

## Clean up in Kuwait

Searing temperatures of up to 55<sup>0</sup>c were the least of the difficulties facing the MineTech Battle Area Clearance Crew deployed to complete a highly unusual demining project in Kuwait over the summer. The task was to clean up Evaporation Pits in the Wafra Oilfields close to the border with Saudi Arabia, an area heavily contaminated with hydrocarbons.

Constructed over a period of 70 years as a now obsolete method of separating oil from brine, the site is the target of a huge clean up project by Saudi Arabian Texaco Inc and Kuwait Gulf Oil Company (K.S.C), working to dispose vast amounts of accumulated oil, sludge and contaminated soil to restore the area for future development.

Occupied by the Iraqi Army during the 1990/91 Gulf War and caught in the path of the Coalition Forces during Operation Desert Storm, Wafra remains contaminated with minefields. Unexploded ordnance (UXO) including cluster bomb sub-munitions litter the oilfields and MineTech's role was to verify the absence or presence of UXO within the pits. In theory, straightforward, but on arrival, the team were faced with a significant challenge dealing with lakes full of oil sludge. MineTech Project Manager, Andrew Roseveare was particularly impressed with how his team rose to the test. "This was a really tough job," confirmed Andrew. "I'm pretty sure no one in the demining industry has had to tackle this sort of project before. Everyone worked phenomenally hard in very difficult conditions."

For some of the crew, that meant wading thigh deep in sludge using broad loop metal detectors to verify the absence of any ordnance. Checking the pits fully required many to be emptied, work that was carried out using crawler excavators and bulldozers employing specially developed procedures to drain the sludge into new pits excavated in safe areas.

Moreover many pits were found to be contaminated with pockets of highly poisonous Hydrogen Sulphide gas which required continuous monitoring. Deminers were equipped with H<sub>2</sub>S gas monitors and gas masks and were forced to evacuate the site whenever safe levels of the gas were exceeded.

Findings included the remains of two cluster bombs, Rockeye sub-munitions, 20mm HE cannon rounds, air dropped flares and small arms ammunition. Altogether the crew verified a total area of 2,662,278m<sup>2</sup> before finally extricating themselves from the sludge at the beginning of November.

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