Canals are Flowing once again ...

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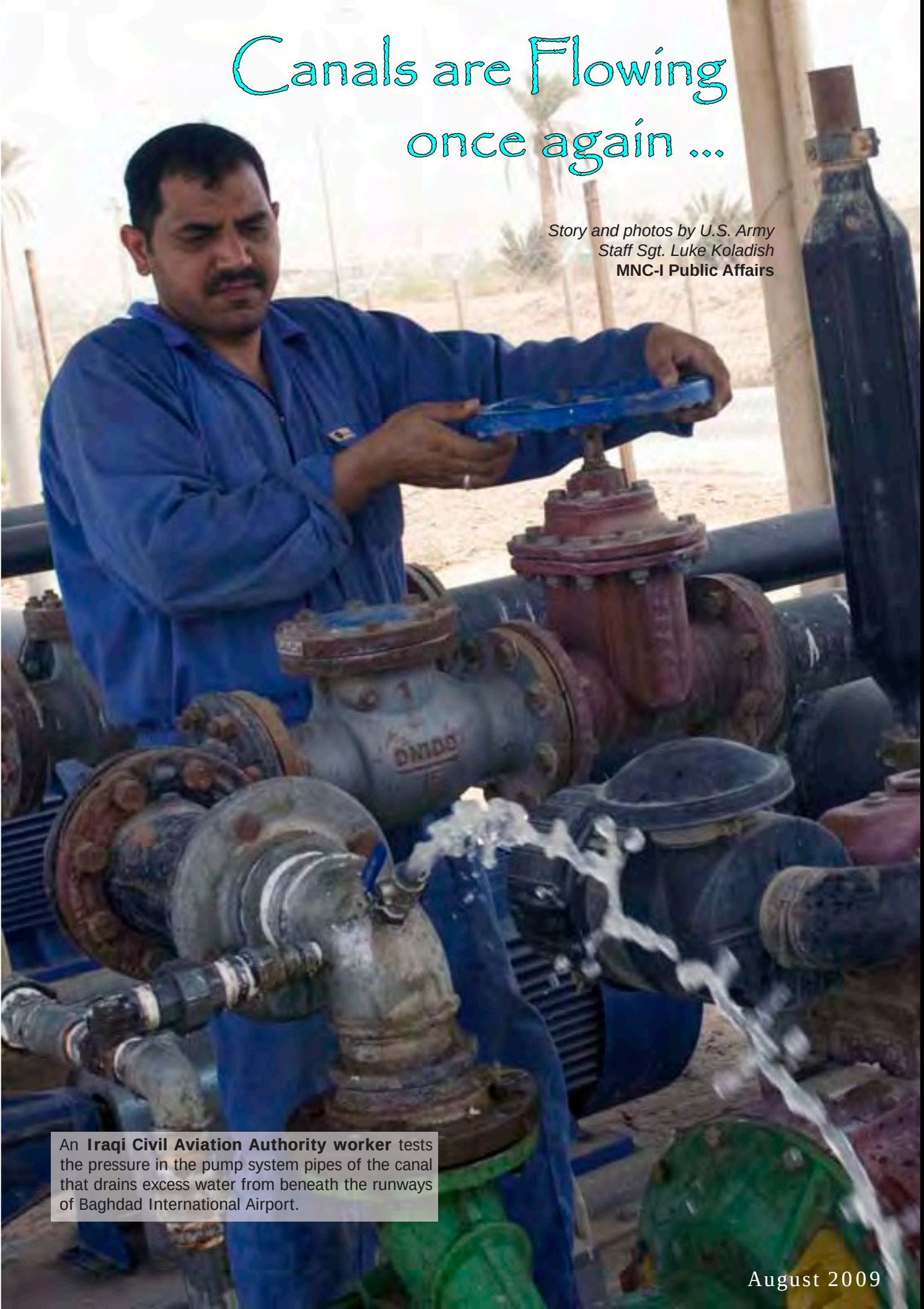

An **Iraqi Civil Aviation Authority worker** tests the pressure in the pump system pipes of the canal that drains excess water from beneath the runways of Baghdad International Airport.

