

Berwyndale to Wallumbilla Pipeline Completed in Record Time

WDS (formerly Diversified Construction Pty Ltd) is pleased to announce completion of the 113 kilometre Berwyndale to Wallumbilla Pipeline in South East Queensland. Due to the unified approach undertaken by all companies involved in the planning, construction and delivery of the project, the pipeline construction was completed in under five months, with construction commencing on 13 September 2009 and Practical Completion achieved on 26 January 2009.

Ciaran Hallinan, General Manager of WDS Oil & Gas Division, described the project as a joint commitment by WDS and AGL Pipeline Investments Pty Ltd (AGL) in delivering a major portion of Coal Seam Gas transportation infrastructure. "The pipeline will allow AGL to deliver Coal Seam Gas from the Wallumbilla Gas Hub to markets in eastern Australia. It allows access to Brisbane, Gladstone, Rockhampton, Mt Isa, Adelaide, Melbourne and Sydney," he said.

AGL, who oversaw development of the project, appointed IDM Partners (IDM) to project manage construction of the pipeline on their behalf. Ray King, the IDM project management team leader, said the contracting concept developed by AGL and IDM was for an Early Contractor Involvement (ECI). "IDM commenced route selection, landholder liaison, cultural heritage negotiations, environmental assessments and pre-Front End Engineering and Design (FEED), with a view that the successful construction tenderer would take over some of these processes" he said.

AGL's expectation was to have the pipeline commissioned in time for start up of the Wallumbilla Compressor Station, which was being built concurrently, and to push gas into the wider network made available by the pending completion of the Queensland to South Australia/New South Wales link between Ballera and Moomba by January 2009. To meet this target IDM engaged WorleyParsons in April 2008 to undertake route selection and the FEED process.

This allowed the procurement process to commence and orders to be placed for long lead items including 113 kilometres of trilaminate coated line pipe from OneSteel with coating applied by Bredero Shaw. The OneSteel order initially required delivery to a central stockpile site at the mid-point of the line and Neil Mansell Transport were contracted by AGL to commence delivery in early-August 2008.

After a tendering process conducted by IDM in May 2008, Diversified Construction Corporation Pty Ltd (DCC), now WDS, was contracted to take over the FEED development (and subsequent for construction) of the pipeline in June 2008. The scope involved providing construction planning and advice and to take over responsibility for the FEED process under the ECI structure.

Whilst this process was underway the IDM team were finalising the cultural heritage and environmental regulatory approvals processes aided by Maloney Field Services and RPS Ecos who with HLA/ENSR Environmental Services and Specialised Native Title Consultants (SNTC) targeted a construction commencement date of 1 September 2008. **Surveyors MJ Hedges/Fyfe were mobilized to expedite initial centerline pegging for CH survey purposes, followed by the full Centreline Alignment survey for construction purposes. Tight timelines and the challenges of State Forest undergrowth necessitated the use of several survey teams from both Fyfe Roma and Brisbane offices.**

Meanwhile the DCC construction team led by Graeme Dowie and Justin Langton, who were completing the Jackson to Moomba Oil Pipeline for Santos in the Cooper Basin, began moving crew and equipment into Miles.

Always conscious of the effect of summer rain on the pipeline route, the DCC team was anxious to get on the ground and commence preliminary work on geotechnical investigations, foreign services location and preliminary access work.

In parallel to these efforts the team was engaging subcontractors and locating suitable areas for camps, whilst at the same time preparing documentation and plans.

A campsite was found west of Miles and agreement was reached with the landowner. The difficulty with obtaining approvals outside the license area meant a one camp strategy was adopted. Within weeks the camp had been moved from the Cooper Basin site and was operational and ready for the initial construction crews.

Occupancy peaked at 180 during construction.

As the construction start date approached, Neil Mansell Transport, now working directly for DCC, began the movement of pipe into a railhead at North Star on the New South Wales - Queensland border. With the stockpile fast approaching capacity, IDM obtained the license and on 13 September 2008 DCC commenced Right of Way (ROW) construction at the Berwyndale Launcher Station, relieving pressure on the North Star stockpile site and allowing pipe to be strung on the ROW. Mansell's were not only taking pipe off the rail at North Star but also trucking pipe directly from Kembla Grange.

