonel Daniel Fake's men in TF 2-16th Infantry, one of the assault battalions, had also been told to expect up to 40 percent casualties in rifle companies if the Iraqis used chemical weapons. Fear made the men anxious, but discipline and an unspoken resolve not to let their buddies down kept them moving forward.

2d Brigade, 1st Infantry Division: G-Day, 1500

Above the whine and clatter of his tanks and the noise of radios and shouting, Colonel Tony Moreno could faintly make out the firecracker-like sound of hundreds of thousands of artillery bomblets searching out every corner of the Iraqi defensive trenches. Moreno's 2d Brigade lay just to the south of the main Iraqi defensive line. The brigade's cutting edge, TF 3-37th Armor, TF 2-16th Infantry, and 4-37th Armor, had 76 Bradley fighting vehicles, 116 Abrams tanks, and hundreds of engineer, air defense, artillery, command and control, maintenance, and supply vehicles. At 1500, TF 2-16th Infantry and TF 3-37th Armor began the breach by clearing lanes through minefields and defensive positions.

In TF 2-16th Infantry, Fake sent A and D Tank Companies forward to cut lanes through the barrier system using ACEs and tanks equipped with plows and antimine rollers. Each tank team cut two lanes through the



Above, Bradleys carried American infantrymen into battle. Below, Marlin's 4-37th Armor pushed through the breach and moved into the rear of the Iraqi 26th Infantry.



barrier as B Mech and E Mech suppressed the Iraqi positions with Bradley 25mm chain-gun and machine-gun fire. None of the infantry had to dismount through the breach; they fought from inside their Bradleys to cover the battalion's tank teams as the tankers used mine plows to collapse Iraqi trenches. ¹⁴

Once eight lanes were completed, Moreno committed his reserve. Lieutenant Colonel David Marlin's 4-37th Armor sped forward with 46 tanks and 6 Bradleys, passed through the cleared lanes, and fanned out on-line at 30 kilometers per hour. Beyond the breach, Marlin's D Tank Company commander, Captain Thomas Wock, noticed an Iraqi infantryman trying to surrender to the Americans. Hands up, clutching a

surrender leaflet, the enemy soldier ran to each of Wock's tanks frantically seeking someone to take him in, but none of the tankers could stop. Tank commanders simply leaned out of their turrets and thumbed the would-be prisoners to the rear.¹⁵

Marlin re-formed the battalion into a diamond formation as they moved past the breach and into Iraqi artillery and logistics areas. As they picked up speed, gunners identified targets and opened fire. Wock's gunner, Sergeant Richard Yankee, destroyed an Iraqi D-30 towed artillery piece at 2,930 meters with a single HEAT round. The Iraqis' will to resist collapsed as other tanks blasted bunkers, trucks, and machine-gun nests. In three hours Moreno's brigade reached Phase Line Colorado, the limit of advance for the day. Trailing units refueled 10 kilometers beyond the breach and prepared to pass the 3d Brigade through at 0500 the next morning.

The reaction of the Iraqis to the attack varied from one position to the next. TF 2-34th took artillery fire at the line of departure where one soldier from the 1st Engineer Battalion was wounded, and desultory mortar fire fell through much of the afternoon. When Bravo 2-34th Armor attacked its objective, 4 of the 16 remaining enemy soldiers surrendered; the others fired rifles at the ACEs and plows, which ultimately collapsed the trenches.

The rapid pace and low casualties during the breach stemmed directly from effective planning and violent execution of both direct and indirect fires. Artillery destroys both physically and psychologically. Physical destruction is simple to measure: hot, jagged, tearing artillery shards kill indiscriminately. Psychological effects are more difficult to determine. Frontline Iraqis, poorly led and dazed by accurate, intense artillery, had no chance against the thoroughly professional "Big Red One." In countless past wars, a dispirited soldier's reaction to disciplined troops wielding superior firepower has always been the same. He either cowers before the firepower or runs away. The Iraqis were no exception.

Instead of needing 18 hours to break through Iraqi positions as originally calculated, the 1st Infantry Division successfully breached them in 2. During the breach operation, Rhame's division had destroyed the better part of two Iraqi divisions. The British 1st Armoured Division began passing through the breach site at 1200 on February 25.

IRAQI GHQ: G-DAY, LATE EVENING

Though battered by the Coalition for 41 days, the Iraqi GHQ had retained control of its forces in the KTO. Emergency crews swiftly repaired the communications system when it was damaged by bombing, relying heavily on the redundancy of the system to maintain contact with forces in the field. As soon as the Coalition ground attack began, GHQ

reacted by repositioning forces. In Kuwait, the 3d Corps commander received orders to withdraw north through Kuwait City to avoid being cut off by the US Marines. Most disturbing were as yet sketchy reports of an undetermined threat approaching the KTO's exposed western flank. GHQ directed General al-Rawi, commander of the Republican Guard, to establish blocking positions oriented to the southwest, facing the open desert.¹⁶ In a matter of hours and with great speed and efficiency, al-Rawi had six heavy brigades from at least four divisions moving west.

Rather than risk his own divisions, al-Rawi assumed command of the Jihad Corps adjacent to his corps in the northern KTO. Preferring to sacrifice regular army units first, al-Rawi ordered the Jihad Corps to commit a portion of its armor as part of the new blocking force. Located in northwest Kuwait astride the Wadi al-Batin, the Jihad Corps' principal mission was to defeat any Coalition thrust up the wadi by counterattacking with the 10th and 12th Armored Divisions. Like any good armor commander, al-Rawi had carefully studied his western flank as a possible avenue of approach. Now he ordered the commander of his 12th Armored Division to deploy two armored brigades south and west into the desert.

At 2130, the phone rang in Colonel Mohammed Ashad's 50th Armored Brigade headquarters. Dropping all pretense of traditional Arab phone courtesy, Mohammed's commanding general got straight to the point, asking anxiously, "Do you remember the position we reconnoitered two weeks ago?" Mohammed replied that yes, he did indeed remember the area. Despite the threat of air attack, he and the 46th Mechanized Brigade commander had gone with the division commander to the southwest part of the theater two weeks before to select possible blocking positions. Some "blockhead" at the Jihad Corps had decided that an attack by the American-led Coalition from that direction might be possible. Mohammed's combat engineers had labored nightly for two weeks to prepare tank firing positions, crew-served weapons pits, and trench works for infantry squads. Now the division commander ordered Mohammed to occupy the blocking positions they had prepared without delay. The "blockhead" at Corps headquarters had been right; Iraqi intelligence reported a column of mistakenly identified light "French armor" approaching from the west and Mohammed was to stop it. The 37th Armored Brigade would assist him. Mohammed wondered why the 46th Mechanized Brigade was not involved, but the general did not offer an explanation, nor did Mohammed ask. Orders were orders, and he quickly alerted his battalion commanders to prepare to move out.

The 50th Armored Brigade still had plenty of fighting machines. Air attacks since January 17 had caused few losses. Ninety of his original

108 tanks remained serviceable, as did most of his MTLB personnel carriers. But nothing could make Mohammed's slow Chinese Type 59 tanks go faster. He planned to place them at the end of his column, hoping beyond reason that they would reach the safety of the new fighting positions before daylight. By 2330 Mohammed and his column rolled slowly down the pipeline road, cutting through the dark, spattering drizzle. As they continued down the road, the 37th Armored Brigade fell in behind them.

While Mohammed's tired Chinese tanks chugged deeper into the desert, al-Rawi shifted his Republican Guard to meet the coming threat. His mission was to block the approaches to Basrah for as long as possible to allow the army to escape from the theater. He began constructing a layered defense using the Tawakalna Mechanized Division and portions of the Adnan Infantry Division to back up the 12th Armored. At his direction, the Tawakalna reoriented its three combat brigades to the southwest, deploying the 29th Mechanized Brigade in the north, the 9th Armored Brigade in the center, and the 18th Mechanized Brigade in the south.¹⁷ At the same time, the Adnan moved a motorized brigade to cover the northern flank of the Tawakalna, and the 18th Mechanized Brigade in the south attempted to tie in with the 37th Armored Brigade. Each division commander placed security elements and guard force battalions even farther to the west and southwest to ensure timely warning of a Coalition advance.

By early morning, under extremely difficult conditions, al-Rawi had assembled a powerful blocking force, complete with the 50th Armored Brigade acting as a forward screen. Behind the 50th, al-Rawi borrowed from British doctrine to create a rear-slope defense along the ridges near the Wadi al-Batin using the three heavy brigades of the Tawakalna and the 37th Armored Brigade of the 12th Armored Division.

A rear-slope defense is simply a sophisticated ambush employed by a defender facing an enemy with longer-range weapons. The main defensive line digs in behind a ridge—in this instance a low rise west of the Wadi al-Batin—just far enough back so that the crest of the ridge is barely within range of the defenders' direct fire weapons. If all goes as planned, the attacking force will crest the ridge and be silhouetted on the horizon so that the defender, well dug in and camouflaged, will have every advantage in the direct firefight. To lure the attacker into the ambush, the defender places small security forces over the ridge in plain sight of the attacker. Al-Rawi directed each Guard brigade to place a company of tanks and BMPs forward, both to act as bait and to provide early warning. The rear-slope tactic also played to the strength of the

Iraqi artillery. If the security force could just slow down the attackers long enough, dense preplanned artillery concentrations could be dropped on them sequentially as they advanced. If positioned properly, a rear-slope defense could be deadly. As he would later prove, the commander of the Tawakalna was a master of the tactic. To the rear of the ambush, the Medina Division created a very strong second line of defense, while to the north the Adnan infantry attempted to protect the northern flank from envelopment. Behind this defensive line, cannon and rocket artillery units deployed and reoriented their weapons, expecting the Coalition advance from the south or southwest.

Early on the 25th, some 30 kilometers southeast of al-Busayyah in the Iraqi 7th Corps sector, Colonel Mohammed's MTLB infantry carriers already lay in their screening positions. His armor, however, was a different story. The slow Chinese tanks were still on the road somewhere behind, and in full daylight Mohammed knew their survival was doubtful. A brief air strike had caught his mechanized battalion at sunrise, destroying several MTLBs just as the unit pulled into position. No air attacks had occurred since, and Mohammed, tired from his night-long exertions, decided in the middle of the morning to take a nap. At 1230, exploding armored vehicles and screams of dying men shattered the Iraqi colonel's slumber. Within minutes, Mohammed and most of his men were prisoners of the 2-2d ACR.

ARCENT: G-DAY, MIDNIGHT

[See Figure 5-2, "Ground Operations—G+1, Monday, February 25, 0800 Hours," at the back of the book.]

Movement of the Iraqi heavy reserve units was on the ARCENT intelligence "watch for" list as VII Corps passed through the breach and fanned out across the desert. General Stewart had ensured that as the American attack unfolded, intelligence collection would be constant.

No matter how good the data, intelligence analysis always involves a subjective reading of objective information: the G2's professional assessment of what the enemy will do. Good intelligence requires the G2 to put himself in the mind of the enemy, requiring leaps of analytical faith based on a foundation of facts. Intelligence, therefore, is not a science but an art, a large part of which involves making correct assessments from partial or flawed data.

Stewart's analysts had inadvertently switched the identities of four Iraqi heavy units. As those units entered the KTO or moved around inside the theater prior to the air operation, signals intelligence analysts picked up bits and pieces of unit call signs, movement orders, and other tip-offs

that said, for example, that the 12th Armored Division was moving to a new but unspecified location. If imagery showed an armor unit moving or adjusting its positions at that time, the unit was labeled the “possible” 12th Armored. As more “hits” developed on the unit’s identity, the “possible” identification hardened to a “probable,” and might even be confirmed by another source. The units in question were the 12th and 52d Armored Divisions in one pair and the 10th and 17th Armored Divisions in the other. Thus when General Franks slapped the map and said, “I want that unit to go away,” his hand rested on the symbol of the 12th Armored rather than the 52d actually at that location.

Of the four misidentified units, the 12th and 52d Armored Divisions were most important to ARCENT because they were closest to VII Corps’ breach. Late on February 24, intercept picked up orders to the 12th Armored Division’s 50th and 37th Armored Brigades to move to unspecified blocking positions. Simultaneously, JSTARS detected 10 vehicles moving north along the pipeline road west of the Wadi al-Batin. It also detected a battalion-size convoy moving from the laager of what Stewart believed was the 52d Armored.¹⁸ Stewart tracked the activity closely to determine whether the Iraqis would attempt an operational counterattack or simply move to block the US VII Corps’ left-hook attack from the west. He owed that “key read” to Franks by midday on the 25th. Movement indicators in the two Iraqi divisional areas continued, reinforced by JSTARS-detected movement out of the Tawakalna laager toward Phase Line Smash.

Early on February 25, Stewart spoke to Franks about the situation, indicating that the Iraqis were not counterattacking. The 52d Armored, in conjunction with the Tawakalna, was moving less than a brigade out along Phase Line Smash. JSTARS had focused on these movements, calculating the precise number of tanks and armored vehicles, their direction, speed, and location along the phase line. The 12th Armored Division, Stewart believed, was occupying similar blocking positions west of Wadi al-Batin. None of these units, therefore, was a threat to VII Corps’ attack.

Stewart projected that the Iraqis would continue to delay along the IPSA pipeline to defend Basrah. He estimated that the remaining Republican Guard divisions—especially the Medina and the Hammurabi—would reposition to defend Basrah as well.¹⁹ Based on that assessment, Franks decided to destroy the Iraqis on Phase Line Smash. The 2d Armored Cavalry Regiment would arrive at Phase Line Smash first.

2d Armored Cavalry Regiment: G-Day Plus 1

After a relatively calm night holding in defensive positions, the regiment resumed the attack on the 25th and intensified the search for evidence of the Republican Guard. During the previous evening, the

weather had worsened as winds picked up bringing in cloudy skies and rain. The winds increased as the day wore on and the ceiling dropped along with visibility due to blowing rain and sand. Continuing with the 4th Squadron leading, the regiment's progress toward the northeast eventually moved out of the way of Major General Griffith's 1st Armored Division allowing him to continue his attack to the north toward al-Busayyah and Objective Purple.

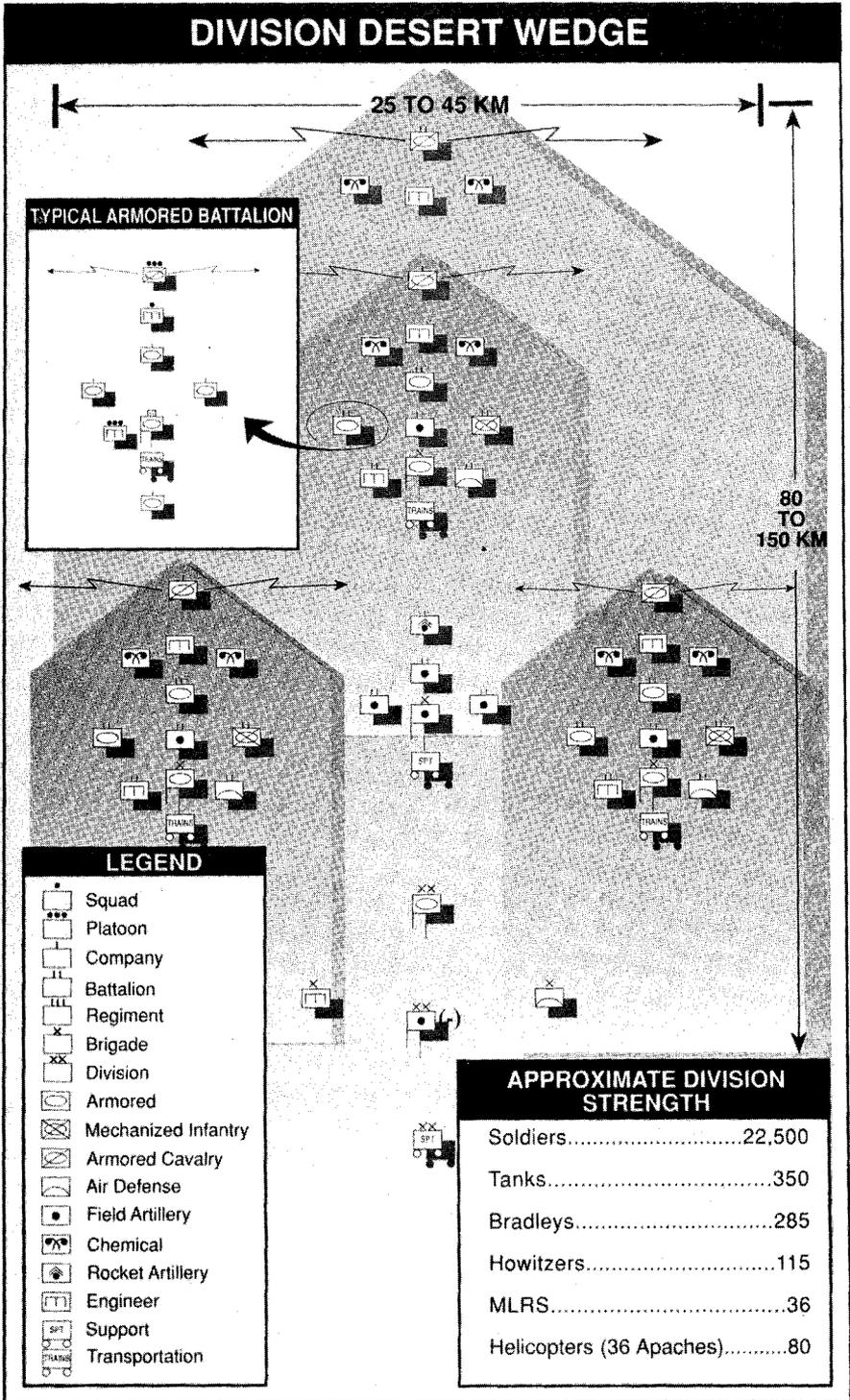
Between 1220 and 1240 the regiment engaged a mixture of T-55s and armored personnel carriers in prepared defensive positions. These proved to be part of the 50th Armored Brigade of the 12th Armored Division. Holder had yet to encounter the T-72s of the Tawakalna, but he knew he was close. Ordered by corps to develop the situation, the 2d and 3d Squadrons continued their forward progress throughout the afternoon and joined the 4th Squadron, already teamed up with A-10s, in the destruction of the 50th Armored Brigade. Late in the afternoon, Franks directed the regiment to keep contact with the enemy without becoming decisively engaged. He was already planning to move the 1st Infantry through the 2d ACR, and he wanted to pinpoint Republican Guard locations to find the best place to insert Rhame's division. That evening two of the regiment's M113 armored personnel carriers got lost in a sandstorm during an Iraqi probing action and were mistakenly taken under fire by friendly troops. Four soldiers were killed and four wounded.

By the end of the day on the 25th, the regiment shifted steadily east to give the 1st Armored's divisional cavalry squadron and the 1st and 3d Armored Divisions enough room to move north toward Phase Line Smash. There Franks would have to decide whether to continue marching northeast or turn hard right in order to collide squarely with the Republican Guard. Meanwhile, the British 1st Armoured Division still had to pin down the Iraqi 7th Corps armored reserves after passing through the 1st Infantry Division. The determined advance of the VII Corps continued.

1st Armored Division: G-Day, 1500, to Midday, G Plus 2

Under scattered clouds, Griffith moved the 1st Armored Division across the desert in a modified division wedge, with the 1st Brigade forward and the 2d and 3d Brigades to the left and right rear. Having chosen the wedge for flexibility, Griffith spread the entire formation over a 26-kilometer front. Intelligence had pinpointed enemy units of battalion strength in his sector, and Griffith planned to outflank and destroy them with his lead brigade. Out front, the brigade had room to maneuver. If the enemy put up determined resistance, Griffith could counter by ordering either the left or the right rear brigade forward. In all, the formation was very agile.

As darkness fell the first day and increasing winds created dust storms, vehicle commanders used thermal sights to scan the area around





Abrams and Bradleys in a desert wedge formation.

them and drivers used night vision devices to maintain formation. To avoid fratricide and maintain position, each vehicle carried identification lights. Flank vehicles and scouts carried additional lights to mark the outline of each formation. Special infrared lights on scout vehicle antennas created a unique thermal signature. Lead vehicles carried blinking strobe lights fitted with conical shields pointed skyward so that the lights were invisible from the ground but could be seen by friendly aircraft. By 2130, all elements of the 1st Armored Division had reached their proper positions in the division wedge. The division halted for the night, and the troops saw to their equipment as leaders paused to review the next day's plans.

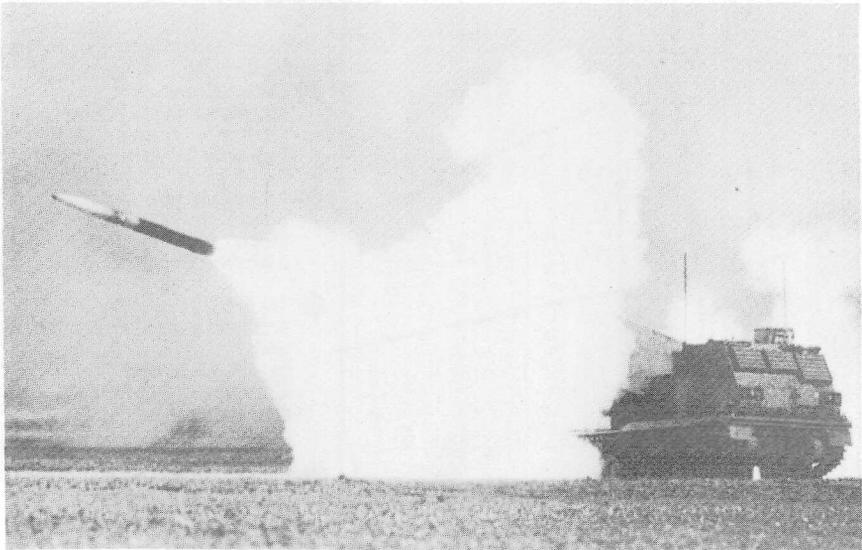
Shortly after the 1st Armored Division resumed its advance on the 25th, the lead brigade reached the southern positions of the Iraqi 806th Infantry Brigade, 26th Infantry Division, located some 50 kilometers south of Griffith's next objective at al-Busayyah. As the day progressed, the weather continued to worsen, eventually shutting down all close air support except Apache and Cobra helicopters. Griffith shifted the lead brigade west to bypass the Iraqi position in order to maintain momentum. He ordered the trailing 3d Brigade to attack the enemy position and catch up to the advance as soon as possible.

Months of unit rehearsals paid off as Colonel Dan Zanini's 3d Brigade conducted a hasty attack. Each task force, company team, platoon, and individual vehicle shifted into place according to long-practiced battle drills. After a short bombardment by the 3-1st Field Artillery, the brigade rolled menacingly into attack formation. As soon as the Iraqis saw the Americans approaching into direct fire range, they began to surrender.²⁰

The rest of the division had continued its attack toward Objective Purple at al-Busayyah. Led by the 1-1st Cavalry, the 1st Brigade made contact with additional elements of the Iraqi 26th Infantry Division. After 2-41st Field Artillery prepped the area, TF 1-7th Infantry overran a battalion of dug-in Iraqi infantry supported by a mechanized team. The Americans knocked out eight BMPs and a T-55 tank. PSYOP loudspeaker teams convinced nearly 300 Iraqis to surrender, and at 1448 the battalion reported the area secure.

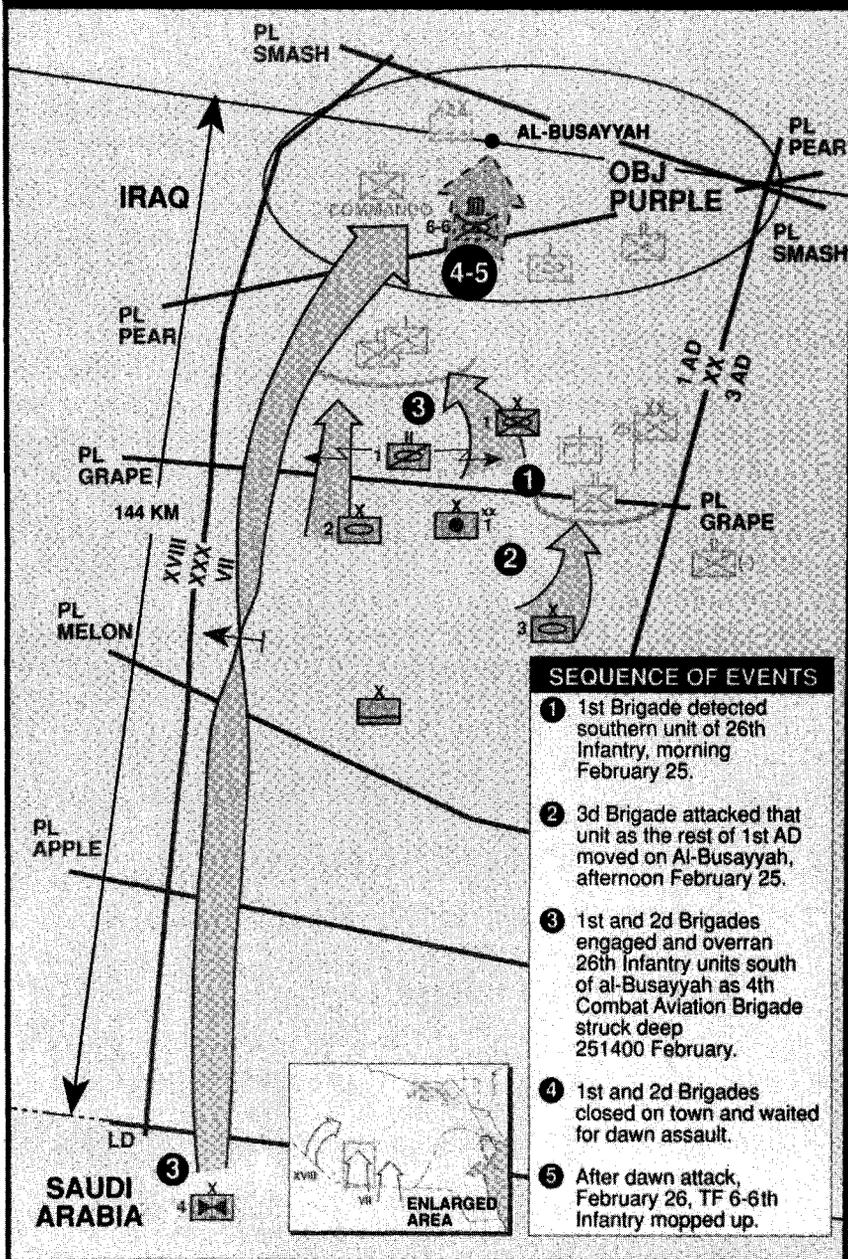
While ground units engaged in close combat, Griffith struck deep with his 4th Brigade's Apache helicopters toward the Iraqi 26th Infantry's logistics base at al-Busayyah. Shortly after 1400, two companies of Apaches launched a series of strikes that destroyed several tanks and BMPs. As a result, hundreds of enemy soldiers ran from their positions to surrender. 1st Armored Division scout helicopters simply herded them into groups as ground units from the 1st Brigade closed to within 10 kilometers of al-Busayyah and rounded up the demoralized Iraqis.²¹

The continued advance of 1st Armored Division's 1st and 2d Brigades brought them to within artillery range of al-Busayyah. In the late afternoon lead units encountered some enemy resistance from dug-in infantry, but the T-55 tanks that intelligence had reported near the town remained hidden. Griffith had two options: conduct a hasty night attack into a built-up area against infantry supported by tanks or wait until morning to conduct a coordinated attack. Griffith called Franks and



MLRS batteries laid down a carpet of explosive firepower deep behind Iraqi lines. Each launcher delivered almost 8,000 explosive bomblets in 12 seconds.

