


On Jan. 29, 1991, Iraq launched its only offensive of the Gulf War—and was promptly clobbered by airpower.

# The Epic Little Battle of Khafji

By Rebecca Grant



**T**HE crew of the Air Force E-8 Joint STARS planned to spend most of the night of Jan. 29, 1991, searching for Scud sites in western Iraq and monitoring territory in front of the US Army VII Corps. Operation Desert Storm had been under way for 12 days, and the Joint STARS crew members were accustomed to dividing time along a wide arc, ranging from Iraqi forces massed on the Kuwait-Saudi border area near the coast to suspected Scud sites far to the northwest.

A few hours into their mission, at 9:30 p.m. local time, the Joint STARS

fanned its sensors over the southern part of Kuwait. Activity deep behind the lines had been building for a few days. Tonight, the moving target indicators showed clear signs of an attack in the making. Forces from Iraq's 5th Mechanized Division and 3d Armored Division were moving south to cross the border near a deserted Saudi town named Khafji. Iraq was trying to start a ground war of its own.

What the Joint STARS crew saw that night was, in fact, the beginning of Iraq's only organized offensive during the Persian Gulf War. The

main phase of the Battle of Khafji lasted less than 48 hours, but it marked a turning point in the debate over the ability of airpower to dominate enemy maneuver forces.

The Iraqi offensive at Khafji began on that January night, almost four weeks prior to the start of the main ground war in late February. Intense interest in the Desert Storm air war, and the ground offensive, overshadowed Khafji at the time and in most histories of Operation Desert Storm. However, three former USAF Chiefs of Staff—Gens. Michael J. Dugan, Merrill A. McPeak, and Ron-



*At left, an AC-130H fires into the twilight at a range in western Florida. In much the same way, a Spectre gunship and two A-10s targeted an Iraqi column of vehicles that was headed for Saudi Arabia in the early part of the Battle of Khafji.*



*F-16s, like this "Viper" getting a CBU load for a mission out of Qatar, were air-to-dirt workhorses in Desert Storm. They were among the aircraft employed in the "kill boxes" set up in the Kuwait Theater during the Khafji battle.*

ald R. Fogleman—all have recognized Khafji's significance as a marker of airpower's increasing ability to meld sensors and advanced weapons under central control to gain the advantage over enemy forces on the ground.

Studies of the airpower response to the Khafji offensive began at Air University, located at Maxwell AFB, Ala., shortly after the war. In 1995, the Air Force Studies and Analyses Agency at the Pentagon began a major reconstruction of the battle. The study, under the direction of Col. Tom Allen, produced findings that, in sum, yield remarkable evidence of airpower's effectiveness against attacking ground forces.

At Khafji, Joint airpower demonstrated something new: a heretofore unknown ability to stop moving enemy armored forces at night, on short notice, and without a synchronized ground counterattack.

### **Iraq's Objectives**

Understanding Iraq's objectives was the first step in the Air Force effort to gauge the significance of Khafji. As stated by retired Air Force Gen. Charles A. Horner, the war's Joint Forces Air Component Commander, the Battle of Khafji was downplayed at the time "because we didn't really understand what the objectives of the Iraqi army were." Complete details may never be available, but evidence suggests the Iraqi offensive at Khafji was a calculated

bid to draw coalition troops into ground combat while Iraq could still maneuver its mechanized forces in the Kuwait Theater of Operations.

After Desert Storm began on Jan. 17, Iraq made several attempts to take some initiative by employing remaining tactical strengths to change the terms of the battle. Scud attacks against cities in Israel and Saudi Arabia began on Jan. 18. Almost 60 percent of Iraq's total Scud launches occurred within the next 10 days, but they failed to start a war with Israel or fracture the coalition. On Jan. 22, Iraq set two Kuwaiti oil fields ablaze and then opened manifolds on offshore terminals to pump oil into the Gulf. Precision strikes by two F-111Fs soon shut down the pumps. Increased coalition air attacks against hardened aircraft shelters compelled Iraq to send more than 80 aircraft scurrying to Iran between Jan. 25 and 29.

After evacuating his front-line aircraft, Saddam must have realized that he had misjudged the effectiveness and persistence of the coalition air attacks. With no end to the air war in sight, the chance to use Iraqi military forces in Kuwait was slipping away. In his effort to seize the initiative, Saddam had one more option: a mechanized offensive across the Saudi border to engage coalition ground forces immediately.

