



The Lightning of Desert Storm

by Colonel Randall J. Anderson and Major Charles B. Allen

This article is a combination of two by the same authors. The first part covers the 101st Airborne Division (Air Assault) four-phase operations plan (OPLAN) as it attacked into Kuwait in Operation Desert Storm. The second part discusses the 101st's light-heavy organization and operations for its covering force defensive mission in Desert Shield to respond to an anticipated Iraqi attack from Kuwait south into Saudi Arabia.

On 17 January at approximately 0300 hours, the coalition forces unleashed the fury of Operation Desert Storm on the infrastructure and military forces of Iraq. The 101st Division OPLAN 91-1, code-named Operation Desert Rendezvous, laid out a four-phased operation to take the division from force repositioning (concurrent with the air campaign) to consolidation after offensive operations. Phase

I (logistical buildup) moved engineer equipment, quartering parties, the division assault command post (ACP) and logistical resources to positions forward at Tactical Assembly Area (TAA) Campbell. The TAA was on the Saudi Arabian-Iraqi border, approximately 50 kilometers east of Rafha, Saudi Arabia. (See Figure 1.) Phase II repositioned the division from its base camp, Camp Eagle II (near Dhahran, Saudi Arabia), to the TAA.



DTG 170001C Jan 91

Soldiers, Sailors, Airmen and Marines of United States Central Command, this morning at 0300C we launched Operation Desert Storm, an offensive campaign that will enforce United Nations Resolutions that Iraq must cease its rape and pillage of its weaker neighbor and withdraw its forces from Kuwait. . . . My confidence in you is total. Our cause is just! Now you must be the thunder and lightning of Desert Storm. May God be with you, your loved ones at home and our country.

General H. Norman Schwarzkopf
Commander in Chief, Central Command

DTG 220700C Feb 91

Division OPORD 91-1 is effective for execution upon receipt of this message. G-Day H-Hour is 240600C Feb 91.

The Division's next Rendezvous with Destiny is north to the Euphrates River. Godspeed and good luck! Air Assault.

Major General J.H. Binford Peay III
Commanding General
101st Airborne Division (Air Assault)

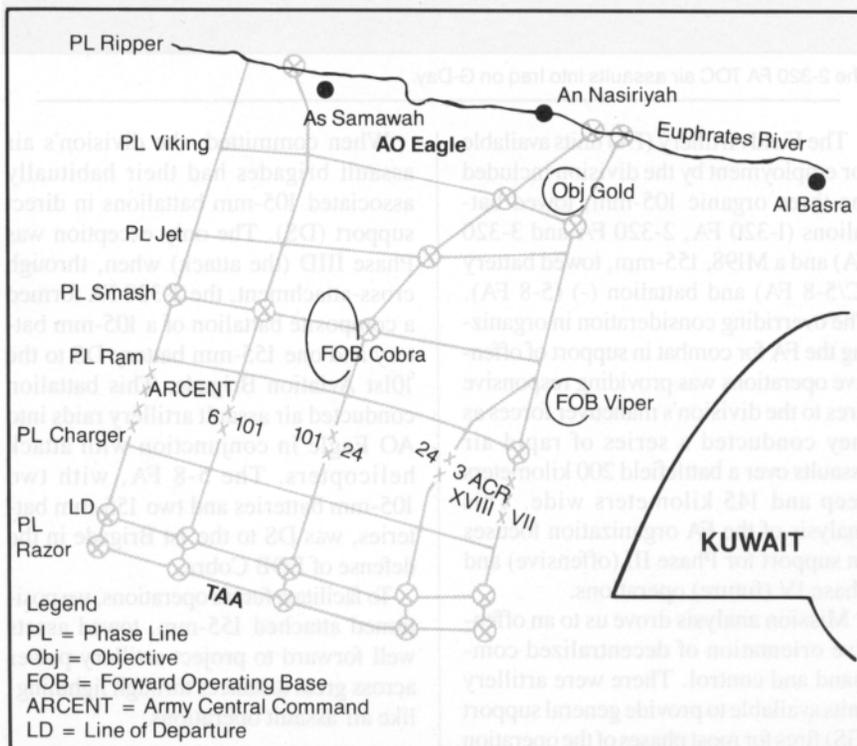


Figure 1: The 101st Airborne Division's OPLAN 91-1, from repositioning in the TAA (concurrent with the air campaign) to consolidation after offensive operations in Area of Operations Eagle along the Euphrates River.

