

ARC Energy Ltd Perth Basin Gas fields

Pipelines and Flowlines, Dongara, Western Australia

ARC Energy's oil and gas fields include the Hovea, Eremia, Apium and Xyris reservoirs, all located near Dongara, approximately 380 kilometres north of Perth, Western Australia. The oil and gas produced from these fields are piped to either the oil production facility at Hovea or the gas treatment facilities at Xyris.

ICON Engineering have provided engineering and management support to ARC for all these infield and export pipelines. Scope of work has included:

- ▶ Project management.
- ▶ Conceptual analysis
- ▶ Route determination
- ▶ Liaising with the independent design validator.
- ▶ Documentation for regulatory authorities.
- ▶ Procurement (pipe)
- ▶ Construction management.
- ▶ Commissioning

Particular projects involved in include:

Xyris gas export pipeline

The Xyris gas pipeline exported dry gas from the Xyris Gas Plant to the Parmelia pipeline. The pipeline is a 6" carbon steel 500m pipeline, through private farmland. The tie-in at the Parmelia Line was executed using a hot tap (whilst the Parmelia was under pressure). The project schedule dictated a period of only 4 months, from concept to 1st gas, including government approvals for the licensed pipeline.



Construction of the XAGGS flowline, which connects various remote fields to the Xyris gas plant facility

Eremia production and gas lift flowlines

The Eremia remote wellheads are approximately 4km from the Hovea production facility. A 6" Glass reinforced epoxy (GRE) production flowline, a 3" carbon

steel gas lift line and a 6" carbon steel water injection line were installed to/from the Eremia remote wellheads to the Hovea facility.

The three lines were all buried in a single trench and the route involved two road crossings.



Construction of the GRE Eremia production line to Hovea

Xyris Gas Gathering System (XAGGS) flowline

The Hovea, Apium and Xyris South gas field wellheads are located within 6km from the Xyris Gas Plant. These were interconnected via a 6 kilometre 6" gas gathering flowline to the Xyris gas plant facility.

The flowline route was optimised to minimise the "caprock" excavation required. The route is predominantly through private farmland.

All the pipelines and flowlines were designed and constructed in accordance with Australian pipeline codes (AS 2885).

ICON's operations experience combined with project and controls know-how contributed to the delivery of these projects on time and within budget.



Construction of the carbon steel flowlines from Hovea to Eremia