Single Boat Workover



Samedan Oil Company

Offshore Israel October, 2003

NAUTILUS CONTRIBUTION: Designer & Project Manager (March to October, 2003)

OBJECTIVE:

Develop a cost effective method of completing wells on a remote oversea field development.

PROJECT:

Nautilus created a method of economically mobilizing a completion rig to a remote oversea location on a single work boat. The design and method enable the Operator to drastically cut costs by taking an available completion rig on a Gulf of Mexico work boat that would also service the rig while in operation. The design utilized rig components to support itself on the work boat. The only fabrication modification required were 16 adaptors to support the piperack panels to the boat bumper rail, which in turn supported the living quarters. The total cost of fabricating the bumper adaptors was less than \$5,000. An example of one of the steps involved with offloading of the boat to the platform in Israel is shown on the following pages.

DELIVERABLES:

Define the Scope of Work (Appraise & Select).

- Identify solutions and associated rig cost comparisons.
- > Select the most cost effective solution.
- > Categorize and determine an inventory of required equipment.

Phase II: Design Rig Modifications and Plan loading arrangement

- > Design any modifications required. Update rig drawings.
- > Determine total weights, load paths and center of gravities.
- > Design and plan the boat load out.

Phase III: Fabricate/update modifications and Assemble Rig.

- Build adaptors and add any modifications to rig equipment.
- Assemble and test equipment fit and function.

Phase IV: Develop Rig-up Plan & Implement

RESULTS:

The mobilization of the completion rig to Israel was highly successful. The Operator saved money on their well completion budget by combining the completion rig with the work boat and not having to embark in a foreign port entailing VAT taxes. First production was also brought on line much quicker due to the effective plan and design.

CONTACT REFERENCE:

Ken Stanley, Drilling Manager, Samedan Oil Company, Houston, Texas (281) 876-6200 Ray Kellow, Noble Energy email: rkellow@nobleenergyinc.com



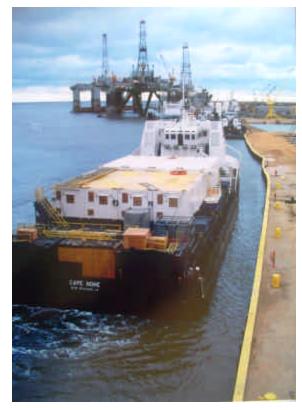


Single Boat Workover



Complete Rig, piperack and quarters loaded onto typical Gulf of Mexico workboat With 130 ft x 45 ft deck space

Rig and Workboat sailed from Gulf of Mexico to Israel offshore platform.



Completed wells for Samedan and demobilized rig back to the Gulf of Mexico.





Rigged-up on platform without docking in international port.