CUSTOMER SUCCESS STORY

Canyon Express Project

FEED - Front-end Engineering Design, 1999 - 2001

CUSTOMER
Total Exploration & Production

EXECUTING OFFICE
Houston

PROJECT LOCATION
Gulf of Mexico, United States

HIGHLIGHTS
• Deepest subsea development of its time
• One of the longest tie-backs of its time
• Last minute change in the host platform location successfully managed
• In-line sleds in ultra-deep water, with 3 sleds simultaneously in the water column on a sloping seabed in a curve
• Fiber optic communications
• Fast track

CUSTOMER CHALLENGES
• Deepest subsea tieback to date at its time
• One of the longest step-out (tie-back) distances of its time at 55 miles
• Fast track development

PROJECT SERVICES
The Canyon Express Project is a first-of-a-kind industry initiative to jointly develop three area gas fields in the Gulf of Mexico, operated by different companies through a common production gathering system. The three separate fields include Aconcagua in Mississippi Canyon 305 operated by TotalFinaElf, King’s Peak in Desoto Canyon 177 and 133, and Mississippi Canyon 173 and 217 operated by BP, and Camden Hills in Mississippi Canyon 348 operated by Marathon Oil. Peak gas production from the three fields will be approximately 500 MMSCFD.

A gathering system consisting of dual 12-inch pipelines will transport the gas from the three fields approximately 55 miles to Williams Canyon Station Platform located in Main Pass 261. The deepest portion of the Canyon Express pipeline system is in the Camden Hills area where the water depth is approximately 7,250 ft. Water depth at the Canyon Station Platform is 299 ft.

The Canyon Express Pipeline System must be able to produce the three fields under different operating regimes and varying production rates from multiple zone completions without any field taking on the performance risk of another field. Accurate flow allocation is therefore essential, which resulted in the use of subsea multi phase flow meters on each of the subsea wells. Multiple well manifolds and infield flowlines have been eliminated through the use of in line well tie-in sleds.
installed as part of the flowlines. These inline tie-in sleds have been designed to accommodate individual subsea wells. As a result, flowline routing is dictated in large part by the location of the subsea wells. Wells are connected to the flowline tie-in sleds using conventional inverted ‘U’ shaped jumpers.

**SCOPE OF SERVICES:**

FEED for the complete subsea development including:

- Flow Assurance and Systems Engineering and Subsea Equipment Specifications
- Flowline Design and Routing
- Steel Catenary Risers at the Virgo Platform
- Subsea Well Tie-in Jumpers
- Subsea Control System, Umbilicals, and Multi phase Flow Meters
- Intervention/Work over Control System
- Project execution support through installation of start-up
- Preparation and evaluation of ITB packages for all subsea equipment and installation
- Review of design and installation engineering
- QC services and management of offshore surveys
- Equipment qualification
- Procurement, expediting, SIT/EFAT, construction management, operator training and rig modification support
- O&M, IMR and intervention manuals
- Post installation start-up and operations support
- O&M, IMR and Intervention Manuals

**RESULTS**

- Successfully executed project
- Met schedule objectives
- Met cost objectives
- Met gas delivery commitments

The above was achieved from FEED to First Gas thru an integrated project team with INTECSEA providing the subsea engineering and subsea equipment package management.

WWW.INTECSEA.COM