

# Oman Export Pipeline

*Amoco Production Company*

**W**illbros provided engineering services for a proposed 483-km (300-mile), large-diameter natural gas pipeline system originating in Oman. The pipeline was designed for a flow rate of up to 1.2 Bscfd.

The scope included preliminary engineering, field reconnaissance, and cost estimates for the system. The design included the main gas pipeline and future compressor stations at Saih Rawl and at an intermediate location. Also included were sectionalizing valves, scraper launching and receiving facilities, measurement facilities, telecommunications and SCADA systems, and housing compounds for operations and maintenance personnel.

Services were carried out in two phases. Phase I involved an engineering study and rough cost estimate for six potential pipeline routes with pipe sizes ranging from 40- to 46-inch. Phase II involved a detailed study of the selected 42-inch route, including more accurate cost estimates. The estimate was presented as a turnkey proposal, as directed by the client.

The cost estimates for the pipeline included the consideration of terrain conditions observed during a preliminary ground reconnaissance of the proposed route. The route selection was carried out by a team of experts with extensive experience constructing pipelines in desert and mountainous terrain. Expertise of the team members included gas transmission pipeline design and procurement, construction logistics and planning, global positioning satellite survey (GPS) procedures, permitting, administration, and security of gas pipeline construction and operations.

Primary considerations in the selection of the pipeline route included minimizing the effect of the pipeline on land use, mitigating the impact of the pipeline on the environment, and selecting the route offering the lowest overall cost within the limits of the preceding considerations.

The pipeline route crosses several major wadis in the foothills of mountains along the route, requiring a special design to prevent erosion at these crossings. The route also crosses a major ridge, requiring rock blasting for grading of the ROW and trenching of the ditch. Two-thirds to three-fourths of the pipeline route involves varying degrees of rock excavation.

The project was completed in August 1996.

*Project Award  
October 1995*

*Project Completion  
August 1996*

*Oman*

