

# Atteris increases capability with the addition of subsea and flow assurance services

In response to customer demand, and to expand on its market credibility, Atteris now complements its current capabilities with the launch of subsea and flow assurance engineering and design services.

For the offshore Australian pipeline industry, the race for more Australian-produced LNG has seen investments in four Australian-based LNG projects with subsea systems (the Gorgon Project, Wheatstone Project, Ichthys LNG Project, and Prelude FLNG Project).

Maintaining gas supplies to Australia's new and existing LNG developments is a necessity for their operators; therefore a succession of brownfield subsea tie-back projects to backfill production is expected to continue well into the future.

The technical requirements of subsea tie-backs are ever-increasing. Requirements for additional subsea functionality such as cooling, separation, pumping or compression has increased the complexity of many projects.

The value of a complex subsea tie-back can be increased with an integrated subsea design team working closely to integrate all aspects of the design.

Atteris' Subsea and Flow Assurance Team Leader, Rex Hubbard explains "Integrating various engineering disciplines is beneficial to a project. Atteris goes beyond this – we continuously develop our engineers' competencies in other disciplines to ensure that each engineer and team leader intimately understands the other disciplines' requirements. This systems understanding and inter-discipline approach ensures the development of subsea tie-back concepts that maximise an operator's value."

The large technical, cost and schedule risks associated with complex subsea tie-backs make Atteris' unique mix of skillsets and inter-discipline knowledge a critical component for project success.

Atteris' Managing Director Eric Jas says the company has a reputation for its practical and often innovative solutions.

"Many of our clients wanted to see Atteris' practical and innovative pipeline

engineering applied to their subsea and flow assurance specific problems, particularly in the front-end phase of their project development," said Mr Jas.

"Atteris is recognised for practical solutions which are engineered to be cost-effective, constructible, reliable and operable. Listening to its clients, Atteris has responded with the addition of subsea and flow assurance engineering and design capability."

"Building on our culture and focusing on delivering to our clients, has been a big decision for us to expand our capabilities; rather than add a separate group, however the market has asked that we offer integrated pipeline and subsea teams, incorporating flow assurance," explained Mr Jas.

"I can report that this area has matured and the move is proving to be a success with repeat business already confirmed. I am confident the addition of subsea and flow assurance engineering capabilities will further contribute to the success of Atteris, which is a product of our people and our clients."

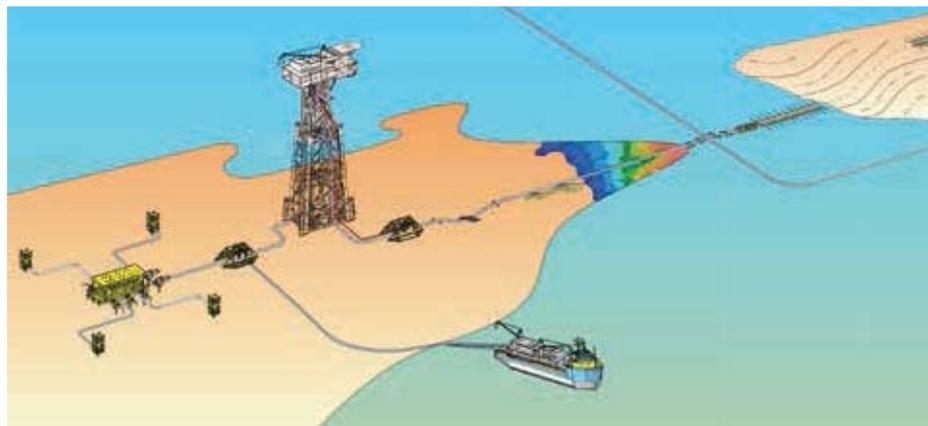
To date, Atteris has provided an integrated understanding of flow assurance constraints, subsea and flowline design, cost and schedule estimates, constructability reviews, equipment requirements for pre-commissioning and start-up, and operations Integrity Management planning.

One study revealed that the replacement of expensive subsea equipment was possible by combining minor modifications with innovative commissioning processes, all without compromising production up-time during the tie-in and commissioning phases.

These concept front-end studies have identified cost reduction opportunities for subsea tie-back projects as well as improvements in production up-time.

Studies of this type can make or break project economics and therefore require intermit understanding of multiple disciplines to ensure quality decision making.

Atteris' new disciplines have 'hit the ground running', with the requests for various front-end studies defining subsea tie-back options and future field development options. **P**



The workings of a subsea pipeline.

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