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• **Research**
• **Partnership to**
• **Secure Energy**
• **for America**
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RPSEA Ultra-Deepwater Program
FACA Meeting
C. Michael Ming
Christopher Haver
Houston, TX
January 30, 2007

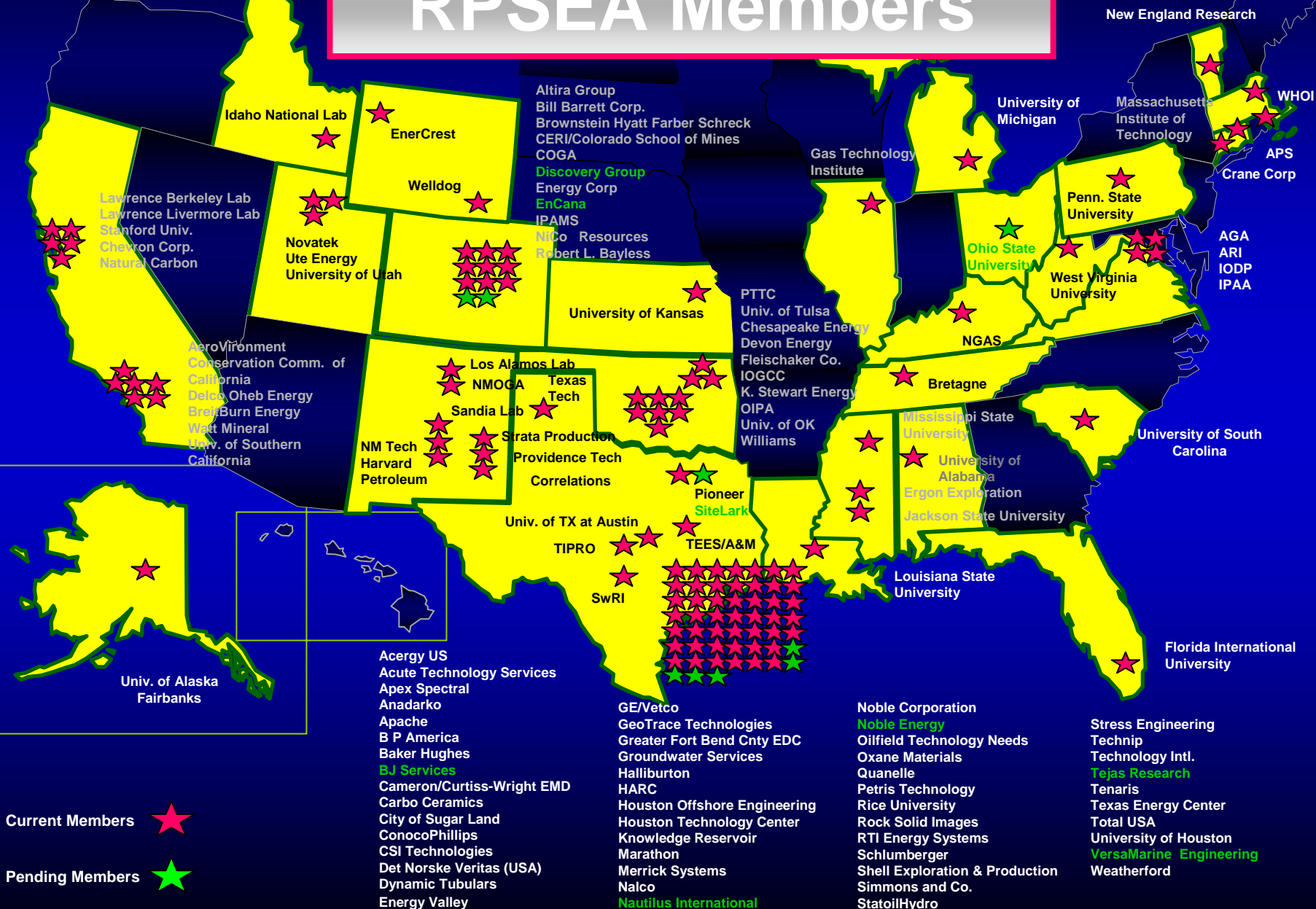
Secure Energy for America



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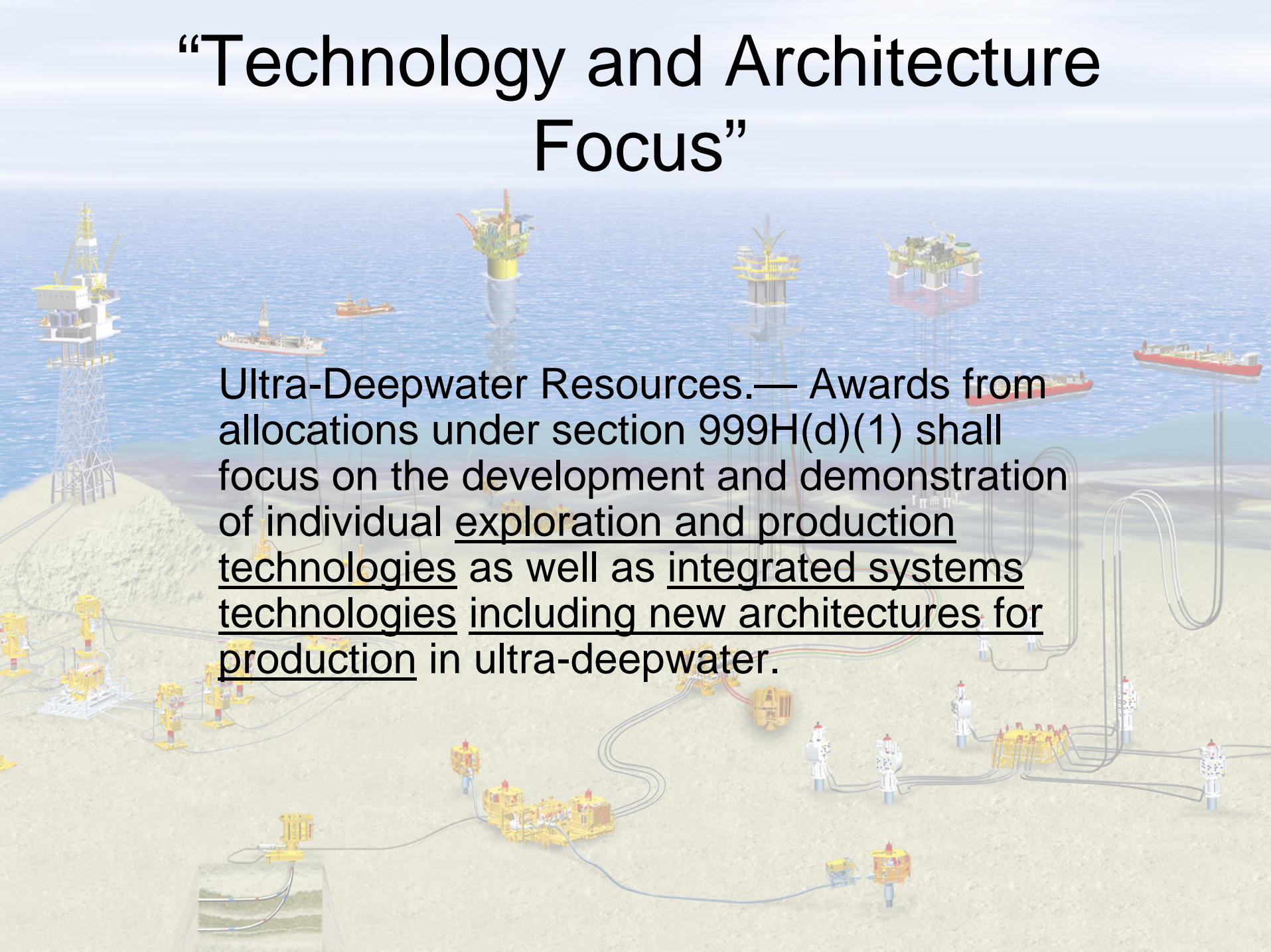
- RPSEA general comments
- UDW program overview
- UDW 2007 RFP status
- 2007 FACA report comments

