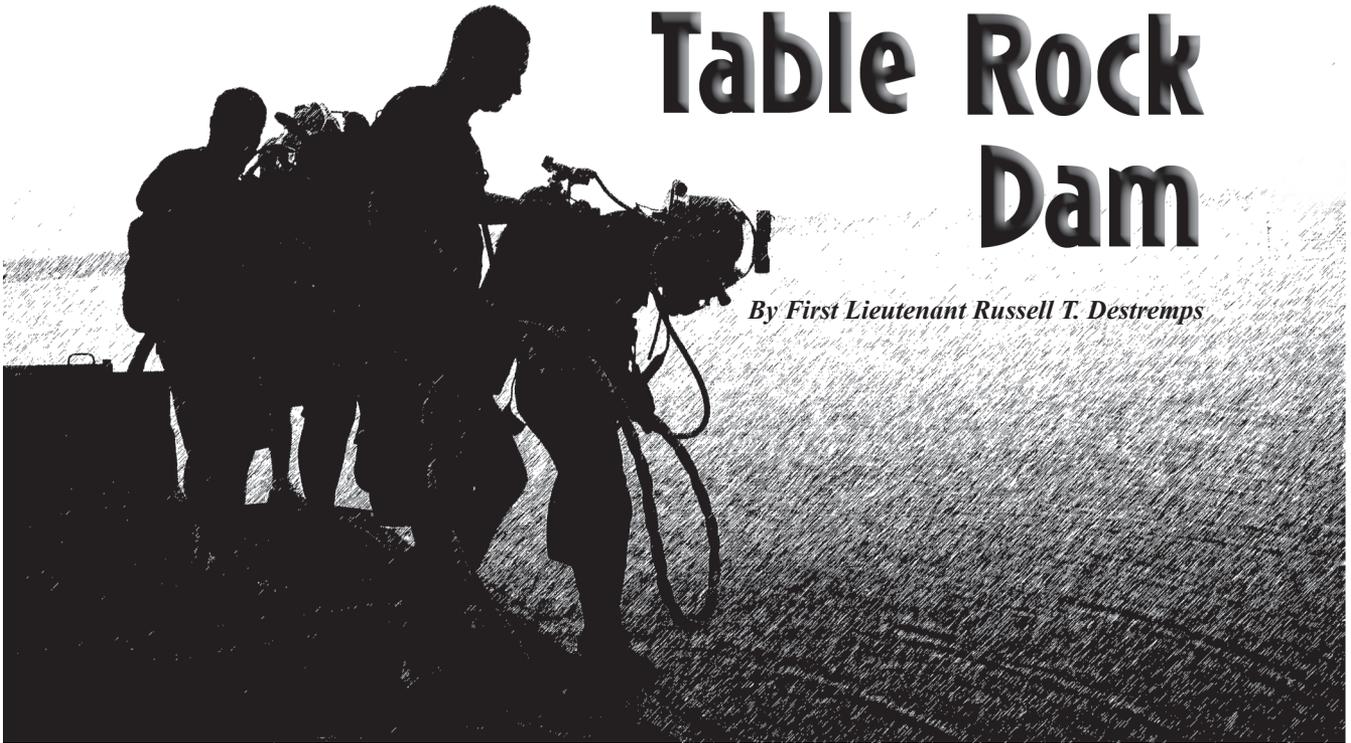


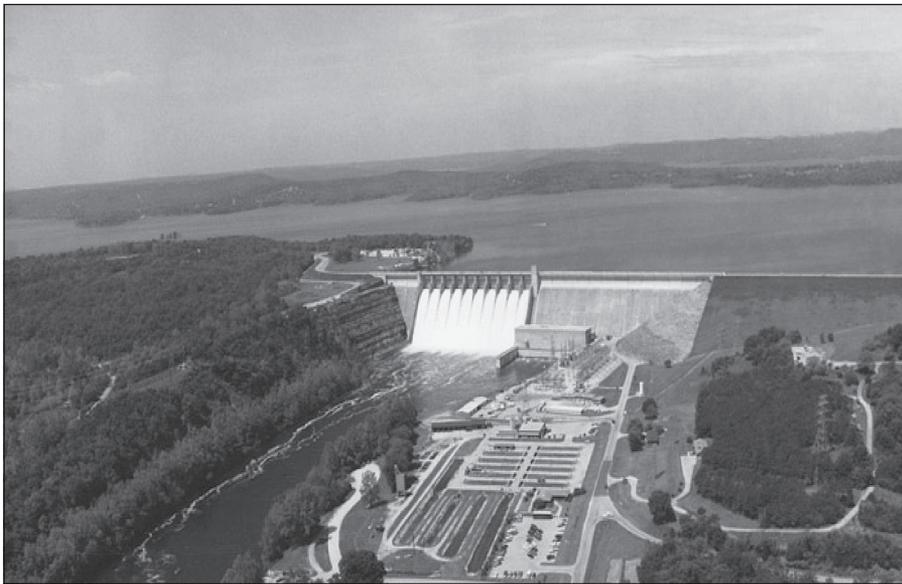
Dive Team Repairs Table Rock Dam

By First Lieutenant Russell T. Destremps



Over the past five years, engineers operating the Table Rock Dam at Branson, Missouri, have seen an alarming amount of water from Table Rock Lake leaking through the face of the dam into an inspection gallery buried by nearly 180 feet of concrete. Because of this leak, an additional pump was installed to remove the water, which

was rushing in at a rate of more than 400 gallons per minute. When the United States Army Corps of Engineers (USACE) Little Rock District decided it was time to do something about this leak before it got any worse, it enlisted the services of the United States Army Dive Company from Fort Eustis, Virginia.



The lake created by Table Rock Dam has a surface of more than 43,000 acres.

Earlier this year, four members of the 86th Engineer Team (Dive), an individually deployable and self-sustainable detachment from the United States Army Dive Company, traveled to Branson with a remotely operated vehicle (ROV) to inspect the dam and locate the source of the leak. The ROV allowed the team to travel with minimal equipment and still safely inspect and survey the dam. The ROV is equipped with a camera that sends streaming video to the surface and is easily maneuverable in the water. After a successful reconnaissance, the team planned a full-scale repair operation for 16 to 22 September 2007.

On 16 September, the 86th linked up with the 50th Multirole Bridge



Soldiers load gear onto the float bridge before moving it to the face of the dam.

Company (MRBC) from Fort Leonard Wood, Missouri, which deployed to support the diving mission with a six-bay float bridge section to be used for a working and diving platform. With more than ten common bridge trucks (CBTs) and support vehicles in convoy, the 50th MRBC traveled more than 100 miles and deployed its bridge sections directly from the CBTs. The sections, which expanded as they hit the water, were promptly retrieved by one of the unit's bridge erection boats and towed to be assembled with the other bridge sections. The entire operation took less than 90 minutes and resulted in a 25- by 120-foot floating platform that could easily support the weight of the divers' equipment. The rapidly deployable float bridges are designed to support the weight of a 70-ton M1 Abrams main battle tank. The working space and maneuverability offered by the bridge sections were helpful to the mission.

