



THIS STORY HAS BEEN FORMATTED FOR EASY PRINTING

## Success is elusive in Iraq's oil fields Attacks threaten a key industry

The Boston Globe

By Farah Stockman, Globe Staff | January 22, 2006

WASHINGTON -- After two years of cost overruns and attacks, American construction workers in Iraq are finally completing a stretch of pipeline deemed the country's most critical piece of oil infrastructure.

But their success is just one small victory in the larger struggle over the fate of the oil industry in Iraq, where sophisticated acts of sabotage are threatening the country's economic survival and eroding the \$1.8 billion US investment in Iraq's oil infrastructure, US officials and energy specialists say.

Three years after Bush administration officials predicted that oil revenues would fund the country's reconstruction, the industry is in turmoil. Attacks that knocked out pipelines in the north have combined with bad weather in the south to drive Iraq's oil exports last month to their lowest level since September 2003, in the aftermath of the US-led invasion.

The oil industry, which accounts for about 60 percent of Iraq's gross national product and more than 90 percent of government revenue, has been hit with nearly 300 major attacks since 2003, according to Iraq Pipeline Watch, an arm of the Institute for the Analysis of Global Security, a Washington-based energy think tank. In July, Iraqi government officials estimated that the attacks had cost the fledgling government \$11 billion in lost revenue.

In northern Iraq, where pipelines snake like rusty veins from the oil fields of Kirkuk, engineers and insurgents battle daily over pipelines that will determine the future of the country.

"Good guys fix it. Bad guys blow it up. That struggle continues almost every day," said Robert Maguire, a US embassy official in Baghdad who focuses on Iraq's oil sector.

Nowhere is that battle more apparent than at the Tigris River crossing, in the heart of the deadly Sunni Triangle, where a US airstrike during the invasion destroyed the Al Fatha bridge but inadvertently damaged the crucial pipelines that run beneath it.

The crossing connects the oil fields of Kirkuk -- which account for 40 percent of Iraq's reserves -- to Baiji, Iraq's largest refinery. It is also the gateway to a 600-mile pipeline that carries crude to Turkey, one of Iraq's two main channels for export to the West.

When the Army Corps of Engineers discovered the damage, they deemed the crossing "the most critical piece of oil infrastructure in Iraq," according to a publication by the corps' Restore Iraqi Oil mission.

The corps mended the crossing temporarily but were forced to lay the pipes above ground across the destroyed bridge, making the site a vulnerable target for insurgent attacks. Now, US-funded workers are in the final stages of finishing a \$118 million, two-year project to build a fortified conduit for the pipes to cross the river, correcting what US officials describe as the "weakest link" in the struggle to get oil to Turkey and to Baiji.

US officials hope that the new submerged crossing will make it possible to reopen the pipeline to Turkey, which handled 800,000 barrels of crude a day prior to the invasion but which has been virtually shut down due to sabotage at the Tigris River and elsewhere.

Some of the officials assert that the new crossing will add 200,000 barrels of production capacity per day to the 1.8 million barrel average that Iraq is now producing, mostly from oil fields in southern Iraq. Iraq's oil ministry, which also suffers from old equipment and outdated practices, has consistently fallen short of its goal of 2.5 million barrels per day, the amount Iraq produced under Saddam Hussein.

But US officials acknowledge that increase will only happen if Iraqis can protect the entire pipeline.

"If you could repair it faster than they could destroy it, you'd win the battle. But you can't," said Lowell Feld, analyst with the Energy Information Administration, an arm of the US Department of Energy.

Sabotage has wreaked havoc on domestic oil consumption, as well.

In December, the refinery in Baiji shut down for about a week because the pipeline was down and there was no way to transport the refined fuel to Baghdad, where residents use it for cars, cooking stoves, and electric generators. Early in January, the Iraqi military provided an escort for terrified truck drivers, but insurgents ambushed the convoy anyway, destroying 20 out of about 60 trucks, according to Reuters.

Fuel shortages contributed to eight-hour-long lines for gasoline that sparked riots across the country and further embittered residents who were already angry about state-imposed price hikes on oil.

In addition to costing Iraq billions in lost revenues, the sabotage threatens to permanently damage the Kirkuk fields. Even when the pipeline is cut, the fields must keep pumping -- "like a heart," Maguire said -- so engineers must put the oil back into the ground, a practice that ruins the oil fields' underground reservoirs.

Amid all the frustrations, the saga of the Tigris River crossing has become an inspirational tale for US officials.

"It's an incredible, heroic engineering story," Maguire said by telephone from Baghdad. "They beat Mother Nature. They beat the insurgents."

But the project suffered many setbacks.

First, Kellogg Brown & Root, a subsidiary of Halliburton Co., and two subcontractors were hired to dig a hole under the riverbed for the pipes, despite concerns that the gravel-like quality of the soil would make such work nearly impossible, according to a Washington-based US official and Randy Duncan, project manager for A&L Underground, the Kansas-based company eventually brought in to finish the job.

Indeed, it became an engineering nightmare that ran so over budget that the special inspector general for Iraq reconstruction conducted an assessment that will be released later this month. A Kellogg Brown & Root spokesman said the soil problems could not have been anticipated and that the rising price of security increased the project cost.

Originally budgeted at \$76 million, the US government ultimately paid Kellogg Brown & Root \$88 million, but canceled the contract before it had been completed.

In 2004, US officials agreed to pay about \$30 million more to A&L to finish the job by digging a ditch across the riverbed and laying the concrete-encased pipes inside it. But workers had to endure continued attacks on their camp and three spectacular sabotage explosions on the pipeline, Duncan said in a telephone interview from the site.

In one case, an insurgent crawled 120 feet inside a newly installed pipeline to set an explosion that took two weeks to fix, Duncan said.

In October 2005, an improvised bomb placed under one active pipeline sparked a massive explosion that lit the river on fire and burned for a week, Duncan said. After that, 38 out of 120 workers assembled from around the world left their jobs because of the danger.

Four more left when they were injured driving over an improvised explosive device, Duncan said. But the firm didn't give up. A few weeks ago, they finally dragged the last pipes up the other side of the river bank.

In February, if all goes well, Duncan will walk off the site with little fanfare, returning to Texas to celebrate a job well done with a bottle of Jack Daniel's, he said.

But he worries about the pipeline that he will leave behind.

"These insurgents are still around just looking for something to blow up," he said. "They can't blow it up here, because we have put it in under the river. But I'm sure once they start the pipeline back up, they are going to have problems" with other locations.

Maguire concedes that, as long as attacks continue, oil exports won't dramatically increase. But he says they will rise gradually, perhaps over a period of many years, as Iraqis begin to protect the pipeline more aggressively.

For him, the new crossing is a small but important victory in the war between engineers and assassins, builders and demolishers, those who would protect the pipeline and those who destroy it.

"Chaotic people want to cut that pipe," he said. "But we have to believe that civilization is going to win. If you believe that, then what you are doing is worthwhile." ■

© [Copyright](#) 2005 The New York Times Company