Integrated Construction Survey Support Services on one of the World’s largest Subsea Gas Field

**Case Study**

**Clients**

- **McDermott**
- **Saipem**

**Water Depth**

- 275m

**Location**

Ichthys Gas Field, Western Australia

**Scope**

The Ichthys Gas Field is in the Browse Basin off the NW coast of Western Australia. Located about 200 kilometres offshore, Ichthys represents the largest discovery of hydrocarbon liquids in Australia in 40 years. The field was developed by Inpex from 2014-18 mainly using two subsea construction contractors.

UTEC provided integrated survey and positioning services to Saipem, McDermott and two smaller clients on pipelay barges, heavy lift vessels, construction vessels, ROV support and survey vessels. Services included:

- Surface and Subsea positioning
- Pre-lay, installation support and as-laid surveys of the 890km 42" gas export pipeline
- Positioning of 60 subsea structures and over 800 ancillary structures – buckle sleepers, mattresses, anode sleds and mudmats
- Complex series of 32 spoolpiece and jumper metrologies
- As-laid and as-built surveys of all infield structures, flowlines, umbilicals and jumpers

Some vessels were operating continuously for 8-12 months with complex logistical challenges in supplying survey personnel and equipment.

The workscope also included precise dimensional control surveys at onshore fabrication sites in Indonesia, UK and Australia.
Solution

UTEC assigned their pool of Australian nationality personnel to the Ichthys’ contracts supplemented by personnel from UTEC’s Singapore office. Where advantageous, personnel with specialist knowledge of a task or client vessel were utilised from UTEC’s Europe/Africa and Americas offices.

Dimensional control surveys were performed by surveyors local to the site.

UTEC provided 5800 mandays to their Ichthys clients together with sophisticated survey and positioning equipment that included:

- Monitoring and recording of crane tip accelerations
- Video/data telemetry between vessels
- Fleet position monitoring
- Cathodic Potential surveys

Result

UTEC’s clients benefitted from the company’s extensive pool of full-time survey personnel employed in Australia and the broader APAC region.

This ensured continuity of approach across multiple vessels and scopes of work over an extended period. It also ensured field and project knowledge was transferred between vessels and phases of the work.

When required, construction survey specialists were also deployed from UTEC’s global pool of field staff ensuring that the best technical solutions were consistently delivered.

The continuity and knowledge transfer enabled standardisation of survey reporting and other deliverables. They also allowed UTEC to develop and deliver to Inpex a standard GIS for the field development.

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.