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## Second Battle of Fallujah— Urban Operations in a New Kind of War

Interview by Patricia Slayden Hollis

*As Commanding General of I MEF, LtGen Sattler commanded the joint and coalition forces at the second Battle of Fallujah in Iraq from 8 to 20 November 2004. Fallujah is about 40 kilometers west of Baghdad on the Euphrates River and has a civilian population of about 250,000—only an estimated 1,500 of whom remained in the city during the battle. The battle was fought by a force of about 15,000, including US Marine, Army, Air Force and Navy units plus British and Iraqi units. The main force swept through the city from north to south down corridors. The forces cordoned the city and searched door-to-door, clearing buildings and engaging the enemy in the streets. This battle was reputedly the most fierce urban fighting for the Marines since the Battle of Hue City in Vietnam in 1968.*



**Q** What prompted the second Battle of Fallujah? Overall, how did you conduct operations, and how effective were they?

**A** In the first battle of Fallujah in April 2004, we did not have an opportunity to shape the battle—only to deal with the enemy’s activities. So we took the lessons learned, such as how the enemy used information operations [IO] to stop the battle, to set the stage for Fallujah II.

All the streets into the town were sealed by known thugs and murderers. I wouldn’t call them “insurgents”—they were just a bunch of rogue thugs. But they controlled the city through intimidation.

The Iraqi Prime Minister Ayad Al-lawli determined that Fallujah had to be cleared to keep from exporting terrorism. Thugs could come to Fallujah; get their missions, ammunition and training; and move out to other parts of the country to execute their missions. The only way to stop these thugs was to clean them out.

Once General Rich Natonski [MajGen Richard F.], the 1st Marine Division Commander, and his staff did their troop-to-task analysis, they asked me for additional forces. So we brought together an operational planning team and worked out a holistic plan to cover ground combat, aviation and combat support, to include operations in Phase IV [after major combat operations], and the forces we’d need to execute the plan. The planning started about a month out. [See Figure 1 for the task organization of the joint and coalition forces for Operation Al Fajr, Fallujah II.]

The task organization was two Marine regimental combat teams [RCT-1 and RCT-7], each with two Marine battalions and an Army battalion; one of the Army battalions led the fight coming down from north to south. We also had six Iraqi battalions that fought very well.

In all, we had about 10,000 service members who actually went into Fallujah. We also had about 5,000 other Soldiers, Airmen and Sailors in support.

We did a number of feints from the

south and east—made the enemy think he knew from which directions we were going to attack. It worked. Our intelligence showed the large number of road blocks, berms and indirect fire, sniper and fighting positions the enemy established in the south and along the east to defend the city. When the sun rose on the day of the battle, we had all of our forces north of the town, but it was too late for the enemy to shift his positions. [See Figure 2 on Page 6 for a map of Fallujah with the coalition and joint forces arrayed on the first day of the attack.]

During the fight, we ended up having to go house-to-house to clear every building because of the number of caches we found—more than 600 caches of weapons, ammunition, explosives and blasting caps. We also found a number of IED, improvised explosive device, factories and a couple of sites where they were making vehicle-borne IEDs.

We came across training camps with literature on how to operate different weapons systems, what tactics to use at ambush sites, etc. We also found torture chambers with cameras and computers used to make CDs for IO and intimidation.

We cleared somewhere between 15,000 and 20,000 buildings, most about three times. After the initial sweep, the thugs got in behind us, so we doubled back to attack south to north and cleared the same buildings again. Then after we secured Fallujah, we went through every building a final time to make sure we cleaned out all the caches.

We cordoned off the roads and built vehicle check points and entrance control points around the city. We cleared the *vermin* out and did not let them come back.

In all, we killed about 2,000 enemy thugs and took about 1,200 people into custody in Fallujah II, including a number of non-Iraqis. Every male of military age captured in Fallujah was at least vetted; many went to detention facilities. We



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the city, which really helped us avoid noncombatant injuries, keeping them down to almost zero.

The last thing we did before the attack was drop a leaflet that told the civilians who did not leave to stay inside their homes and lay down on the floor with their pamphlets in their hands as we entered the building. We took them north to holding places, in most cases, mosques. We brought buses and vehicles along behind the attack to escort them north.