During the war with Iran, Iraq's ground forces frequently launched probing attacks into Iran's lines. The

Iranians would counterattack, pursue, and end up being drawn into traps where Iraq could inflict heavy casualties from carefully prepared defensive positions. Saddam may have calculated that an Iraqi attack across the border at Khafji would work the same way. Iraq's offensive stood no chance of outright victory. However, if coalition ground forces could be compelled to engage and pursue the Iraqis, a costly battle might weaken the coalition and perhaps even prevent the Iraqis from being forced out of Kuwait.

In late January, Iraq's III Corps was still an intact force. Coalition air attacks had concentrated on taking down the integrated air defenses in Iraq, attacking weapon storage sites, and debilitating Iraq's command and control. Although coalition air attacks in the KTO were beginning to intensify, fewer than 1,000 sorties had been flown against fielded military forces during the first week of the air war. Many of these were directed at the Hammurabi Division of the Republican Guard and other front-line infantry divisions farther west. US Central Air Forces planners rated Iraq's forces at 81 to 99 percent of full strength on Jan. 29.

### **Saddam Plans the Attack**

Four days earlier, on Jan. 25, Saddam convened senior military leaders and began planning to attack. As forces from Iraq's III Corps began preparations, Joint STARS sensors detected and recorded the increased activity. Earthmoving equipment dug berms and reinforced artillery positions on Jan. 26 and 27. Armored vehicles from the 3d Armored Division moved into position on Jan. 28.

A few hours after darkness fell on Jan. 29, US Marine Corps outposts along the border made the first contact with the advancing Iraqi forces. Forward outposts and fire control teams to the west returned fire and fell back as planned to hold the line on the ground while Marine forward air controllers directed air strikes against the Iraqis. Iraqi forces quickly occupied the town of Khafji, which had been abandoned months earlier because of its vulnerable position.

The action of the Marines was a controlled, tactical response. However, the coalition next had to determine the intent of the Iraqi probes,

contain the offensive forces, and regain control over Khafji. For the US-led coalition ground forces, the Iraqi attack came at an awkward moment. The Army component was in the midst of its three-week redeployment from the coastal area to attack positions more than 200 miles west. Any disruption to the 24-hour-a-day caravan might upset the timetable for the upcoming attack. Containing the offensive and pushing the Iraqis out of Saudi territory was vital.

As the battle began, theater commander Army Gen. H. Norman Schwarzkopf told reporters, "The mere fact that they launched these attacks indicates they still have a lot of fight left in them."

Joint STARS reports of Iraqi movement on the border and behind the lines flowed into the Tactical Air Control Center that night at about 10 p.m. local time. Brig. Gen. Buster Glossoon received the first Joint STARS reports and conferred with Horner. The JFACC ordered the single Joint STARS aircraft flying that night to swing back to the KTO and concentrate its arc of coverage over the border area near Khafji. Later that night—at 2 a.m. on Jan. 30—the Joint STARS sensors began to detect more movement as the 5th Mechanized

entered Khafji and elements of the 3d Armored advanced through the adjacent Al Wafra forest. To the west, the Iraqi 1st Mechanized Division probed across the border.

### Airpower Responds

Unbeknownst to Saddam, Schwarzkopf had decided not to play into his hands by launching a ground counterattack. "Schwarzkopf told us he didn't want to put any other forces over there," recalled retired USAF Maj. Gen. Thomas R. Olsen, who at the time was serving as CENTAF deputy commander. Schwarzkopf instructed his commanders to use airpower as the key element, along with Marine, Saudi, and other coalition ground forces, to stop the attack. To increase the margin of safety, the Marines embarked on a phased redeployment in their sector to put a buffer of about 20 kilometers of territory between coalition forces and the Iraqis. As long as airpower could reach deep to stop the offensive, the coalition ground forces in the area would not have to be reinforced, and Schwarzkopf would not have to reposition the redeploying Army forces.

