

# PRESS RELEASE - OCTOBER 2003

RELEASE DATE: 24/10/2003



## COE DRILLING AUSTRALIA SUCCESSFULLY COMPLETES BASSGAS HDD SHORE CROSSING



In Early 2003, Clough Engineering Limited awarded the HDD Shore Crossing Subcontract to Coe Drilling Australia Pty Ltd on the Origin Energy BassGas Project.

The BassGas Project will bring the first alternate gas supply into south eastern Australia since the Gippsland gas fields were developed over 30 years ago.

The Project will commercialise natural gas, LPG and condensate from the Yolla field, located 147 kilometres from Kilcunda in Bass Strait. The gas from the field will meet 10% of Victorian gas demand for 15 years.



Above: Coedrill550 Pipe Pusher

The Project is a Joint Venture partnership between Origin Energy as Operator (37.5%), AWE (30.0%), CalEnergy (20.0%) and Wandoo Petroleum (12.5%).

The work involved the installation of a shore crossing at Kilcunda in Victoria by way of Horizontal Directional Drilling (HDD).

The scope provided by Coe included the fabrication of the gas pipeline onshore behind the HDD Rig Spread. The methodology proposed by Coe for the installation of the pipeline was the forward thrusting method. This method involves installing the pipeline by pushing the product into the preconditioned borehole, unlike the conventional method of pulling from Offshore.

Detailed project engineering and design was required to satisfy the client and to confirm that the proposed methodology could achieve a successful installation of the product pipe.

Work commenced on site with the fabrication of the 1477m long Nap-rock Coated DN355.6mm x 14.3mm wt API 5L X 65 Pipeline. The pipeline was welded and field joint coated with CeramGard HBE-95 prior to the pre-installation Hydrostatic testing of the completed pipe string.

Drilling operations commenced in early July using the Coedrill 550 drilling spread.

The Pilot hole was drilled with a 9 7/8" TCI Bit and a 6 3/4" Mud Motor using a conventional Magnetic Guidance System



Above: Mitchell Oil & Gas Pty Ltd carried out the Pipeline Welding operations. The pipeline string was prefabricated and field joint coated behind the drill site in preparation for installation by the coedrill550 pipe pusher. Photo: E.Foley

The ground conditions consisted of mudstone overlying sandstone of varying consistency. The rock strength was varied, but was of mainly medium-high strength. The highest unconfined strength of the rock was 142 MPa.

The formation overlying the HDD Exit consisted of Sandy Clay and Sandy Silty Clay.

Due to Environmental & Technical Constraints on the project, Coe proposed to complete the Pilot Hole in Several Stages. Stage 1 was to drill the Pilot Hole a distance of 940m, terminating just beyond the sandstone formations.

During this pilot hole stage, 100% of drilling fluid returns were kept for the duration of the operation.

Following the completion of Stage 1, the hole was enlarged to a diameter of 20" using standard industry

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tooling used for forward reaming. On completion of the forward reaming operation in this stage, the pilot hole was completed to the offshore location. The remainder of the pilot hole was forward reamed and prepared for product installation.

Once the borehole had been completed the drilling assembly was withdrawn and the CoeDrill550 Pipe Pusher was mobilised to site. The CoeDrill550 Pipe Pusher had been designed and built in Coe's Gold Coast engineering facility specifically for the BassGas project.

The pipeline installation operation was completed in two stages; the first stage was to install the pipeline to a position beyond the offshore HDD exit hole until suitable conditions existed for the marine support vessel to work. During the first stage of the installation operation sea swells between 3-5m were experienced.



Once the offshore barge was mobilised and moored, a method of assisting the pipeline by winching from the barge in conjunction with the CoeDrill550 Pipe Pusher thrusting from Shore positioned the pipeline some 355m beyond the HDD exit hole in water depths of 22m

After gauging of the installed pipeline was achieved, it was rigged to a pre set anchor and flooded to stabilise the pipeline against the prevailing Bass Strait sea conditions. The borehole exit of 3° was achieved successfully.



above: Marine Support was provided by Global Offshore.

On completion of the stabilisation, an ocean survey was completed to verify the pipelines sea bed stability.

The ultimate success of the HDD Shore Crossing at Kilcunda by Coe will no doubt lead to many opportunities for other Shore Crossings in the future utilising the highly versatile CoeDrill550 Pipe Pusher.

### STATISTICS

**Owner:** Origin Energy  
**Main Contractor:** Clough Engineering  
**HDD Shore Crossing Subcontractor:**  
Coe Drilling Australia

Location: Kilcunda, Victoria.  
Pipe string Length: 1477m  
Pipe Spec: 355.6mm 14.3mm wt API5L X65  
Coating: Naprock  
Joint Coating: Cerumgard HBE-95

Welding Subcontractors: Mitchell Oil & Gas  
Offshore Support Subcontractor: Global Offshore

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