Now, as you can imagine, when you back thugs “against a wall,” they might play like they are noncombatants and try to exfiltrate out in our buses. For the most part, our Iraqi forces could see through that, so we took the thugs to detention facilities vice humanitarian assistance holding areas.

Although we worked hard to avoid damaging the city or causing noncombatant injuries during the battle, we still had to fight the fight; some damage was

inevitable. So our IO campaign told the people about the reconstruction of Fallujah—that power grids and water purification were coming back online, schools were being remodeled, streets were being repaired and rubble was being taken out of the city. We constantly educated the people so they knew things were happening all over their city.

We didn’t bring people back into Fallujah until 23 December. We began opening up the city by little districts, a total of 18, one at a time. This allowed us to get the rubble out and open services in the districts before the people returned.

We told the people how we were going to inspect their homes for damages, how claims could be adjudicated and that the process took time, and when the money would be coming.

Our IO campaign worked very well. It was time-consuming, and there was still some citizen angst about not being able to return to their homes except by

designated districts.

IO set the conditions for minimal damage and injuries in the battlespace, allowed us to fight in Fallujah with the world understanding why it was necessary and helped decrease the citizens’ anxiety during the city’s attack, clean up and repopulation.

This is a new kind of war.

**Q** How did you employ fire support in urban operations in Fallujah, and how effective was it? How important were your forward observers to the process?

**A** Our fire support plan was based on the Marine Corps’ combined arms doctrine and included fixed-wing aviation from the Marines, Air Force and Navy; Army and Marine helicopters, both attack and MEDEVAC [medical evacuation]; M198 [155-mm towed] and Paladin [155-mm self-propelled] artillery; and 81-mm and 60-mm mortars. Additionally, we created an inherently

