

Payamino Field Development- Ecuador

PROJECT SCOPE

The scope of the design and construction of the Payamino Field crude oil production facility in Ecuador included 12 miles of 4 and 6-inch gathering system flowing to a 20,000 BPD production unit. The facility design utilized three phase separators, process tankage, circulating pumps, 22,000 BBL of storage, two booster pumps, custody transfer metering system, a produced water treatment and disposal system, fire detection and protection systems, and utilities (power, water, air). Total capital cost of the Payamino project was \$6.3 million.

Environmental considerations played a significant role in the facility design. New regulations to protect the rain forest required additional water treating equipment for produced water disposal. Waste-gas flaring facilities were built taller than standard to protect the surrounding forest. Other environmental considerations included oil spill containment systems and vegetation restoration after construction.

Gulf Interstate Engineering Company (Gulf) project team performed the design, procurement, and construction management of onshore production facilities in the rain forests of Ecuador. Built in the Payamino Field of Ecuador's remote Block 7 region, the facilities were designed to process and deliver 20,000 BPD to Petro Ecuador's pipeline system.

Gulf originally developed plans for the 20,000 BPD facility in 1988 for another operator. When ORYX Ecuador Energy Company took over the development project, Gulf continued its Payamino Field efforts. Between 1990 and 1992, Gulf provided full engineering, procurement and construction management for the project. The construction phase of the project was completed one month ahead of schedule.

MATERIALS AND EQUIPMENT PROCUREMENT

Gulf provided a full range of services in the procurement process. For all materials and equipment, Gulf responsibilities included solicitation of

bids, commercial and technical evaluation of bids, purchase order placement, shop inspection, expediting, acceptance of materials and equipment and arrangements for export preparation.

Gulf also assembled the

complete bid package (contract documents, specifications, scope of work, and drawings) for construction bidders.

CONSTRUCTION MANAGEMENT

During the construction phase of the Payamino project, Gulf provided all construction management functions. Gulf's responsibilities involved all aspects of the construction process, including mechanical systems (such as pumps, flow lines and separators), electrical and utilities systems, instrumentation and local control systems, and materials management.

At the conclusion of the project, Gulf's commissioning and start-up teams trained operating personnel from Petro Ecuador and provided a complete set of operating manuals and job date books.





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