Phase III, offensive operations against Iraqi forces, included four subphases: Phase IIIA—the seizure and establishment of a forward operating base (FOB Cobra) approximately 75 miles inside Iraq; Phase IIIB—the buildup of the FOB; Phase IIIC—an armed reconnaissance of the Euphrates River valley area of operations (AO Eagle) to interdict enemy forces and identify suitable lan-

ding zones (LZs) and blocking positions; and Phase IIID—the attack into the Euphrates River valley to interdict and block enemy forces. Phase IV (future operations) consisted of three subphases: Phase IVA—force repositioning and logistics buildup of a deeper FOB (Objective Gold); Phase IVB—aviation reconnaissance of the 101st Division AO in the vicinity of Basra, Iraq; and Phase

IVC—offensive operations to destroy the Republican Guards Forces Command (RGFC) and isolate Basra.

This article documents the 101st Airborne Division Artillery's implementation of Division OPLAN/OPORD 91-1. This OPLAN provided the direction to move the division artillery (Div Arty) to the TAA and then conduct combat operations against Iraqi forces.

Operation Desert Storm



The 2-320 FA TOC air assaults into Iraq on G-Day.

The Field Artillery (FA) units available for employment by the division included the three organic 105-mm, towed battalions (1-320 FA, 2-320 FA and 3-320 FA) and a M198, 155-mm, towed battery (C/5-8 FA) and battalion (-) (5-8 FA). The overriding consideration in organizing the FA for combat in support of offensive operations was providing responsive fires to the division's maneuver forces as they conducted a series of rapid air assaults over a battlefield 200 kilometers deep and 145 kilometers wide. This analysis of the FA organization focuses on support for Phase III (offensive) and Phase IV (future) operations.

Mission analysis drove us to an offensive orientation of decentralized command and control. There were artillery units available to provide general support (GS) fires for most phases of the operation. But we decentralized all firing units to support offensive operations as far north as the Euphrates River, as far south as FOB Cobra and as far east as FOB Viper.

When committed, the division's air assault brigades had their habitually associated 105-mm battalions in direct support (DS). The only exception was Phase IIID (the attack) when, through cross-attachment, the 2-320 FA formed a composite battalion of a 105-mm battery and one 155-mm battery DS to the 101st Aviation Brigade. This battalion conducted air assault artillery raids into AO Eagle in conjunction with attack helicopters. The 5-8 FA, with two 105-mm batteries and two 155-mm batteries, was DS to the 1st Brigade in the defense of FOB Cobra.

To facilitate future operations, we positioned attached 155-mm, towed assets well forward to project artillery power across great distances through lightning-like air assault operations.

Camp Eagle II to the TAA

At start of the air campaign, the 101st deployed by air and ground from Camp

Eagle II to the TAA by task-organized brigades in seven days. The division's entire high-mobility multipurpose wheeled vehicle (HMMWV) fleet and the majority of its personnel moved from King Fahd International Airport (vicinity of Camp Eagle II) to the Rafha airfield by C-130 aircraft. All 2-1/2 ton and larger vehicles moved from Camp Eagle II to the TAA by a 723-mile ground convoy through the Saudi capital of Riyadh.

Operations. Once Div Arty units and C/5-8 FA arrived in the TAA, the first priority was to provide fire support across the divisional front. Two air assault brigades along the Saudi-Iraqi border began aggressive patrolling and counter-patrolling operations. Their DS battalions provided fires in support of these operations. Additionally, C/5-8 FA and C/6-27 FA multiple launch rocket systems (MLRS) were positioned to provide fires GS to the division.

From G-7 to G-Day, the division planned armed aerial reconnaissance operations to identify and attack enemy forces that threatened operations beyond the border. We planned both ground and air assault artillery raids, supported by attack helicopters, to neutralize or destroy lucrative targets.