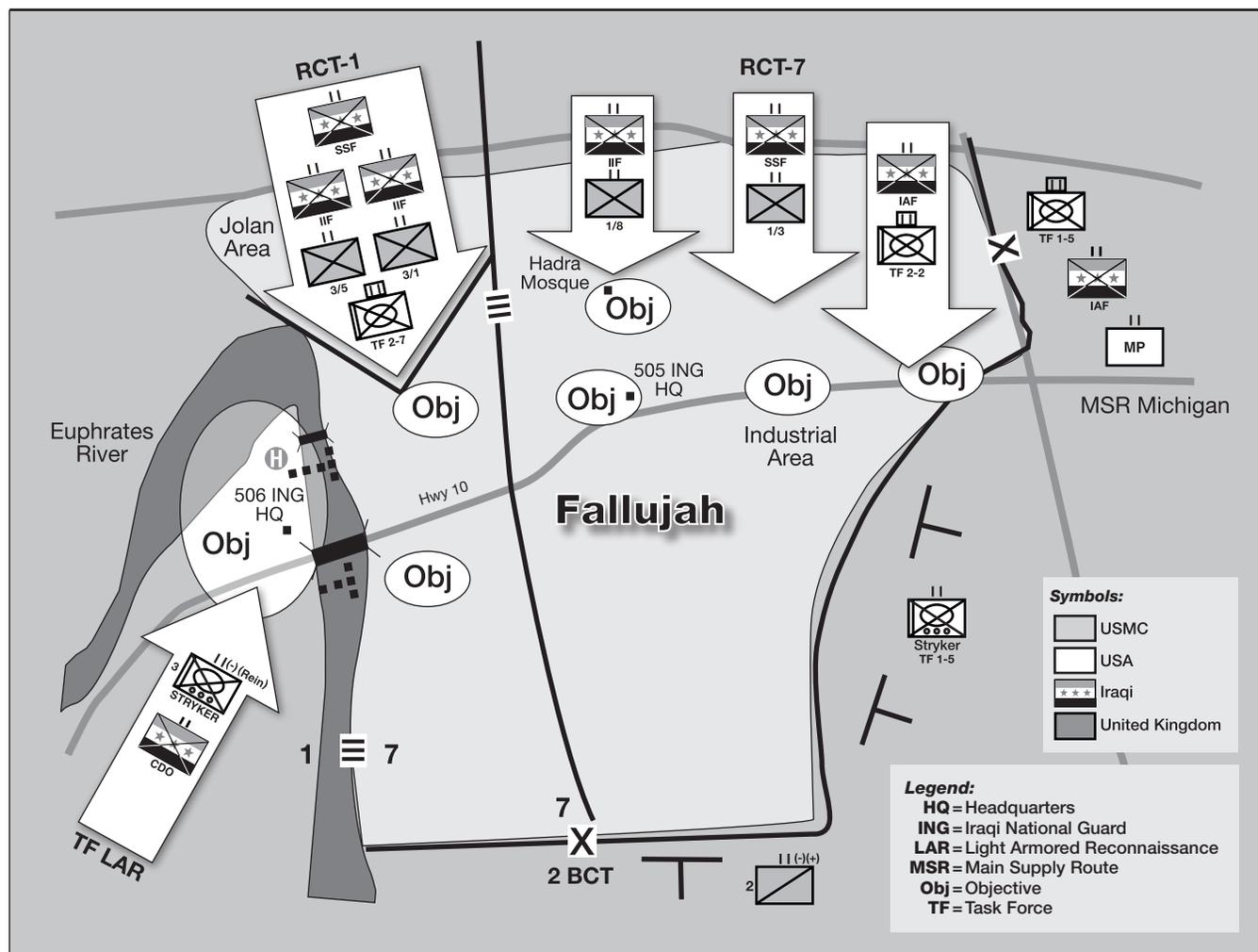


Figure 2: Operation Al Fajr on 8 November 2004—Attack Day

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deconflicted battlespace to ensure we could employ our fire support systems as rapidly and effectively as possible.

We fired more than 6,000 artillery rounds during the battle. Every round was in response to enemy action—there were no prep fires before the attack, no harassing and interdicting fires. Every round fired was controlled by a forward observer [FO] or, in some cases, an unmanned aerial vehicle [UAV]. Our UAVs gave us the grid coordinates of an enemy position and allowed us to clear the area for fires and estimate collateral damage.

Our FOs were *critical*. To minimize damage and injuries to noncombatants, every round was on a specific target, often one tube firing at a time, and was observed. Based on the way we had laid out Fallujah's imagery with the buildings numbered, all FOs had the same imagery the pilots and personnel back at the combat operations center [COC] had.

So, obviously, the first round was very accurate. We often hit the exact building with Artillery, even though we were not using precision-guided artillery rounds. And if we didn't hit the target with the first round, we were able to walk the next round onto the target quickly.

This is how good the Artillery was: the ground warriors were willing to call in artillery rounds within 150 meters of themselves. One advantage of urban combat is friendlies can move back one row of buildings or get down below a wall to afford more protection from incoming rounds than in open terrain. We cleared danger close fires at 100 meters for the 81-mm mortars down to 50 meters for the 60-mm mortars.

So we didn't use any one system in isolation. We employed fire support in a cascading effect.

**Q** *How did you command and control your fire support?*

**A** RCT-1 and RCT-7 each had an Artillery battery in direct support [DS]. The Paladin battery [A Battery, 3rd Battalion, 82nd Field Artillery, (A/3-82 FA)] was DS to the 2nd BCT. Both the Paladin battery and a Marine M198 battery [M/4/14 Marines] were positioned at Camp Fallujah, some 22 kilometers southwest of Fallujah. [Also on Camp Fallujah and under the operational control of RCT-7 were two Paladins from 2/A/1-6 FA.] Now, that meant we couldn't mass a battalion's worth of Ar-

tillery on a target, but the enemy targets were no larger than a squad, so a battery could handle them.

The Paladins and M198s first response was counterbattery fire. Even though the enemy had limited indirect fire assets that were generally ineffective, we made sure that if he did fire, we found the point-of-origin and "rained steel" down on him.

The Marine and Army Artillery operated as one. They spoke the same language and had the same pride and professionalism. They ran their FDCs [fire direction centers] and FSCCs [fire support coordination centers] and cleared targets the same way. You could have taken Marine and Army Artillery officers and staff NCOs and interchanged them.