RPSEA Members



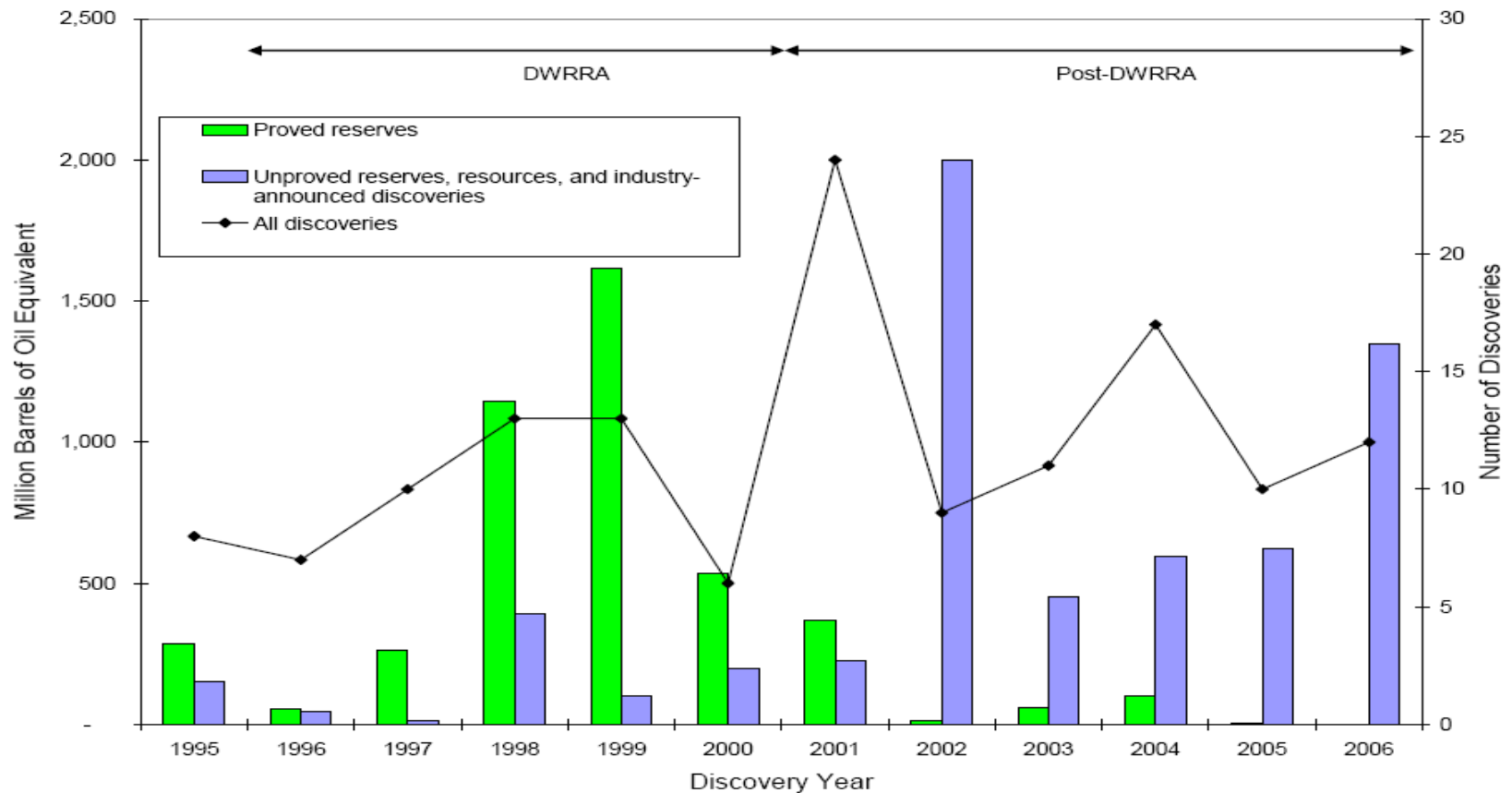
“Technology and Architecture Focus”

Ultra-Deepwater Resources.— Awards from allocations under section 999H(d)(1) shall focus on the development and demonstration of individual exploration and production technologies as well as integrated systems technologies including new architectures for production in ultra-deepwater.