Although positioned and prepared to support a variety of missions, the Div Arty organic and attached elements didn't fire while the division occupied the TAA. It was decided that sporadic enemy activity didn't justify possibly disclosing the presence of the division to the Iraqi forces in our AO.

Training. The Div Arty firing units conducted final precombat training after their arrival in TAA Campbell. Clearly, air assault operations were the linchpin of preparation for combat. Two com-

ponents of this training deserve special attention: day and night air assault artillery raid training and training to employ CH-47 helicopters as "prime movers" during air assault operations.

The Div Arty firing units spent several days conducting progressive training with the division's medium- and heavy-lift battalions. This day and night training consisted of dry drills, tactical exercises without troops (TEWTs) with the firing battery leadership and the aircraft crews, static training with the aircraft and battery collective training.

We developed an air assault procedure for 105-mm units that would allow them to conduct extended air assault artillery raids. A firing battery loaded inside CH-47s, air assaulted to a firing position. Upon arrival, the aircraft shut down to the rear of each howitzer and remained in the firing position through extraction.

This concept provided several advantages. It increased the survivability of the aircraft, affording them the security of the artillery battery instead of having to proceed to an unsecured laager site. The aircraft were available for immediate extraction, decreasing fuel consumption



Using CH-47 helicopters as the 105-mm howitzers' prime movers, the 101st Airborne Div Arty trained for extended air assault artillery raids.

and, therefore, making it possible to conduct deeper artillery raids. Using these procedures, we could carry up to 900

rounds per battery (150 with each howitzer), allowing us to engage multiple targets in a target-rich environment.

Combat Operations Against Iraqi Forces

The tremendous successes achieved during the G-7 to G-Day armed aerial recons minimized the enemy threat from the line of departure (LD) all the way to the proposed FOB. We had captured 462 enemy prisoners of war (EPWs) and captured or destroyed extensive equipment. Although 105-mm and 155-mm firing units were positioned for on-call SEAD fires for the air assault penetration at the LD, they didn't receive a call for fire.

The 2-320 FA, DS to the 1st Air Assault Brigade, air assaulted with two firing batteries loaded inside CH-47s to FOB Cobra. The third battery, with C/5-8 FA, moved by ground convoy to the FOB. C/2-320 FA fired the first rounds of the war from a 101st Div Arty unit when it engaged an Iraqi infantry battalion dug in three to five kilometers north of the FOB. Shortly after the fire mission, an enemy battalion of more than 400 soldiers surrendered to 1st Brigade soldiers.

The 5-8 FA (-) had been with its parent 18th FA Brigade, reinforcing the French



The 3-320 FA tactical operations center emplaces in the Euphrates River valley in Iraq.

6th Light Armored Division as they attacked and seized objectives to the 101st's west on G-Day and G+1. Early on G+2, the 5-8 FA (-) was released from its reinforcing mission to the 6th Division, rearmed, refueled and joined the Div Arty in FOB Cobra. The battalion provided GS fires for the security of the FOB and prepared for future operations to the east.

Within 12 hours of FOB Cobra's becoming operational, the 3d Air Assault Brigade conducted an air assault into AO Eagle and began to establish blocking positions and interdict enemy lines of communication (LOCs) along the Euphrates River valley. The 3-320 FA air assaulted two batteries into AO Eagle (a distance of 128 kilometers) to provide DS fires for the 3d Brigade. The third firing battery from 3-320 FA moved by ground convoy through FOB Cobra and joined the rest of the battalion in AO Eagle. The

3-320 FA fired several combat missions in DS of the 3d Brigade and was credited with destroying vehicles and equipment along this critical enemy LOC.

The 1-320 FA, DS to the 2d Brigade, had moved from TAA Campbell to FOB Cobra by ground convoy on G-Day and G+1. It was occupying an assembly area in FOB Cobra, preparing for an air assault attack to the north, when it was diverted to the east. The ground campaign had been so successful that Central Command (CENTCOM) accelerated operations to destroy the retreating, disorganized RGFC forces.

The 2d Brigade established a FOB (FOB Viper) 145 kilometers to the east of FOB Cobra. From Viper, our attack helicopters launched east to help destroy the RGFC. The 1-320 FA air assaulted its three firing batteries to FOB Viper in support of 2d Brigade's operation. The C/5-8 FA was attached to 1-320 FA and moved by ground convoy to FOB Viper.