I attribute that incredible interoperability to the professionalism at Fort Sill. That's one hell of a school that teaches the Artillery to be the *King of Battle*—and it works.

**Q** *What did you learn about Artillery in urban operations?*

**A** If you have shared imagery and preplan as much as possible by knowing the coordinates of potential targets on that imagery, then the FOs and FDCs can hit the target, adjusting if they have to, to take out a target *very* rapidly.

We learned that UAVs can provide the coordinates required for Artillery as well as aviation fires.

If an Artillery round was the choice for the desired effects, an aviation crew flying in the area can use its Litening pod to provide the exact coordinates for the target. [The new Litening pod in many aircraft can display detailed imagery of the ground from, say, 26,000 feet in the air.] The crew also could see, for example, if another friendly unit was coming into the back side of that target, something an FO might not be able to see. Every part of the joint team played some unique role that made the whole more effective.

Another thing we learned was that on the front side of the attack, VT [variable time] fuzes were most effective because many of the enemy were outside on rooftops. But once we moved down into south Fallujah where we backed the thugs into a wall (2nd BCT had sealed the south) and the thugs became very determined, PT [point detonating] fuzes were more effective.

**Q** *In the Battle of Fallujah, could you have used precision-guided Artillery munitions, such as the 15- to 70-kilometer guided multiple-launch rocket system (GMLRS) unitary rocket to be fired by MLRS and the high-mobility artillery rocket system (HIMARS) (GMLRS now in theater) and the 35- to 40-kilometer 155-mm Excalibur unitary round (soon to be in theater)?*

**A** With GMLRS hitting rounds in theater and Excalibur hitting rounds in testing, both within four meters or less of their targets—*absolutely* I could have used them. They will be extremely useful in future conflicts. They give us all-weather, 24-hour, seven-day-a-week precision-guided capabilities. The sooner we can get them, the better.

Now, having said that, these incredible munitions will add to our capabilities, not replace any. They will not replace aviation with air-breathing pilots, not only dropping precision-guided munitions, but also providing situational awareness so the guys on the ground can prosecute the battle better.

And, our "dumb" Artillery rounds in the battle of Fallujah were pretty damn "smart," so we don't want to get rid of them. It isn't an either-or.

The ground warrior doesn't care if his fires come from tubes, rockets or aircraft, just as long as he gets what he needs and when he needs it. These two new munitions now mean he can have precision-guided fires *any* time.

**Q** *What unique TTP did you use to employ joint fires?*

**A** We employed what we called "keyhole CAS." Working with the CENTCOM [Central Command] CFACC [Coalition Force Air Component Commander], Lieutenant General Buchanan [Walter E., III], and the CENTCOM Commander, General John [P.] Abizaid, we built a stack of CAS. With rotary-wing aircraft operating at 5,000 feet and below and fixed-wing at 9,000 feet, we established four holding points for Air Force, Navy or Marine fixed-wing and Army or Marine helicopters. We had Cobra and Apache attack helicopters plus Blackhawks and CH-46s that flew MEDEVACs or resupply.

Army helicopters picked up wounded Marines and Marine helicopters picked up wounded Soldiers to take them to



Photo by SFC John Charles Van Boers, 55th Signal Company (Combat Camera)

SGT Mathew H. Lowry and SPC John L. Jackson, A/3-82 FA, 1st Cav Division, verify and load a round into a M109A6 howitzer during combat operations in Fallujah, 6 November 2004.

shock trauma centers for treatment, no matter if the medical facility was Marine or Army.

We built shared, detailed imagery of Fallujah; mensurated coordinates for certain key buildings on the imagery; and worked closely with CENTCOM's CAOC [Coalition Air Operations Center] in Qatar. So all joint pilots had the same keyhole CAS stack briefing and used the same reference points on their knee boards. The ground warriors understood the keyhole CAS stack along with the ANGLICOs [air naval gunfire liaison companies], FACs [forward air controllers] and JTACs [joint terminal attack controllers], and they all had the same imagery.

So when a building was mentioned as a target, everyone knew exactly which building it was, regardless of the uniform he wore or his role in the fight. If a Marine pilot in the stack said he did not have the right ordnance on board for a particular target, then an Air Force pilot could say he did and come out of the stack to take out the target.