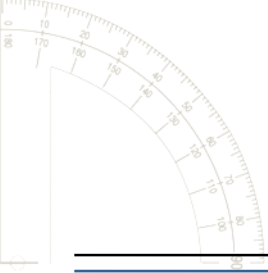
A detailed 3D illustration of an ultra-deepwater oil field. The scene is set in a vast blue ocean. In the foreground and middle ground, several large, complex offshore platforms are visible, some with yellow and white structures. These platforms are connected to a dense network of subsea pipelines and equipment on the seabed. The seabed is depicted in shades of brown and tan, showing various geological features and the layout of the subsea infrastructure. In the background, several support vessels, including supply ships and offshore supply vessels, are positioned around the field. The overall image conveys the complexity and scale of deepwater oil production.

Increasing Lag Between Discovery and Development

Proven Reserves Add Value



MMS Report 2007-021: Deepwater Gulf of Mexico, Interim Report of 2006 Highlights



Significant Demand for UDW Technology Funding

April, 2007

120+ Project Ideas
\$300 MM

June, 2007

70 Project Ideas
\$175 MM

July, 2007

26 Project Ideas
\$30 MM

RPSEA 2007 & 2008 Projects

UDW 2007 RFPs

- 4 RFPs released October 29, 2007
 - 9 proposals received December 27, 2007
 - Proposals under evaluation
- 5 RFPs released November 28, 2007
 - 13 proposals received January 28, 2008
- 5 RFPs to be released February, 2008

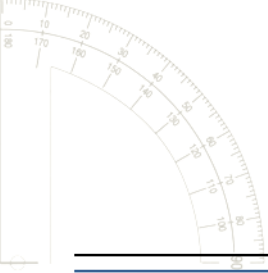




UDW Advisory Committee Comments

- “Enhance the focus on environmental issues”
 - DW 1801 - *Effect of Global Warming on Hurricane Activity and Severity*
 - DW 2101 - *New Safety Barrier Testing Methods*
 - DW 2801 - *Gulf Operational Current Model Pilot*

- “Increase emphasis on drilling and completions”
 - DW 1401 - *Carbon Fiber Wrapped High Pressure Drilling and Production Riser Qualification Program*
 - DW 1402 - *Ultra-deepwater Dry Tree System for Drilling and Production in GOM*
 - DW 1501 - *Extreme Reach Development*
 - DW 2301 - *Deepwater Riserless Light Well Intervention*
 - DW 1502 - *Coil Tubing Drilling and Intervention System*
 - DW 2502 - *Modeling and Simulation of Managed Pressure Drilling for Improved Design, Risk Assessment, Training and Operations*



UDW Advisory Committee Comments, cont'd

- “More emphasis on achieving grand challenge R&D breakthroughs”
 - DW 1201 – *Wax Control*
 - DW 1302 – *Ultra-high Conductivity Umbilicals*
 - DW 1401 - *Carbon Fiber Wrapped High Pressure Drilling and Production Riser Qualification Program*
 - DW 1501 - *Extreme Reach Development*
 - DW 1902 - *Deep Sea Hybrid Power System*
- “Increase emphasis on drilling and completions”
 - DW 1401 - *Carbon Fiber Wrapped High Pressure Drilling and Production Riser Qualification Program*
 - DW 1402 - *Ultra-deepwater Dry Tree System for Drilling and Production in GOM*
 - DW 1501 - *Extreme Reach Development*
 - DW 2301 - *Deepwater Riserless Light Well Intervention*
 - DW 1502 - *Coil Tubing Drilling and Intervention System*
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“Stovepipe” Concern

Ultradeepwater Challenges

- Significantly extend subsea tieback distances - surface host elimination
- Dry trees and risers in 10,000' wd
- Cost effective wellbore/subsea intervention
- Economic 100 MMBOE developments
- Continuous Improvement
 - Per wellbore recovery
 - Cost reduction

