

# Full-Spectrum Bridging Operations in Iraq

By Second Lieutenant Scott D. Eshom

**W**ith Operation Arrowhead Ripper only weeks away, insurgents targeted and successfully rendered a key regional bridge impassible with a vehicle-borne improvised explosive device (VBIED). Located north of insurgent hotbed Baqoubah, the bridge had served as a passageway over the Diyala River. Operation Arrowhead Ripper, part of the larger Operation Phantom Thunder, was an overall offensive to clear insurgent-held cities, maximizing the surge capabilities of coalition forces. With passage over the Diyala River limited, elements of Task Force Lightning and other forces preparing for cordon-and-search operations in Baqoubah could not effectively carry out their mission. The 502d Engineer Company (Multirole Bridge) and elements of the 92d Engineer Battalion (Combat Heavy) answered the call for assistance.

The mission was simple: deploy an assault float bridge (AFB) and improve the near- and farshore approaches to permit traffic access to the temporary bypass. Knowing the urgency of the mission, elements of the 92d prepared for the movement and site work during the night. The operation was



**Part of the Mabey-Johnson bridge is pulled down with two D7 dozers.**

broken into three phases: movement to the site and nearshore preparation to provide access for the 502d bridge assets; bridge emplacement; and farshore preparation, roadwork completion and testing, and movement back home.

Although the 502d emplaced the bridge, the most demanding phases of the operation required the improvement of both shores and the construction of a roadway. Soldiers

Photo by Second Lieutenant Nicholas Soroka



**Soldiers from the 502d Engineer Company use a bridge emplacement boat to stabilize the new bypass bridge while it is being anchored. A HYEX on the far shore works to improve the approach.**



**A D7 dozer clears the roadway, pushing the damaged Mabey-Johnson bridge into the Tigris River.**

from the 92d Headquarters Support Company, the 502d Support Platoon, and Bravo Company provided construction and earthmoving assets and immediately started work on the nearshore approach. D7 dozers and graders worked nonstop for 24 hours to improve the trail running parallel to the existing highway and the bridge structure. After several hours of hard work, the noncommissioned officer in charge deemed access to the near shore of the existing bridge sufficient. Hydraulic excavator (HYEX) operators began improving the slope and approach of the river bank to provide 502d bridge assets ample room to maneuver and launch their improved ribbon bridge (IRB) bays and boats.

Soldiers from the 502d's 2d Platoon worked overnight to emplace the IRB bays needed to bridge the gap. Once ready

to cross, D7 dozer operators began work on the far side to complete access to the highway. The skilled HYEX, grader, and dozer operators of the 92d worked around the clock to clear concrete debris off the dirt path, widen and fill areas with several dump truck loads of gravel, and level out the approach from the bridge on the far shore.

To ensure that the new road and bridge were effective, site leadership required a test run. Operators loaded up heavy equipment pieces to mimic the standard convoy that uses the bridge. With successful passage across the intersections leading off and onto the highway, the improved road, and the bridge, the Soldiers who contributed to the mission knew they had done something special. Military convoys immediately began to use the new road and bridge, and days later, Operation Arrowhead Ripper kicked off.

Coordination with the 92d's engineer assets was an important factor in mission success. With knowledge of the bridge site needs of the 502d, site leaders effectively directed ground operators on worksite priorities. Knowledge of military vehicle turning requirements led to a successful test run with sharp turns off and onto the highway. And when the initial mission was complete, the 92d responded to an urgent order to clear the damaged Mabey-Johnson bridge from the existing concrete bridge. Winched to the hulking 70-ton Mabey-Johnson bridge, two D7 dozers successfully cleared the roadway, and the 502d's 1st Platoon replaced the Mabey-Johnson bridge. The implementation of full-spectrum bridging operations by the 502d Engineer Company and the 92d Engineer Battalion enabled both the successful execution of Operation Arrowhead Ripper and the long-term assured mobility needs of the region.

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Photo by First Lieutenant Brad Stubblefield

**The 502d's 1st Platoon pushes a replacement Mabey-Johnson bridge across the gap in the Al Taji Bridge over the Tigris River.**