

LNG Sampling System for Wheatstone Project



SYNERTEC



PROJECT SUMMARY

Wheatstone LNG is a liquefied natural gas plant located near Onslow in remote Western Australia. Synertec was engaged by Bechtel Oil and Gas and Chevron Australia to deliver an LNG sampling system to sample and measure the composition of the LNG during ship loading for the purposes of custody transfer.

THE CHALLENGE

The custody transfer and LNG sampling system required full operational redundancy that would meet the international agreement for sampling and measuring LNG.

The system was required to continuously sample the LNG throughout the entire ship load.

SYNERTEC'S SCOPE

Synertec designed and delivered a complex sampling system, complete with full redundancy, to perform the sampling with extreme precision.

The unique solution has high reliability due to the complete redundancy of all components in the system. The system is also precise, delivering custody transfer measurements with 99.5% accuracy.

The scope of work delivered by Synertec included the detailed design, construction, and testing of:

- LNG composite sampling vaporisers
- LNG composite sampling system
- Manual spot sampling points for compositional analysis and impurities
- LNG composite analyser house
- Gas chromatographs
- Sample conditioning systems
- Remote Inputs and Outputs (I/O)
- Calibration gas cabinet

CLIENTS

Bechtel Oil and Gas
Chevron Australia

LOCATIONS

Onslow, Western Australia
Melbourne, Australia

CORE CAPABILITIES

- Specialist multi-discipline engineering including instrumentation, electrical, process, mechanical, and automation engineering
- Project management
- Construction management
- Factory acceptance testing
- Site acceptance testing
- Commissioning
- Operational and maintenance training

TECHNOLOGIES

- Yokogawa gas chromatographs
- Krohne load out computer system
- Allen-Bradley ControlLogix programmable logic controls and human machine interface
- Opta-Periph vaporisers and gas holder
- SilcoNert 2000 coated electro-polished tubing