FOB Viper was being built up logistically when the cease-fire was announced.

The Lightning of Desert Storm

The 101st Airborne Division and the coalition forces experienced unprecedented success in combat operations against Iraqi forces. The 101st effectively projected power across an operational area the size of the northeastern United States. This was classic application of AirLand Battle doctrine, and air assault artillery played a critical role as it moved quickly over long distances in support of infantry and aviation task forces.

At the conclusion of the war, General Schwarzkopf visited the division and said, "While the armor and air forces were the thunder, the 101st Airborne Division (Air Assault) was truly the lightning of Desert Storm."

Operation Desert Shield

The Covering Force Mission

By mid-October 1990, the 101st Division was performing the covering force mission for the XVIII Airborne Corps in Saudi Arabia. The 101st Div Arty faced several challenges as we prepared to respond to an anticipated attack by Iraqi forces south from Kuwait.

A Vast Desert Wasteland

The covering force area (CFA) assigned to the 101st was a vast desert wasteland, 100 kilometers wide and 55 kilometers deep, which was 100 kilometers south of the Saudi Arabian-Kuwaiti border. Throughout the CFA, there were very few terrain features that would limit mechanized forces' mobility or canalize attacking forces in any significant way. The entire CFA could be used by the enemy in a combination of division-sized avenues of approach.

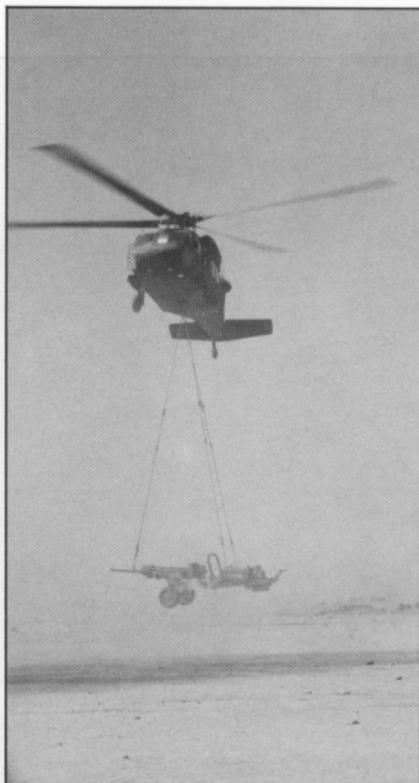
On the positive side, the terrain also facilitated our employing close air support (CAS), attack helicopters, tube-launched, optically tracked, wire-guided missiles (TOWs) and FA as an integrated team. Line of sight that stretched from a

few kilometers out to 30 to 40 kilometers made it possible to cover a large area with a minimal number of well-placed aviation and ground observers. The terrain, while providing high-speed avenues of approach for an attacking Iraqi force, also allowed us to delay and destroy the Iraqis with the awesome power of the Air Assault Division's combined-arms team.

The Threat

The theater intelligence community assessed that the Iraqis would attack in the 101st sector with two divisions (one mechanized and one armored) as the main attack in the east. The objective of this attack would be to seize the key terrain of An Nu Ayriyah, a major road network and intersection, and Tapline Road, a hard-surfaced, high-speed mobility corridor running northwest to southeast the width of the CFA.

One or two Iraqi mechanized divisions would be used as a supporting attack from the northwest of the CFA to seize Tapline Road and link up with the main attack in the vicinity of An Nu Ayriyah. Intelligence analysts estimated that the supporting attack would follow the main attack by 12 to 24 hours.



A UH-60 helicopter extracts a 1-320 FA section and its howitzer from the pick-up zone using an extended sling.



A 101st Div Arty 105-mm howitzer gun crew prepares to fire. For the covering force mission, the Div Arty was reinforced with the heavy artillery of the 75th and 212th FA Brigades.

Facing this threat, the covering force mission called for an integrated light-heavy force operating over an extended battlefield in accordance with AirLand Battle doctrine. The organic maneuver forces available to the division commander included the three air assault brigades (1st, 2d and 3d), the 101st Aviation Brigade with its two attack helicopter battalions (1-101 AAtk-Apache and 3-101 AAtk Cobra) and the 2-17 Air Cavalry Squadron.

