

# E&P

APRIL 2004

A Hart Energy Publication

## Top 16 Innovators

29th annual award winners announced



**DEEPWATER DRILLING**

**FRONTIER EXPLORATION**

**SUBSEA PRODUCTION SYSTEMS**



# 2004

## *Engineering Innovation*

### Judges choose top 16 industry projects

**H**art's E&P editors and staff proudly present the winners of the prestigious 2004 Special Meritorious Awards for Engineering Innovation.

The pages that follow spotlight the 16 awards the judges picked as best of the 2004 crop of entries. The winners reached across a broad range of disciplines and addressed a number of problems that posed roadblocks to efficient operations. The resulting technologies opened new and better avenues to the complicated process of finding and producing hydrocarbons around the world.

This year, some of the brightest minds in the industry from service and operating companies submitted a record number of entries representing better technology and new techniques for judges to consider.

The award program honors engineering excellence and achievement in every segment of the petroleum industry. It recognizes new products and technologies that offer innovation in concept, design and application. Winning entries represent techniques and technologies that are most likely to solve costly problems and improve exploration, drilling and production efficiency and profitability.

The people and companies that submitted the entries realize the oil- and gas-producing industry depends on new, better and constantly changing technological innovation to continue producing low-cost oil and gas from smaller and deeper

reservoirs to feed an increasingly energy-hungry world.

Contest judges chose the winners, but there were no losers in this contest. The products chosen represented the best of a long list of winners.

The expert panel of judges included engineers and engineering managers from operating and consulting companies worldwide. They applied their expertise in areas in which they were familiar, and judges were excluded from categories in which they or their companies had a business interest.

Hart's E&P would like to thank these distinguished judges for their efforts in selecting the winners in this year's competition.

As in past years, Hart's E&P will present the 2004 awards at the Offshore Technology Conference in Houston, Texas, May 3. The magazine would like to break this year's record number of entries in next year's contest. Individuals, companies and organizations are working around the clock on new technology that will improve the industry's efficiency, and those efforts should get the public attention they deserve.

An entry form for the 2005 Special Meritorious Awards for Engineering Innovation contest is available at the magazine Web site at [www.eandpnet.com](http://www.eandpnet.com). The deadline for entries is Dec. 1, 2004.

**FACILITIES, SYSTEMS: SEPARATE STORAGE SHUTTLING AMERICAN SHUTTLE TANKERS**

# Storage shuttles support deepwater production

A new system called Separate Storage Shuttling (S-S-S) offers a solution for a deepwater discovery far from the nearest pipeline. American Shuttle Tankers LLC of Houston, Texas, proposed a new system that works with floating production platforms of any kind.

Under the proposal, a dynamically positioned tanker would take station off the production platform. Dynamic positioning would allow close relative station keeping without danger to either the tanker or the platform. Dynamically positioned, smaller shuttle tankers would then offload liquids from the tanker, which would take the product to the any destination selected by the operator.

The storage tanker would be a double-hulled, OPA 90, DP2, DNV or comparable class with a capacity of 800,000 bbl. A possible source for those tankers might be shuttle tankers now used in the North Sea and modified for center moonpool loading. The production platform would offload the liquids to a center moonpool on the tanker. The tanker would offload product from the stern to a typical bow loading system on the shuttle craft. Approximately 60 dynamically positioned shuttle tankers exist in the world fleet.

A shuttle tanker with a capacity of 565,000 bbl would have a shallow enough draft to enter any Gulf of Mexico port, and it would comply with Jones Act flag regulations, but the storage tanker could fly any flag.

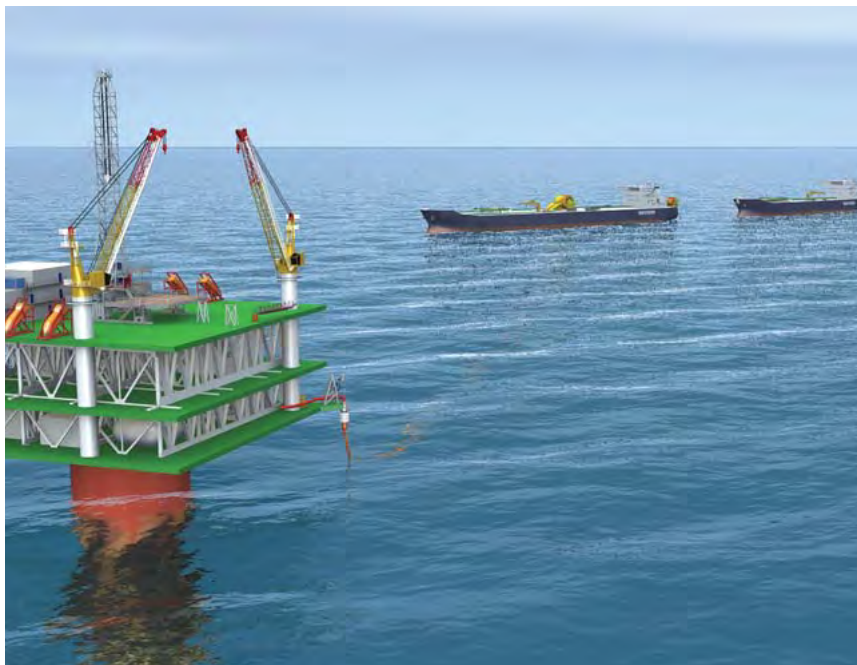
The tanker system, like a floating production, storage and offloading system, would eliminate flow problems from long, deepwater lines.

The tankers would not require service vessels for connection or disconnection, an operation that would take 1 to 2 hours.

In case of rough weather, tankers could handle waves 27 ft (8 m) high from trough to crest. If a hurricane should approach the operation, the storage vessel could disconnect easily and move to safer, calmer waters under its own power.



All of the equipment is in production now and could easily be adapted to Gulf of Mexico operations. The company has several patents pending on the application of the technology.



Under the S-S-S system, a floating production platform would offload liquids to a storage tanker, which would offload fluids to a shuttle tanker.



2004

*MEA Judges*

**Donald Duttlinger**  
Petroleum Technology Transfer Council

**David Murphy**  
Shell Technology E&P

**Eve Sprunt**  
ChevronTexaco

**Richard Ellis**  
Consultant

**Lanny Schoeling**  
Shell Exploration & Production Co.

**John Thorogood**  
BP Amoco Exploration (Faeroes)

**John Gidley**  
John L. Gidley & Associates

**Michael Schoenberger**  
Consultant

**Tim Tipton**  
Marathon Oil Co.

**Bob A. Hardage**  
Bureau of Economic Geology

**Yoram Shoham**  
Shell International Exploration &  
Production Inc.

**Svein Tellefsen**  
Statoil ASA

**George King**  
BP America

**Jerome Schubert**  
Texas A&M University

**Scott Wehner**  
Kinder Morgan Inc.

**Keith Millheim**  
Anadarko Petroleum Corp.

**Doug White**  
JM Huber Corp.