The Soldiers of the 50th MRBC secured the floating platform to the side of the dam; the 86th divers set up their equipment and began repair operations on 17 September. After the ROV located a series of 2- to 6-inch holes in the face of the dam, divers went down more than 140 feet to repair them. Despite the relatively small size of the holes, the amount of suction they create at such depths calls for a great deal of respect and caution from the divers. Their hands, feet, or equipment could get stuck in the holes, slowing production or even causing serious injury or equipment malfunction.

The 86th divers worked continually for three days alongside the Soldiers of the 50th MRBC and the USACE engineers and operators to fix the dam. The divers used underwater

hydraulic drilling equipment to install a 200-pound patch fabricated by USACE engineers, bolting it onto the face of the dam to cover the holes. The patch was equipped with fittings to pump in a two-part grout that would expand as it came into contact with the water and fill the voids in the concrete where the water was leaking through. After the diving evolutions were completed, dam operators reported that the flow of water into the inspection gallery of the dam had completely stopped.

The mission was a success that benefited all the parties involved. The mission was cost-efficient for USACE, and the Soldiers of the Army Dive Company and the 50th MRBC gained invaluable training experience. The Army Dive Company has an ongoing relationship with USACE districts across the country and has worked with the Little Rock District in the past. Dive missions such as the repairs performed on Table Rock Dam allow the company to execute real-world training stateside to prepare it for its wartime mission, while providing a professional service to USACE. The Army Dive Company continues to foster its relationship with USACE and looks forward to future training experiences with it. 

First Lieutenant Destremps is a platoon leader with the 86th Engineer Team (Dive). Commissioned through the Army Reserve Officer Training Corps, he is a graduate of the Engineer Officer Basic Course and the Sapper Leader Course at Fort Leonard Wood, Missouri, and the Marine Engineer Dive Officer School at Panama City, Florida. He holds a bachelor's in mechanical engineering from Villanova University.