UTEC was contracted to carry out geophysical surveys, prior to pipeline and topsides installation work, at the offshore Safaniyah field, the largest offshore oilfield in the world, in the Kingdom of Saudi Arabia.

The workscope required the mapping of seabed features and water depth over a 26 sq km area including platform 500m zones and shoals that became exposed at low water.

Solution

UTEC mobilised Saudi partner, Zamil Offshore's, vessel Zamil 51 for the survey. In areas too shallow (0-5m) for the Zamil 51 to operate the survey was carried out from a shallow draft boat launched from ZS1. Both vessels were in full compliance with Aramco requirements.

Mobilisation of survey equipment and fabrication of the boat launch/recovery system was done in Zamil's Dammam KSA shipyard.

Survey data was acquired from the Zamil 51 with an overside pole-mounted R2Sonic 2024 multibeam echosounder and a towed Edgetech 4200 sidescan sonar positioned with a Teledyne GAPS Ultra-Short Baseline (USBL) system.

Continued overleaf...
Solution Continued

The shallow water survey was performed utilising a overside pole-mounted Edgetech 6205 acquiring interferometric bathymetry and sidescan sonar data. Preliminary data processing was carried out onboard the vessel by UTEC data processors and geophysicists to confirm coverage and data quality. Final processing and reporting was completed in the UTEC UAE office.

Result

• An offshore geophysical survey was successfully performed in KSA with locally based equipment and personnel
• Efficient survey of shallow water areas using the extended range of interferometric bathymetry compared to the range of conventional multibeam echosounders
• Safe and efficient small boat operations supported by mother ship – reducing small boat transit distances
• Onboard processing and charting ensured quick delivery of results to the client

About Zamil

Established in 1977, Zamil Offshore, a fully integrated offshore and marine services company, owns and operates one of the largest support vessel fleets in the Middle East, is a pioneer in shipbuilding and ship/rig repair within the Kingdom of Saudi Arabia and is an active player in the offshore construction industry.

About UTEC

Since 2005, UTEC, an Acteon company, has grown to become one of the largest global surveying contractors in the offshore energy sector.

We provide a wide range of survey, positioning and data management services using the most advanced equipment and techniques.

Our highly experienced team have more than 4000 years of combined survey experience and can find solutions for our clients’ most complex challenges.