1ST ARMORED DIVISION'S DESTRUCTION OF THE 26TH INFANTRY AND FIGHT FOR AL-BUSAYYAH G+1, FEBRUARY 25 - G+2, FEBRUARY 26



recommended the latter. Franks agreed but told Griffith to be well beyond al-Busayyah by 0900 the next morning. Franks' design for the upcoming battle allowed no further delay. Throughout the night, Griffith pounded Iraqi defenders with 1,500 artillery rounds and 350 MLRS rockets.

At dawn on the 26th, Griffith prepared to attack al-Busayyah. Weather conditions remained dismal with wind gusts to 42 knots, ceilings as low as 200 feet, and thunderstorms intermixed with blowing sand. The Iraqi conscripts' morale was already dismally low as they huddled miserably in bunkers around the town. Griffith's artillery soon shattered al-Busayyah completely by accelerating to a maximum rate of fire 15 minutes before the ground assault began. American gunners sweated chemical suits black as they dispatched thousands of bomblet projectiles toward enemy positions. The continuous crackle of exploding submunitions began to subside at 0630 as the division's 1st and 2d Brigades pushed forward, Bradleys and Abrams on-line, to move through the Iraqi defenses.

Before the psychological shock of the artillery wore off, the 2d Brigade attacked toward the center of al-Busayyah with TF 6-6th Infantry and TF 2-70th Armor, while the 1st Brigade lanced through positions south of the town. Most of the Iraqis gave up quickly. The five missing Iraqi T-55 tanks suddenly emerged from wadis southwest of the town. Abrams and Bradley gunners immediately destroyed them at very close range. Only the 26th Infantry's commando battalion displayed any fighting spirit by refusing to leave the center of town. Griffith had issued strict instructions not to get bogged down in house-to-house fighting, and the Americans passed through quickly.

The fight around al-Busayyah was little more than a skirmish, but it was first blood for the division. The experience gave soldiers two crucial advantages. First, the fight confirmed, if only on a small scale, the superiority of Griffith's tactic of simultaneous attack in depth. To his front Griffith created a carpet of combat power that stretched 24 hours and nearly 100 kilometers ahead of his lead maneuver elements. At the greatest distance, Apache aircraft struck with company-size attacks as far as 50 to 60 kilometers forward of the advancing tanks. At 30 kilometers, MLRSs began to inundate targets uncovered but as yet undestroyed by air attack. Once within direct observation of scout helicopters and forward observers, cannon artillery joined in the crescendo of firepower. Only after these four successive waves had washed over the Iraqi defenses did Griffith carefully maneuver to achieve overwhelming tactical superiority and finish the fight with direct fire.

The second advantage of the al-Busayyah fight was that it gave the division its first combat experience since World War II. While the Iraqis at al-Busayyah were inferior to the Republican Guard, the commando

battalion had been trained by the Guard and was considered its surrogate. The confidence level of the entire division rose immeasurably. Much uncertainty remained, but the 1st Armored Division had come through the shock and confusion of its preseason game a clear winner.

In addition to the enemy, Griffith faced another foe—one that he could not bend to his will—time. He had promised Franks to be rolling by 0900. While the outcome of the fight at al-Busayyah was never in question, he would not be able to meet his time line if he waited for the town to be cleared. Instead he turned the task of mopping up to Lieutenant Colonel Michael McGee, commander of TF 6-6th Infantry, and pushed the rest of the division on toward the Republican Guard.

Like his boss, McGee expended copious firepower rather than manpower to ferret out the last few commandos in al-Busayyah. He held his Abrams and Bradleys back out of antitank rocket range and attempted to entice the Iraqis to surrender. When that failed, he established a firing line east of the town with three of his companies while the fourth blocked escape routes to the north. An assault element with a Bradley platoon, two armored combat earthmovers, and a combat engineer vehicle (CEV) readied itself on the south side. After an intense 10-minute preparation from the 2-41st Field Artillery, McGee's tank and Bradley firing line opened up for 20 minutes to cover the assault force as it moved forward. The assault element still continued to receive small-arms fire. The heavy CEV with its 165mm short-barrelled gun could lob huge shells, each packed with more than 50 pounds of TNT and capable of leveling a building. The troops nicknamed the enormous shells "trash cans." Under McGee's control, Sergeant Darryl Breedlove of the 16th Engineer Battalion crept forward, halting near each suspicious building. The two ACEs with their heavy plows scraped along behind. If the defenders of a particular building or trench line did not surrender, Breedlove either leveled it with a "trash can" or the ACEs plowed it under.²²

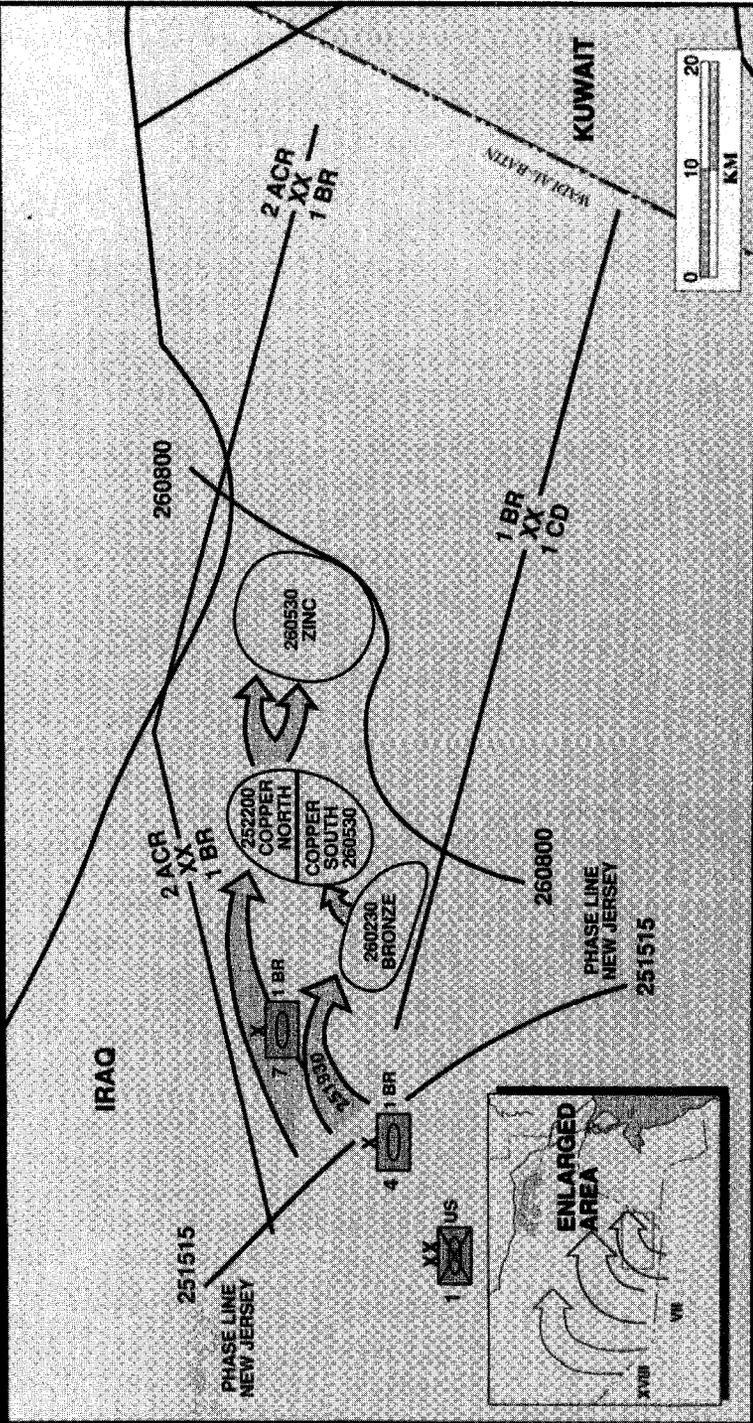
At 1230 on the 26th, the 72 cannons and nine MLRSs of the 75th Field Artillery Brigade caught up with the 1st Armored Division after an all-night forced march from the 1st Infantry Division breach site. During the afternoon, Griffith ordered his entire division to turn 90 degrees from a northward to an eastward orientation so that the entire formation was aligned directly toward the Republican Guard located just 50 kilometers away. Changing the direction of some 6,000 vehicles on the move was made easier by constant battle drills and by the flat, featureless nature of the terrain. Within a few minutes of the order, Griffith, flying above in his command and control Blackhawk, witnessed a sight reminiscent more of a naval than an army maneuver. While one brigade cluster of a thousand vehicles held steady, the geometrically precise dust clouds of two other brigades quickened and split gradually to the right and left as the brigades formed up on either side of each other. A 2-kilometer space between lines

of tanks defined the boundary between each battalion; a kilometer or less divided companies. Once aligned, the armored tip of the three brigades again accelerated eastward. Parallel files of Abrams tanks led the formation, appearing from the air like small, single-turret battleships positioned to put maximum firepower and protection forward. The Bradleys followed behind arrayed like cruisers, spaced 50 to 100 meters apart and conforming to the movement of their more heavily armored companions. Battery-size columns of artillery followed 2 kilometers behind the armored tip. Closely behind the artillery, in hundreds of parallel columns, came a huge assortment of support vehicles: tankers and supply HEMTTs, tracked ambulances, and command posts with smaller armed HMMWVs darting in and out of the formation like destroyers keeping watch over their thin-skinned and less mobile charges.

British 1st Armoured Division: G-Day Plus 1 to G-Day Plus 2

Major General Rupert Smith was hunting for the Iraqi 52d Armored Division to prevent it from striking the exposed VII Corps flank. His overall target was a group of smaller positions, collectively called Objective Waterloo. To get at the 52d, the British 1st Armoured Division had to pass through the "Big Red One," make a sharp turn to the east, and force its way through the crumbling forward defenses of the Iraqi 7th Corps. Smith understood the need for speed. He planned to leapfrog his brigades forward to maintain momentum while his artillery struck deep against the Iraqi rear. When he received notice to move up the assault time, he marched his two combat brigades 100 kilometers to staging areas during the early morning of the 25th. All afternoon the British division negotiated lanes through Iraqi barriers just cleared by the 1st Infantry as they made their way to the line of departure, Phase Line New Jersey. By 1515, the lead 7th Brigade was attacking east along the divisional northern axis. After a long approach march, the brigade assaulted Objective Copper North, destroying a major communications facility and defeating a counterattack by a company of T-55s. The 4th Brigade began advancing on the southern axis at 1930. Traffic control problems imposed a momentary delay, but by the time the 7th Brigade secured Copper North, 4th Brigade was nearing Objective Bronze. As the attack on Bronze began at 2230, the 4th Brigade eliminated pockets of armor and infantry and overran several huge logistics sites. Asked to send loudspeakers forward to help convince the Iraqis to surrender, Smith wryly offered more MLRS fire instead. Smith pushed the 7th Brigade forward to Objective Zinc where the "Desert Rats" destroyed a weakened Iraqi armored brigade, killing 46 armored vehicles and capturing 1,800 prisoners. By daylight, Smith had his hands around the throat of the Iraqi 52d Armored Division. The hapless commander of the Iraqi division's 52d Brigade later remarked that he "did not know

**BRITISH 1ST ARMOUR DIVISION
G+1, FEBRUARY 25, 1515 HOURS - G+2, FEBRUARY 26, 0800 HOURS**



what a [British] Challenger tank looked like until one showed up outside my bunker that morning." Every kilometer the British pushed eastward lessened the chance that the Iraqis could interfere with Franks' battle plan by striking VII Corps in the flank.

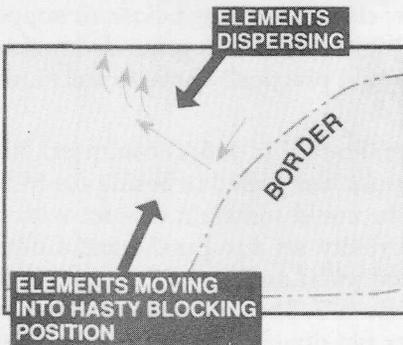
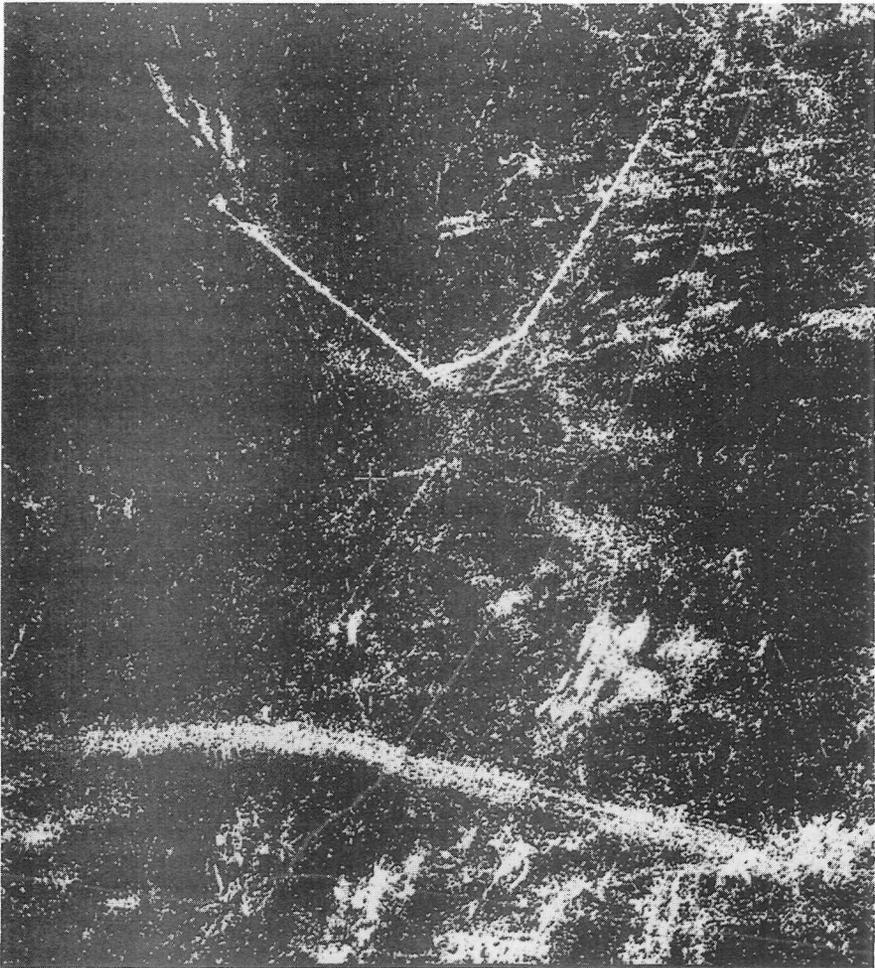
As dawn broke on the 26th, 7th Armoured Brigade secured its initial objective on the division's left and continued the attack against the next group of enemy armored forces farther east. On its right, the 4th Armoured Brigade continued to destroy enemy units in flanking attacks. By late afternoon on the 26th, Smith's division was ready to launch a series of attacks that would carry it across the Wadi al-Batin into Kuwait.²³

VII CORPS: G-DAY PLUS 1, EARLY AFTERNOON

[See Figure 5-3, "Ground Operations—G+1, Monday, February 25, 2400 Hours," at the back of the book.]

1st Armored Division's order to swing east came as part of VII Corps' grand maneuver to turn directly into and destroy the Republican Guard. On the afternoon of the 25th, Franks called together his key staff members to make final preparations for the maneuver. Brigadier General John Landry, the corps chief of staff, and Colonel John Davidson, the corps intelligence officer, flew up to Franks' tactical command post from the corps main headquarters. The weather, already miserable, was growing worse. What had been one of the hottest spots on earth only weeks earlier was now near freezing. Earlier fog had turned into intermittent rain that by afternoon had increased in intensity. Howling gusts of wind mixed fine powdered sand with blowing rain and propelled the infernal muddy concoction against windshields, vision blocks, and map boards, and into every exposed corner of every vehicle on the march.²⁴ Visibility dropped to near zero. Thick, stinging blasts of wet sand lashed vehicle commanders straining to check compasses or global positioning systems as they struggled to maintain formation. Low clouds prevented close air support in many areas of the battlefield and high winds often grounded helicopters. Franks realized that the corps would practically have to feel its way toward the Republican Guard.

At the center of the VII Corps line, Franks' M-113A3 command track and his two M-577 command post tracks had pulled in beside the M-577 of the 3d Armored Division CP so he could maintain contact with his corps while his own TOC crew hurriedly set up. Franks and Colonel Cherrie, his operations officer, huddled with Landry and Davidson under the tarpaulin extension at the rear of the 577. The tarp could not keep out the blowing rain. Gritty brown water ran down the corps commander's map board as the shivering group of officers shouted at each other over the howling wind. Outside, a communications crew struggled to steady the multichannel TACSAT antenna to enable Franks' tactical command post



- Enemy elements moving northwest into blocking positions.
- Engaged and destroyed while on the move.
- Note three elements dispersing on north side of the road.

JSTARS readout, G plus 1, depicted 12th Armored Division and Republican Guard elements moving into blocking positions. This picture allowed General Stewart to track the Iraqi GHQ battle plan as it developed on the ground.

to maintain contact with ARCENT headquarters. Both Franks and Davidson had talked with Stewart at ARCENT G2 earlier that morning. Stewart told them that he believed the Republican Guard might reorient its forces but did not appear to be maneuvering against VII Corps. When Colonel Davidson reached Franks' command post in the early afternoon, he confirmed Stewart's assessment.

The time had arrived for Franks to call his audible if he was to bring the Republican Guard to battle in the next 24 to 48 hours. Turning the corps would take that long. Franks and Cherrie laid out time and space calculations on the back of a soggy envelope. Together they drew the graphics to depict the audible using a grease pencil on a dripping acetate map overlay. Franks had to make his call and then get the order out to 145,000 soldiers, most of whom were advancing deeper into Iraq with every passing second. After further deliberation, he selected FRAGPLAN 7, a contingency plan audible developed on the assumption that the Guard would remain in or near positions occupied at the start of the ground war. The plan was not a perfect fit, however. It called for three heavy divisions to make the main assault, but Franks had only two, the 1st and 3d Armored then moving side by side through the desert. The audible postulated the 1st Cavalry Division as the third finger in the armored fist but Schwarzkopf had not yet released Tilelli's unit from the theater reserve mission. Fortunately Rhame's "Big Red One" had made it through the breach relatively unscathed and was in a position to serve as the essential third division.

The decision made to turn right, Cherrie had to inform the corps. The order would be the most important and decisive of Desert Storm. In a much practiced drill, the staff quickly typed a FRAGO, or shortened version of an operations order, on a laptop computer. Cherrie's operations clerk "loaded" the order into the E-Mail system as Cherrie and Franks hovered over him to review it one last time. While the corps was no longer in Germany, the German influence remained in the corps. Cherrie, in his best Teutonic accent, ordered "Launch FRAGO!" The clerk hit the "launch key" and sounded off with "FRAGO launched!" Another staff officer then logged the order number and time in his staff journal and filed a paper copy in a binder. The VII Corps' "electronic torpedo" had just sunk the Republican Guard.

The scene illuminated Franks' personal style of command. At least once, and often twice a day, he flew directly to the divisions or separate brigades to confer with his commanders face-to-face. A quick huddle over maps spread out over the engine deck of a HMMWV or around a map board propped up by the side of an armored vehicle provided Franks the opportunity to explain his plans in detail. These trips forward allowed Franks to "smell" the battlefield and to measure his commanders: their



General Franks talked to his units via telephone. Despite the computer age, the corps commander still followed the battle with grease pencil on acetate from a canvas track extension in his tactical CP. General McCaffrey, commander, 24th Infantry Division, used a Blackhawk as his forward CP. Note the satellite antenna. TACSAT equipment kept him in touch with his widely spread and fast-moving units.



level of confidence, their understanding of his plans, and any concerns they might have about his operational intent.

With FRAGO 7 on its way, the 1st Armored Division continued to advance north on the left wing while the 2d ACR shifted south to take up station to the right of the 3d Armored Division. The cavalry would cover the ground between the 3d Armored Division and the British. Franks expected the cavalry regiment only to locate and fix the Republican Guard. Once that happened, the 1st Infantry Division would pass forward through the cavalry and form up with the 1st and 3d Armored Divisions.

VII Corps would meet the Republican Guard with the three heavy divisions on-line turning clockwise shoulder-to-shoulder to form the giant radial arm of the Great Wheel. Four heavy artillery brigades and the corps aviation brigade would support. The fourth heavy division, the British 1st Armoured, would turn more slowly at the hub of the wheel to anchor the corps' right flank by taking Objective Varsity. Traveling up the spoke away from the British 1st Armoured Division, the 1st Infantry Division would blast through Objective Norfolk and then continue east. The 3d Armored Division would attack through Objective Dorset and on toward Objective Minden. At the northern tip of the radial, the 1st Armored Division would attack and secure Objective Bonn. All of these objectives were stacked one atop the other and superimposed directly over the main fighting positions of the Republican Guard.

Franks and Cherrie calculated that the battle might begin late on the 26th, certainly by the 27th, a date still well ahead of schedule. As the evening of the 25th wore on, the calculus of battle continued to turn in VII Corps' favor. The British 1st Armoured Division's move east had allayed concerns that an Iraqi counterstroke might disrupt vulnerable supply columns or interfere with the jockeying of the heavy divisions into position for the upcoming battle. The corps had nearly completed reassigning artillery brigades to the armored divisions. Griffith would receive the 75th Field Artillery Brigade's three cannon battalions and MLRS battery. The 42d Field Artillery Brigade's one MLRS and two cannon battalions would join the 3d Armored Division in the center. The 2d ACR would pass off the 210th Field Artillery Brigade's three cannon battalions and single MLRS battery to the 1st Infantry Division.

CENTCOM: G-DAY PLUS 2, MORNING

The call from Yeosock on the morning of the 26th was a routine battle update, but he also suggested that Franks call General Schwarzkopf.²⁵ From his tactical command post deep inside Iraq, Franks reached Schwarzkopf at his permanent headquarters 800 kilometers south in Riyadh. Schwarzkopf wanted VII Corps to pick up the tempo of advance. Radio intercepts indicated that the withdrawal ordered by Iraqi 3d Corps in southern Kuwait had turned into a rout. Further, heavy tank

transporters had been spotted moving to the assembly area of the Hammurabi Armored Division, a clear indication that Saddam might be trying to pull the Hammurabi back out of Schwarzkopf's reach. At all costs, the back door had to be shut before Saddam's best soldiers escaped. Weather remained a problem and the CINC could not count on air power to put the cork in the KTO bottle. From his distant position, Schwarzkopf had already formed an image of the ground operation as a pursuit rather than a movement to contact. In his view, the only viable course of action to prevent the Republican Guard from getting away was to increase the tempo of the ground attack and to destroy the enemy before he fled.

VII CORPS: G-DAY PLUS 2

From his forward location, Franks viewed the battle differently. Even though the Iraqi 3d Corps might be on the run, intelligence did not indicate any rearward movement on the part of the Republican Guard or the associated 10th and 12th Armored Divisions of the Jihad Corps. On the contrary, all movements thus far had been *toward*, not away from him. The Iraqi GHQ had built one solid defensive line and appeared to be assembling a second just behind it. While VII Corps senior leaders accepted the reports of feeble enemy resistance encountered by the Marines and Arabs in Kuwait, those particular Iraqi troops belonged to a different army than the Republican Guard. Should Franks simply accelerate the advance without first forming his armored fist, his divisions would bounce into the Guard sequentially and piecemeal, an open invitation to defeat in detail. In any case, only the 1st and 3d Armored Divisions, both still without their reinforcing artillery brigades, were available to attack at this stage of the battle. The Iraqis had five heavy divisions collected in a tight cluster in the vicinity of northeast Kuwait: the Republican Guard's Tawakalna Mechanized, the Medina and Hammurabi Armored Divisions, and the regular army's 10th and 12th Armored Divisions.

Pursuit of an enemy requires that he first be broken. Schwarzkopf's call to pursue clashed with the tactical reality of a stationary, dug-in, forewarned, and competent enemy. In the end, Franks simply accepted the contrast in views as the result of different perspectives. Early on the 26th, he ordered his corps to attack and destroy the Republican Guard no later than last light on the 27th. This simple message dictated the desired tempo of attack: VII Corps would press the attack without pause. Major subordinate commands received the message by 1045.

If Franks upped the tempo of the advance, he in no way changed his vision of the upcoming battle. He would smash the Republican Guard with a mailed fist before the corps shifted to the pursuit. Through the early afternoon of the 26th, Franks traveled to subordinate headquarters to receive battle updates and to issue orders to ensure that the armored formation retained its mass.

Miserable weather compounded VII Corps' communications difficulties. All corps units constantly monitored the command net on FM, but given the distance between units and the unreliable atmospheric conditions of the region, satellite was the most reliable communication method when on the move. Unlike XVIII Airborne Corps, however, VII Corps had very few TACSAT sets on hand and these could not be used in a moving vehicle. Franks' daily trips forward partially eased the problem. When communications were out, Franks and his commanders relied on their mutual understanding of his intent.

