

Value	US\$275,000,000
Start Date	March 2002
Completion	February 2004
Client	Sasol Petroleum International



Sasol Petroleum International Natural Gas Pipeline

MOZAMBIQUE TO SOUTH AFRICA, SOUTH AFRICA

Sasol Petroleum International awarded McConnell Dowell, in joint venture, the design and construct contract for the Sasol Petroleum International Natural Gas Pipeline, a 865 km long, 26" diameter gas pipeline from Mozambique to South Africa, linking the Temane Gas Field to Sasol's Petrochemical Plant and Secunda in Mpumalanga Province.

Competing against five other international bidders McConnell Dowell, as part of the GLMC Joint Venture, were awarded the engineering, design, procurement construction and commissioning of the 865 km gas pipeline. The 26" diameter pipe traverses Mozambique's wide flood plain area and construction for this part of the project was scheduled in the dry season. Landmine clearance was also required along the whole 531 km route through Mozambique, with most mines encountered in urban areas.

Some housing relocation was required on the pipe route mainly near the Mozambiquean border town of Ressano Garcia. Near the border of the two countries, the line passed through over 50 km of mountainous terrain including the Lebombo foothills, where extensive rock was encountered.

The route also included 100 km of "wet" areas, where the pipe needed a concrete casement for buoyancy purposes. The construction team drew on the mountain pipe laying experience of

McConnell Dowell gained on previous steep terrain projects in Myanmar and Georgia.

Adding to the challenges, horizontal directional pipe drilling was employed beneath the Limpopo and Changane rivers, and various pipejacking operations was used for road and rail crossings and some smaller river crossings.

Along the 334 km of the route in South Africa, from Komatipoort to Secunda, the pipeline traverses the low veld with its intense farming and game farms, then climbs through the mountains around Baadplas onto the very steep veld at the Devils Knuckles.

Some problems relating to old mining workings needed some special attention in regard to support work for the pipe. In contrast to the Mozambique stretch where the land was all government-owned, the South African route passed through some 260 private properties requiring right of way approval. While automatic welding was utilised on the Mozambique section, the South African section involved large areas of rock excavation and extensive bending of the pipeline.

Because of the terrain, manual welding was utilised.

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