At the Air Operations Center, the first task was to direct sorties al-

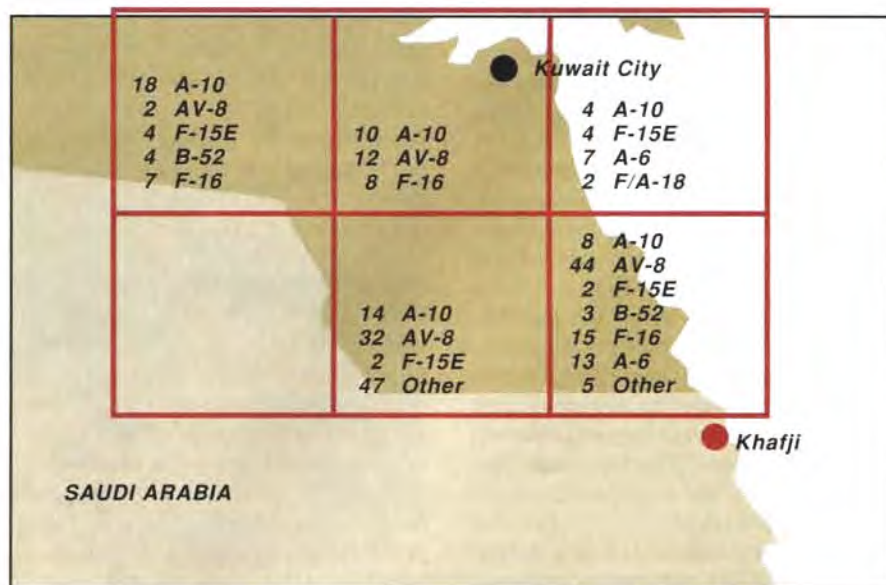
ready scheduled on the night's Air Tasking Order to strike moving Iraqi forces picked up by the Joint STARS sweep. Air attacks were funneled into the KTO from different altitudes and directions using a grid of designated "kill boxes" as a control measure. Each box measured 30 kilometers by 30 kilometers and was subdivided into four quadrants. Planners pushed a four-ship flight through each kill box every seven to eight minutes in daytime and every 15 minutes at night. In the designated area of the box, a flight lead was free to attack any targets he could identify within the allotted time.

Within the CINC's guidance to the air component, air interdiction operated independently. Hundreds of air attacks on Iraqi forces in Kuwait were already scheduled and under way. For example, more than 100 Air Force A-10 sorties were concentrated on the Republican Guards Tawakalna Division far to the northwest of Khafji. Many of the other sorties listed on the Air Tasking Order were already assigned to areas where the three divisions were gathered for the offensive. With airpower already flowing through the kill boxes, air controllers quickly diverted sorties to the Marine forward



### Khafji Kill Boxes

The enlargement below shows six of the 20 main kill boxes that divided the Kuwait Theater and the number of sorties per box during the period Jan. 29–31, 1991. Aircraft crews assigned to these six boxes flew 267 sorties—representing 17 percent of the total for those three days.





***"Like something from A-10 school": When Iraqi forces took to the road, A-10 tank killers found themselves in an ideal situation. Their destruction of an Iraqi convoy meant that Saddam's forces started the attack shorthanded.***

air controllers or sent them ahead to interdict the Iraqi forces attempting to reach coalition lines.

Pilots found the Iraqi armored vehicles were easier to identify and target once they were on the move. Near Al Wafra, an A-10 pilot described the sight of a column of vehicles as "like something from A-10 school." A-6s joined in, using Rockeye air-to-ground weapons. A-10 pilot Capt. Rob Givens later recalled with some amazement: "I, myself—one captain in one airplane—was engaging up to a battalion size of armor on the ground" and "keeping these guys pinned for a little bit." Air Force AC-130 gunships waiting on alert were scrambled after a hasty briefing. As lead elements of the 5th Mechanized with some support from the 3d Armored reached Khafji, one Air Force gunship caught the column and stopped many of them from entering the town.

Anti-aircraft fire and occasional missile launches were reported by the aircrews. However, the rapid attacks to squelch the initiative of the maneuver force also hit the Iraqis before they could bring up and assemble most of their heavier air defense guns and shoulder-fired SAMs, an important edge for the coalition that contributed to increased aircraft survivability and effectiveness.

### **The Second Night**

By the morning of Jan. 30, a few hundred Iraqi troops were occupying

the town of Khafji. Air attacks on the columns had been so effective that the objective of the Iraqi attack remained unclear to the coalition. "So few Iraqis made it across the border," Horner later recalled, "that it appeared to be some sort of minor action."

For the coalition, recapturing Khafji itself and stopping any Iraqi attempts to reinforce the town were the top priorities. Marines moved into place south of Al Wafra to hold the sector. Fixed-wing aircraft, attack helicopters, and artillery pieces joined the close-in battle around Khafji. Cobra helicopters with TOW antitank missiles cycled throughout the day to attack targets like Iraqi armored personnel carriers at close range inside the town of Khafji. Throughout the day, fixed-wing sorties scheduled on the ATO checked in with the Marine forward air controllers to seek out targets. An OV-10 spotted an Iraqi tank column moving south toward the town and passed the location to several airborne Marine F/A-18s. Pilots later told forward air controller Maj. Jim Braden, USMC, that as soon as the first Iraqi vehicles got hit, they all stopped moving and became much fatter targets for the aircrews. Toward evening, Saudi and Qatari forces assigned to the area began the first of two attacks to retake the town.