By 1600 on the 26th, Franks' battle against the Republican Guard began to take on precisely the geometry he had envisioned. Along an 80-kilometer front, VII Corps pressed forward in the blowing sand with seven armored and mechanized brigades and an armored cavalry regiment aligned geometrically from north to south. An additional mechanized division, four heavy artillery brigades, and an attack helicopter brigade reinforced the formation. That afternoon the formation crossed Phase Line Tangerine, an imaginary control line superimposed on tactical maps along the 65 north-south grid line. The attacking brigades closed on the four heavy Iraqi brigades defending from northwest to southeast just 5 kilometers east of Tangerine. United in space, time, and purpose, the largest armored battle since the Second World War was about to begin.

With his corps approaching the first Iraqi defensive line, Franks prepared for the subsequent pursuit phase of the operation that the CINC had pressed for so emphatically. He ordered the 1st Cavalry Division, which Schwarzkopf had just released from theater reserve, to move rapidly into formation just behind the 1st Armored Division. In just 24 hours, Tilelli's "First Team" raced 250 kilometers northward in an attempt to join the fight. Franks intended to insert the division into a sweep across the northern boundary of VII Corps and attack east to Objective Raleigh. Likewise in the south, he planned to hook the 1st Infantry Division around the southern shoulder of the attacking mass to complete the envelopment by striking northeast to the coast. The British 1st Armoured Division would guard the 1st Infantry's right flank. XVIII Airborne Corps would seal the escape routes north to Basrah and across the Euphrates in front of VII Corps' enveloping armor.

XVIII AIRBORNE CORPS: G-DAY, MIDMORNING, TO G-DAY PLUS 2

The accelerated timetable on G-Day suited General Luck just fine. His biggest challenges were time and distance, and an early start would help him seize his terrain objectives and catch up with VII Corps. Luck's divisions each had independent missions and each mission was focused on terrain. The French 6th and the 82d would screen the corps' left flank. The 101st and the 24th formed the outer rim of the Great Wheel. Like the

outermost skater in a line forming a whip, the 101st and the 24th would have to move faster than VII Corps divisions to maintain any semblance of geometric cohesion within the Wheel. The 101st could escape the tyranny of terrain with its helicopters, but the 24th would have to race along the outer rim while traversing some of the most inhospitable terrain in the KTO. Before either could turn east and assist in the destruction of the Republican Guard, Luck had to cut Highway 8. With FOB Cobra secure, the 101st was already patrolling the highway with Apaches, and Peay would soon place his infantry squarely across it. Getting McCaffrey and Starr's armor astride the road would complete Luck's grip on the main Iraqi lifeline into the KTO.

24th Infantry Division and 3d Armored Cavalry Regiment: G-Day, 1500, to Evening, G-Day Plus 2

Like race horses springing from the starting gate, the 24th Infantry Division and the 3d ACR sped across the border berm to begin their dash to the Euphrates. The 24th moved with three brigades abreast: the 197th Infantry on the west flank, the 1st Brigade in the center, and the 2d Brigade on the east. The 3d ACR drove north, continually stretching an arm to the east to maintain contact with the 1st Armored Division in the VII Corps sector. Both units had already eliminated Iraqi screening forces during their pre-G-Day warm-up. For the next two days, they fought time and terrain more than they did Iraqis.

General McCaffrey had to accomplish many tasks in a very short period: link up with the 101st, then cut Highway 8 by blocking it with armor, and finally, turn east and roll up the enemy's right flank. Such a complex plan demanded simple execution. McCaffrey's divisional front was almost 70 kilometers wide. By the time he reached the Euphrates his sector would stretch back nearly 300 kilometers. To simplify command and control, McCaffrey used east-west and north-south grid lines to mark limits of advance and to control fires. Key vehicles within each formation would be able to maintain precise alignment in spite of invisible boundaries and control measures, thanks to the Global Positioning System that each carried on board. Instant communication with every vehicle allowed commanders to shift formations rapidly.²⁶ McCaffrey used simple, well-rehearsed battle formations. Typically, each brigade moved in an upright "V" formation. Two balanced battalion task forces of 55 armored vehicles and tanks formed the tops of the "V." This formation allowed the brigade to meet an enemy from any direction with a balanced combination of tanks and infantry. The base of the "V" was a pure armor force of 58 Abrams, which also acted as the brigade reserve and formed a mobile, responsive, and massive counterattack force. The division's artillery was tucked up close behind the lead task forces. With 24 kilometers of range, the guns could conceivably have stayed farther back and still

have been able to fire in front of the division's lead task force. However, when moving against an uncertain foe, McCaffrey needed his guns close so he could maintain the eye-to-eye contact between supported and supporting units that was essential to reducing response times and precluding any chance of confusion or delay in the delivery of fires. McCaffrey could have eased the problem inherent in moving less mobile artillery by echeloning or staggering battalions of guns and rockets out along the route of march, but he kept his artillery concentrated on the move to ensure that when it was needed, firepower would be applied en masse. Artillery would not be applied in penny packets; if a target was worth engaging, it would receive, as a minimum, a battalion's worth of firepower.²⁷

Logistics was McCaffrey's greatest concern. To the rear, logisticians scrambled to move the 400,000 gallons of fuel, 213,000 gallons of water, and 2,400 short tons of ammunition the division would use daily. The 36th Engineer Group followed closely to smooth a path behind each brigade. Once the XVIII Airborne Corps advanced beyond as-Salman, the hard-surface roads along MSRs Texas and Virginia would ease the division's transportation problems.²⁸

In the complete black of night amid blowing sand, McCaffrey's huge force of more than 26,000 soldiers and 8,600 vehicles ground steadily northward at 25 kilometers per hour. Worsening weather reduced visibility to less than 1 kilometer and rendered night vision aids useless beyond that range. Forty-five kilometers into Iraq, McCaffrey shifted the division to two brigades abreast. The 197th drove toward Objective Brown, 140 kilometers north of the border, and 2d Brigade thrust toward Objective Gray, immediately to the right of Brown. 1st Brigade shifted right behind the 2d Brigade.²⁹ McCaffrey employed his two lead brigades like blocking linemen to open a hole for Colonel John LeMoyné's 1st Brigade so that he could, in turn, carry the ball forward another 50 kilometers beyond the enemy's first line of defense. Colonel Ted Reid's 197th Infantry Brigade opened the assault by blocking the division's left on Objective Brown at 0300 on the 25th. He began with a bombardment from 72 guns and 27 rocket launchers, followed by deeper strikes with fighter-bombers. Colonel Paul Kern's 2d Brigade, supported by an equally heavy artillery concentration, blocked to the right at Objective Gray at 1300. By midday, the ground gained by LeMoyné's drive up the middle had carried the division into a new type of terrain. The open desert changed gradually into a series of narrowing, shallow valleys. By 2130, having met little significant opposition, McCaffrey was three-quarters of the way to the Euphrates River.³⁰

McCaffrey had almost beaten his enemy—time—when the Euphrates River Valley slowed him down. His first 24 hours of movement had been along the eastern edge of the Sahra al-Hajarah (Desert of Stone), a high,

rocky desert 300 to 400 meters above sea level that is covered with sharp stones and boulders. Some 60 kilometers from the Euphrates, however, the terrain changes abruptly as it begins a 290-meter drop to the river. Steep cliffs, many as high as 50 meters, flank the wadis that are the natural routes down from the high desert. Where they level out for any distance, sabkhas mark the areas flooded during the infrequent rains. The area is rough going when rain is sparse. When it rains as it had for nearly 24 hours prior to the division's arrival, the sabkhas turn into nearly impassable quagmires. During prebattle analysis in late December, McCaffrey's troops picked up the name "the great dismal bog" for the region from an Air Force pilot's survival map.³¹

Lieutenant Colonel Thomas Leney's 2-4th Cavalry, the divisional cavalry squadron, worked most of the night of February 25 to find paths through the great dismal bog. After countless stops, starts, and redirections, they found the few passable routes for the 197th Brigade. Engineer battalions following in trail began to make the routes more passable for scores of vehicles waiting on dryer ground to follow. The cavalry then turned to screen toward the division's western flank.

By midday on the 26th, the 24th Infantry Division's three brigades were ready to resume final attacks to seal the Euphrates River Valley. As McCaffrey saw the situation, the 197th Brigade had to seize Battle Position 101 on the southeastern edge of Tallil Airfield. The 2d Brigade would seize Battle Position 103 and then turn east to attack toward Jalibah Airfield. As McCaffrey's main effort, the 1st Brigade would stay in the lead and sever Highway 8 at Battle Position 102. Operating on individual axes, but in consonance with one another, the three brigades marched north at 1400.



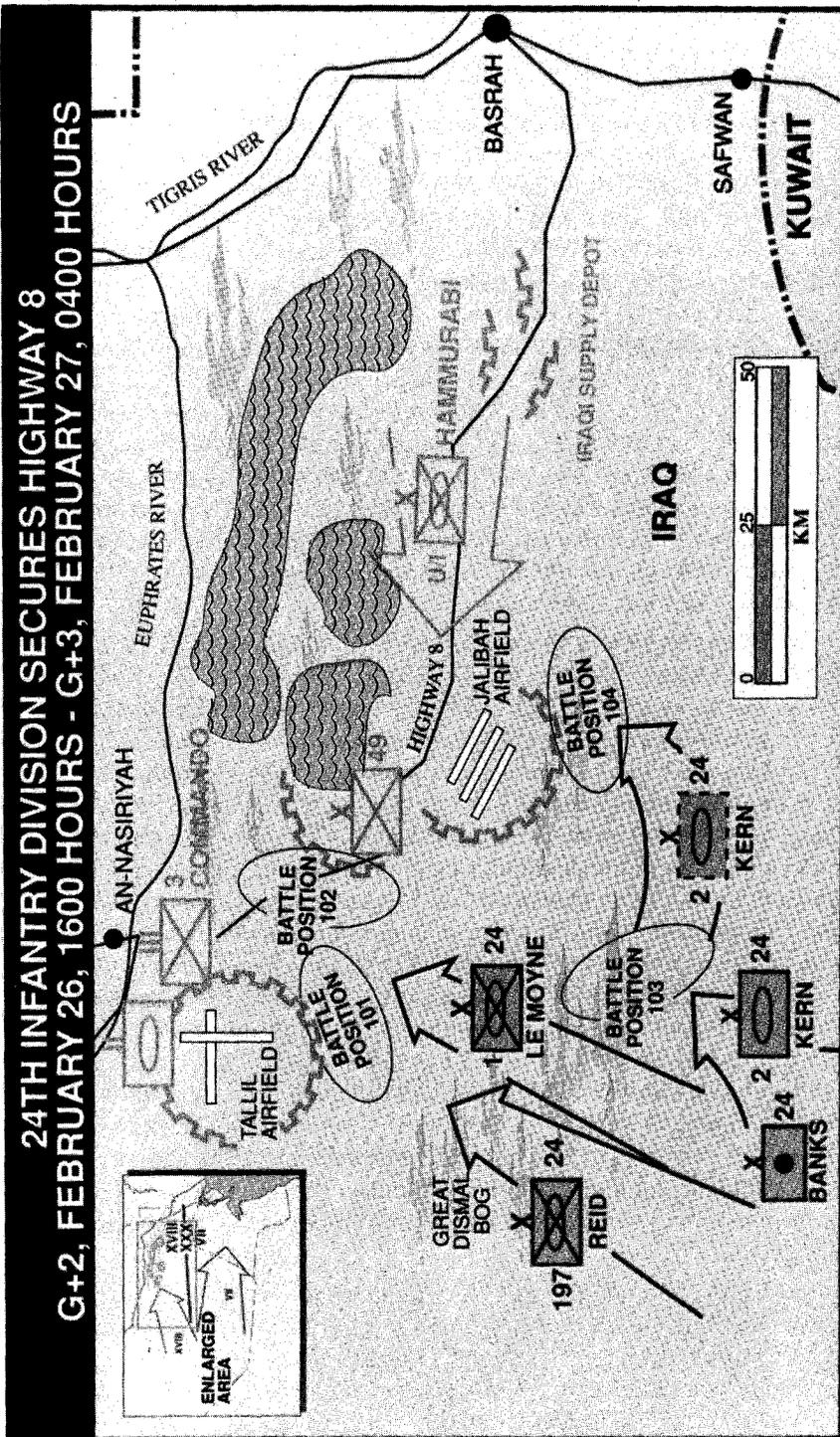
Abrams from the 197th Infantry Brigade emerged out of the rough terrain south of Highway 8 only to encounter mud flats along the Euphrates River Valley, February 26, 1991.

The rain and blowing sand of a shamal draped the remaining daylight with a surreal shroud as the brigades wound their way up muddy wadis and sabkhas.

Prior to the operation, McCaffrey had planned to halt temporarily south of the Euphrates in order to bring his logistics forward before pressing on to cut Highway 8. But fearing that the Republican Guard might seize on his pause to begin their escape, McCaffrey pressed on. Farther south, the 24th Infantry Division's logistics system pushed supplies forward. The drive through the great dismal bog had required so many twists, turns, and diversions that fuel in the combat units was running low. Division support command soldiers set up temporary logistics bases along combat trails to the rear of the brigades. The first division support area, DSA-1, was 100 kilometers from the border in the center of the division sector. As the lead brigades moved out, the division set up DSA-2 northwest of Objective Gray to take advantage of the French seizure of as-Salman. Major Pat Shull commanded TF Shull, a convoy of 243 trucks with 95 combat loads of ammunition and 50,000 gallons of fuel that cleared MSRs Texas and Virginia and closed into DSA-2 on the afternoon of February 26.³²

As the northernmost brigade of the 24th, LeMoyne's 1st Brigade was the first to hit its objective, BP102 astride Highway 8. The 1-41st Field Artillery and the 212th Field Artillery Brigade pummeled the objective with a 30-minute preparation. The Iraqis struck back. For the first time, the 24th met spirited resistance. Iraqi soldiers in the northern KTO were completely different from the totally ineffective infantry the 24th had overrun at their intermediate objectives. Although surprised by the Americans, the soldiers from the Iraqi 47th and 49th Infantry Divisions and commandos from the Republican Guard engaged the attackers with small arms and towed antitank guns. Soon hundreds of rounds of Iraqi artillery began to land in the midst of the Americans. As usual, however, the Iraqi gunners persisted in firing only at preselected targets, often 55-gallon drums they had evidently emplaced as reference points that LeMoyne's drivers readily learned to avoid. A Q-36 radar from C Battery, 25th Target Acquisition Battalion, was in position when Iraqi rounds came in. The radar picked up the enemy rounds in the air and electronically backplotted to a D-30 battalion immediately after it fired. Within minutes, the 1-41st and 212th Field Artillery responded with volleys of dual-purpose, improved conventional munitions (DPICM) to silence the Iraqi guns.³³

On the northern end of BP102, Lieutenant Colonel John Craddock maneuvered his 4-64th Armor toward a canal north of Highway 8. Two 100mm rounds from an AT-12 antitank gun slammed into the main-gun mount and rear fuel cells of Craddock's tank, but the tough machine continued to roll. Craddock, shaken but none the worse for wear,



continued to direct his companies to overwatch positions. He used one company to block the highway and led the other two north to a canal paralleling the river. Craddock discovered several dozen Iraqi trucks and tanks on HETs, their drivers proceeding blithely along the highway, unaware that it was no longer theirs. Trucks, tanks, and HETs were quickly dispatched. Continuing north, the battalion overran a huge, untouched ammunition storage area and pushed the beaten Iraqis protecting the facility into the weeds near the canal. 1st Brigade reported BP102 secure by 0110 on February 27. Craddock later learned that his charge across Highway 8 had turned back a brigade of the Hammurabi Armored Division seeking to escape to Baghdad.

To the west of the 1st Brigade, the 197th Brigade had struggled with the terrain through the evening of the 26th. As the brigade moved north toward BP101, Reid softened his objective with A-10 strikes. Sandstorms and high winds slowed the march and obscured visibility. At 2200, elements of the Republican Guard 3d Commando Regiment attempted to ambush the lead elements of TF 1-18th Infantry, most of which were still struggling to emerge from the great dismal bog. First Lieutenant Larry Aikman's scout platoon was guiding the battalion through a particularly difficult area when one of his scouts spotted Iraqi antitank teams partially hidden around them. Acting instinctively, Aikman formed his thinly armored M113s on-line and in the midst of rocket and machine-gun fire, barreled over the commandos.

Gradually Reid pulled all of the 197th Brigade out of the bog to attack BP101. By late evening, he had massed his two mechanized infantry battalions and one tank battalion against the enemy's right flank. In a coordinated attack, the "Sledgehammers" of the 197th hit the position



Support columns stretched hundreds of kilometers back to the line of departure in Saudi Arabia.

simultaneously and rolled up another 300 Guard commandos. The 4-41st Field Artillery fired more than 100 rounds of improved conventional munitions and rocket-assisted projectiles ahead of the advancing infantry. By 0430, the brigade objective was secure.³⁴

While the 197th struggled with the mud and the 1st Brigade slammed the door on the Hammurabi, Kern's 2d Brigade emerged from the bog and raced forward against minimal resistance to grab BP103 by early evening. Kern immediately began to prepare for the attack on Jalibah. By late evening on the 26th, McCaffrey's lead elements stood on Highway 8 while the division tail stretched 300 kilometers back to the original tactical assembly area. Not until the Hammurabi's HET-loaded tanks ran into McCaffrey's tankers did the Iraqis discover that the XVIII Airborne Corps had closed their most direct route to Baghdad.

XVIII AIRBORNE CORPS: G-DAY PLUS 2, EARLY EVENING

Fully a day before McCaffrey reached Highway 8, General Luck realized that if he was to join the assault on the remainder of the Iraqi army gathering around Basrah, he had to swing the bulk of his corps eastward to catch up with VII Corps. By the evening of the 26th, VII Corps was far enough east to engage Republican Guard outposts, and every kilometer that Franks moved east increased the distance between the two corps. Like Franks, Luck had to call an audible to join in the fight against the Guard. CONPLAN Ridgway fit the requirement precisely. Ridgway called for the 24th to make the main effort by attacking east along both sides of Highway 8. The 101st would support with a deep attack by Apache and Cobra helicopters into an objective 10 kilometers north of Basrah.³⁵ Ridgway placed the 3d ACR under the operational control of the 24th Infantry Division and placed Colonel Emmitt Gibson's 12th Aviation Brigade under control of the 101st. By 2020 Luck had issued orders to reorient the corps.

The two division commanders reacted quickly in the next two hours. McCaffrey directed his brigades to continue their attacks up to the Euphrates and then to turn east. The 3d ACR would secure Objective Tim on a new boundary between VII Corps and XVIII Airborne Corps. Peay would then move his 2d Brigade from FOB Cobra to Objective Tim to create FOB Viper. Four battalions—a total of 72 Apaches—would base from Viper to screen the corps' northern flank. General Johnson, the 82d commander, established AO Bragg in the rear of the 24th Division sector to assist in clearing bypassed enemy units and to destroy abandoned Iraqi equipment. Johnson moved his 1st and 3d Brigades forward along MSRs Texas and Virginia, expecting to release them to the 24th Division to assist in clearing operations near Tallil or Jalibah. Luck's corps was prepared to synchronize its operations with those of Franks.

THE BATTLE OF WADI AL-BATIN

VII CORPS, G-DAY PLUS 2

2d Armored Cavalry Regiment: G-Day Plus 2, 1525

On midafternoon, February 26, Franks began the long awaited battle against Saddam's Republican Guard as VII Corps crossed Phase Line Tangerine on the 65 Easting, the longitude selected as the final coordination line before the corps reached the Guard. At 1525, the 2d ACR advanced past Tangerine with its three ground squadrons abreast: the 2d Squadron in the north, the 3d in the center, and the 1st in the south. Thirty minutes later at the 70 Easting, the 2d Squadron ran into the forward security outpost of the Tawakalna Division's 18th Mechanized Brigade. A task force of more than 30 T72M-1 main battle tanks and a dozen BMP infantry fighting vehicles occupied revetted firing positions, while supporting infantry manned interconnecting dugouts and trenches. The thick blowing sand and swirling mist cut visibility to less than 1,000 meters, but with thermal sights the Abrams and Bradleys still had an advantage in any weather. The cavalry advanced to the killing ground unannounced.

As the 2d Squadron pressed forward, indistinct blobs in thermal viewers grew steadily in size and clarity. Excited gunners first used low power on their gun sights to count targets, then switched to high power to pick out those with turrets rotated in their direction. A mile and a half from the Iraqis, tank commanders' fire commands broke the soft rushing noise of vehicle intercoms. Gunners answered immediately with "On the way" and pressed the firing buttons on their "cadillac" handgrips.

The boom of tank guns and the sharp "crack—crack—crack" of Bradley 25mm chain guns echoed through the fog, rolling over many Iraqi crews 10 seconds after they died. Inside American tanks, the blast of the main guns outside merely blended with the cacophony of battle. All along the firing line, the sequence in each tank was identical: a rapid-fire command to engage; the mass of the main gun slamming rearward with each shot; the blast-proof door banging open as the loader smoothly flipped another silver bullet into the breach.

Survivors in the Iraqi security force stubbornly returned fire, aiming at the muzzle flashes of the American guns. Unable to see clearly, Iraqi gunners collectively made two technical mistakes that doomed them. First, they had all zeroed their 125mm main guns at the standard Soviet battle sight range of 1,800 meters. The cavalry opened the duel at 2,400 meters, so nearly every Iraqi shot landed short. Second, they assumed that the distant muzzle flashes came from stationary tanks. Since Americans fired on the move, the Iraqi shots that came close merely skipped over the spot where the Abrams had been only seconds before. Under the



An M1A1 from the 2d Armored Cavalry Regiment just moments before meeting the Tawakalna Division.

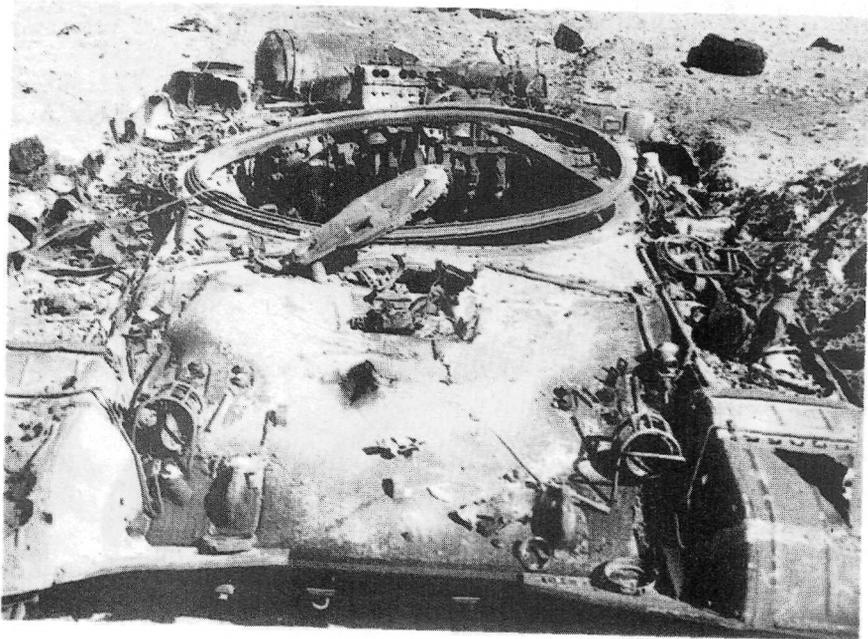
American guns, the remaining combat vehicles in the Iraqi security force died quickly. The defending Iraqi commander later remarked that after losing 2 of his 39 T-72s in five weeks of air attack, the 2d Cavalry had annihilated his entire command in fewer than six minutes in what later became known as the Battle of 73 Easting.³⁶

As flaming T-72s began to form the outline of the Iraqi firing line, the squadron's fire support teams called for artillery. More than 2,000 howitzer rounds and 12 MLRS rockets spewed 130,000 bomblets on the frontline Iraqis and targets beyond the range of direct fire weapons. When a company of T-72s threatened to overrun 3d Platoon of G Troop, howitzers fired an immediate suppression mission that stopped the Iraqis cold. Regimental gunners fired 128 DPICM rounds and 12 MLRS rockets shortly thereafter against an unseen Iraqi armored unit previously located from aerial photographs. Faint white flashes followed by dense columns of smoke stretched out horizontally by the wind proved the intelligence target to have been a good one. Later inspection verified that the strike had knocked out a company of armored vehicles, 27 ammunition bunkers, and 40 trucks. The 73 Easting fight was nearly over.

As darkness fell, the fighting in the northern zone of the regimental sector slackened, while in the southern portion of the zone the 1st and 3d Squadrons had little contact. Unfortunately, another fratricide incident occurred in 3d Squadron as a Bradley mistakenly fired at another Bradley in a neighboring troop, wounding six soldiers. Once its leaders had sorted out the friendly fire incident, the cavalry regiment halted, its job of finding the enemy completed. At the VII Corps tactical command post, reports



The M829A1 depleted uranium round for the Abrams main gun easily cut through the T-72's thick frontal armor. Once penetrated, ammunition exposed inside caught fire and the tank exploded catastrophically. In the photo below, a silver bullet entered just below the driver's hatch.



from this engagement and others arrived almost simultaneously from across all 80 kilometers of the corps front.

VII CORPS: G-DAY PLUS 2, LATE AFTERNOON

A single glance at the corps' tactical situation map revealed that Franks' attack had achieved almost geometric precision. Because the corps approached aligned roughly north to south and the Republican Guard defenses were oriented northwest to southeast, the collision occurred at an oblique angle. As the flank divisions lapped around the dense mass of the Republican Guard, the trace of the corps front eventually formed into the horns of a bull. In the north, 1st Armored Division hooked deep around the northernmost Iraqi brigade. In the center, the 3d Armored Division pinned the Tawakalna's 9th Armored Brigade, and in the south the 1st Infantry Division prepared to pass through the 2d ACR, first to penetrate and then to envelop the southern wing of the enemy. On the corps' right flank, the British 1st Armoured Division crushed remnants of the 52d Armored Division to advance well past the left flank of the Republican Guard. The close battle now began in earnest.

