Challenge
The West Delta Deep Marine (WDDM) concession in the Mediterranean Sea comprises 19 gas fields, of which 12 fields (Scarab, Saffron, Simian, Sienna, Sapphire, Serpent, Saurus, Sequoia, SimSat-P2, Sapsat-1, Sapsat-2 and Swan) are in production.

An onshore processing terminal processes gas from the Scarab and Saffron fields via a 24-inch and 36-inch 90km pipeline. Xodus was asked to analyse the impact of two new booster compressors on the existing equipment, allowing first pass tuning and operations personnel to understand the operating envelope of the plant at lower pressures.

Assignment scope
- Develop a dynamic simulation of new booster compressors
- Evaluate proposed compressor control system (anti-surge and loadsharing)
- Evaluate impact of new equipment on existing plant.

Results
- Evaluated impact of start-up, shutdown and trips
- Validated loadsharing and anti-surge system prior to start-up.

Case study
Client: ENPPI
Location: Onshore Egypt

Dynamic simulation study of process and anti-surge control systems
Response of modelled systems to process upsets and emergency shutdowns tested and recorded

Boosting gas export
Xodus Group experts examine the impact of new booster compressors on an onshore processing terminal under start-up, shutdown and transient conditions

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