With the offensive now about 24 hours old, and Saudi and Qatari forces pressing in on Khafji, bringing up reinforcements was the only chance

for Iraq to recover the initiative or to try again to draw the coalition into a ground battle. The coalition forces engaged in and around Khafji did not know that Iraq was about to move fresh elements of the 3d Armored Division and 5th Mechanized Division under cover of darkness to reinforce Khafji and engage coalition forces.

The Joint STARS aircraft, scanning deep into the enemy's territory for moving targets, detected columns moving along the coastal road toward Khafji and at other points just inside Kuwait. Air controllers directed airborne assets to nip at the Iraqi attempts to recommence operations. One stunning example of this came at about 2 a.m. local time on Feb. 1; Joint STARS recorded an air attack in progress on a column of vehicles. In the first minutes of the attack, the lead Iraqi vehicles swerved off the road and into the desert. Multiple Joint STARS tracks of the primary and secondary Iraqi lines of communication across Kuwait confirmed that air attacks had disrupted vehicle traffic throughout the area. Instead of advancing toward the coalition forces, Iraq's forces were being stopped, rerouted, delayed, and destroyed. Iraq's forces were unable to continue with organized maneuver. By the morning of Jan. 31, the entire offensive had unraveled.

American airpower had within a short period of time destroyed enough vehicles to stifle the Iraqi III Corps' effort to regain the initiative. On one level, Khafji "proved, once again, that an unsupported army moving in the field is highly vulnerable to airpower," concluded Maj. Daniel Clevenger, one of the AFSAA study's leaders.

"From Iraq's standpoint, the Battle of Khafji was a debacle," Schwarzkopf later wrote in his memoir. A captured Iraqi soldier from the 5th Mechanized Division remarked that his brigade underwent more damage in 30 minutes of air attacks at Khafji than it had in eight years of the Iran-Iraq War.

The air response at Khafji supplied needed close support to engaged coalition forces and shaped the deep battle with the most efficient air counteroffensive against maneuvering land forces ever documented. The 1st Mechanized, 3d Armored, and 5th Mechanized divi-

sions were located in five kill boxes when they began the offensive against Khafji. The Gulf War Airpower Survey released by the Air Force in 1993 reported that coalition aircraft flew 267 sorties in those kill boxes in the 72 hours of Jan. 29–31. The 267 sorties totaled just 17 percent of the sorties flown in the 20 main kill boxes in the KTO in those three days. Other coalition air and ground forces carried out assigned tasks unrelated to Khafji with no disruption.

### Airpower and Enemy Maneuver Forces

At Khafji, airpower's deep interdiction robbed the Iraqi maneuver forces of the initiative by attacking them as they moved. By halting the maneuver force, Coalition airpower also exposed the Iraqi forces to follow-up interdiction. In the first three days of February, sorties flown against the exposed units tallied more kills against tanks, and coalition air continued to attack the Iraqi forces that had been part of the offensive.

Airpower's response to the Iraqi offensive at Khafji suggests that there are two distinct phases involved in halting maneuvering mechanized forces.

In the first phase, the main task is to detect and respond to their maneuver quickly, and with enough accuracy, to hit the relatively small number of vehicle kills needed to disrupt the initiative of the maneuver force. Successful maneuver re-



*This image shows burning targets in the Khafji area. Intelligence work, particularly from Joint STARS aircraft, was key to the detection and rapid response marking the first phase in halting the enemy's maneuvering mechanized forces.*

quires anticipation and mental agility to bring forces to the decisive point, according to US Army doctrine. A well-executed offensive maneuver should throw a defender off balance and give an attacker the initiative to set the terms of the battle. Initiative in the maneuver force depends on high efficiency as units move and attack.

The key to halting the Iraqi maneuver was the set of air attacks that took away the maneuver force's initiative. Aircraft had to identify targets and attack rapidly. At Khafji, the air units proved they could do

this job best when enemy forces were on the move. As Olsen recalled, the mobile Iraqi forces "were lined up in columns on roads, they were easy to find, they were easy to strike." The 5th Mechanized and supporting elements lost the initiative when A-10s and A-6s attacked vehicles moving near the Al Wafra forest and when the AC-130s destroyed several vehicles in the lead brigade on the coast road leading into Khafji. At the time, CENTAF's daily tally recorded that, by Feb. 1, attacks from the air had destroyed about 44 of the 5th Mechanized's tanks, about 25 percent of its prewar inventory.