1st Armored Division: G-Day Plus 2, 1300

As Griffith's 1st Armored Division rolled past Phase Line Tangerine with three brigades on-line, his aerial scouts from the 1-1st Cavalry searched across his front to confirm the latest updated templates of enemy positions from corps intelligence. At 1312 a Cobra scout team from C Troop, working the southern portion of the division sector, discovered one battalion of the Tawakalna's 29th Mechanized Brigade.

Chief Warrant Officer Gary Martin, call-sign "Snake 22," flying a Cobra in a hunter-killer team from 1-1st Cavalry, had already logged several hours rounding up prisoners, coordinating with flank units, and searching for the enemy. The weather continued to deteriorate and visibility dropped to less than a mile in the windblown sand. Martin was about to break station when he was ordered to investigate an Iraqi armored unit reported to be moving into the southern divisional sector.

"Snake 22" skimmed low over the desert beneath the overcast sky into steadily falling visibility. He closed to 1,500 meters before he saw the column of 50 T-72s. Another hunter-killer team joined Martin's as the squadron prepared a JAAT mission with two Air Force A-10s en route to the area. As the team moved into position, Martin opened fire with his rockets. His few aerial-delivered bomblets added to the hundreds of thousands being dropped on the Iraqis by MLRSs. Suddenly a loud popping noise distracted the pilot: the Cobra's compressor had stalled. A quick check of his instrument panel revealed rising engine temperature that promised an imminent forced landing. To lighten the crippled aircraft, Martin fired off his remaining rockets. He then pointed the nose of

the Cobra toward friendly lines and called for help. Before the Cobra engine finally quit, choked by desert sand, Martin had nursed the bird along like a flat rock across a pond, skipping the Cobra off the ground four times to get out of range of Iraqi tanks.

On the ground, Martin and his gunner nervously awaited rescue as the A-10s roared overhead, pounding Iraqi positions fewer than 1,500 meters away. In minutes, Second Lieutenant Dave DeSantis, B Troop's 3d Platoon leader, careened up in an M3 Bradley scout vehicle to pick up the downed aviators. The pair quickly transferred the Cobra's crypto gear and other loose items to the scout track and mounted up. As they sped to safety, DeSantis told Martin, a highly decorated Vietnam MEDEVAC pilot, "Hey Chief, relax and enjoy the ride. You'll be safe in the back of my Brad." Martin would spend most of the rest of the war as a ground scout.³⁷

After the scouts confirmed the enemy positions in 3d Brigade's zone, Griffith ordered Zanini, its commander, to destroy the Iraqis. Meanwhile, Griffith pressed forward with his center and left-flank brigades. The 1-1st Cavalry continued its reconnaissance eastward, skirting the enemy battle positions to the north.

3d Brigade, 1st Armored Division: G-Day Plus 2, 1500

Zanini returned to his command post. After reviewing the situation with his staff, he decided to add the firepower of Lieutenant Colonel Ward Critz's TF 7-6th Infantry to the assault line of Lieutenant Colonel Ed Dyer's TF 1-37th Armor. Both battalions would blast Iraqi vehicles and defensive positions with main-gun rounds, TOW missiles, and 25mm and 50-caliber fire. Zanini would hold TF 3-35th Armor in reserve under Lieutenant Colonel Ed Kane.³⁸

When the enemy positions were softened up, Zanini would keep TF 7-6th Infantry in an overwatch position 3 kilometers back while TF 1-37th Armor rolled forward to crush the enemy. His intelligence showed that the Tawakalna should be arrayed within 5 or 6 kilometers to the front, so when they passed 3 kilometers they would begin to reach the range limits of TF 7-6th Infantry's covering fire. Zanini recognized that TF 1-37th Armor would be exposed, but he figured Dyer's tankers could handle the fight. Dyer's battalion was the only unit in 1st Armored Division equipped with the new heavy turret that offered the added protection of depleted uranium shielding against the powerful Iraqi T-72 125mm smooth-bore guns.

Thirteen kilometers from contact, Zanini's direct support artillery, the 3-1st Field Artillery Battalion, opened the battle. Three kilometers out, TF 7-6th Infantry opened fire as planned, soon joined by TF 1-37th Armor on its right. Along the brigade front, Abrams tanks and Bradley infantry vehicles fired at the enemy positions at ranges in excess of 2,000 meters, laying down a base of fire to cover Dyer's attack. After 15 minutes under

fire from both battalions and supporting artillery, several dozen Iraqi hulks burned to the front.

It was pitch black at 1900 and the entire brigade was steering by thermals and night vision goggles. TF 1-37th Armor's line of 41 Abrams tanks charged past the right flank of TF 7-6th Infantry, leaving behind their lightly armored vehicles and attached infantry company. The tanks entered a fire storm as they closed. Iraqi machine-gun fire made a continuous slapping sound against the armor of the American tanks as red friendly and green enemy main-gun tracers skimmed across the ground and ricocheted high into the night sky. The Iraqi gunners were poor marksmen and their green sabot tracers hit nothing. The American gunners, however, were deadly. Within seconds after a T-72 had marked its position by firing its main gun, it took an American sabot in return and disappeared in a shattering set of explosions. The battleground rapidly became a junkyard of Iraqi armored vehicles.

Dyer led his three tank companies forward as he struggled to maintain the symmetry of his battle line to keep his firepower forward and thereby avoid casualties from friendly fire. They advanced toward four Iraqi battalions, two in a forward defensive line and two in a second line 1,000 meters farther back. Although he did not know it at the time, Dyer was badly outnumbered. He faced more than 150 armored vehicles on the objective, including two tank battalions. Normally assigned one tank battalion and three mechanized infantry battalions, the commander of the Tawakalna Division had removed an infantry battalion from the 29th Mechanized Infantry Brigade and replaced it with a tank battalion. The battle was to be one of quality versus quantity.

As they moved forward, what had formerly been open plains of sand gave way to vegetation. Long stretches were covered with thick, low bushes no higher than a tank. Thermals saw through the low vegetation, making it impossible for enemy soldiers or vehicles to hide. Several dozen T-72s and BMPs in the first 3,000 meters were ablaze within what seemed like seconds. Ironically, the American gunners' ability to outshoot the Iraqis began to work against them. As Iraqi tanks burned, the heat began to wash out the American thermal sights, making them difficult or impossible to use.

In Europe before the Gulf crisis began, Dyer's D Company had been training to represent the US Army in the Canadian Army Trophy Competition. The CAT gunners, as they referred to themselves, killed Iraqi vehicles with impressive speed as they rolled forward. Captain Pittard, their commander, soon found that it was extraordinarily difficult to keep his tanks on-line as they moved through the night, but he urged them on. The CAT team was living up to their advance billing as the best gunners in the Army. As he listened to his crews shout over

the radio after each distant kill, Pittard knew that the extra hours of training had been worthwhile.

Pittard had started some 50 meters behind his line of 12 tanks, but like an anxious race horse at the starting gate, his own tank driver had gradually edged closer to the line as the fight intensified. Eventually Pittard shouldered aside two of his tanks to give his gunner a clear field of fire. Then they mounted a small ridge where he held his company in place on the crest.

As they waited for the other companies to catch up, many of Pittard's tanks picked up hot spots very close in the wadi below them and began methodically to knock them off. Meanwhile, Pittard monitored the battalion net, noting that B Company had fallen well behind and C Company was farther back still. He listened to Dyer urging, cajoling, even pleading with the other company commanders. Then B Company drew abreast of Pittard and joined in with their main guns at the targets in the wadi. Within 10 minutes, C Company drew up on the ridge. Once on-line, the entire battalion charged down the other side.

As TF 1-37th Armor crossed over the ridge into the heart of the Iraqi defensive zone, the Iraqi commander's carefully disposed rear-slope defense stripped Dyer's tanks of their range advantage. Within 1,000 meters, a row of dug-in T-72s and BMPs suddenly appeared below the crest. All were hull-down in prepared positions behind thick dirt walls. Now the Americans were well within Iraqi killing range, and although the Soviet-made night sights were markedly inferior, things could still get very dicey. So many Iraqi vehicles were burning around the target that areas of the battlefield were as bright as day. Again, the American thermal sights began to wash out.

The Iraqi defender was also clever enough to build his rear-slope defense behind a stretch of particularly rugged terrain, which he liberally scattered with excellent Italian-made antitank mines. After cresting the ridge, Dyer's tanks found themselves not only exposed, but considerably slowed. Dyer was trying to keep C Company on-line when Bravo 6 called to tell him that tank Bravo 23 had hit a mine and lost its engine. The tank commander still had battery power, however, and would keep fighting until the battalion trains arrived. Minutes later he got the report that Sergeant Steede's Delta 24 had been knocked out with an unknown number of casualties.

The battle had suddenly turned grim. A T-72 round had hit Bravo 23 in the rear exhaust exits. Another T-72 bypassed by D Company had killed Steede's tank. Bravo 23 took another hit from its ambusher in the back of its turret. The Iraqi sabot blew through the armor into the compartmented ammo storage area and set off an enormous explosion as many of the 30-odd main-gun rounds that were left erupted in white-hot flames. The

M-1 design came through, however. The blast escaped through the blow-out panels in the top turret, thus venting the explosion away from the crew compartment. The Halon suppression system kept fire out long enough for the crew to scramble to safety. Once they were safely away, more ammo began to cook off, and Bravo 23 started to burn in earnest.

Meanwhile, C Company had lost two more tanks to enemy fire, including the company commander's track. One of C Company's platoon leaders, Lieutenant Al Alba, killed the T-72 and BMP that had fired the lethal shots. Taking command of the company, Alba had combat lifesavers treat the wounded, then loaded both crews atop his turret and continued to attack.

Late that evening, Dyer called a halt to allow his tank crews to rearm, refuel, and rest, however briefly. He knew that the Medina Division's 14th Brigade was no more than 20 kilometers to the east, and his battalion would meet them soon. The crews of TF 1-37th Armor, though exhausted, were triumphant. Although they still had 30-odd hours of fighting before them, on that night they had utterly destroyed the best equipped and most competent force in the Iraqi army, and although they lost four tanks in the process, no Americans had died. After the war they returned to count the burned-out hulks of 76 T-72s, 84 BMPs, 3 air defense artillery pieces, 8 howitzers, 6 command vehicles, 2 engineer vehicles, and myriad trucks.

By 2300, Zanini's 3d Brigade had consolidated on the far side of its objective. TF 1-37th Armor returned briefly to the objective to sweep the trenches with infantry. Military police and engineers then took charge of the growing number of prisoners.

Griffith's division had turned the northern flank of the Republican Guard's first defensive line. Aware of enemy moves to establish additional defenses farther east, Griffith repeated his leapfrog maneuver in order to pass around the rest of the Tawakalna and the Jihad Corps and continue the fight with a fresh brigade. As he moved, Griffith again sent his attack helicopters to strike the enemy on and beyond his next objective. Franks' left horn was hooked deep in the side of the Republican Guard.

Griffith Strikes Deep

In the late afternoon of February 26, the next portion of the Iraqi defenses in Griffith's path was a defensive line occupied by a motorized brigade of the Adnan Infantry Division, located more than 20 kilometers northeast of the Tawakalna. Farther east, brigades from the Medina Armored Division began deploying in force to a previously prepared second defensive line. Griffith sent his cavalry out to pinpoint both forces. By dusk, the 1-1st Cavalry Bradleys were 50 kilometers to the front of 1st Armored when fire from BMPs and T-72s pinned them down. Griffith did

not want his cavalry to get involved in a direct fire slugging match with a heavier force, so he called on the Apaches to help them disengage. As ground units continued to press forward, he called his artillery into action before ordering his forward brigades to pass through the stalled divisional cavalry squadron and pick up the close fight against the Medina.

While repositioning, the Cavalry Squadron operations center and B Troop received heavy enemy artillery fire, probably from the Adnan. Private First Class Marty Coon, a combat lifesaver, was close by the Squadron TOC when he heard the yell, "Incoming!" In moments, more than 100 enemy artillery bomblets rained down on Coon and his fellow soldiers, wounding many of them and shredding their vehicles. After the fire ceased, Coon and the other soldiers rushed about to treat the wounded, carry others to safety, and mark unexploded munitions. Helping the wounded was Private First Class Tammy Reese, a young medic from the 26th Support Battalion. She and Coon were instrumental in maintaining the cohesion of the unit. Of the 23 soldiers wounded, all but 6 were able to carry on their duties. Five wheeled vehicles were destroyed, and one Bradley and two armored command post vehicles were damaged.³⁹ In an ominous turn, Griffith realized that his enemy also possessed deadly bomblet artillery munitions.

Meanwhile, Griffith's 3-1st Aviation under Lieutenant Colonel Bill Hatch extracted revenge on the Adnan with their Apaches. After a quick radio call, Captain Rick Stockhausen's six A Company Apaches took off in echelon-right formation 100 feet apart and close to the deck. Each Apache carried eight Hellfires and thirty-eight 2.75-inch rockets. An unrelenting rain drummed against each canopy. The night was so black that the pilots relied on FLIRs alone to distinguish the line of Bradleys below them that marked the forward line of contact with the Adnan. Two kilometers beyond the friendlies, all six Apaches carefully eased up on-line, 150 meters apart and still some 50 feet above ground. Stockhausen could see 30 to 40 hot spots through his FLIR, mostly sitting still 6 kilometers to the front. He used his laser designator to divide the area into six distinct kill zones, one for each aircraft. As he methodically began to direct his Hellfires into the Iraqis, Stockhausen noticed that the dark night and the very steep angle of the missiles' trajectories completely surprised and confused the enemy. As they ran aimlessly among the burning vehicles, the hapless Iraqis obviously had no idea what was hitting them. Hatch had joined the engagement as a copilot-gunner. He was so absorbed in his Hellfire sight that he failed to notice a rumble of explosions below him until the pilot in the adjacent aircraft broke in on his radio. The pilot told Hatch that he had just chewed up about a dozen Iraqi soldiers armed with AK-47s who had collected below Hatch's Apache and were ready to shoot him down. His wingman's 30mm gun had saved Hatch's life.

After 45 minutes on station, A Company returned to refuel and rearm. Hatch's battalion made three more circuits through the Adnan during the early hours of the morning. Later, gun camera videotape confirmed that the single Apache battalion had killed 38 T-72s, 14 BMPs, and 70-odd trucks.

3d Armored Division: G-Day Plus 2, Midmorning

General Funk's 3d Armored Division formed the center of VII Corps, tightly wedged between Griffith's 1st Armored on his left shoulder and Rhame's "Big Red One" moving up steadily on his right. He had only 27 kilometers of battle front. With such limited room, Funk could only allow two brigades forward on-line and still maintain some minimal capability to maneuver. The dense formation, however, would not permit the leap-frog and bypass technique that Griffith was able to execute in the north. Instead, Funk was obliged to defeat his piece of the Republican Guard with concentrated firepower. Funk divided his supporting artillery into two roughly equal groups which he tucked up very close behind the lead task force of each lead brigade. Two distinct concentrations of artillery—as many as 50 guns and rockets apiece—were kept close so that when a major obstacle appeared, they could be immediately ordered into action to deliver an overwhelming mass of firepower. Funk's artillery practiced what could only be called a "mass hip-shoot." Given the signal, battalions of rockets and guns would halt in place and orient themselves, using GPS or the inertial locating device aboard each MLRS. Then, under the control of the brigade fire support officer, guns of all calibers would open fire in unison. The 3d Armored Division artillery and its supporting 42d Artillery Brigade could execute a hip-shoot in fewer than eight minutes.⁴⁰

Funk pushed the artillery as far forward as possible to take advantage of every available meter of range. He kept two MLRS batteries under his direct control to work over fresh targets provided by his forward scouts, Air Force and Army pilots, or preplanned target lists derived from intelligence. Ironically, in one instance his MLRS was so close that he had to send two batteries 7 kilometers back to the rear to get the targets beyond the minimum range of the system. On Tuesday morning, February 26, Funk had driven his two-brigade phalanx within range of the Tawakalna. He initiated his drumbeat of firepower with an hour's worth of pinpoint shooting by two Air Force AC-130 Spectre gunships. As close air support A-10s and F-16s appeared over his formation, Funk established informal airspace coordination areas (ACAs) along specific grid lines to separate his artillery from his tactical air. The ACAs gave friendly aircraft a block of airspace free of friendly surface fires, especially artillery, and allowed Funk to continue attacking targets outside the ACAs. As aircraft reported on station to the division air liaison

officer, he passed them to his forward brigades to allow them to work the air support as close as 5 kilometers to friendly troops. Concern for fratricide dictated that no close strikes would be flown unless the aircraft were under positive control from observers on the ground. Funk used as much air support as weather and safety allowed. He wanted to delay calling for an artillery hip-shoot for as long as possible so that the momentum of his two brigades would not be interrupted until the last conceivable moment.

Funk's two lead brigades attacked the Tawakalna's 29th Mechanized and 9th Armored Brigades on an oblique angle at 1632. As with the 1st Armored Division, he achieved total tactical surprise, appearing some five hours earlier than the Tawakalna commander expected. In the north, 3d Armored's 2d Brigade hit the southern end of the 29th Mechanized and main positions of the 9th Armored while the 1st Brigade broke into the enemy security zone in the south. Once the 2d Brigade penetrated, Funk planned to pass the 3d Brigade through to exploit the success.

1st Brigade, 3d Armored Division: G-Day Plus 2, 1630

Colonel William Nash's 1st Brigade on the right flank of the 3d Armored Division struck the enemy security forces at approximately 1630. Nash advanced with TF 4-32d Armor in the north, TF 3-5th Cavalry in the center, and TF 4-34th Armor in the south. The brigade formation was very tight. As few as 50 meters separated the fighting vehicles as they jockeyed for space and the least obstructed field of fire along the 12-kilometer line of steel. Lieutenant Colonel John Brown's TF 3-5th Cavalry pressed forward into the lead only to discover an Iraqi bunker complex supported by dug-in T-72s and BMPs 1,000 meters to its front. Sensing the imminence of a fight, more tanks and Bradleys began to elbow into the firing line.

By most accounts, First Lieutenant Marty Leners was the first tankerman in the 3d Armored Division to kill a T-72. Leners led 1st Platoon, C Company, 3-5th Cavalry, and his tank, Charlie 1-1, led the brigade eastward through the dense fog and rain. At 1630 the scout platoon leader, First Lieutenant Donald Murray, reported taking a T-72 sabot round through the road wheels of his Bradley. Aware now that the enemy was very close, Captain Tony Turner, the company team commander, ordered Leners to slow a bit so that the trailing platoons could swing up on-line beside him. Just then Leners' gunner, Sergeant Glenn Wilson, spotted the T-72 through his thermal sight. The alert Iraqi tank commander picked up Leners' tank at the same time. Leners immediately dropped down to verify the target while shouting fire commands through the intercom. Wilson lased the target. A series of red digital zeros flashed below the reticle...too much dust and fog for the laser to sense a return. Leners could see the ugly snout of the T-72 main gun begin to traverse toward him. Wilson lased again. Still zeros. The tank's battle sight was set to 1,200

meters, but Leners could see that the T-72 was well beyond that range. Instantly he reached to the right wall of the turret to find the range toggle so that he could manually index a greater range. With his thumb jamming the toggle upward, the digital reading increased in 10-meter increments, slowly at first, then accelerating: 1260—1270—1280.... It seemed to Leners as if he were trying to set the alarm on a digital clock in slow motion. Wilson kept the pipper on the T-72, nervously fingering the firing button on his "cadillac" handgrips. Leners estimated a range of 1,600 meters. Both crewmen could sense that the T-72 would be on them before the new range was set. Leners commanded "Fire," and a split second later the round was gone. The round kicked a plume of sand in the air as it ricocheted just short. As Leners kept his thumb on the toggle, Specialist Leonidas Gipson loaded another sabot round. The reticle now registered 1650. Wilson fired again. Three seconds had passed between the first and second round. Leners and Wilson shouted, both in exultation and relief, as their thermal sights whited out with the explosion of the Iraqi tank.

Meanwhile, the remainder of the brigade closed on the enemy bunker complex and every gun and missile launcher seemed to open fire at once as the commander called for artillery and air support. The 2-3d and 2-29th Field Artillery delivered a concentration of 154 DPICM rounds on the fortifications at 2020. More high-explosive and white phosphorus (WP) rounds followed. Bits of burning WP found full fuel tanks ruptured by the high explosives and set off a series of gigantic secondary explosions. Using a ground laser designator, a fire support team guided two Copperhead rounds fired by the 2-3d Field Artillery onto two bunkers, destroying both.⁴¹

The fighting was not all at stand-off distances. For the scouts of Lieutenant Colonel John Kalb's TF 4-32d Armor, it turned into the armor equivalent of a switchblade fight. The scouts had three Bradleys forward on-line. At 1920, Sergeant Dennis DeMasters spotted a T-72 at 400 meters with infantry clinging to it closing on his Bradley from the southeast. DeMasters attempted to engage, but when his TOW test indicated a system failure, he scuttled his vehicle to the rear in an anti-Sagger drill. Meanwhile Staff Sergeant Christopher Stephens fired a TOW at the charging tank, but its guidance wire tangled and it fell short. At the same time, Lieutenant James Barker, his platoon leader, opened up with 25mm fire, shooting a few Iraqi infantry off the back of the T-72. Stephens fired a second TOW that struck the T-72's tracks, immobilizing but not killing the Iraqi tank. Then as Barker fired a third missile to kill the stubborn T-72, disaster struck. Friendly 25mm fire from the north hit Stephens' Bradley, killing him and mortally wounding another soldier. Two other scouts suffered less serious wounds. The whole frantic engagement had lasted no more than four minutes. Meanwhile, Sergeant First Class Craig Kendall from C Company rushed forward

with his Abrams to cover the battered scouts as artillery and mortar fire finished the fleeing Iraqi infantry.⁴²

The 1st Brigade had to pace its advance with the 2d Brigade, Funk's main effort, and keep contact with the division's 4-7th Cavalry and the 2d ACR to the south. During fighting in the southern portion of the brigade sector, 4-34th Armor, 4-7th Cavalry, and the 2d ACR became entangled with each other in the darkness and foul weather. Caught in the middle, the 4-7th Cavalry took friendly fire from its right and left rear, resulting in the deaths of two of 4-7th's soldiers and the loss of three Bradleys. Funk reconsidered continuing the night assault. He had already approved 3d Brigade's plan to conduct a deliberate attack in the north at dawn and he needed to maintain alignment of his forward brigades to prevent any chance of further fratricide. With the confusion developing on his southern flank, however, Funk decided to halt until daylight. Until then, close air support, artillery, and attack helicopters would repeatedly strike the enemy positions. Bradley gunners used 25mm cannon to mark targets for the A-10s, and the division artillery began a sustained program of fires to keep the Iraqis off-balance.⁴³

Funk kept a tight reign on his attack aviation. He apportioned one Apache company to each of his two attacking brigades. At approximately 2200 a call from the corps deep battle cell informed him that a JSTARS "hit" had discovered a column of Iraqi armor moving southeast to



A TOW leaves the launcher of a Bradley fighting vehicle. The Bradley proved its ability to kill armored targets with 25mm automatic cannon as well as with longer-ranging TOWs.

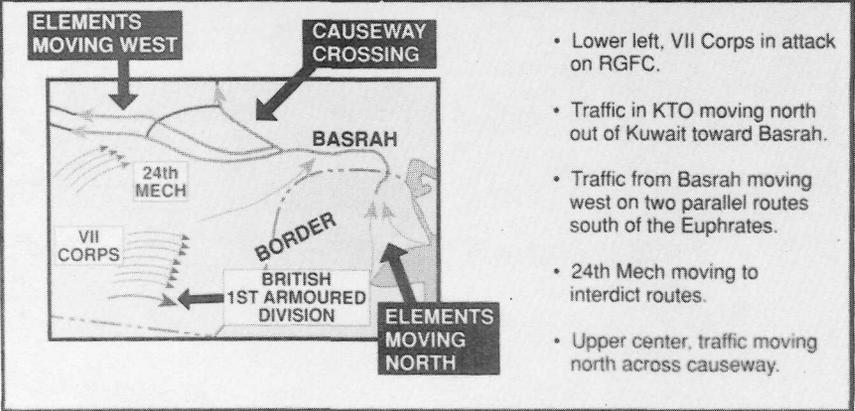
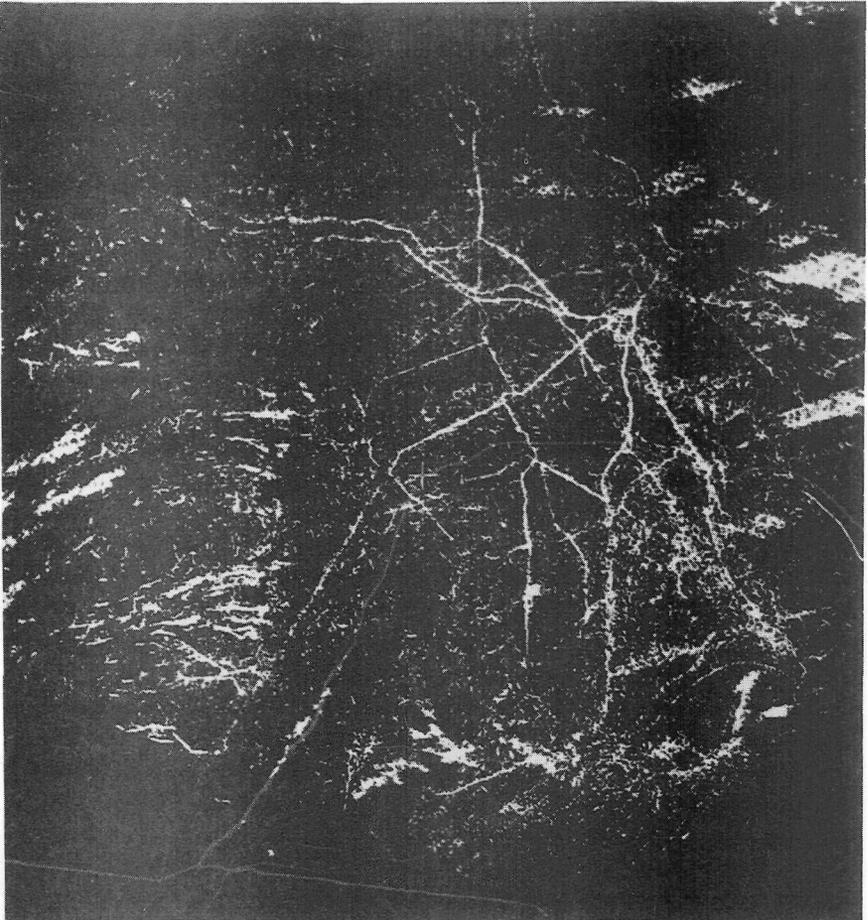
northwest across his front. Documents captured later confirmed that a Tawakalna battalion task force had been alerted to conduct a shallow counterattack into the crease between the 3d and 1st Armored. The column was too far away to engage with tank fire and too imprecisely located for artillery. But if unengaged, it might disrupt the VII Corps attack at its most vulnerable moment. Funk's call to Colonel Mike Burke, his Aviation Brigade commander, brought 24 Apaches forward across the 2d Brigade sector half an hour later. The weather was abominable. Burke's helicopters moved cautiously above the 2d Brigade's line of advance, steering solely by night goggles and FLIRs. At 2300 the lead Apache spotted the distinctive heat signature of a battalion of Iraqi tanks lined up in column and closing steadily on an open area between the two divisions. The Apaches caught the column in the flank and took just three minutes to destroy 8 Iraqi T-72s and 19 BMPs. Standing in his commander's hatch 5 kilometers away, Funk could see sequential flashes of white light marking the impact of each Hellfire on the hapless Iraqi column.