Fallujah II was fought in a city five miles by five miles with 15,000 to 20,000 buildings that had about 10,000 Soldiers, Marines and Iraqis attacking north to south, some swinging east to west and some attacking back from south to north. Aviation, Artillery, mortars plus UAVs had to be deconflicted with their effects orchestrated to prevent fratricide, be most effective and limit collateral damage or injuries to non-combatants. All that had to happen in a fog of intense house-to-house combat for 10-plus days in a constrained urban

environment.

We were about as joint as you can get. The young men and women who pulled all that off were *amazing*.

**Q** *Even though Fallujah II had excellent joint interoperability, what can we still improve?*

**A** We need to go one step further in our shared imagery and improve the downlinks from aviation and UAVs so the ground forces can see exactly what the pilots see on their Litening pod displays. We need Litening pods in all joint fixed-wing aircraft as well as rotary-wing and to push the pod's imagery down to all joint observers and ground forces responsible for clearing targets so they can just "click" on the target for an aviation attack.

Rover III does that. [It is a portable, receive-only terminal for sensor data from multiple airborne platforms. For example, it allows ground forces and observers to see the ground details pilots see on their Litening pod displays from 26,000 feet in the air.]

In Fallujah II, we did not have enough Rover III receivers, so we need more of them. Also, we need to modify our UAVs to feed their imagery down via Rover IIIs.

Rover III identifies the target as the enemy, clears the target of friendly forces and helps limit collateral damage. We would be able to execute all types of CAS more rapidly using Rover IIIs, and they are useful in urban terrain where the next row of buildings often obscures the observer's vision.

**Q** *Please describe your targeting process, both deliberate and reactive.*

**A** When we positively identified a target as valid, in deliberate targeting we estimated the collateral damage potential of executing that target. A weaponeer worked a detailed equation, taking into account the type and size of the target, size and effects of the weapon, etc., to come up with the estimated collateral damage. We then figured out how we could get that collateral damage down to zero—change the heading of the aircraft, size of the bomb, delay of the fuze, etc.

If the collateral damage was still high, then an authority in the chain of command had to determine if the target was important enough to risk the collateral damage.

The next step in the deliberate targeting process was to deconflict the target with friendly forces. We're never going to accept a friendly casualty on a deliberate target. We ensured the commander who owned the target's battlespace had cleared the target.

The last thing we did in counterinsurgency ops was to ask a series of questions. What are the unintended consequences of executing this target? Will we hand the enemy an IO opportunity or can he generate a false IO campaign because of it? (In one IO campaign, the enemy used old footage to show elderly men, women and children in the hospital, claiming they were injured by our forces in Fallujah II.)

Two months before the fight, we took down deliberate targets on a nightly basis: training camps, command and control nodes, meeting places for some of the high-value targets, etc. It took weeks to build some of those target folders before we actually decided we were going to take those targets down.

Now, in reactive targeting—when troops were in contact or if there was hostile intent—the junior commander on the ground could clear and execute the target. An example of "hostile intent" is when the enemy was setting up a mortar tube; the commander didn't have to wait until the enemy fired the tube to take it out.

If troops were in contact, the junior commander on the ground had the authority to engage a target to protect his forces. He positively identified the target and cleared it. Collateral damage was his call.

Now, the commander had to consider proportionality. In other words, he

couldn't throw a 2,000-pound bomb that could cause collateral damage on an enemy walking across a street with a rifle.

For either type of targeting, based on the fire support control measures that we employed and our keyhole stacked CAS, when a valid target appeared, we wanted to engage it in seconds or, worst case, in minutes.

**Q** *In the press, the US military has been criticized for knowing only how to "break things" and not being effective at Phase IV operations. How did you conduct Phase IV in Fallujah?*

**A** We had everything for Phase IV planned before we moved across the line of departure. We did not attack Fallujah's electrical power grid, water supply, railroad trestle, the two bridges going across the Euphrates River or the pump houses. Fallujah is below the Euphrates River, so if you blow the pump houses, it will flood like New Orleans.