The commander positioned his three air assault brigades in the western portion of the CFA. Their concepts of operations called for a series of engagement areas that would delay, deceive and attrit attacking Iraqi forces as they moved from north to south through the CFA. Employing classic combined-arms doctrine while taking advantage of their superior knowledge of the open terrain in their sectors, the brigade commanders were confident of their ability to accomplish their light-heavy mission.

To "thicken" the battlefield and adequately address the threat to the key terrain of An Nu Ayriyah, the XVIII Airborne Corps Commander attached additional maneuver forces to the 101st. The 3d Armored Cavalry Regiment (ACR) positioned its three heavy, highly mobile, armored cavalry squadrons, one air cavalry squadron and three howitzer batteries to counter the threat to An Nu Ayriyah. The 12th Combat Aviation Brigade (CAB), with its two attack helicopter battalions (3-227 AAtk-

Apache and 5-6 Air Cavalry), also was attached. The 2-229th AAtk Battalion (Apache) from Fort Rucker, Alabama, also joined the 101st Aviation Brigade team. The addition of these assets to the division, coupled with the vastness of the division AO, presented some new and unique fire support challenges.

Artillery Organization for Combat

To address the formidable Iraqi threat facing the 101st in the CFA mission, the XVIII Airborne Corps Artillery Commander reinforced the 101st Div Arty with the 75th and 212th FA Brigades from III Corps Artillery, Fort Sill, Oklahoma. (See Figure 2.) Including the organic 105-mm and 155-mm howitzer batteries, the 101st Div Arty fought the fire support battle with the equivalent of 11 artillery battalions. This proved to be a welcome challenge for a light Div Arty headquarters.

The 101st three organic FA battalions

75th FA Brigade

1-17 FA (155-mm, Self-Propelled)
2-17 FA (155-mm, Self-Propelled)
5-18 FA (203-mm)
6-27 FA (-) (Army TACMS/MLRS)

212th FA Brigade

1-18 FA (203-mm)
3-18 FA (+) (155-mm, Self-Propelled)
3-27 FA (MLRS) (Attached)

Figure 2: Preparing to face potential Iraqi attacks in the covering force area, the XVIII Airborne Corps Artillery Commander reinforced the 101st Div Arty with the 75th and 212th FA Brigades from III Corps Artillery.

were DS to their habitually associated maneuver brigades. Because the 3d ACR was the division's main defensive effort, a significant artillery force was required to support them. The 101st Div Arty designated the 212th FA Brigade as the Force FA Headquarters for the 3d ACR and attached the three howitzer batteries to the brigade's 3-18 FA (155-mm, self propelled). The 3-18 FA, thus, became a six-battery DS battalion for the 3d ACR.

Setting the Stage

The division's concept of operations was to engage and attrit attacking Iraqi forces with its attack aviation assets well forward in the sector. The aviation would then hand over the battle to the air assault brigades and the 3d ACR, who would continue the fight in their respective sectors. If the threat persisted, the division would then conduct passage of lines with and hand the battle over to the 24th Infantry Division (Mechanized) and assume a screening mission on the 24th's west flank.

Positioning FA assets was critical to provide continuous fires for the depth of the CFA. The nature of the covering force mission favored centralized control, but the size and expanse of the AO offered a strong argument for decentralization. Unless firing units were judiciously positioned, significant gaps would result and responsive fires wouldn't be available.

To support the aviation brigades, the 75th FA Brigade positioned two 155-mm battalions well forward in the CFA to provide priority fires and quick-fire channels. The battalions were to provide fires from at least 10 kilometers north of Phase Line (PL) Shovel back to their battle hand-over line with the air assault brigades.

The 212th FA Brigade also positioned two MLRS batteries far enough forward in the 3d ACR sector to range 10 kilometers beyond PL Shovel. This provided additional fire support to the avia-

ion brigade operating forward of the 212th's sector.

An interbrigade reinforcing fire net was established from the 155-mm battalion of the 75th FA Brigade to the MLRS battalion of the 212th FA Brigade to enhance the responsiveness of fire support to the forward aviation brigade. The great distances of the CFA, coupled with the limited range of FM digital and voice communications, necessitated this unusual link up.