Later that night, in a second effort to split the American units between boundaries, the Iraqis launched another probe with a battalion task force from the 29th Brigade of the Tawakalna. The Iraqi unit had, however, gone too far south and missed the seam. As it turned back north in the early morning light, the unit met disaster. Kalb's 4-32d Armor was in overwatch position west of the Wadi al-Batin as 3-5th Cavalry and 4-34th Armor bounded forward. At 0700 on the 27th it was Kalb's time to move. His scouts had not gone far before they spotted the Iraqi column at a great distance along the wadi, moving southeast to northwest directly across the path of the 2-34th. He had a few moments to rush his tanks into a line formation before the Iraqis spotted him. Kalb gave a task force fire order and 43 tanks opened up at once across a 2-kilometer front. The firefight ended in slightly more than a minute with 15 T-72s and 25 armored and numerous wheeled vehicles burning. Kalb had stopped the Iraqis from slicing into the southern flank of 2d Brigade.

2d Brigade, 3d Armored Division: G-Day Plus 2, 1700

As it moved into battle against the Tawakalna, Colonel Robert Higgins' 2d Brigade advanced in a wedge formation with a reinforced tank battalion, TF 4-8th Cavalry, in the lead. TF 4-18th Infantry was to its left and TF 3-8th Cavalry to its right. Supporting artillery and engineer units were tucked into the center of the formation; combat support vehicles trailed behind.⁴⁴

The scout platoon of TF 4-8th Cavalry made first contact with the enemy defensive line at 1722 when the scout platoon leader surprised an Iraqi squad leisurely dismounting from vehicles alongside their fighting positions. After making short work of the squad with 25mm fire, the scouts moved on. Five minutes later, four hot spots on the scouts' thermal



JSTARS readout, G plus 2, depicted VII Corps and 24th Infantry Division elements closing on the Republican Guard. Note that the Iraqis continued to move toward Basrah and to use the causeway over the Euphrates River.



The blast from a 120mm Abrams main gun momentarily lit up the night.



Tawakalna Division T-72 found after the Battle of Wadi al-Batin. The tanks were dug in, exposing only 2-3 feet of turret.

sights proved to be Republican Guard BMPs. After a brief fight, the "Spearhead" scouts wisely pulled back under a hail of enemy fire. Artillery air bursts, mortar rounds, and BMP shells landed throughout the formation as the scouts scuttled for shelter behind the following heavy tank companies.

TF 4-8th Cavalry commander, Lieutenant Colonel Beaufort Hallman, ordered "Action front" to his B Tank Company on the left, C Tank in the center, and D Tank on the right. B Tank moved up on-line to overwatch Charlie as Captain Ernest Szabo, C Tank commander, bounded his 1st Platoon forward to develop the situation. C Tank's wedge formation closed to within 1,500 meters of the enemy before opening fire. The 1st Platoon quickly destroyed a BRDM reconnaissance and a ZSU 23-4 anti-aircraft vehicle. After this first volley, some 100 Iraqi soldiers appeared. A few surrendered and some helped wounded comrades. Most, however, moved to cover, and as the company pressed forward, enemy rocket-propelled grenades hit them from all directions and artillery exploded randomly throughout the formation.

The increasingly intense enemy fire convinced Hallman to rein C Tank back into the center of a battalion firing line. Szabo got the call to pull back just as his tank, Charlie 66, threw a track. Under heavy fire, he dismounted and rushed over to another tank to continue the fight, only to find its radio encoding system inoperative. Again, Szabo scrambled through the hostile fire to take over his executive officer's tank, Charlie 65. As darkness fell the enemy fire slackened, but C Tank stayed to destroy enemy bunkers, infantry, and armored vehicles. By 1755, the C Tank commander had finally pulled back slightly, and B Tank shifted right to stay tied in with them. A check to Bravo's left revealed that they were still tied in with TF 4-18th Infantry.

On Charlie's left in Bravo Tank, Second Lieutenant Sean Carroll was completely absorbed in the sights and sounds of his first battle when suddenly an Iraqi BMP 73mm smooth-bore round streaked past the front of his tank and over his wingman and smashed into the heavy machine-gun mount of tank Charlie 12. Glancing off the mount, the round exploded against the left sponson box. Hit by fragments, Staff Sergeant Robin Jones, Charlie 12's tank commander, heard his driver scream as the Abrams' Halon fire extinguisher went off. Thinking the tank was on fire, Jones rolled out of the hatch and off the back deck and staggered over to Charlie 11 to get help before collapsing onto the sand. Then artillery airbursts began to explode over the formation, shredding ration boxes and duffle bags attached to the turret rails of the tanks around him. Carroll watched from his "open protected" hatch position as Charlie 12's tank commander fell in the sand behind the tank. Szabo roared up in Charlie 65 and called for his first sergeant to bring the medic track

forward. After the medics recovered the stricken soldier, Szabo continued the fight. Meanwhile, Charlie 12 fought on with a three-man crew.

On the right flank, D Tank moved up into the direct firefight. As they charged forward, Delta's tank commanders observed C Tank under fire. RPGs exploded harmlessly against the armor of the Abrams, the crews inside oblivious to the hits. Enemy artillery fire continued to impact about the company. Remaining on-line with C Tank and the TF 3-8th Cavalry on its right flank, D Tank awaited further orders as the last light left the desert.

Following slightly to the rear of TF 4-8th Cavalry, Colonel Higgins was not pleased with the way his brigade's battle was unfolding. From his forward position, Higgins sensed that the enemy remained unbroken and might halt a frontal attack unless he pounded them harder. Therefore, he moved his MLRS battery back in order to strike the nearby enemy positions again. Not fully realizing his northern brigade was already into the main Iraqi defenses, Funk pressed Higgins to attack and realign with the 1st Brigade to the south. Higgins reported that the enemy positions were extensive, including battalion positions almost 3 kilometers in depth behind the main Iraqi defensive line. Higgins planned to hit the Iraqis with a hasty attack at 2200. Funk concurred and continued to blanket the vast position with masses of artillery and repeated Apache strikes.

Hallman's TF 4-8th Cavalry would again lead the attack. Hallman planned to bound forward in three phases. In the first, a single tank platoon from C Tank would rush toward the enemy, covered by fire from the rest of the task force. During the second phase the rest of C Tank would follow, coming on-line with the lead platoon. Finally, the remainder of the battalion would move forward to form on-line with C Tank. An intense artillery preparation would precede each step.

At 2247, Szabo's 3d Platoon bounded forward 500 meters, 45 degrees off the planned azimuth of advance. With a few choice words, he regained the attention of the errant lieutenant. During the second bound, a friendly DPICM bomblet fell short, killing one of the fire support NCOs. Slowly the task force advanced, firing at more and more hot spots as bunkers and dismounted infantry came into view. On the right flank, D Tank engaged reconnaissance vehicles 2,000 meters distant. Inspection of the battlefield the next morning revealed that Iraqi vehicle commanders tried to protect their machines from direct fire by hiding behind the dead vehicles. However, the 120mm sabot rounds sliced through the dead vehicles with more than enough energy to kill the live ones as well.

On the third bound, B Tank on the left flank hit heavy resistance. Bradleys and tanks engaged BMPs at ranges from 100 to 3,000 meters. The tankers used machine guns and high-explosive main-gun ammunition to disintegrate dismounted infantry and bunkers at point-blank range. For

the next four hours, the tankers fought desperately in what could only be construed as a tanker's version of hand-to-hand combat.

On the brigade's left flank, TF 4-18th Infantry also encountered a thick assortment of well-hidden BMPs and tanks at ranges from 25 to 3,000 meters. In the initial fighting that afternoon, TF 4-18th Infantry's A Company got into a slugfest with an Iraqi BMP company supported by T-72s. After killing one BMP with 25mm fire, three more BMPs attacked the company but were quickly destroyed, along with one T-72. Still, the Guard infantry continued to fight tenaciously. The battalion's Vulcan section moved up to join the fight. The six-barreled 20mm cannon sprayed the Iraqi soldiers with high-explosive rounds at 2,000 rounds per minute. The rounds exploded among the Iraqis, breaking the attack. That night the enemy stubbornly continued to resist, mounting counterattacks against the boundary between the battalion and 4-8th Cavalry. The Americans destroyed enemy forces trying to hit the brigade's flank before the Iraqis could see to shoot. At 0300, Higgins reinforced TF 4-18th Infantry with an additional tank company, but by then the fighting had started to taper off. With Iraqi resistance largely broken, the Americans began regrouping. At 0345, Higgins' brigade received orders to pass the 3d Brigade forward into battle later that morning. The battle staff issued warning orders and began preparations for the battle handover that would take place soon after first light. The 2d Brigade would then become the division reserve. Funk wanted to insert a fresh brigade to maintain the tempo of the attack.

1st Infantry Division: G-Day Plus 2, 1800

To the south of 3d Armored Division, Rhame's "Big Red One" prepared to pass through the 2d ACR and pick up the battle late on the 26th. In blowing sand and rain, the division took the hand-off after a 16-hour march from the breach and lined up on the move to go into battle against a Republican Guard heavy brigade. Rhame moved his two forward brigades through the cavalry in a very delicate and risky passage-of-lines operation that came off better than many leaders had dared hope. As he formed his division to attack, Rhame took control of the 210th Field Artillery Brigade from the 2d ACR and was firmly in control of the battle by 2200. His entrance into the fight boosted the VII Corps battle line to nine heavy maneuver brigades, all attacking simultaneously across the 80-kilometer front.⁴⁵

The Tawakalna Division commander had organized his defensive line with his tank battalions concentrated on his left and right wings with infantry entrenched between. The 1st Infantry attacked on a west-to-east axis south of the 2d ACR. As Rhame's two lead brigades, the 1st and the 3d, advanced through the enemy obstacle belt, they hit the defenders of the southern portion of the 18th Mechanized Brigade and, farther east, the

12th Armored Division's 37th Armored Brigade. The fight lasted until daybreak.

1st Brigade, 1st Infantry Division: G-Day Plus 2, 2200

In the north, Maggart's 1st Brigade attacked with two battalions abreast, TF 2-34th Armor on the left and 1-34th Armor on the right. TF 5-16th followed the remainder of the Brigade. The 1st Brigade moved against the 18th Brigade of the Tawakalna Division and mixed units from other enemy formations including the 37th Brigade of the 12th Armored Division. No longer attacking conscript infantry, the "Big Red One's" soldiers soon learned that the Guard and Army troops at Norfolk would fight with better skill and better weapons than the units they had faced at the breach.

Bone-tired after their eighth day of combat since the first shots fired in security zone fights on February 18, the 1st Brigade troops had moved up believing they would be placed in reserve. But mental agility was the order of the day. Soon after passing through the 2d ACR at the 70 Easting, both lead battalions made contact. Changing formations following the passage, two of TF 2-34th Armor's company teams turned north and broke contact with the remainder of the task force. Separated by a rise, neither of the lost companies could see the main body. Fearful of fratricide from the cavalry to the rear or between elements of the task force, TF 2-34th commander, Lieutenant Colonel Gregory Fontenot, directed Captain Juan Toro of B Company to fire a star cluster to guide the missing company teams. Toro complied, and Fontenot put two more star clusters up to mark the task force flank. The star clusters oriented the lost companies, but they also alerted the Iraqis who rewarded Fontenot and Toro by opening up with rifle fire, heavy machine guns, and RPGs. TF 2-34th Armor fought its way through one dismounted platoon position using only machine-gun and rifle fire since the enemy was between B Company and the two companies coming south. Shortly after midnight, both units were moving again, still in contact.

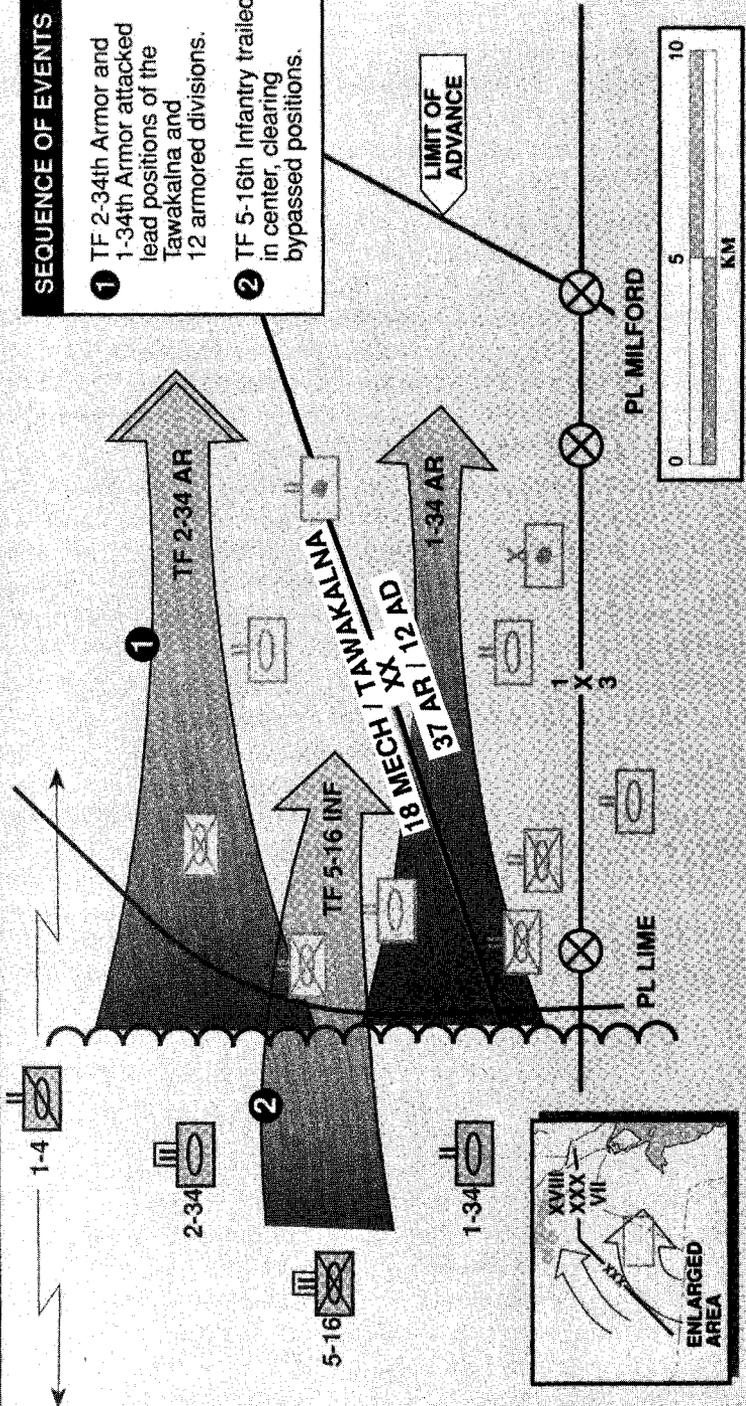
TF 2-34th Armor attacked with two tank teams abreast, an infantry team in echelon on the task force's left, followed by an infantry team and an engineer company. The task force identified most enemy positions at about 2,000 meters, then divided targets among companies while closing the range to 1,500 meters. At 1,500 meters, Fontenot brought his units to a short halt and engaged using volley fires when possible. When two BMPs appeared in Alpha Team's sights between them and Delta Team's trail vehicle, Captain Johnny Womack's soldiers knocked out the BMPs without waiting for orders.

To the south, Lieutenant Colonel G. "Pat" Ritter's 1-34th received fire that destroyed two Bradleys from First Lieutenant Glenn Birnham's scout platoon, killing one soldier and wounding four others. Birnham was

1ST INFANTRY DIVISION'S FIGHT AT NORFOLK G+2, FEBRUARY 26 - G+3, FEBRUARY 27

SEQUENCE OF EVENTS

- 1 TF 2-34th Armor and 1-34th Armor attacked lead positions of the Tawakalna and 12 armored divisions.
- 2 TF 5-16th Infantry trailed in center, clearing bypassed positions.



among the wounded, but he stayed with his platoon and guided in a tank company sent by Ritter to reinforce the Bradleys. Birnham continued the fight until the last of his soldiers was evacuated. Once Ritter secured the burning Bradleys, he bounded a second company forward to relieve the rest of his scout platoon. Once the scouts withdrew, 1-34th Armor broke through the initial positions of a T-55-equipped tank battalion and resumed the attack.

Ritter's battalion, attacking along the seam of two brigades, moved quickly in a diamond formation, picking off tanks and BMPs from two enemy units. The 1-34th Armor troopers dispatched both T-72s from a Guard unit and T-55s from a regular army tank battalion. By 0600 the two battalions had destroyed more than 100 armored vehicles and captured hundreds of prisoners. Lieutenant Colonel Sidney "Skip" Baker's TF 5-16th Infantry followed, gathering stragglers and destroying a logistics support area bypassed by TF 2-34th Armor.

The night settled into a seemingly endless succession of short fights against unsupported tank or infantry company positions. Across the brigade front, flaming pyres marked the destruction of the 18th and 37th Brigades, while several kilometers to the north the 1-4th Cavalry marked the horizon with pyres of their own as they attacked east protecting the brigade's flank.

By first light the brigade had swept through Objective Norfolk, and its service and combat support units were threading their way through the battlefield litter, occasionally taking fire from survivors of the night's carnage. The division interrupted refueling with curt orders to continue the attack. The brigade motored off for two more days and another night's fighting, which made them one of the few ground maneuver units that saw action on all four days of the VII Corps attack.

3d Brigade, 1st Infantry Division: G-Day Plus 2, 2200

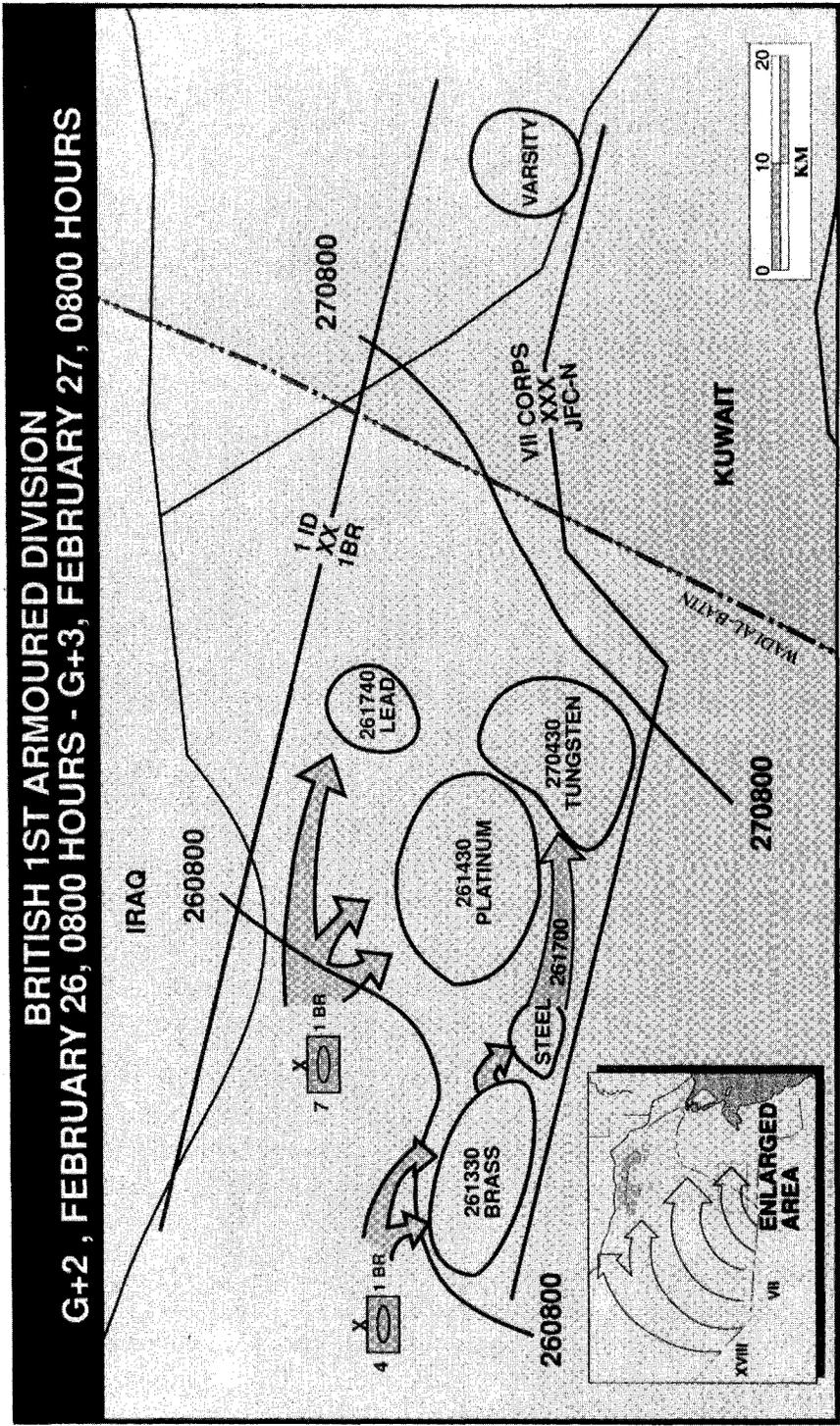
Colonel David Weisman commanded the division's 3d Brigade from the 2d Armored Division (Forward) from Germany. He charged in the south with three battalion task forces on-line from left to right: TF 3-66th Armor, TF 2-66th Armor, and TF 1-41st Infantry. Almost at once the brigade encountered well-prepared defenses. An antitank ditch running the width of the brigade sector slowed the charge. As they crawled across the obstacle, grimly determined Iraqi antitank teams hidden in nearby trenches engaged the tanks from all sides with rocket-propelled grenades. Rockets exploded against the Abrams, blowing off gear and damaging engine doors and tracks, but causing no serious damage. Throughout the night, stubborn Iraqi antitank teams repeatedly emerged from previously bypassed positions to stalk the tanks and Bradleys. Alert and constantly on edge, the American tankers had little trouble detecting the approaching Iraqis through thermal sights, and they cut them down like wheat

with long bursts of coaxial machine-gun fire. The Iraqis died never realizing how they had been detected. By remaining still and cold, a few T-55 tanks managed to escape detection long enough to open up a fanatical main-gun fusillade at point-blank range. The superior range, accuracy, and mobility of the American tanks counted for little in the ensuing tank-to-tank gunfight. Red and green sabot tracers crisscrossed and careened into the night as gunners on both sides opened fire on virtually any likely target.

American gunners relied on tube orientation and direction of movement to identify friend from foe. Any vehicle or unit not moving eastward parallel to their route of advance immediately came under fire. At 0200 tragedy struck. B Company, TF 1-41st Infantry, trailed B Company, 3-66th Armor, on the battalion's northern flank. On the south, A Company, 3-66th Armor, led C Company, 1-41st Infantry. As Bravo 1-41st moved forward to close up with Bravo 3-66th, Captain Lee Wilson's Bradley received RPG fire from his left that struck the ground in front of his track. In a tragic coincidence, the image of an Iraqi RPG exploding on or near a vehicle appeared through a thermal exactly like the image of a main tank gun firing. Almost immediately, American sabot rounds hit Wilson's and two other Bradleys. Out front the scenario was the same for A and B Tank teams. When Bravo's right front tank took two hits from RPGs, it came under friendly tank fire from the north. Three Alpha Abrams were also hit by main-gun rounds. Another Bravo tank turned toward the main-gun flashes only to be hit on the front slope. Later that morning, on the brigade's northern flank, two Bradleys from TF 3-66th Armor crossed into the 1st Brigade's sector by mistake. Clearing a bunker complex, the Bradleys came under RPG and machine-gun fire, which they returned. A Company in 1-34th Armor mistakenly identified the wayward Bradleys as T-62s and destroyed both. Fratricide had cost the lives of six soldiers and destroyed five Abrams and five Bradleys. To preclude further incidents, both brigade commanders tightened the already iron grip they had over the pace of their advancing elements. Stern orders, cross talk between units, specific instructions for opening fire, and vigilance on the part of junior leaders kept formations on-line and served to limit any further confusion on the battlefield. By 0430 on the 27th, the 1st Infantry began rounding up prisoners, regrouping units, and resupplying tanks.⁴⁶

British 1st Armoured Division: G-Day Plus 2 to G-Day Plus 3

To Rhame's south, General Smith's British 1st Armoured Division had also pressed the attack throughout the night of the 26th. That morning, 4th Brigade attacked and seized Objective Brass. Despite the blowing sand and dust, heavy Challenger tanks and Warrior infantry fighting vehicles quickly destroyed most of two armor and mechanized infantry battalions.



By 1330, the brigade held the objective in strength as 7th Brigade in the north launched its attack to seize Objective Platinum. In a carefully orchestrated series of one-two punches, Smith shifted his artillery back and forth in support of the alternating attacks of his brigades. By nightfall, advance British elements approached the Wadi al-Batin in the north, while 4th Brigade launched yet another attack in the south to seize Objective Tungsten by 0430. Both units then regrouped, with 4th Brigade preparing for a full-scale morning assault across the IPSA pipeline and beyond the Wadi al-Batin.

