Marine Protected Areas and Oil & Gas Offshore Alaska

Presented to
MPAFAC

Presented by
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September 10, 2009
Content

- Glimpse of the Arctic offshore
- Global perspective on the Oil & Gas Industry’s offshore experience
- Possible scope of development in the offshore
- Relationship between the two concepts
  - Marine Protected Areas
  - Oil & Gas development
Alaska Offshore
Beaufort Sea
Sea Ice Break-up
Satellite Monitoring of Polar Pack

Video

Date: 20030928

Sep, 2003 – May, 2004
Grounded Compression Ridges

D. Dickins
Landfast Ice Growth

Thickness data from Vaudrey (2000) and Sandwell
Global Perspective on Offshore Cold Region Experience

- Caspian Sea
- Sea of Okhotsk
- Alaska Timeline
Kashagan Drilling Island
**Industry Interest and Activity Spans the Last 100 years**

**Alaska**

- **1918**: Geologists look for oil possibilities
- **1952**: First offshore seismic study of Alaska (Alaska's south)
- **1956**: Cook Inlet - Seismic
- **1958**: 14,000-foot wildcat well (Cook Inlet)
- **1959**: Discovery: Middle Ground Shoal No. 1
- **1962**: Cook Inlet production
- **1963**: First Cook Inlet pipeline completed
- **1964**: Seismic in Chukchi Sea
- **1965**: Chukchi Sea Burger well
- **1966**:...
- **1975**:...
- **1977**:...
- **1978**:...
- **1982**:...
- **1983**:...
- **1984**:...
- **1985**:...
- **1986**:...
- **1987**:...
- **1988**:...
- **1989**:...
- **2005**:...
- **2006**:...
- **2007**:...
- **2008**:...
Offshore Development
Success Case
2010 - 2040
BP Northstar (Alaska)
Arctic Structure - Artist’s Rendition
Systematic Approach to Development

• The Industry is technology based
  – Technology informs business decisions as well as technical choices in day-to-day operations
  – Technical evolution and new capabilities enable new businesses

• There is a structure to how technology progresses a development
  – Learn what is needed
  – Develop knowledge and capability to address these needs
  – Deploy the new capability in engineered products

• Technical performance criteria must be achieved in prime areas
  – Safety
  – Environment
  – Engineering
Arctic Technology Areas

- Circum Arctic Plate Reconstruction
- Alternative Seismic Methods
- Ice Management
- Autonomous Underwater Vehicle
- Oil Spill Prevention and Response
- Emergency Evacuation and Rescue
- Sound Reduction
- Ice & Ice Effects
- Pipeline Placement
- Climate Effects on Ice and Operations
- Sea Ice and Weather Forecasting
- Unmanned Aircraft Systems
- Year Round Jack Up
Cone Structure Model Test
Marine Sound Project

“quiet design”
Mitigation Mechanisms

- Acoustic Barriers
  - Bubble Curtain
  - Sound Attenuation Blanket

- Equipment Isolation
  - Isolation Devices
  - Insulation
  - Structural Acoustic Damping

- Structural / Vessel Design
- Operation Control
Whale Locating
Potential offshore energy reserves in the Arctic are large and will be integral to near-term National prosperity.

The Industry is a significant Stakeholder in planning for the offshore.

The Industry regulatory structure uses the best available scientific information and science-based management to ensure that oil and gas extraction is carried out at low risk and in the public’s interest.

Industry is committed to gathering and interpreting new data to add to the very significant body of research that exists.

Industry has a full awareness of subsistence issues, and is continuing efforts to address Alaska Native concerns.

The Industry would be concerned about establishment of MPAs that blanket vast areas and are not rigorously justified by scientific results.
The two concepts are not mutually exclusive and they can do much more than coexist.

The two concepts can be supportive of each other.

Tangible achievements can likely be accelerated by establishing engagement and linking goals.

Both Oil and Gas development and formation of MPAs must be rooted in science based activities:
- The science enables both
- The science work should be coupled and optimized.
End of Presentation
Data Acquisition