Our civil-military operations team moved in behind the front line forces. While fighting was still going on, they cleaned and set up the governance center to give the people of Fallujah a voice in their city's reconstruction.

The Seabees also moved in behind the front lines with bulldozers and trucks picking up the rubble and litter on the streets. In a matter of days, we had tons of debris moved to a pre-approved site.

We also had contracts in place to pay Iraqis to pick up the rubble and take it to a central location and sweep the streets. This was a "two-fer." One, we put money in their pockets, and two, we gave them purpose—jobs enhancing their city.

We already knew where all the power grids were and who the electrical contractors would be. So as soon as an area was secure enough to start hanging wires on the poles to get the grids back up, we regridged the city in the sequence of districts we repopulated.

We brought in huge water containers, each with 13 spigots, that contractors refilled so the people would have access to fresh water.

We also estimated what it was going to cost and gave the amount to the Prime Minister so he would have x-million dollars available immediately for the residents to get their lives back on track.

Did we do it all right? Were we trained to do all the things we did? No. But we did a good job.

Phase IV needs to be more of an inter-agency process. The military has to be

the lead at the beginning because it's still somewhat of a hostile environment. But somewhere along the line, this phase needs to morph from heavy military to 50-50 participation with other government agencies and then to the military in a supporting role.

As it stands in Iraq, the military rides Phase IV all the way through. The good news is our young men and women are adaptive and smart enough to figure it out. The bad news is they have to figure it out.

**Q** *How will fielding the lightweight 155-mm M777 howitzer enhance the fires capabilities of the Marine air ground task force (MAGTF)? The high-mobility artillery rocket system (HIMARS)? The expeditionary fire support system (EFSS)? [EFSS is a towed, rifled 120-mm mortar and is scheduled to begin fielding in the 10th Marines in late 2006 or early 2007.]*

**A** Because of its increased mobility, the lightweight 155, the triple seven, will displace more easily and be fire-capped [ready to fire] more rapidly in any area of operations. Also, in combination with the Excalibur unitary round that's coming out, it will provide *unbelievable* first-round precision fires, day or night, seven days a week. The same is true of HIMARS firing GMLRS unitary, giving us even greater range.

The fires triad coming into the force—the M777, HIMARS and EFSS—will complement our other mortars and aviation and give us seamless and continuous fires to prosecute battle 24/7 anywhere in the world.

**Q** *What message would you like to send Marine and Army Artillery-*

*men stationed around the world?*

**A** You Artillerymen are very adaptable and versatile. In urban counterinsurgency operations in Fallujah II, sometimes the Artillery shaped and maneuver forces went in behind vice maneuver forces going in and the Artillery taking out targets in front of and around them. Sometimes maneuver supported fires, and other times fires supported maneuver.

In counterinsurgency operations in Iraq, some Artillery units operate as maneuver or MP units and conduct civil-military operations, information operations and other nontraditional missions. With your intelligence, flexibility and adaptability, you can contribute all across the spectrum, from Phase I through Phase IV, in any type of operation, but especially in counterinsurgency operations.

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**Lieutenant General John F. Sattler has commanded the Marine Forces Central Command (CENTCOM) since August 2005 and the I Marine Expeditionary Force (I MEF) at Camp Pendleton, California, since June 2004. As the I MEF Commanding Officer, he deployed to Iraq and commanded the joint and coalition forces in the Battle of Fallujah II in November 2004. He also served as Director of Operations for CENTCOM and, before that, Commander of the Combined Joint Task Force-Horn of Africa. He commanded the 2nd Marine Division at Camp Lejeune, North Carolina, the same division in which he served as Assistant Division Commander and Commanding Officer of the 2nd Marine Regiment. Among other tours, in the J-34, he was the Deputy Director of Operations (Combating Terrorism) and in an earlier tour, in the J-3 as a Ground Officer for Operation Solid Shield, both on the Joint Staff at the Pentagon.**



(Left to right) LTG Abdul Qater, CG of the Iraqi Army Forces; LtGen John Sattler, CG of I MEF; and Col Craig A. Tucker, CO of Regimental Combat Team 7, discuss operations during Fallujah II.