VII CORPS: G-DAY PLUS 2, 1300

11th Aviation Brigade

From the beginning, Franks had planned to fight a synchronized battle, striking the Iraqis close and deep simultaneously. One of his means for attacking deep was Colonel Johnnie Hitt's 11th Aviation Brigade, which Franks intended to launch against Iraqi armored reserves. The Air Force assumed some of the deep-strike mission, but Hitt's Apaches were more effective at precision strikes against masses of moving armor, especially at night. Franks kept his G2 looking up to 150 kilometers in front of his forwardmost units for any armored movement large enough to threaten his corps. On the afternoon of February 26 when no such movement had occurred, he decided to strike deep at the stationary Iraqi 10th Armored Division.

VII Corps' deep battle cell had developed a number of event-triggered contingency plans and had placed a series of kill boxes over areas the Iraqis would likely use to launch counterattacks. These plans were thoroughly coordinated with the staff and corps units for execution on short notice. One such plan, CONPLAN Boot, called for a deep attack to be launched from Saudi Arabia, across the breach, and into a kill box 100 kilometers inside Iraq.

Franks told Hitt to prepare for an attack that night to preempt any movement of the 10th Armored Division still in its static position near Objective Minden well inside Kuwait. Hitt issued the warning order at Forward Assembly Area Skip at 1530, then flew to the corps main command post to coordinate the plan. In order to strike so soon, Hitt was forced to change CONPLAN Boot considerably. Time was too short to plan for a detailed passage of lines as the brigade had done in the pre-G-Day feint on February 17.

Uncomfortable with some of the details, Lieutenant Colonel Roger McCauley, commander, 4-229th Attack, and Lieutenant Colonel Terry Johnson, deputy brigade commander, flew to the VII Corps Tactical Command Post to confer with Franks and his G3, Colonel Cherrie. Franks told Johnson not to launch until he and McCauley had coordinated with every

division and 2d ACR. The general was particularly concerned that last-minute changes might result in fratricide when the attack passed over friendly ground units. Cherrie also told the pilots to stay in the kill boxes and not to fire east of the 20 north-south grid line. The Air Force would attack on the east side of that line.

The attack was planned to begin at 2100, but Hitt could not get through on the TACSAT to transmit the final go-ahead order until 2030. At 2100 Major Sam Hubbard, the battalion S3, took off in an Apache with A Company, and Johnson followed in the brigade command and control UH-60. A Company's six Apaches were at the point of McCauley's battalion wedge with the mission of clearing the route for B and C Companies. As Hubbard approached the friendly front line, he observed a tank battle just south of Objective Norfolk. The Apaches diverted slightly to the south. Johnson's aircraft arrived at the same point seconds later.

McCauley's battalion of 18 Apaches attacked with three companies on-line. A Company had the northern box, which included a slice of Objective Minden. B and C Companies had the center and south, respectively. After Captain Greg Vallet's A Company crossed the release point, they turned east and crossed into Kuwait. Vallet spread his Apaches about 150 meters apart and began a slow eastward movement into the box at about 30 knots. Almost immediately the Apaches received small-arms fire as they swept through, firing missiles, cannon, and rockets at anything that appeared hot in the FLIR. Friendly units were not a factor since the nearest were 50 to 80 kilometers behind them. Captain Ben Williams' B Company entered his kill box shortly after Vallet. About halfway through the box, Williams' company picked up T-62s and a mix of MTLBs and BMPs and wiped out everything in their path all the way to the 20 grid line, the limit of advance. In a moment of great frustration, McCauley, in the front seat of one of Bravo's Apaches, watched in his FLIR as hundreds of Iraqi vehicles moved steadily northward toward Basrah on the other side of the 20 grid line. He radioed Johnson to recommend a second attack across the grid line with every Apache available. Except for one engagement by one of his teams, Captain Steve Walters ran C Company all the way to the last 5 kilometers of his box before encountering the enemy. Walters' Apaches destroyed an assortment of MTLBs, T-62s, Type-59s, BMPs, and ZSU 23-4s, along with numerous trucks of all types.

Back at the corps main headquarters in the deep battle cell of the All-Source Intelligence Center, Hitt had received an updated JSTARS readout that showed thousands of moving targets on both sides of the frustrating 20 grid line. At 2230 Johnson forwarded McCauley's recommendation for a reattack and told Hitt the battalion was already rearming and refueling.

The Air Force attacked the area east of the 20 grid line with a series of single FB-111 strikes, where each dropped four 2,000-pound laser-guided bombs approximately every 20 minutes. When the air tasking order had been prepared more than 24 hours earlier, any targets east of this line were assumed to be well beyond the concern of the VII Corps commander. The methodical F-111 bombing sequence was never intended to blunt the mass withdrawal of several Iraqi armored divisions. If every bomb hit a vehicle, only 12 of several thousand would be knocked out each hour. When Hitt realized that the Iraqis were in full flight, VII Corps tried to get permission from ARCENT to attack into the Iraqi formation. Just one battalion strike with 18 Apaches could kill more than 100 vehicles in half an hour. Unfortunately, once the ATO was in the execution phase, it was almost impossible to turn off. In the limited time available, ARCENT could not portray to CENTCOM how successful Franks' deep attack had been and how devastating a strike east of the 20 grid line would have been. The missed opportunity frustrated Franks and the 11th Aviation Brigade pilots. Franks had lost a chance to attack in depth by synchronizing maneuver and air power. As for the pilots, they had had to pass up an attack pilot's dream. To salvage as much as he could from the strike, Hitt ordered another attack in the same kill box to commence as soon as McCauley rearmed and refueled.⁴⁷

Rearming and refueling took longer than expected, but A Company was back in the air at 0130. For the second mission, McCauley ordered Vallet to attack from the south into what had been C Company's kill box while B Company reattacked in their original box. Vallet's second attack turned into a free-for-all. While his other crews systematically snaked their way through the kill box, Vallet focused on a multivehicle convoy only 2,000 meters to his front. For three minutes Vallet worked the column over from his copilot-gunner position. Using classic tactics, he knocked out the lead and trail T-62s with Hellfires and switched to multipurpose submunition rockets as he closed on the convoy. He finished off the convoy with a hail of 30mm shells in a final pass.

Even though the Apaches had swept the boxes clean on the first mission, more combat vehicles of all types continued to pour in from the south as the Iraqis rushed madly to escape Kuwait. McCauley's two companies expended all ordnance in fewer than 30 minutes. When they pulled out for the return, McCauley told Johnson he could do another attack, but it would be almost daylight before they would be finished. Johnson agreed that little was to be gained if they could not go beyond the Air Force limit line. The deep attack on Minden was over.

The raid on Minden knocked out much of the Iraqi 10th Armored Division. In the two separate 30-minute attacks, the 4-229th destroyed 33 tanks, 22 armored personnel carriers, 37 other vehicles, a bunker, and an undetermined number of Iraqi soldiers. Just 18 Apaches had broken the

division's spirit and by so doing eliminated any hope that al-Rawi might have of reinforcing his Republican Guard. The men of the 10th Armored Division—the second half of the Jihad Corps—their morale shattered, blew up their personnel bunkers, abandoned their tanks, and began walking north.

[See Figure 5-4, "Ground Operations—G+2, Tuesday, February 26, 2400 Hours," at the back of the book.]

Sunrise on the 27th was a dawn for the undertaker. The morning pall lifted to reveal burned-out tanks and armored personnel carriers, crewed by corpses, scattered across the landscape. Around and in front of defensive trenches, dead Iraqi antitank ambush teams lay in clusters. At irregular intervals along the 80-kilometer front lay heaps of broken and discarded equipment: helmets, smashed automatic rifles, crushed anti-tank grenade launchers, empty boots, and blood-stained clothing—sober evidence of the night's grim events.

Clustered among the dead up and down the battle line sat stunned and morose Iraqi Guardsmen and regular army soldiers. One was Lieutenant Saif ad-Din of the Iraqi 9th Armored Brigade. As he sat with a group of his comrades waiting for interrogation, Saif watched the Americans methodically prepare to resume the attack. Nothing in his training had prepared Saif to fight such soldiers. When the Americans struck, Saif and his crew mates were taking advantage of the lull in fighting afforded by the blessedly atrocious weather. The attack came with such fury and suddenness that the tactics Saif had learned in fighting the Iranians proved useless. The Americans seemed to have telescoped a month's worth of fighting into minutes. First came the artillery. Thousands of exploding bomblets landed about him in such profusion that they seemed to search out every bunker and trench. Then the direct fire onslaught began. Vehicles all about him erupted in sequence, left to right, until all were burning furiously. Within minutes the American tanks had passed his position. The terror was quickly over... and Saif, at least, was still alive.

VII CORPS: G-DAY PLUS 3, DAWN

For the soldiers of VII Corps, however, the battle was far from over. Thus far, only the 2d ACR had been pulled off-line and put in reserve, replaced by the "Big Red One." Franks' intent remained unchanged: press the fight to destroy the Republican Guard no later than sunset on February 27. Fewer than 12 hours remained to complete the task. As the day progressed, the heavy morning fog dissipated. The theater remained

under heavy cloud cover although the ceiling did lift to about 3,000 feet, allowing a greater use of close air support.

In the north, the 1st Armored Division was at least 15 kilometers ahead of 3d Armored Division. Griffith prepared to attack through Objective Bonn to Phase Line Kiwi. Already his Apaches were out forward, ranging freely about in search of the Medina Armored Division, the next and last major unbroken unit in their path.

Funk's 3d Armored Division had fought the Tawakalna's 29th Mechanized Brigade's southern battalion, as well as the majority of its armored brigade and part of its 18th Mechanized Brigade. Funk was now poised to penetrate the southern portion of the enemy defensive line with a 1st Brigade attack, while 3d Brigade passed through 2d Brigade in the north and continued the drive east.

Rhame's 1st Infantry Division's two forward brigades had destroyed the southernmost battalions of the 18th Mechanized Brigade and the majority of the 37th Armored Brigade as they clawed their way, meter by meter, through Objective Norfolk. Now they stood ready to continue the assault east across the Wadi al-Batin and into Kuwait. His lead elements were also some 15 kilometers forward of the 3d Armored Division.

In the far south at the hub of the wheel, Smith's British 1st Armoured Division, roughly on-line with Rhame's 1st Infantry Division to its north, finished a deliberate, set piece attack across the IPSA pipeline and secured their final objective on the west side of the Wadi al-Batin. Smith's lead elements then regrouped for the attack across the wadi to seize Objective Varsity, deep inside Kuwait.

1st Armored Division: G-Day Plus 3, Dawn

At first light on February 27, the 1st Armored Division with its three brigades shoulder-to-shoulder steamrolled east toward the Medina Armored Division. Griffith pulled back his Bradley scout vehicles before reaching the enemy main line. Thereafter the division front was made up exclusively of 350 M-1 tanks.⁴⁸

2d Brigade, 1st Armored Division: G-Day Plus 3, Dawn

Five battalions would engage the Medina Armored Division's 2d Brigade and part of a brigade from the Adnan Division in the largest tank battle of Desert Storm. The fight would be remembered by those who fought it as the Battle of Medina Ridge. Colonel Montgomery Meigs' 2d Brigade marched forward on the northern end of the division. From north to south, the brigade's three battalions were TF 4-70th Armor, TF 2-70th Armor, and TF 1-35th Armor, which tied into the leftmost battalion of the first brigade, TF 4-66th Armor.

Progress that morning was slow as the 2d Brigade worked its way through an Iraqi training and logistics storage area, destroying tanks, armored personnel carriers, artillery pieces, engineering and command vehicles, and trucks. The sky was dark and brooding and a wet wind skated across the sand. The tanks had been running all night and had stopped to refuel soon after first light. Fuel was short, but each of the three tank battalions had saved enough to ensure another four hours of running time.

At about 1130, the brigade entered a wadi filled with grass-covered, sandy hillocks. As they emerged onto the clear, sandy, high ground east of the wadi, tank crews in TF 2-70th Armor began to pick up targets on their thermals. Although barely distinguishable at 3,000 meters, they appeared to be tanks and other armored vehicles buried deeply in the sand. Meanwhile, Lieutenant Colonel Bill Feyk moved his TF 4-70th Armor's tanks on-line and ordered the more vulnerable infantry Bradley company to form the reserve. Meigs moved TF 6-6th Infantry to cover the corps' open left flank. The massive tank firing line halted momentarily to request permission to engage.

Within seconds after TF 4-70th Armor had been cleared to fire, A Company opened up on Iraqi tanks at about 2,800 meters. To the right, TF 2-70th Armor had briefly stopped on the high, flat ground, and Alpha 4-70th pulled up next to them. For tank crewmen who had previously only fired on main-gun ranges, the view through their thermals was heady indeed. Hundreds of hot spots glowed from camouflaged tanks at a distance nearly impossible to see with the naked eye. Like the Tawakalna commander, the Medina's commander had established a rear-slope defense below the ridge. He had, however, made a fatal error in terrain appreciation by placing the defensive line too far from the ridge. His tanks could not reach the American tanks on the ridge, but with careful gunnery the Americans could just range his.

As they crested Medina ridge, Meigs ordered a halt when he realized the magnitude of the formation arrayed before him. To even the odds, he called for air support. Apache helicopters from 3-1st Aviation quickly took up station and hovered no more than 30 feet above TF 4-70th Armor's battle line before opening fire with Hellfires. Iraqi artillery immediately added background noise to the battle by dropping heavy fire behind Meigs' line of tanks. As usual, the artillery fired without adjustment and continued to land harmlessly in the same spot. Now Meigs' main tank guns added their own deadly tattoo to the crescendo of battle sounds. The farthest any had ever fired in training was 2,400 meters. Now, when the pressure was really on, his tankers were regularly drilling sabot rounds through T-72s at 3,000 meters and beyond. Much later Feyk recalled a particularly poignant moment. Surrounded by rotor wash, the roar of engines, and the deafening explosions of tank rounds and artillery, Feyk

stopped his frenetic activity to absorb completely what his tankers were doing. Each crewman was grimly killing Iraqi tanks with calm, mechanical regularity. Excitement could be heard on the radio, but no panic—just an occasional shouted warning or a correction, or perhaps a muttered word of encouragement. It was a scene of uncanny discipline and phenomenal human control in the midst of hell. Feyk would never forget it.

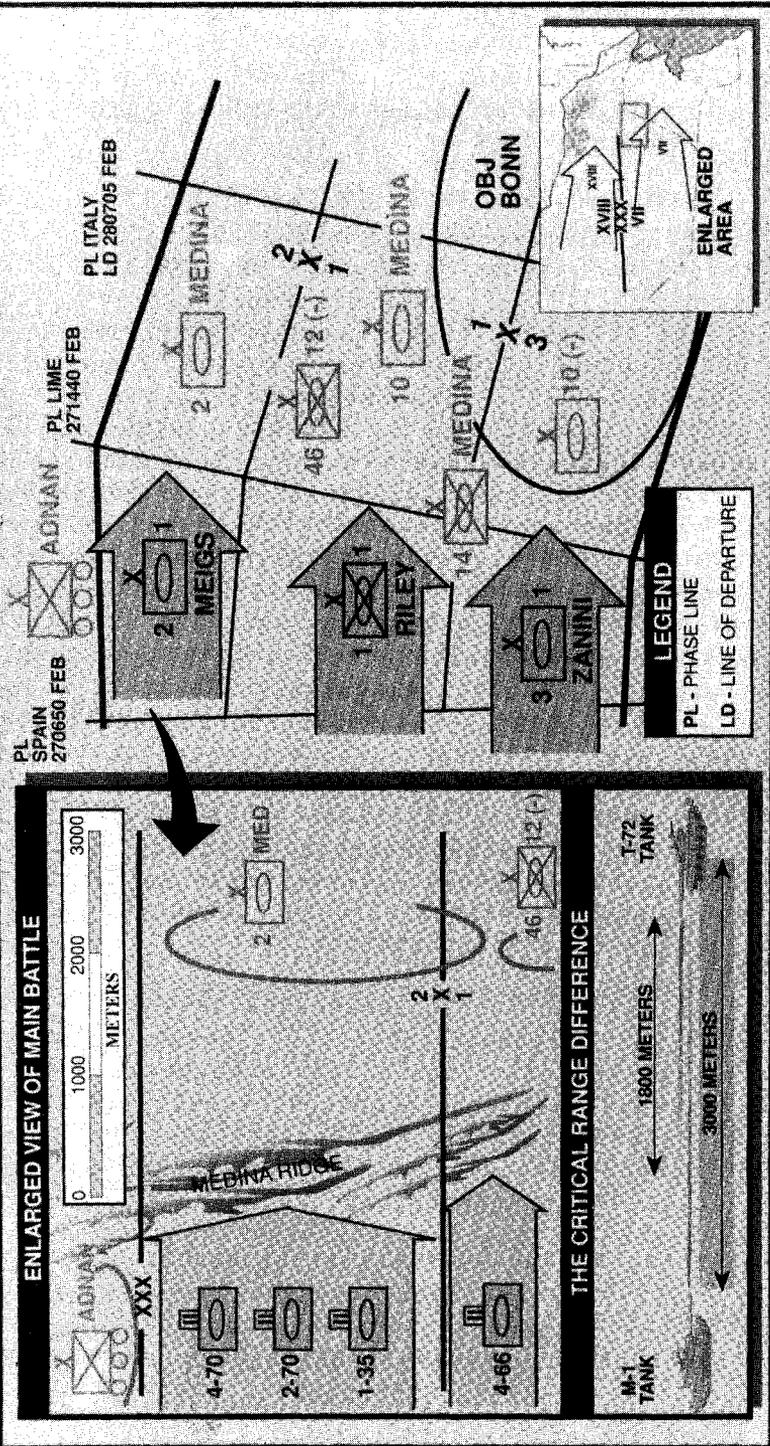
Forming the 2d Brigade's right flank, Lieutenant Colonel Jerry Wiedewitsch's TF 1-35th Armor continued to shoot hot spots in their thermals while moving forward at a steady 15 kilometers per hour. D Company, TF 2-70th Armor, halted momentarily to acquire targets. The pause allowed D Company, TF 1-35th Armor, to move more than a kilometer ahead of the right flank of D Company, 2-70th. To regain realignment, Wiedewitsch ordered Delta 1-35th to stop when they got within 1,000 meters of the Iraqi defensive positions.

Sergeant First Class John Scaglione led Delta 1-35th to within 800 meters of the Iraqi lines. His platoon leader had fallen back in the formation and Scaglione had taken over the point position. He reluctantly stopped while two other tanks in his platoon fell back to cross-level main-gun ammunition. While this 20-minute operation was going on, Iraqi artillery and mortars began to fall behind them in the wadi.

In spite of increasingly accurate fire, Scaglione refused to sink into his hatch and forfeit his all-around vision. His platoon was isolated, well in front of other American forces, and he could not afford to miss anything. He stood in the turret keeping a steady watch through binoculars while his gunner continued to swing the turret and its thermal sights back and forth through a 180-degree arc. Suddenly Scaglione was just able to make out the main-gun tube of a T-72 as it rose over the top of a berm and leveled menacingly on his company commander's tank. He slipped down onto his thermal sights and twisted his override hard left, slewing the turret around. He laid his cross hairs in a spot just right and below the muzzle of the T-72. His gunner fired almost instantly and the silver bullet crossed the several hundred meters between them in less than a second, blasted through the berm, and unerringly found the steel body of the T-72. Again Scaglione popped out of the turret and continued to scan. In quick succession his crew discovered and killed three more threatening T-72s before any could get off a shot. By then his two wingmen had finished cross-leveling main-gun ammunition and were ordered to pull back 500 meters.

While the tanks slowly reversed, keeping their thick frontal armor toward the enemy, gunners continued to fire, sending Iraqi tank turrets spinning into the air like 10-ton boxes. Meanwhile, Lieutenant Colonel Steve Whitcomb, commander of TF 2-70th Armor, moved forward to retie his lines with TF 1-35th Armor. He approached D Company from

**1ST ARMORED DIVISION'S DESTRUCTION OF MEDINA ARMORED DIVISION
G+3, FEBRUARY 27 - G+4, FEBRUARY 28**



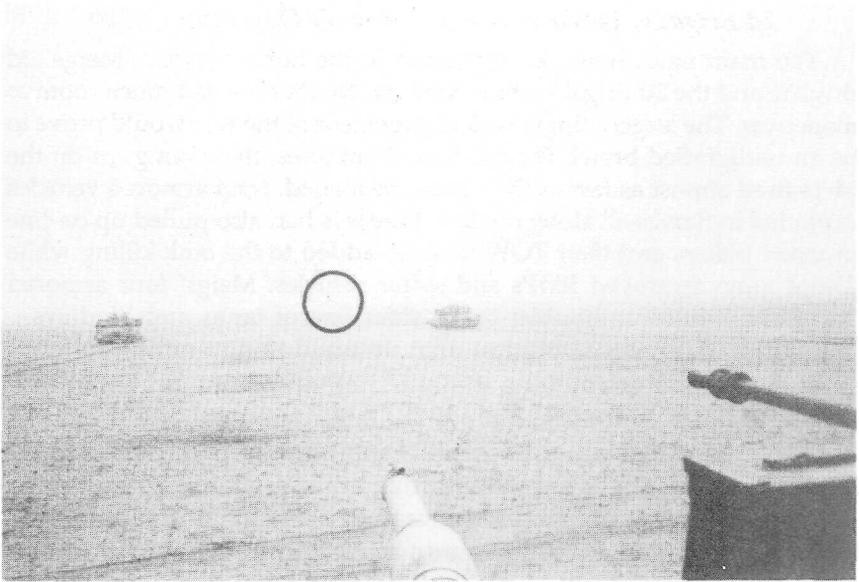
the rear and drove forward through the company. Telling the men on the tanks to "Follow me," Whitcomb headed for the left flank of TF 1-35th, nearly 2 kilometers to the front. At this point, Meigs recognized the growing confusion within the brigade's firing line and ordered a pullback to reconsolidate.

1st Brigade, 1st Armored Division: G-Day Plus 3, 1100

As the 2d Brigade realigned, 1st Brigade units got into a fight with a mixed group of Iraqis from the Medina's 14th Mechanized Brigade and remnants of the 12th Armored Division's 46th Armored Brigade. D Company, TF 4-7th Infantry, had moved out that morning after a brief pause to rest and refuel. The company reached Medina Ridge after only a 5-kilometer march, and Staff Sergeant Charles Peters, the company master gunner, spotted several BMPs and T-72s dug in on the slope below his Bradley. Maintaining the strictest fire control, Peters destroyed one BMP with only three quick rounds of 25mm armor-piercing ammunition, then adroitly switched his ammunition selector to high explosive to engage the Iraqis as they ran from the vehicle toward some nearby trenches. He just as rapidly switched back to armor-piercing again to kill a second BMP and engaged a third, raising a cloud of dust all around the target with impacting 25mm cannon rounds. This particular Iraqi vehicle strangely did not explode like the others, and as the dust settled, Peters saw why—it was a T-72. As the tank opened fire on his company, Peters quickly raised the TOW "two-pack" launcher and switched sighting systems a third time. The sequence took only seconds, but it seemed like hours before he could launch the missile. Peters held his cross hairs steady on the tank a few seconds longer until missile impact and destruction. He finished this remarkable one-man gunnery demonstration by switching back to the 25mm a fourth time to kill a third BMP as Captain Christopher Shalosky, his amazed company commander, watched.⁴⁹

3d Brigade, 1st Armored Division: G-Day Plus 3, 1400

Farther south, Zanini's 3d Brigade also came into contact with the southern extension of the Iraqi 14th Mechanized Brigade and elements of the 10th Armored still reeling from McCauley's devastating Apache attack the previous evening. Sergeant First Class Terry Varner led 1st Platoon of B Company, TF 3-35th Armor, toward Objective Bonn. As his platoon rolled over a series of ridges, Varner was the first to spot Iraqi armor to the front. Calling out, "Bimps! Shoot 'em—contact Bimps! Out!," Varner's first shell destroyed the lead enemy vehicle. As it exploded, a dug-in T-72 popped out of a hide position and fired at Varner's tank, missing it by 100 meters. Varner destroyed the T-72 four seconds after killing the BMP, a total engagement time of just seven seconds.⁵⁰



Two photographs taken by LTC Jerry Wiedewitsch's TF 1-35th Armor during the Battle of Medina Ridge graphically illustrate the new dynamics of tank warfare. Above, the M-1 to the right destroyed an Iraqi T-72 at a distance of almost 2 miles. The target can be seen as a red spot on the horizon. Below, Wiedewitsch as he passed through the enemy position, marked by six burning tanks, just minutes later. The rightmost tank had just exploded, throwing its turret into the air.



2d Brigade, 1st Armored Division: G-Day Plus 3, 1300

The main fight, however, remained in the north between Meigs' 2d Brigade and the 2d Brigade of the Medina. Neither foe had much room to maneuver. The largest single tank engagement of the war would prove to be an undignified brawl. For the first 10 minutes, the main guns on the M-1s fired almost as fast as they could be loaded. Iraqi armored vehicles exploded in flames all along the line. Bradleys had also pulled up on-line in many places, and their TOW missiles added to the tank killing while 25mm guns destroyed BMPs and softer vehicles. Meigs' four armored battalions formed a shoulder-to-shoulder line of tanks and Bradleys—more than 200 armored vehicles—that stretched along a north-south line more than 10 kilometers.

The Medina's 2d Brigade was arrayed in two parallel lines of T-72s and BMPs running northwest to southeast, with each vehicle spread 100 to 150 meters apart. The Iraqis had skillfully dug in and camouflaged their firing line and placed a formidable protective ring of anti-aircraft guns around it. One ZSU 23-4 managed to shoot down an American A-10 aircraft. But the distinctive signatures given off by the ZSU's four rapid-firing barrels alerted nearby tanks to its presence and it immediately disappeared in an angry flurry of tank fire. The Iraqis had also registered artillery on the wadi behind the Americans. The Iraqi plan was to kill the American tanks on the ridge with dug-in T-72s and then drive the survivors back into the wadi and finish them off with artillery. The Iraqis, however, had no idea they could be detected and destroyed at a range of nearly 2 miles.

Franks and Griffith on Medina Ridge

Some 20 minutes into the fight, Franks came up on the divisional radio. With 1st Armored Division committed against the Medina, Franks wanted to coordinate passing the 1st Cavalry around Griffith's northern flank. Griffith's aide, Captain Keith Robinson, gave Franks' pilot the coordinates of their position from the LORAN navigation device on Griffith's HMMWV, and within minutes Griffith had guided Franks to his location. Griffith was briefing his commander when one of many Iraqi artillery concentrations hit nearby, causing some concern to VII Corps staff officers, one of whom turned quizzically to Griffith's aide and asked, "What's that, some short rounds from our artillery?" Robinson shook his head and offered, "Nah, that's Iraqi artillery." He smiled at the officer's confused expression and said, "Don't worry, that's about the fifth barrage they've fired, but they don't move it. It just goes into the same place every time."