Train as You'll Fight— Fight as You've Trained

The 101st developed a contingency plan that had two air assault brigades and their DS artillery battalions forward in their CFA positions at all times. The third brigade was positioned at Camp Eagle II to provide rear area security.

Brigade task forces (TFs) deployed to the CFA for 30 out of every 45 days. While there, they focused on their mission essential task lists (METLs) to prepare for combat operations. During these rotations, DS battalions conducted detailed briefbacks of their plans to support the maneuver brigade's concept of operations, as well as the Div Arty FA support plan. Comprehensive fire support rehearsals soon followed.

During these rehearsals, movement matrices were validated, voice and digital fire nets were exercised and fire support plans were integrated to support the maneuver brigades. Battalion survey teams emplaced primary, supplemental and alternate firing positions, as well as observer target reference points and brigade obstacles.

A Div Arty-wide covering force exercise integrated all fire support elements from the OH58D observation helicopters to the firing batteries of all DS battalions and FA brigades. A thorough after-action

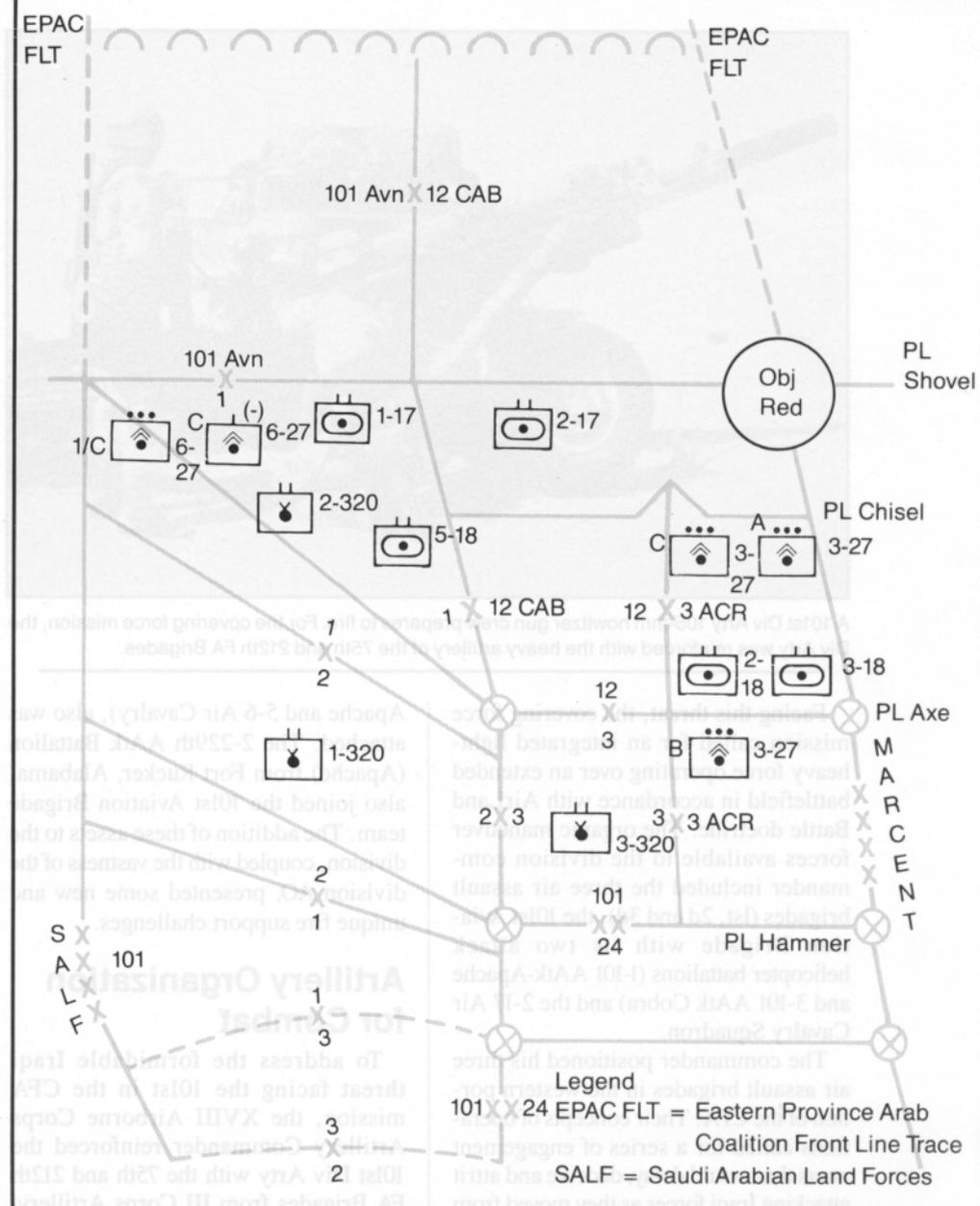


Figure 3: The 101st Division's position during its covering force mission in Operation Desert Shield.



A howitzer section of 2-320 FA direct fires at Faisal Training Area, Saudi Arabia, in November 1990.

review was conducted to capture the multitude of lessons learned.

With the reinforcement of the 75th and 212th FA Brigades came the responsibility for 101st fire support coordinators to gain and maintain proficiency employing the varied munitions offered by the additional weapons systems. This included combat observation lasing teams (COLTs) and ground/vehicular laser locator designator (G/VLLD) teams lasing for Copperhead round live shoots.

The 101st Div Arty and reinforcing artillery units conducted rigorous, realistic training in the local training areas and "up country" in the CFA positions. We



A gunner in the 101st Airborne Div Arty sets off deflection to hit the target during Desert Shield.



A howitzer section of C Battery, 2-320 FA is ready for pick up on the Saudi-Iraqi border on G-Day.

eventually built an artillery live-fire range in the CFA, which enabled all firing elements to practice and refine their skills. This provided outstanding opportunities for our units to train precisely as we intended to fight.

TACFIRE Interface