Air attacks destroyed some vehicles, damaged several more, and forced crews to abandon others. The net effect was to strip the enemy of the ability to achieve the surprise, momentum, massed effects, and dominance that are the hallmarks of successful maneuver.

Unquestionably, operating over a desert held certain advantages for the air attackers. (The same road system and open terrain made it possible for the Iraqis to charge into Kuwait in August 1990.) In the end, however, the success of airpower owed less to terrain and more to the target tracking of Joint STARS and the rapid response of centrally controlled air forces when fed near-real-time information about enemy maneuver.

Dispersed, camouflaged forces or buried targets would take longer to



*By Feb. 1—a day after the main phase of the three-day battle—25 percent of the Iraqi 5th Mechanized Division's prewar inventory of tanks had been destroyed by air attacks.*



**The Battle of Khafji proved that airpower can strip the initiative from an enemy maneuver force. In the seven years since then, airpower has become even more effective in target identification and weapons employment.**

identify and attack from the air, but by the same token, dispersal, camouflage, and entrenchment precluded efficient offensive maneuver, as the ground offensive of late February attested.

After the initial attacks, the second phase exploited the loss of initiative that made the enemy force even more vulnerable. More damage was done on Feb. 2, as air attackers picked over the identified locations of the stranded forces. Reconnaissance indicated the attack units of the 5th were trapped between two Iraqi minefields. "The 5th Mechanized, which had been rated one of their finest armored units, just a notch below the Republican Guard, was almost entirely destroyed," Schwarzkopf concluded, adding that "we monitored Iraqi reports afterward that only 20 percent of the division made it back" to pre-offensive positions.

"The only ground offensive that Saddam Hussein had mounted had been defeated," concluded the Department of Defense's official report on the conduct of the war. The use of coalition air brought home to the Iraqis that "they could not gain the initiative," said Horner. In fact, the coalition seized the initiative by using airpower to turn the tables on the attacking Iraqis. Joint STARS caught the preparations for and launching of the attack in time to spoil some of the surprise effect. Steady surveillance and the constant availability of air attacks blocked

the Iraqi commanders from sustaining the initiative because they could not execute plans beyond the initial operation.

The Battle of Khafji also suggested that the amount of attrition needed to seize the initiative from a maneuvering enemy force and stop the offensive was very different from the level of attrition commanders want to inflict on an enemy force in defensive positions. CENTAF concluded that, when the offensive at Khafji was halted, the 5th Mechanized was still at 77 percent strength, and the supporting divisions, 1st Mechanized and 3d Armored, were at 99 percent strength. In contrast, Schwarzkopf had set a goal of achieving 50 percent attrition among the infantry divisions defending Iraq's front line prior to the coalition ground offensive.

At Khafji, it took less attrition to cause the defeat of Iraq's offensive than it took to set the conditions for launching the coalition ground attack. Neither Khafji, nor any other case study, can predict precisely the number of vehicles that must be destroyed to rob the enemy maneuver force of its most precious asset: the initiative. However, Khafji's evi-

dence suggests that the number is relatively small. After the war, the CIA conducted a survey that concluded that 51 of the 5th Mechanized's 160 vehicles were destroyed by air before the ground war commenced. A total of about 90 enemy vehicles were destroyed in the vicinity of Khafji.

### **What It Means to Halt**

Khafji demonstrated to all but the most ingrained skeptic the ability of deep air attacks to shape and control the battle and yield advantages for engaged ground forces. In 1991, airpower identified, attacked, and halted division-sized mechanized forces without the need for a synchronized, ground counterattack.

The conclusion, for some, is that the US should put more emphasis on airpower and less on ground forces. "If we take to heart the lessons of Khafji," retired Air Force Maj. Gen. Charles D. Link stated recently, "we must reexamine how we spend our defense dollars."

Seven years have passed since airpower defeated the Iraqi offensive at Khafji. In that time, USAF, Navy, and Marine Corps have quintupled the number of aircraft capable of carrying laser-guided bombs. In 1998, Joint STARS will be fully operational, with synthetic aperture radar and moving target indicator sensors advanced well beyond what was available in 1991. When these forces are present, they can provide 24-hour battlespace awareness and transmit target information for strikes that can disrupt the enemy's initiative and later cause added attrition. In that situation, no enemy maneuver force stands much chance of successfully reaching its objectives. Airpower is actually more effective in target identification and weapons employment than it was in 1991. The operational lessons of the Iraqi offensive at Khafji remain intact: Dominance in the air can strip the initiative from an enemy maneuver force—and do it with an efficiency that makes airpower the decisive weight in the operational balance. ■

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