



## Case Study

### Operations and Engineering Support

## Chevron – Wheatstone Upstream Feed Study

The Wheatstone Upstream project is part of the greater Chevron Wheatstone project and was in the final phase of FEED when K2 was requested to undertake a high level and holistic isolation, draining and purging study.

K2 was contracted to for an initial review of the inlet separation system in late September 2011. The success of this initial review resulted in K2's contract being expanded in early October to include a further 21 systems.

The timing of the study was designed to fit between the later stages of the FEED (ensuring mature enough information), and FID to identify any major issues prior to this milestone in late December 2011.

The Scope of Work for the study was to review the detailed design:

- P&IDs;
- 3D Model;
- Equipment list;
- Equipment data sheets; and
- Other relevant project data.

The key deliverables required for each system were:

- A report detailing:
  - Equipment maintenance boundaries;
  - Marked up coloured P&IDs identifying equipment maintenance boundaries for the main equipment;
  - Equipment maintenance isolations;
  - Compilation of a valve isolation register;
  - Spades and blinds register for vessel entry (for applicable systems);
  - Marked up coloured P&IDs showing locations of spades and blinds required in preparation for vessel entries;
  - Compilation of spade and blind register;
  - N2 purging and N2/He leak testing requirements;
  - Identify volumes required for purging and leak testing;
  - N2 volumes required for purging versus facility N2 system generation capability; and
  - Identify laydown space footprint requirement for N2 purging and leak testing equipment.
  - Locked open/locked closed register;
  - Trapped pressure register; and
  - A final report and presentation.

An earlier than expected FID announcement resulted in the Chevron team requesting K2 to complete a reduced study.