Division Artillery, 1st Armored Division: G-Day Plus 3, 1400

Initially, Griffith's counterbattery radars were looking in the wrong direction to detect the Iraqi batteries. Not long after the rounds began to

impact behind the 2d Brigade firing line, the gunners reoriented two radars toward the north and east and immediately pinpointed a 122mm D-30 battalion that was firing methodically at a constant four rounds per minute. Colonel "VB" Corn ordered three full MLRS launchers to respond, but, maddeningly, the Iraqi guns were firing from across the 40 Northing grid that marked the border with XVIII Airborne Corps. Clearance to shoot took more than half an hour as the request went back to VII Corps main command post, then by satellite to XVIII Airborne Corps command post, then back again. Once received, however, the MLRS volley obliterated the Iraqi battery. Corn kept his radars illuminated continuously and within minutes his Q37 acquired nine more targets that were silenced by another 12 MLRS rocket volleys. By 1400 Corn had eliminated four Iraqi artillery battalions, using MLRSs with deadly effect. In the next 24 hours, Corn's gunners would destroy 72 Iraqi field artillery pieces. As each Iraqi battery opened fire, he retaliated in less than two minutes with a minimum of 12 rockets and a battalion's worth of 8-inch cannon artillery. The Iraqis had no hope of winning the counterbattery duel.⁵¹ Three weeks later, Corn walked through the three firing positions occupied by the D-30s and counted 13 destroyed guns surrounded by MLRS rocket motors, fuzes, and warhead shrouds.

Beyond the impacting Iraqi artillery fire, Franks and Griffith watched Abrams tanks and Bradley fighting vehicles engage the Medina. Apache helicopters, poised above TF 2-70th Armor well to the north, added Hellfires. Smoke, dust, and communications problems between tanks and Apaches caused Griffith to send the Apaches against targets deeper in zone. A-10 and F-16 aircraft soon joined the fight. Several kilometers away, they could see friendly artillery strikes going in, the multiple explosions of distant bomblets sounding like firecrackers on the Fourth of July. Inky black clouds from oil fires created the backdrop to an incredible tableau of orange burning Iraqi tank hulks occasionally flashing white as the flames found on-board ammunition. Hundreds of intensely burning points of light spread across the horizon before them. At that moment thunder began to roll in, as if nature had decided to add its own pyrotechnics to the display. As jagged streaks of lightning stabbed the sky, the rumble of thunder and the rumble of massed artillery firing from the division rear were indistinguishable. It was exhilarating and frightening. No Hollywood director could have conceived a more dramatic panorama.

Air and artillery strikes hammered Medina Ridge for a full two hours. By 1500, everything inside or near the Iraqi defensive positions had been killed or set afire. The 2d Brigade swung forward again from the north, this time with TF 4-70th Armor on a southeast azimuth across the American front. TF 2-70th Armor, with TF 1-35th Armor following, spread behind in a giant curving tail of vehicles. As the entire mass of the brigade rolled over the Iraqi positions at an angle, engineer troops hopped

aboard any Iraqi vehicles not completely destroyed and blew them up with explosives.

1st Brigade, 1st Armored Division: G-Day Plus 3, 1645

As the 2d Brigade moved forward, the scouts of TF 4-66th Armor of 1st Brigade received the mission to maintain contact. When the 2d Brigade momentarily halted, the scouts were exposed to fire from an enemy ammunition bunker complex on the flank. Within minutes an RPG struck HQ 55, a Bradley cavalry fighting vehicle, and knocked it out. To cover HQ 55's evacuation, Sergeant First Class Frederick Wiggins, the scout platoon sergeant, abruptly placed his track between the damaged Bradley and the enemy. Wiggins had just opened fire on the Iraqis when two RPGs struck his track, instantly killing the driver, Specialist Clarence Cash. Wiggins and Corporal Richard Knight were seriously wounded and several others inside were hurt. Meanwhile, the platoon leader, First Lieutenant Robert Michnowicz, maneuvered the remainder of the scouts to rescue their comrades and eliminate the Iraqis. HQ 53 moved left of Wiggins' vehicle and picked up two of the wounded. Staff Sergeant Robert Hager moved HQ 52 in close and dismounted two of his squad, Privates Timothy Wright and Matthew Meskill, to recover the others. As Wright and Meskill worked, their gunner, Sergeant David Smith, destroyed the Iraqi RPG teams. HQ 56 covered their withdrawal, killing another RPG team as the scouts moved back to regain contact with TF 1-35th Armor.⁵²

Soldiers like Varner, Steede, Scaglione, Peters, and Wiggins were the cornerstone of Griffith's victory at Medina Ridge. The 1st Armored Division had one soldier killed in a fight in which more than 300 Iraqi armored vehicles, the cream of the Republican Guard, were destroyed. At 1700, VII Corps ordered Griffith's division to resume the attack as soon as possible. Significant pieces of the Medina Division were still intact on Objective Bonn, and the 1st Armored Division commander intended to continue the attack early on the 28th.

VII CORPS: G-DAY PLUS 3, 1800

Franks had intended to pass the 1st Cavalry Division around to the north of the 1st Armored Division on the afternoon of the 27th as the left wing of a double envelopment. The tank battle between the 1st Armored Division and the Medina, however, convinced him that to conduct such a maneuver any earlier than the following day would be unwise. CENTCOM had denied the corps' request for a boundary change with XVIII Airborne Corps that would have given the 1st Cavalry Division room to move around the 1st Armored Division. Without the boundary change, the risk of fratricide was too high. Therefore, Franks instructed

the 1st Cavalry Division to remain behind the left wing of the 1st Armored Division, much to General Tilelli's disappointment.

The right arm of Franks' envelopment, the "Big Red One," had already crushed the Iraqi 37th Armored Brigade and had gone on the pursuit. Franks flew to the 1st Infantry Division tactical command post and told Brigadier General William Carter, Rhame's assistant division commander, to continue the attack east. Franks tapped the map where the waters of the Persian Gulf meet the sand of Kuwait and said, "See this blue... this is the way home." The division marched on all day in order to be able to cut the Kuwait City-Basrah highway by dark. Lieutenant Colonel Robert Wilson's 1-4th Cavalry had already crossed the highway shortly after 1630 and spent several harrowing hours into the evening out of contact with the rest of the division. Wilson eventually set up defensive positions astride the highway. Again, fear of fratricide intervened, and at 1930 Franks ordered the division to halt for the night to avoid any possibility of a nighttime collision with the right flank of the 3d Armored Division into whose path they were moving. Wilson's squadron spent the night processing more than 1,000 prisoners while cut off from the rest of the division by 25 kilometers.

After breaking through the armored crust of the Tawakalna, the 3d Armored Division overran the Iraqi division's artillery positions and remnants of the 10th and 12th Armored Divisions. Ahead of his division, Funk worked two Apache battalions—his own 2-227th Attack and the 11th Aviation Brigade's 2-6th Cavalry. As the division advanced, more prisoners began to appear, a sure sign that the Republican Guard's morale had finally begun to collapse. The division began to find entire battalion sets of combat equipment abandoned, some with vehicles still running, shells loaded in breeches, and radios switched on. By 2030, lead elements of the 3d Armored Division had reached Phase Line Kiwi, their limit of advance for the night.

The British 1st Armoured Division had secured Objective Varsity and was waiting for a decision on whether to continue to drive east to the Kuwait coast or to drive south and open a resupply route down the Wadi al-Batin. By 2030, Franks confirmed that the division would continue to drive east, securing its final objective between the north-south highway and the coast.

By the evening of February 27, VII Corps had broken five Iraqi heavy divisions: the Tawakalna, Medina, 10th Armored, 12th Armored, and 52d Armored. Of the Republican Guard heavy divisions, only the Hammurabi remained reasonably intact. The infantry divisions along the Saudi border, now the southern flank of the corps, had disintegrated and were joining thousands of their comrades in VII Corps POW camps. They had

no coherent defense. The Iraqi GHQ had lost the battle for Kuwait and now could only concentrate on survival.

XVIII AIRBORNE CORPS: G-DAY PLUS 2, LATE EVENING

On the evening of February 26, General Luck was very pleased with his corps' progress. The attack to the Euphrates had gone faster than he expected with fortunately few casualties. However, the VII Corps' turn to the east had opened up a 50-kilometer gap between them. XVIII Airborne Corps' race was not over.

3d Armored Cavalry Regiment: G-Day Plus 2, Midnight

Colonel Starr's 3d ACR was the first unit in Luck's corps to move east. Reassigned to McCaffrey's control under CONPLAN Ridgway, the 3d ACR moved to regain contact with Franks' corps late on the 26th. During the move, Starr received an audible to attack and seize Objective Tim, the airfield at Umm Hajul along the east-west boundary between the two corps. Starr had not had physical contact with VII Corps for almost 24 hours, and he was very concerned with the proximity of the airfield to his boundary with VII Corps. He had his operations officer contact the 1st Armored Division, the left flank of VII Corps, to coordinate a boundary change to give his regiment more maneuver room. Some time later, word reached Starr that the boundary change was disapproved. The liaison officer also warned the regiment that some 1st Armored logistical units were still in the area. Starr immediately contacted his right-flank squadron commander and informed him of the disapproval. He also told him to watch for possible friendly units along the boundary.⁵³

By midnight, the 3d ACR turned east toward Objective Tim. In the early morning of February 27, the southernmost squadron attacked the objective. At first they saw nothing. But as the attack progressed, the southernmost troop commander observed vehicles through his thermals on the southwestern tip of the airfield. They fired warning shots, and in the heat of the moment, one Bradley reported receiving incoming rounds from what appeared to be a building. A one-sided firefight ensued but ended abruptly when, in attempting to get the enemy to surrender, the cavalry realized their targets were fellow American soldiers. Engineers from the 54th Engineer Battalion, 1st Armored Division, were on the airfield awaiting the recovery of a disabled vehicle. Friendly fire killed one soldier and wounded another.⁵⁴

The incident was tragic. An immediate investigation revealed that both units were on the correct side of their respective boundaries. Extreme darkness created by cloud cover made visibility possible only through night vision devices. While thermals could be used for precise targeting out to a range of 3.2 kilometers, the thermal image was so indistinct that

beyond about 700 meters gunners found it difficult to differentiate between friend and foe. A square plywood tool box mounted on the back of one of the larger engineer vehicles made it appear through the thermals to be a building.

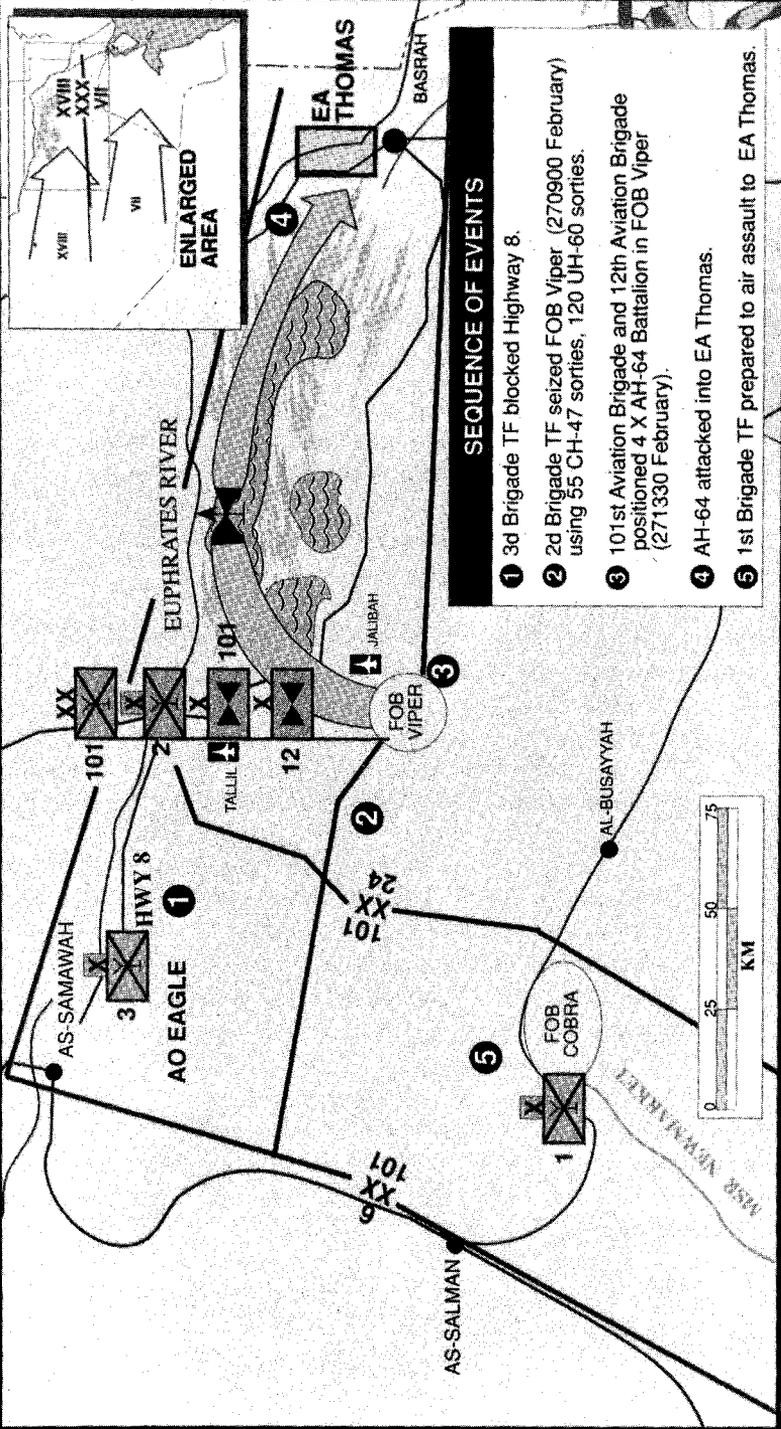
Fear of further fratricide grew as word of incidents and near misses filtered throughout the ARCENT chain of command. The corps commanders became increasingly concerned as their units began to converge in the tightly constricted battle space of Kuwait. Among thousands of units from platoons through corps, extreme caution began to work its way into the execution of the battle plan. Attacks halted more frequently to allow units to sort themselves out before advancing again. Distant targets, most surely Iraqi, were allowed to escape without engagement. Luck and Franks established a 5-kilometer "sanitary" zone between their respective corps and agreed that no target in the zone, even if positively identified as Iraqi, would be engaged. Undoubtedly all these actions saved lives, but the price paid for more safety was a substantial increase in friction and a concomitant dampening of audacity and dash throughout the remainder of the campaign.⁵⁵

101st Airborne Division: G-Day Plus 3, 0800

Once Objective Tim—30 kilometers southwest of Jalibah airfield—was in the hands of the 3d ACR, Luck ordered the 101st to raise the curtain on one gigantic final aerial envelopment toward Basrah. The objective was to slam another door on escaping Iraqis. This time Luck would send Peay's division far to the east to cut the last remaining escape route—Highway 6 running north out of Basrah and paralleling the Tigris River. After a 45-minute flight, the first serial from 2d Brigade, with an infantry battalion, an artillery battalion, air defense, and engineers, landed at Objective Tim shortly after 0900. More than 500 infantry soldiers and 60 antitank HMMWVs spread out, immediately securing the area while field artillerymen placed 18 tubes of 105mm howitzers into action.

Within four hours, 2d Brigade converted Objective Tim into FOB Viper with enough fuel and ammunition on the ground to provide temporary support for four attack helicopter battalions. At 1430, two aviation brigades, launched from Viper, began to sequence the killing power of 64 Apaches into EA Thomas, a kill box plotted 145 kilometers farther east and directly north of Basrah. Two battalions of the 12th Aviation Brigade worked the north side of EA Thomas, while the 101st Aviation Brigade attacked the south with another two battalions. Apaches screened the northern flank of the corps sector en route to EA Thomas by shooting up anything that moved below with Hellfires, rockets, and chain-gun fire. During four hours of continuous attacks, the Apaches destroyed 14 personnel carriers, 8 multiple rocket launchers, 4 anti-aircraft guns, 4 grounded helicopters, 56 trucks, and 2 SA6 radars. Significantly, the

101ST AIRBORNE MOVE TO FOB VIPER AND ATTACK ON EA THOMAS—G+3, FEBRUARY 27



Apaches did not find a single tank moving through EA Thomas.⁵⁶ Either the Iraqis had not yet arrived in the EA, had already passed through it to the north, or were hiding inside the town. Later satellite and U2 imagery would show that a large number of Iraqi armored vehicles were clustered south of Basrah as late as March 2, 1991, implying that they and others arrived there after Peay's deep attack.

The pace of the operation was so intense that ammunition and fuel began to run low. Two days of bad weather had delayed the delivery of supplies forward into Iraq, so 30 cargo-carrying Chinooks were obliged to return to the main bases in Saudi Arabia for sustenance, a round-trip of more than 800 kilometers, or roughly the distance from New York City to Boston. Each Chinook ferried either 8 tons of ammunition or 2,000 gallons of fuel in a circuit of at least five flying hours. Still, the flow was barely enough to feed the hungry Apaches. As darkness fell, a ground convoy arrived with more supplies to link Viper to FOB Cobra.

The operation into FOB Viper demonstrated the overwhelming advantage accrued to the side best able to exploit the aerial dimension to support ground maneuver. By flying low and slow and by maintaining constant close-up observation of the ground, the 101st maintained control over an area of Iraq 160x380 kilometers, or roughly the size of the state of Massachusetts.

24th Infantry Division: G-Day Plus 3, 0500

With the 101st astride the Iraqis' last route of retreat, the 24th pushed eastward to eliminate Iraqi forces near FOB Viper. McCaffrey's main effort was 2d Brigade's attack on Jalibah Airfield with 1st Brigade making a supporting attack down Highway 8.

McCaffrey knew that the remainder of the campaign for his division would be a full-throttle rush eastward. Without a tight rein, momentum generated by such a huge force could get quickly out of control. To keep his force under control, he created a series of parallel boundaries aligned on Highway 8 and another series of perpendicular north-south phase lines that would allow him to dress his formation periodically before continuing. Thanks to GPS, he was able to link his phase lines to map north-south grid lines. The resulting division operational plan for the move east looked like an enormous gridiron.

At 0500, five battalions of artillery poured massed fires into the objective for an hour. While the prep was going in, TF 1-64th Armor and TF 3-69th Armor took up firing positions to the southwest and began to systematically destroy an understrength T-55 battalion from firing positions well outside the range of the obsolete Iraqi tanks. As the tanks of TF 3-69th Armor established their firing positions, C Company came under mortar and small-arms fire. In response, a tank from the company crossed

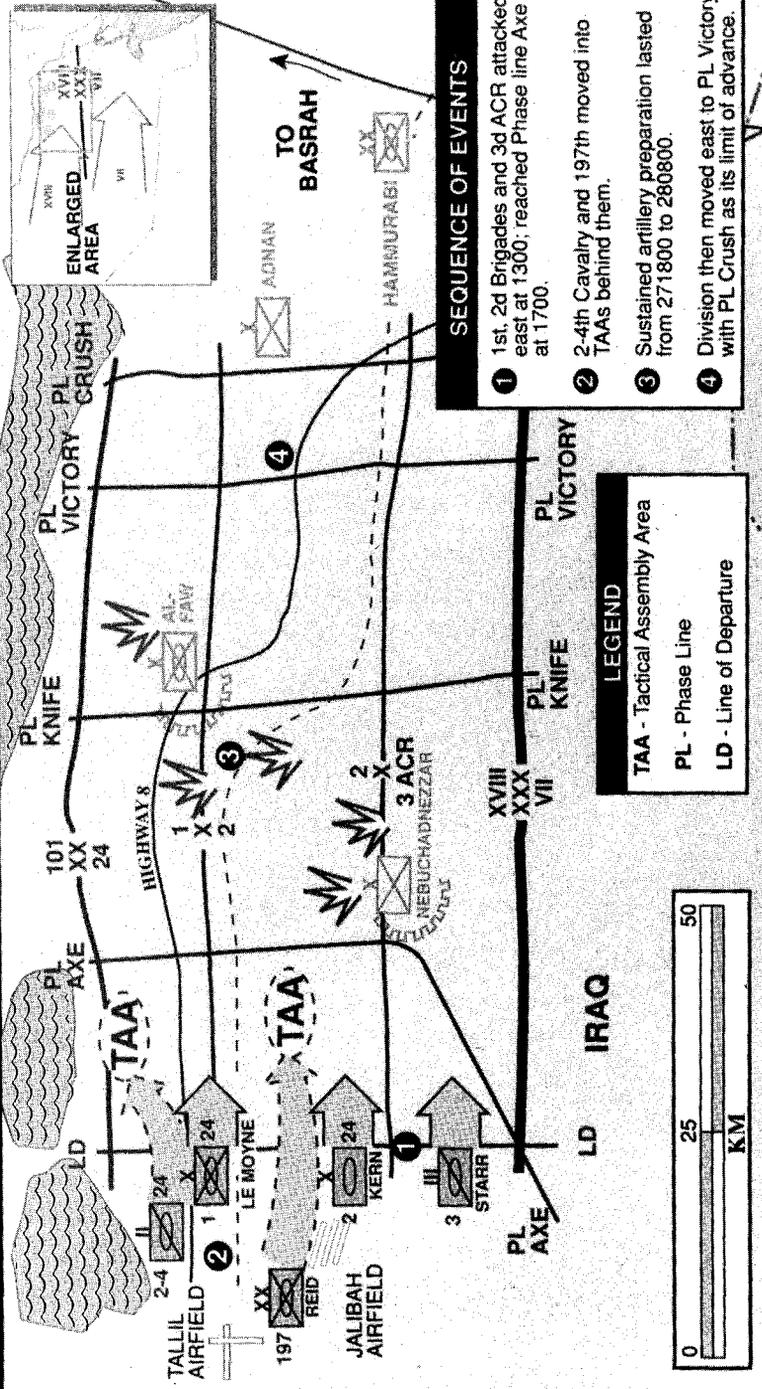
the boundary into TF 1-64th Armor's sector to engage a dummy tank position. The remainder of the platoon followed, firing on what they believed were MTLBs and tanks. Although the 3-69th commander, Lieutenant Colonel Terry Stanger, called for a cease-fire to sort out the confusion, it was too late. Three Bradleys from TF 3-15th Infantry had been struck, killing two soldiers and wounding eight others. Later, TF 3-15th Infantry swept through the airfield, firing 120mm and 25mm rounds at anything that moved. The shock effect of the artillery and the speed of the American combined-arms assault overwhelmed the defenders. By 1000 the field was secure. The Iraqi armored battalion had lost all of its vehicles. The attack also destroyed 14 MiG fighters abandoned by the Iraqi air force.⁵⁷

At 1300 McCaffrey continued the attack east with three brigades, leaving the 197th Infantry Brigade behind to clear Tallil Airfield with an on-order mission to follow and support the rest of the division. The 1st Brigade moved along the north side of Highway 8. The 2d Brigade, now past Jalibah, attacked in the center, and the 3d ACR marched on the southern flank near the VII Corps boundary. With an Apache battalion covering, the 212th Field Artillery Brigade and the division's own division artillery preceded movement with a series of planned fire strikes. The division moved out across a 50-kilometer front with more than 800 combat vehicles.

Just east of Jalibah along Highway 8, the division encountered huge logistics and ammunition storage sites. Elements of the al-Faw, Nebuchadnezzar, and Hammurabi Republican Guard Divisions continued to pop up in scattered enclaves on both sides of the highway. Whenever possible, McCaffrey's lead battalions bypassed every obstacle to maintain momentum. Drivers pushed their Bradleys and Abrams to speeds exceeding 40 miles per hour. Enemy artillery tried to react, but the attack moved so fast that the Iraqi gunners were never able to adjust fires rapidly enough to catch up to the advancing columns. Iraqis who showed no will to resist were bypassed; those who fought, died. Destroyed vehicles littered the roadway as the 24th overran more than 1,300 ammunition bunkers and nearly 5,000 Iraqi soldiers.

The fast-paced attack east strained the "Victory" Division's support structure to the breaking point. Operating out of his forward tactical command post, McCaffrey quickly outdistanced his communications. Although he could talk with his forward units on FM radio, he could reach his main command post and XVIII Airborne Corps only through TACSAT. Farther south, 24th Division logisticians attempted to keep up with the frantic pace of forward units by establishing a forward base along Highway 8 near Battle Position 102. Critical fuel and ammunition did not arrive forward until the night of February 27. Resupply vehicles, able to

THE VICTORY DIVISION'S ATTACK TOWARD BASRAH—G+3, FEBRUARY 27



average about 10 to 15 miles per hour, continually fell behind. For the logisticians, the entire war had been a game of catch-up.⁵⁸

XVIII AIRBORNE CORPS: G-DAY PLUS 3

[See Figure 5-5, "Ground Operations—G+3, Wednesday, February 27, 2400 Hours," at the back of the book.]

General Luck moved his tactical command post forward along Highway 8 to oversee the corps' final move to seal off the KTO. McCaffrey would continue the corps' main effort and Luck gave him the additional firepower of the 18th Field Artillery Brigade. The additional artillery gave the "Victory" Division $9\frac{1}{3}$ artillery battalions, or 4.5 artillery tubes per kilometer along its 50-kilometer front. Luck also shifted an Apache battalion from the 12th Aviation Brigade to the 24th. McCaffrey ordered the 197th Infantry Brigade east from Tallil to become the division reserve. He planned to continue the attack eastward at 0500.⁵⁹

As for the 101st, General Peay had suspended his high-tempo Apache attacks into EA Thomas north of Basrah. He had been unable to get the fire support coordination line extended farther out and targets had proved fewer than anticipated. In any case, Peay's pilots were so exhausted from the four hours of attacks into Thomas that they could no longer fly safely. With Luck's concurrence, Peay planned to air-assault his 1st Brigade into EA Thomas the next morning. Following a proven sequence, if Peay could get forces on the ground along this highway, the Republican Guard's last escape route would be severed. The final act for XVIII Airborne Corps was put on the shelf, however, when at 0145, February 28, the corps received the first indication of a cease-fire.

