



RasGas Barzan Project FEED: HSER Studies

Services Performed

IRC performed a number of health, safety, environment, and risk (HSER) studies on time and on budget for the front-end engineering and design (FEED) of the Barzan offshore platform topsides and pipelines for ExxonMobil and Qatar Petroleum.

Objectives

- Execute HSER studies to ensure that activities and analyses in the Risk Management Plan adequately focus on hazard identification and assessment leading to an inherently safe design
- Provide timely input to the design to prevent personal injury or loss of life and damage to property and the environment
- Assess whether the risks are tolerable

Project Description

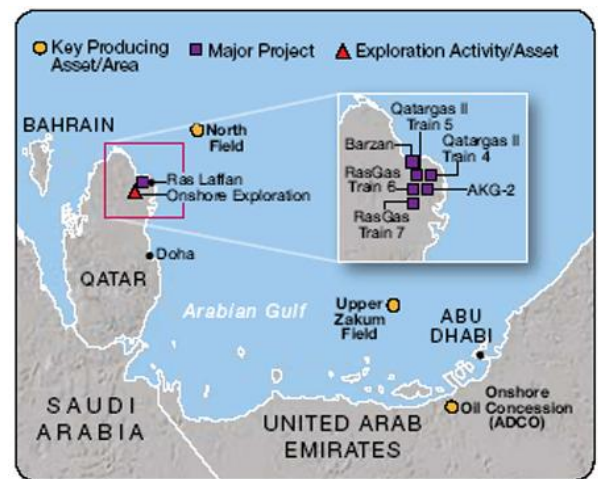
RasGas (a joint venture between Qatar Petroleum and ExxonMobil) planned to develop the multibillion dollar Barzan natural gas project in the North Field reservoir offshore Qatar. The project included a natural gas offshore production system with conventional wellhead platforms, infield pipelines, and export pipelines to the onshore Barzan Gas Plant in Ras Laffan Industrial City (RLC). First phase gas production was scheduled for 2012 at 1.5 billion cubic feet per day.

J. Ray McDermott Engineering performed the FEED for the offshore project scope. RasGas was to use the FEED results and recommendations to perform internal reviews, to seek shareholder project sanction, and as the basis for an EPC lump-sum invitation to tender (ITT) for the project offshore facilities. So that hazards and risks could be managed most effectively and from the earliest stage, IRC was asked to perform a number of studies including:

- Hazards and operability (HAZOP)
- Consequence analysis
- Explosion risk analysis
- Dropped-objects study
- Topsides installation HAZID
- Simultaneous operations study (SIMOPS)

Key Benefits to Client

- Robust HSER studies delivered on schedule with risks quantified and determined to be as low as reasonably practicable
- Verification that safety measures and best practices were integrated into the FEED
- Risk-reduction and mitigation recommendations (e.g., process safety, fireproofing, shelter and electrical building blast rating, pipeline protections) were incorporated to the FEED and engineering, procurement, and construction phases



Protecting life and improving production by shaping the design and operation of hazardous facilities

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