With the construction crews all on the go the inevitable happened - heavy rain in early September, and again in October and December, making things extremely difficult,(as it can be when it rains in black cotton soil country). Graeme Dowie recognised early in proceedings that weather could potentially cause problems and additional resources were employed. There was no let up in construction works however - a few rescheduled leave breaks circumvented the worst of the weather - but construction continued on schedule.

An additional challenge to all the wet weather was that the original identified water sources not being available to the project, meaning DCC had to re-jig the hydrotesting program numerous times. Finally, approval was obtained to take water from Dogwood Creek. This necessitated the creation of fourth test section and required water to be disposed of into a holding dam specifically constructed for this purpose.

Whilst the pipeline was underway, Steve Jacobs, DCC Fabrication Supervisor, was putting the Launcher at Berwyndale and the Receiver at Wallumbilla together. Assembly was always ahead of the provision of some of the more exotic items of equipment but with IDM, AES and DCC working together the final pieces fell into place.

Vincent Lee, DCC's Instrumentation & Electrical Manager, coordinated the Cathodic Protection, which protects pipelines from external corrosion, and the Supervisory Control and Data Acquisition (SCADA) systems. The interfaces with QGC at Berwyndale and Epic at Wallumbilla and the need to integrate these systems to suit the EIM operational requirements proved another challenge.

To add to this, crossings of Dogwood and Yuleba Creeks by Horizontal Directional Drilling were required as were the traversing of numerous public roads. This was accomplished on schedule by Pipeline Drilling Group lead by John Whitbread and Bothar Boring.

A planned bore under the APA Roma to Brisbane pipeline through rock had to be aborted and was subsequently open cut so as to minimise impact on these assets. Ray King described the cooperation of the team at APA led by Marg Straker as exceptional.

Minding the shop on the Occupational Health and Safety (OH&S) front was Brian Ross, assisted by paramedic Alex Drapow, both from DCC. As part of the OH&S approach, DCC commissioned a purpose built vehicle to be used as a mobile clinic/medical response vehicle for the construction of the pipeline, ensuring a rapid medical response was guaranteed in the event of a medical emergency.

Kel Sanson, DCC's Environmental Manager, oversaw the environmental risk management for the project. DCC and AES developed strict guidelines in conjunction with the Environmental Protection Agency and Department of Forestry to ensure the project had limited impact on the community and the local environment.

One of the highlights of the project from the environmental side was the fauna management program which rescued trapped wildlife from the pipeline trench and also recorded a snapshot of the regions diverse and endangered species. Fauna handlers removed more than 960 animals from the pipeline trench during the course of construction, registering some species previously unknown in the area.

Ciaran Hallinan, General Manager of WDS Oil & Gas Division, said it was an excellent achievement by DCC and all involved in construction of the pipeline that at completion of the project there had been no reportable safety or environmental incidents.

And of course you cannot build a pipeline without copious amounts of paperwork. Andru Daryanto, DCC's Quality Assurance Manager, compiled the Project Data Record with input from WorleyParsons, the Construction Survey Team from CADS led by Troy Harper, **MJ Hedges/Fyfe Alliance** and the drafting team at Sungold. 15 volumes later the pipeline is complete!

Ciaran Hallinan stated that numerous audits of all systems were conducted by AGL, SGS and internally at DCC. "Every audit report commented on the excellent adherence to procedures, further evidence of the project team's commitment to best practice," he said.

Hydrotesting of the pipeline under the supervision of DCC's Garret O'Mahony and Ray Polzin and overseen by HTS Lynndon Harnell was successfully completed in late January 2009. The pipeline was pre-commissioned with Practical Completion achieved by 26 January 2009.

Steve Jacobs and Vincent Lee returned to site on 1 April 2009 to assist with the final commission. Gas reached operational pressure on 8 April 2009.

Ciaran Hallinan said that all employed on this project from concept to completion can be proud of their efforts. "The achievement of reaching this milestone was the result of a great team effort. Support from all participants meant that despite the many challenges and hurdles encountered during construction a united and positive focus by all parties overcame these difficulties. Congratulations to all."

A Spokesperson for AGL agreed with the sentiment and congratulated all those who were involved in delivering this successful project.