...at Baghdad International Airport

Sgt. Thomas Jeffrey Phillips, **Chief Petty Officer Edward M. Lubas** and engineering advisor **Majeed Al Tamimi** from the 364th Civil Affairs Brigade, and engineers from the Iraqi Civil Aviation Authority observe the flow of water into the canal that runs outside of Baghdad International Airport, July 23.

Sgt. Thomas Jeffrey Phillips, Navy Chief Petty Officer Edward M. Lubas, and Majeed Al Tamimi, a bilingual bicultural engineering advisor, stood at the edge of an empty canal that disappeared into the horizon.

The team from the 364th Civil Affairs Brigade, Camp Victory, listened as a diesel back-up generator was fired up, popped, sputtered and then died.

After a few adjustments were made by mechanics from the Iraqi Civil Aviation Authority, the pumps were primed. Water progressed from a muddy trickle to a steady flow, bringing a satisfying end to the project that started back in April.

"It's good to see they were able to pull everything together and get it working," said Phillips, a functional specialities noncommissioned officer-in-charge and Gilbert, Ariz. native.

"To see all that water barreling out and filling the canal was a pretty good feeling."

More than two months ago the ICAA Director General, Sabeeh Al Shebany, expressed that the increasing water levels beneath the runway were a priority for any assistance the 364th could provide said Lt. Col. Howard A. Schaffer of Beaverton, Ore.

"They said the water table beneath the Baghdad International Airport was too high and they thought there might be an issue on our side of the canal system (Victory Base Complex)," said Schaffer, and economic development officer with the brigade.

A series of pumps had been completed as a Commanders' Emergency Response Program or CERP initiative in November 2007 to ensure the water table beneath BIAP did not compromise the integrity of the runways.

The civil affairs team was concerned that those pump stations might be the problem. After a survey of the sites, Lubas, a telecommunications officer from Jacksonville, Fla., immediately saw the problem.

"The mechanical seals were bad, the control units were covered in dust that causes shorts, back-up diesel pumps were non-operational and there were some holes in the piping system causing a lack of pressure," he explained.

Despite the disarray of the equipment, the team decided that with proper maintenance and a few repairs, the pumps could be operational again.

"The first part was explaining to the Iraqis they didn't need new equipment, they just need to replace a few parts and maintain what they had," Phillips said.

Gorgess Oshan, an employee of the Iraqi Civil Aviation Authority, tightens the bolts for the pipe connecting the submersible to the pump as Sgt. Thomas Jeffrey Phillips, 364th Civil Affairs Brigade, watches, July 23, near Baghdad International Airport.

In subsequent visits, Lubas outlined steps for a maintenance program, coordinated with Iraqi engineers on what repairs had to be done to get the pumps operational, and formed standard operating procedures.

"They were running the pumps in manual position and with a power grid so unstable, once power went out the pumps would shut down and the pressure would bleed out and it wouldn't turn on again."

Part of the new SOP was to keep the pumps running automatically so they would stop when the water reached a certain level, but still keep water in the pipes to keep the system charged and ready to resume as the canals filled.

"I was astonished today how much work they have done to get to the pumps operational, and they did it on their own, with their own parts," Lubas said during the last scheduled visit to the canals.

The water level at the first pump station had already decreased two feet and the water at the second pump station was flowing easily and smoothly. The BIAP canals merge with other canals until they reach farms needing irrigation.

"They have been shown how it works, they got the parts and they got it working," Al Tamimi said.

"Whether or not they will keep maintaining and keep it running is now up to them, we are finished with the project."

Chief Petty Officer Edward M. Lubas examines the drive shaft of a pump at a station along with Iraqi Civil Aviation Authority engineers outside Baghdad International Airport, July 23.