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Washington, DC

Iraq War Note
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1. The “Battle of Baghdad: Trafficability, Shelters, Barriers, the Baghdad Red Line, and the Places We Can’t Find on the Map

The nature of terrain is changing rapidly as US forces close in on Baghdad. Water barriers are becoming much more frequent, although one must be careful to assume that every ditch is a canal and requires bridging. Many, if not most, can simply be bulldozed into crossing points. The word “trafficability” will, however, become much more important because much of the land is wet or soft, and will bog down support vehicles, and many bridges cannot take tanks and artillery.

This move out of the desert into the twin rivers delta requires careful reporting. For example, sandstorms will still affect rear areas, but thunderstorms and flooding - deliberate or not - will affect many of the positions in the area from an Najaf and Al Kut to Baghdad.

As the Serbs showed in Kosovo, every small complex of buildings can be a shelter or hiding place. Decoys become far more effective. Whether or not one calls it human shields, towns become sanctuaries or killing grounds, and even with UAVs, it is impossible to locate most dispersed forces.

The fixed defenses around Baghdad may be the least of the problem, particularly if any of the divisions bypassed on the way up have elements willing to infiltrate into US rear areas and fight. We also need to remember that Iraq has 10 commando brigades, two special forces brigades, Saddam’s Fedayeen, and numerous security forces - not just the regular Republican Guards divisions or Special Republican Guards. All can be used for defense in depth in the Baghdad area, rather than locked into a largely mythical red line of defenses.

Note that regular maps cannot begin to show this level of detail, and even satellite maps only hint at it. Moreover, past wars have shown that hills, small rivers, and towns so small that they not only are not on the map, but also no one can agree on their name, become the key turning points of war. The ability to “zoom in” on the unexpected may be critical to effective coverage.

2. Chemical Weapons and Biological Weapons

This is a good time to reflect on the fact that we may face chemical weapons, and even biological weapons in the next few days. We need to be extremely careful about the language we use. Even the CIA has been pushed into worst-case estimates of the impact of chemical weapons in eight years of the Iran-Iraq War. An estimate of 12,000-15,000 dead has been pushed up to 30,000 in recent anti-proliferation literature. Tens of thousands of chemical rounds against a densely packed exposed infantry produced many more wounded, but remarkably few killed. In many cases, Iranian also could not use gas masks effectively because they insisted on keeping their beards.

This war could be different. First, panic and precaution are probably going to be more important than killing and wounding. Even a few rounds can slow an advance or disrupt a rear area. In practice, the disruptive and psychological effect may often be more important than the casualty effect, and most non-experts who reach for a weapons effect handbook grossly exaggerate the threat.

The other difference, however, is VX gas. There is no such thing as poison gas. All chemical weapons are heavier than air vapors. VX is far more stable and persistent vapor than any form of nerve gas used in the Iran-Iraq War, although not more persistent than mustard gas. It is also about 10 times more lethal,



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It still will take something like 100 rounds to successfully attack a dispersed infantry battalion unless Iraq has really good cluster munitions and VT fuses. It takes more like 1,000 to attack an exposed brigade. This makes Iraq's artillery weapons and multiple rocket launchers far more important in such combat than its long range missiles, although the Ababil 50 and Ababil 100 may now have more lethal cluster bomb warheads with chemical weapons.

The key uncertainty is that no one has ever used VX gas in combat. The lethality models provided in books often assume optimal dispersion against unprotected human beings on a smooth flat plain with no ground moisture and fired at night. The detection and protection models, however, are also filled with massive uncertainties. From the real-world reliability of reused suits to the error and false alarm prone detectors to the air filters in vehicles.

In short, the only way to be sure of what will happen under real-world conditions is to observe the use of such weapons. A truly grim reality.

The other dimension is biological weapons. There is no evidence that Iraq has any prompt killers in terms of rapid effects other than toxin - biological poisons that are generally less lethal than non-persistent nerve gas. Troops are immunized against Anthrax. The psychological effects of such weapons, however, are immense and no one exposed to such weapons can simply rely on Anthrax vaccine. Moreover, the humanitarian complications of any spillover on to Iraqi civilians could put an immense burden on us that we are totally unprepared to deal with.

The end result is that a last ditch biological attack, even as a small terrorist attack, could have significant results in spite of the fact most of our forces are dispersed, and it would now take days to have any effect even against those who are not immunized.