The absence of a tactical fire direction system (TACFIRE) capability in the 101st Div Arty challenged our command and control network as we synchronized and coordinated the fires of our 11 artillery battalions. All 75th and 212th FA Brigade battalions, as well as the brigade headquarters, had TACFIRE. Using liaison officers (LNOs) from the two reinforcing brigades proved to be critical to our ability to control reinforcing fires, reposition

75th FA Brigade elements and remain abreast of the fire support battle in the 212th FA Brigade sector. The LNOs relayed and received secure messages to and from their brigade tactical operations centers (TOCs) using mobile subscriber equipment (MSE). Because the two reinforcing FA brigades had MSE, this superb, state-of-the-art communications system was provided to the Div Arty TOC to interface with them.

Some TACFIRE/Non-TACFIRE interface challenges were solved by the fact that OH-58Ds, the division's primary target acquisition asset north of the CFA, could down-link digitally into the brigades' TACFIRE systems. This feature, which was exercised on numerous occasions during rehearsals, proved to be a most responsive method for placing

the enemy. Another system found in the reinforcing FA brigades that interfaced effectively with TACFIRE was the Q-36 and Q-37 Firefinder radars. The radars' TACFIRE compatibility drove us to attach the two Q-37 radars from the 101st 2d FA Detachment (FAD) to the 75th FA Brigade. Each FA brigade was responsible for the counterfire mission in its respective area.

North to the Euphrates

On 17 January at approximately 0300 hours, the fury of Operation Desert Storm replaced the deterrent posture of Operation Desert Shield with a massive air offensive on the infrastructure and military forces of Iraq. Marine Central Command (MARCENT) forces relieved 101st Division units in place in the CFA. This freed the 101st to prepare for its next "Rendezvous with Destiny" north to the Euphrates River during offensive operations of Desert Storm. Without question, Operation Desert Shield proved to be the finest training experience in many years and paved the way for the unprecedented successes of Desert Storm.

In the 101st Div Arty, our success and the short duration of this conflict are a tribute to our air assault doctrine, our planning, equipment and, most importantly, to the skill, will and courage of our soldiers. There were no casualties in the Div Arty during Operation Desert Storm. In the 101st Division, we refer to the conflict as "The 101-Hour War."



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