CEASE-FIRE

VII CORPS: G-DAY PLUS 4, EARLY MORNING

[See Figure 5-6, "Ground Operations—G+4, Thursday, February 28, 2000 Hours," at the back of the book.]

The on-again, off-again cease-fire order also affected VII Corps. To finish the battle, Franks had intended to execute his double envelopment at 0500, with the 1st Cavalry in the north and the 1st Infantry Division in the south. The 1st and 3d Armored Divisions would press forward in their zones, as would the British 1st Armoured Division. This plan was never fully executed. Franks informed the heavy divisions that the cease-fire would take place at 0500 and issued guidance concerning rules of engagement. Those orders soon changed when Yeosock called the VII Corps tactical command post shortly after 0200 and relayed news that Schwarzkopf had delayed the cease-fire until 0800. The CINC wanted a



General Franks, center, with three fingers of the VII Corps armored fist on March 6, 1991: Generals Funk, 3d Armored; Rhame, 1st Infantry; and Griffith, 1st Armored. Not shown are Generals Smith and Tilelli and Colonel Holder.

major offensive action mounted before that time to destroy as much of the enemy as possible. Franks alerted Colonel Hitt's 11th Aviation Brigade for another Apache strike in the direction of the town of Safwan but changed the order to retain unity of command in the 1st Infantry Division sector. VII Corps was unable to contact General Rhame directly since he was forward commanding from an M-1 tank. Instead, Colonel Cherrie called General Carter and relayed the order for the "Big Red One" to continue the attack to the east and to get Apaches to attack toward Safwan. At 0400 Franks issued an order for the divisions to continue the attack. An ARCENT order to secure the crossroads at Safwan with ground forces never reached the 1st Infantry Division, causing major frustration later when Schwarzkopf mistakenly believed the crossroads were under US control. The other divisions on or near Phase Line Kiwi would continue to use that control measure as a limit of advance.

The attack began at approximately 0600. A 45-minute preparation from 8-inch and 155mm howitzers and MLRS rocket launchers preceded the 1st Armored Division's attack. By 0615 all units were advancing, but a report of a unit receiving friendly fire froze all movement between 0645 and 0705. Even as the divisions closed on their objectives, the 1st Infantry Division would clearly not reach the crossroads at Safwan before the

cease-fire. The Apaches combed the area and found some Iraqi soldiers but few vehicles. At 0723, VII Corps ordered a temporary cease-fire.

At the time of the cease-fire, the 1st Armored Division was just short of the Kuwaiti border, having destroyed more than 100 tanks and armored personnel carriers in a cataclysmic final hour of combat. The 3d Armored Division was along Phase Line Kiwi, and the 1st Infantry Division had combat units a short distance south of the Safwan crossroads and as far east as the Kuwaiti coast. The British 1st Armoured Division also succeeded in reaching the coast. The corps immediately assumed a hasty defensive posture as it began to refuel and refit the combat units.

XVIII AIRBORNE CORPS: G-DAY PLUS 4

With the order to cease fire and establish defensive positions, General Luck was now faced with a number of Iraqi military formations reluctant to withdraw behind the military demarkation line. He issued orders to avoid combat if at all possible in accordance with CENTCOM's rules of engagement, but he permitted his commanders to take whatever measures necessary to protect their forces while compelling the Iraqis to withdraw.

Commanders directed their battalions to approach Iraqi positions in battle formation. If the Iraqi units held their ground, American officers would go forward to tell the Iraqis to fall back. Sometimes the audacity of the Coalition leaders was enough.

When the menace of a massed ground attack failed to convince the Iraqis to comply with Coalition demands, commanders reinforced the threat with air power. A flight of A-10s or Apaches poised just overhead usually sufficed to deter all but the most recalcitrant Iraqi leaders. Despite their bravado, the Iraqis had witnessed more than enough destruction and were unwilling to hazard yet another dose. Nonetheless, some intrepid Iraqi Republican Guard units needed more than demonstrations.⁶⁰

24th Infantry Division: G-Day Plus 4

The cease-fire proved particularly brief for the 24th Infantry Division. Over the next 24 hours, the 24th moved eastward to positions along Phase Line Victory with its reconnaissance elements out as far as Phase Line Crush. At Phase Line Victory, Colonel LeMoyne ordered the 1st Brigade to halt and hold a series of parallel positions running generally north to south. A parallel road only 2 kilometers to the front of LeMoyne's brigade separated his main defensive line from the bulk of the Hammurabi Division. The road was important to the Iraqis because it was the most convenient remaining route of escape for the Hammurabi north to safety deeper inside Iraq.



Tanks of the Hammurabi Division were located south of Basrah on March 1, the day before the Rumaylah Oilfield fight. Note that the unit still displayed excellent field discipline.



1st Brigade, 24th Infantry Division: G-Day Plus 4 to G-Day Plus 6

For the next two days, the 1st Brigade continued to receive sporadic artillery fire. Most of it fell among the scout platoons of TF 2-7th Infantry, the most forward of the brigade positions. The isolated fire was little more than a nuisance, and at first LeMoyne believed it was just coming from Iraqi artillery units that had not gotten the word to cease fire. But early in the morning on March 2, scouts reported receiving RPG and Sagger fire. This direct fire was a clear violation of the cease-fire terms and LeMoyne did not hesitate to respond in kind. After a short firefight, TF 2-7th Infantry scouts captured an enemy infantry squad responsible for some of the mischief.

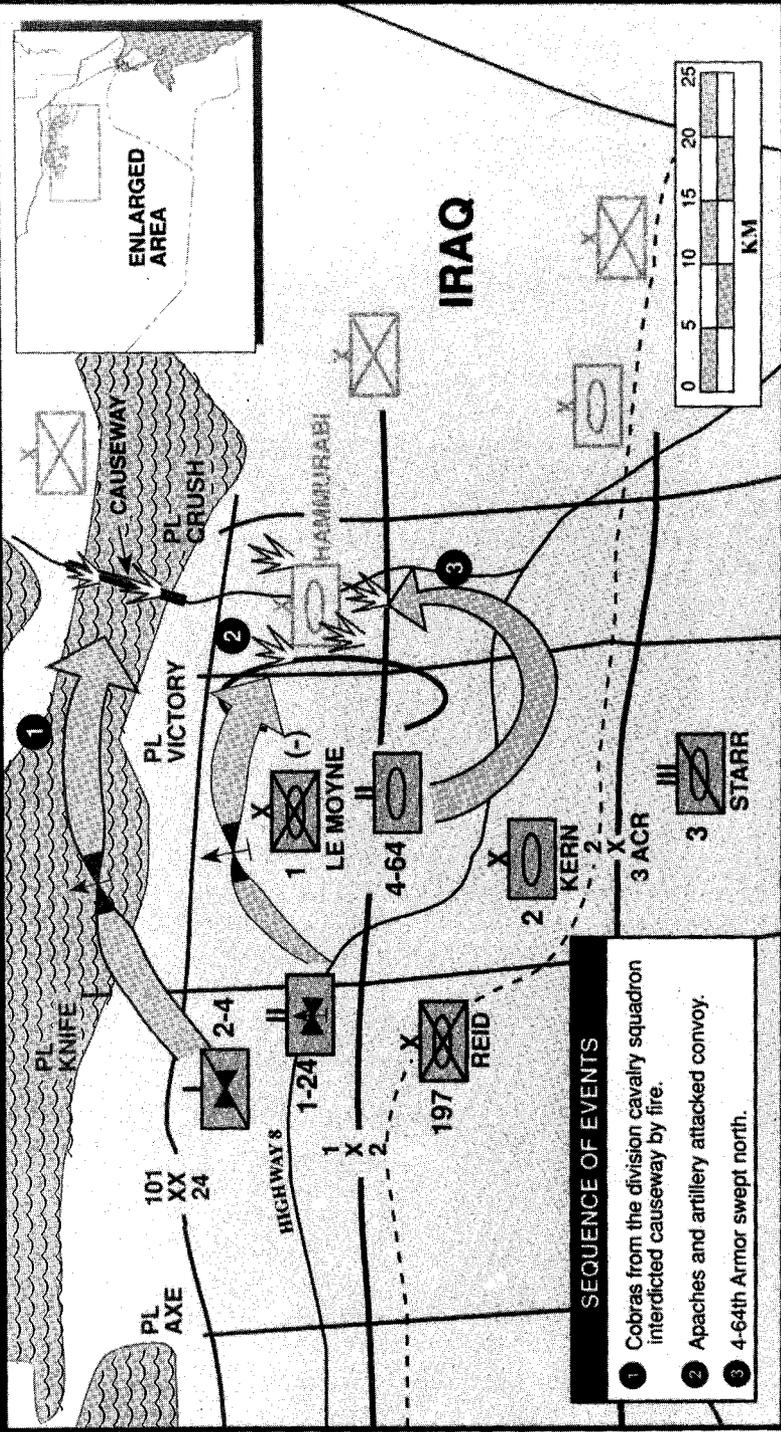
Any doubt concerning Iraqi intentions was erased later in the morning when LeMoyne's scouts reported an endless column charging northward across the division front and deliberately firing at 1st Brigade forward elements as it moved. More than 200 T-72s and BMPs, accompanied by an equal number of support vehicles, clearly told LeMoyne that the Hammurabi were making a run for the causeway, the most direct route out of the Rumaylah oil fields and the Basrah pocket. Saddam needed his best armor to crush the spreading rebellion inside Iraq.

LeMoyne held every tactical advantage. If he could block off the narrow 2.5-kilometer causeway with artillery-fired mines, he could then call in Apaches to ravage the stalled column and finish off the enemy with an armored assault. Helicopters from 2-4th Cavalry took up aerial battle positions on the north end of the causeway, blocking escape. Meanwhile, Lieutenant Colonel John Floris, the brigade fire support coordinator, called on three M-109 self-propelled 155mm howitzer battalions, an 8-inch battalion, and an MLRS battalion to fire a combination of scatterable mines and DPICM on the causeway and main body of the Iraqi column. As the artillery began to fall on the convoy, the Iraqi vehicles scattered in all directions.

Those who fled west on Highway 8 ran smack into LeMoyne's two mechanized infantry battalions where they were killed or captured or forced to scurry back to the causeway. The cavalry and artillery destroyed many of the Hammurabi vehicles fleeing north. At the rear of the stalled column, Iraqi vehicles tried to break away back to the south only to be crushed by a continuous and impenetrable wall of artillery. To the east, about 200 Iraqi armored vehicles that had not yet crossed the cease-fire line remained unengaged. Another 200 enemy combat vehicles were already safely across the Euphrates River outside the division's protective zone.

At 0900, McCaffrey reassigned Lieutenant Colonel Tom Stewart's 1-24th Aviation to LeMoyne's control. In less than an hour, Stewart's 18

24TH INFANTRY'S FIGHT AT RUMAYLAH—G+6, MARCH 2



Apaches approached on-line from the east and methodically destroyed 102 vehicles with 107 Hellfires.

The entire Iraqi column was a mass of desperate Guardsmen. Some had fled when the artillery and the Apaches arrived. Others steadfastly remained at their vehicles, stalled along a 15-kilometer stretch of road, and continued to fight. To end the fight, LeMoynes ordered Lieutenant Colonel Craddock's 4-64th Armor to swing well to the south of the column and then attack up the road, rolling up the Hammurabi all the way to its lead element at the tip of the Fish Lake Causeway. As the Abrams advanced, they slammed silver bullets into every undamaged armored vehicle. The toll was devastating. Over 185 armored vehicles, 400 trucks, and 34 artillery pieces lay burning in the swath cut by the 24th Infantry. Only 40 armored and 200 wheeled vehicles limped to the east toward Basrah while LeMoynes's brigade policed up hundreds of prisoners. Certain they would no longer threaten the Coalition, LeMoynes let these vehicles go. Thousands of footprints in the killing zone were evidence that most of the Iraqis had escaped before their vehicles were destroyed.

MILITARY VICTORY

A military force reaches its culminating point when continued combat operations—offensive or defensive—risk defeat in detail because of losses, resupply shortfalls, simple exhaustion, or growing enemy strength. Campaign plans strive to force the enemy to pass beyond his culminating point first. It can be a close-run race as it was in the October '73 War, with the outcome hanging in the balance to the last bloody moment, or it can be more distinctly linked to a catastrophic event such as the bombing of Japan in World War II. In the Gulf, CENTCOM never reached its culminating point. Despite the fact that many combat units were nearing exhaustion after days of uninterrupted fighting and moving, CENTCOM could have sustained operations considerably longer. The Iraqis, on the other hand, reached their culminating point when the Republican Guard was destroyed. Without the Guard's power and mobility, Saddam could not stop the Coalition. Schwarzkopf's correct assessment of the Guard as the Iraqi center of gravity assured overall victory once the Guard was eliminated as a viable threat. That moment was reached by midnight, February 27, when al-Rawi realized the magnitude of his defeat at the battle of Wadi al-Batin and ordered an immediate withdrawal of the remnants of the Republican Guard out of the KTO to positions designated for the defense of Iraq.⁶¹ With the exception of the Hammurabi Armored Division, the majority of the remaining Guard armor had already reached or passed through the Basrah sanctuary en route to positions well inside Iraq. The 24th Infantry Division's

blocking action along Fish Lake Causeway eliminated a brigade of the Hammurabi. After that fight, the remainder of the Hammurabi would slip away through Basrah. As many as one-third of the Guard's T-72s made it out of the KTO. The same was generally true for the regular army.

To some extent the Iraqis benefitted from the gap that grew between the two corps as VII Corps swept east and XVIII Airborne Corps reduced enemy resistance in the Euphrates Valley. The two-corps attack against the Republican Guard that ARCENT envisioned turned into a sequential affair with the XVIII Airborne Corps trailing Franks' VII Corps. By 1300 on the 27th, lead elements of the 1st Armored Division were almost 50 kilometers ahead of XVIII Airborne Corps. But the Adnan, Nebuchadnezzar, and al-Faw Republican Guard Infantry Divisions north of VII Corps were little threat to VII Corps' flank, and as XVIII Airborne Corps turned east, most of their units escaped north across the Euphrates or turned back to Basrah.

The time to kill Saddam's armor was before it reached the Basrah pocket, but once al-Rawi ordered a withdrawal, the chance to do so was fleeting. The night of the 26th, when the 11th Brigade Apaches worked over the 10th Armored Division, presented the best window of opportunity to eliminate the bulk of the Iraqi armored forces that eventually escaped. Both VII and XVIII Airborne Corps worked Apaches as deep as allowed on the 27th. Significantly, Peay's Apaches did not destroy a single tank in four hours of daylight attacks on EA Thomas just north of Basrah, suggesting that the bulk of the Iraqi tank elements had not yet reached that far north. Meanwhile, Franks' Apaches took a steady toll of Iraqi tanks through most of the day on the southern and western approaches to Basrah. The decision to leave everything east of the 20 Easting to air power rather than mount a series of Apache attacks against the retreating armor gave the Iraqi tanks the opportunity to run a rather porous gauntlet and seek sanctuary within the Basrah pocket. Close examination of the "Highway of Death," created by the Coalition air forces along the main road from Kuwait City to Basrah, showed the vast majority of the destroyed vehicles to be trucks, cars, and buses looted from the Kuwaitis, none of which were capable of off-road movement. Saddam's armor, able to fan out across the desert, merely sidestepped to the east and retreated into Basrah.⁶²

Given the Coalition's need to minimize civilian casualties, the Republican Guard and regular armored forces were safe from air attack once inside Basrah. The only way to have stopped the escape of Iraqi armor at that stage would have been to completely seal the theater by closing all exits by air or by blocking them with ground troops. An air assault by ground combat forces into EA Thomas was not tactically feasible until the 28th. With more than 20 bridges and causeways leading out of the KTO, cutting them all and keeping them cut from the air proved impossible. By

March 1, Republican Guard armored and mechanized units had reached as far north as al-Quarnah, almost 100 kilometers north of Basrah. These units were not fleeing in disorder; their march order was disciplined. As they halted, tanks dug dispersed revetments with 360-degree security. They were leaving one fight to join another against the Shia and Kurds. To have reached so far north on the 1st, the Guard armor had to have moved into Basrah on the 27th, if not the 26th.

The weather played a hand by interfering with air interdiction against the bridges. During the ground operation, the weather was the worst the area had experienced in 14 years. Even before the air operation began, the Iraqis had pre-positioned pontoons, barges, and extension bridges to offset the effects of bombing against their transportation network. Once the war began, Iraqi engineers worked furiously and effectively. Under cloud cover and rain, they quickly built by-passes around damaged bridges or bulldozed causeways across the relatively shallow rivers. On March 1, the Rumaylah Causeway was operational as was at least one bridge inside Basrah. Given the poor weather and inability to see them with overhead systems, the bridges were probably in service during the night of the 27th. Only that would explain the Republican Guard's presence at al-Amarah, 200 kilometers north of Basrah, on March 2.

That said, the Iraqi military machine that sputtered out of the Basrah pocket was still a beaten army. In the next few weeks, its fight against the Shia and Kurdish insurgents proved to be a close-run race. As in the past, Saddam's Republican Guard proved its loyalty to the regime by leading the fight to crush the rebels. However, the Republican Guard was but a shadow of its former self. Forced to reconstitute, the Guard stripped its regular army brethren of the best equipment, reducing even many regular heavy divisions to shells. Six months after the campaign, the 5th Mechanized Division, the Iraqi attacker at Khafji, surrendered in mass to Kurdish rebels in northern Iraq. As for the Republican Guard, some of its units were beyond help. Obliterated by Franks' VII Corps, the Tawakalna Mechanized Division was deactivated.

In 41 days of air operations culminating in a lightning 100-hour ground battle, the Coalition had utterly crushed the Iraqi military machine, liberating Kuwait from its occupiers. While the Marines, the "Tiger" Brigade, and the Arab Coalition forces had rolled over Fortress Kuwait, ARCENT had unhinged the Iraqi defense of the KTO with the XVIII Airborne Corps and VII Corps' Great Wheel. General Luck had reached out and strangled the Highway 8 lifeline to Saddam's forces. General Franks had ridden roughshod over the Republican Guard, destroying the center of gravity of Saddam's defense of the KTO in a ground war that was all but over as General Griffith closed on Medina Ridge.

Notes

1. Combat lifesavers are soldiers with other duties who have received training in advanced first aid. They are not intended to replace combat medics, but serve to stabilize injured soldiers until they can receive medical attention. Once trained, combat lifesavers are issued the same medical kit bag used by medics.
2. Tom Carhart, *Iron Soldiers*, to be published by Pocket Books. Copyright 1993 by Tom Carhart. All rights reserved.
3. XVIII Airborne Corps Operations Log, February 25, 1991.
4. Sean D. Naylor, "Flight of Eagles," *Army Times*, July 22, 1991.
5. 101st Airborne Division (Air Assault) After-Action Command Report, Operation Desert Shield/Storm, June 13, 1991, pp. 45-47.
6. 101st Airborne Division Commander's Narrative, February 24, 1991, pp. 1-5.
7. 101st Airborne Division After-Action Report, pp. 49-50.
8. *Ibid.* pp 50-52.
9. VII Corps Command Report, Volume 11A, Annex A-G. Contains the Executive Summary of 1st Infantry Division's participation in the campaign. See also Lieutenant Colonel Gregory Fontenot, "The 'Dreadnoughts' Rip the SADDAM Line," *Army*, January 1992, pp. 28-36, for a battalion commander's view of the ground war.
10. VII Corps Command Report, Volume I. Although the Executive Summary and the Historical Narrative describe events, a better source is Enclosure 2 to the Executive Summary which contains a "Combat Operations" briefing that describes, by day of battle, the plan for the day, the read on the enemy, and the decisions taken at the end of each period.
11. Colonel Johnnie Hitt, "Desert Storm Tactical Vignettes: Emergency Resupply of 2d ACR," undated, p. D-3.
12. A task force is a temporary combat organization established under a normal battalion headquarters that has a mix of combat arms, usually armor and infantry. For example, an armor battalion and an infantry battalion in the same brigade might swap two companies, creating two balanced task forces each with two armor and two infantry companies. In contrast, a battalion composed of a single combat arm is never referred to as a task force. A task force might have two companies with the same alphabetical designation. To avoid confusion, such companies are usually identified in full, giving their alphabetical letter and type unit as in Bravo Tank or Bravo Mech. If a battalion commander so desires, he can cross-attach platoons at the company level to create "teams."
13. VII Corps Artillery After-Action Review, undated; VII Corps Artillery, "Concept of Fires, Operation Desert Saber."
14. Jim Tice, "Coming Through, The Big Red Raid," *Army Times*, August 26, 1991, p. 20.

15. Lieutenant Colonel David W. Marlin, "History of the 4th Battalion, 37th Armored Regiment," unpublished manuscript, April 12, 1992, pp. 249-279.

16. VII Corps Battlefield Reconstruction Study, "The 100-Hour Ground War, The Failed Iraqi Plan," April 20 1991, pp. 101-103, 108-109.

17. *Ibid.* pp. 110-111.

18. *ARCENT MI History*, Chapter 8, Section VII, Annex A, Appendix 3, Desert Read 007-91, 513th MI Brigade message 242300Z February 1991.

19. *Ibid.* Desert Read 009-91, 513th MI Brigade message 250900Z February 1991; Stewart memorandum.

20. HQ 1st Armored Division, "1st Armored Division in Operation Desert Storm," April 19, 1991, hereafter cited as *1st Armored Division*.

21. Colonel Daniel J. Petrosky and Major Marshall T. Hillard, "An Aviation Brigade Goes to War," *Aviation Digest*, September/October 1991, p. 56.

22. *Ibid.*; Carhart.

23. Inspector General for General Doctrine and Training, Ministry of Defence, *Operation Granby: An Account of the Gulf Crisis 1990-91 and the British Army's Contribution to the Liberation of Kuwait* (London: Ministry of Defense, 1991); Operation Desert Sabre-Objective Summary, Tab 1 to Appendix 3 to Annex J to HQ 1st (UK) Armoured Division 202/26/22 G3 Plans, March 25, 1991.

24. Armored vehicles are equipped with a number of vision blocks, which are similar to periscopes in function. They allow drivers, gunners, and vehicle commanders to see outside in several directions while "buttoned up."

25. This timing is according to Major Toby Martinez, General Franks' aide, who personally booked the call.

26. 24th Infantry Division (Mech) After-Action Report, June 19, 1991, JULLS Report No. 52154-15005, p. 14.

27. *Ibid.*, JULLS No. 52155-37544, p. 19.

28. 24th Infantry Division History, pp. 9-10.

29. *Ibid.* p. 17.

30. *Ibid.* pp. 17-18.

31. Interview with Major General Barry R. McCaffrey, February 27, 1992.

32. 24th Infantry Division History, pp. 9-10; 24th Infantry Division, *The Victory Book, A Desert Storm Chronicle*, ed. Margot C. Hall (Fort Stewart, GA: December 1991), p. F5.

33. Telephone interview with Major Kent Cuthbertson, fire support officer, 1st Brigade, 24th Infantry, June 19, 1992.

34. 24th Infantry Division History, pp. 19-20.

35. XVIII Airborne Corps, "Phase IIID Operations to Destroy the RGFC Positional Defense in Place (CONPLAN Ridgeway)," undated, distributed on February 26, 1991, p. 3.

36. This information, quoted in *Soldiers* magazine, was from the debrief of the luckless commander.

37. Major Mark Hertling, "Downed Pilot," 1st Armored Division Vignettes, undated.
38. Carhart; 1st Armored Division.
39. Hertling, "Combat Lifesaver"; Private First Class Tammy Reese, "Combat Medic," 1st Armored Division Vignettes.
40. Interview with Major General Paul Funk, June 1992; Historical Overview of the 3d AD in the Persian Gulf War.
41. 1st Brigade, 3d Armored Division, "History of the Ready First Combat Team, 1st Brigade, 3d Armored Division, November 1990 thru 22 March 1991."
42. Lieutenant Colonel John F. Kalb, "Investigation Into the Combat Action Involving TF 4-32 Armor Scouts on 26 February 1991"; Steve Vogel, "The Tip of the Spear," *Army Times*, January 13, 1992, p. 16.
43. Major General Paul Funk, "Investigation of Possible Fratricide by 3d Armored Division Units," 16 March 1991; Vogel.
44. 2d Brigade, 3d Armored Division, "Operation Desert Shield, December 1990 thru 27 February 1991."
45. HQ 1st Infantry Division, "Chronological Summary of Events," March 26, 1991.
46. Colonel David Weisman, "Informal Investigation of the Night Attack Conducted by 3d Brigade on 26-27 February 1991," March 10, 1991.
47. Interviews with Colonels Stan Cherrie and Johnnie Hitt and Lieutenant Colonel Terry Johnson.
48. Carhart; 1st Armored Division.
49. Captain Christopher Shalosky, "Bradley Master Gunner," 1st Armored Division Vignettes.
50. Lieutenant Colonel Edward Kane, "Tanker Perfection," 1st Armored Division Vignettes.
51. 1st Armored Division; interview with Colonel V.B. Corn, June 23, 1992.
52. "Scout Platoon," 1st Armored Division Vignettes.
53. Major Mark W. Maiers' written statement, March 2, 1991, AR 15-6 Investigation directed by Colonel Douglas H. Starr, investigated by Captain David Jacquot, SJA, February 27, 1991.
54. AR 15-6 Investigation Information Paper, June 17, 1991.
55. AR 15-6 Investigation.
56. 101st Airborne Division (Air Assault) After-Action Report, p. 57.
57. 24th Infantry Division, *The Victory Book*, pp. 98-100. BDA figures came from XVIII Airborne Corps battle log dated February 27, 1991.
58. 24th Infantry Division History, p. 20.
59. *Ibid.* pp. 22-23.
60. CENTCOM ordered a suspension of offensive operations with instructions to establish defensive positions along a line of demarkation in occupied

Iraq. Nonhostile Iraqi forces were to be allowed to withdraw, but under the rules of engagement, Coalition forces could defend themselves if attacked.

61. Ala Lafta Musa, "Why Was the Ground Attack Against the Republican Guard Moved Up a Whole Day?" *Al-Quadisiyah* (Iraqi army newspaper), March 9, 1992, p. 4.

62. *AUSA Green Book*, October 1991, p. 290, shows a JSTARS scope image of the Iraqi withdrawal routes parallel to the north-south highway from Kuwait City to Basrah, the "Highway of Death."