

Marine Protected Areas and Oil & Gas Offshore Alaska

Presented to
MPAFAC

Presented by
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Content

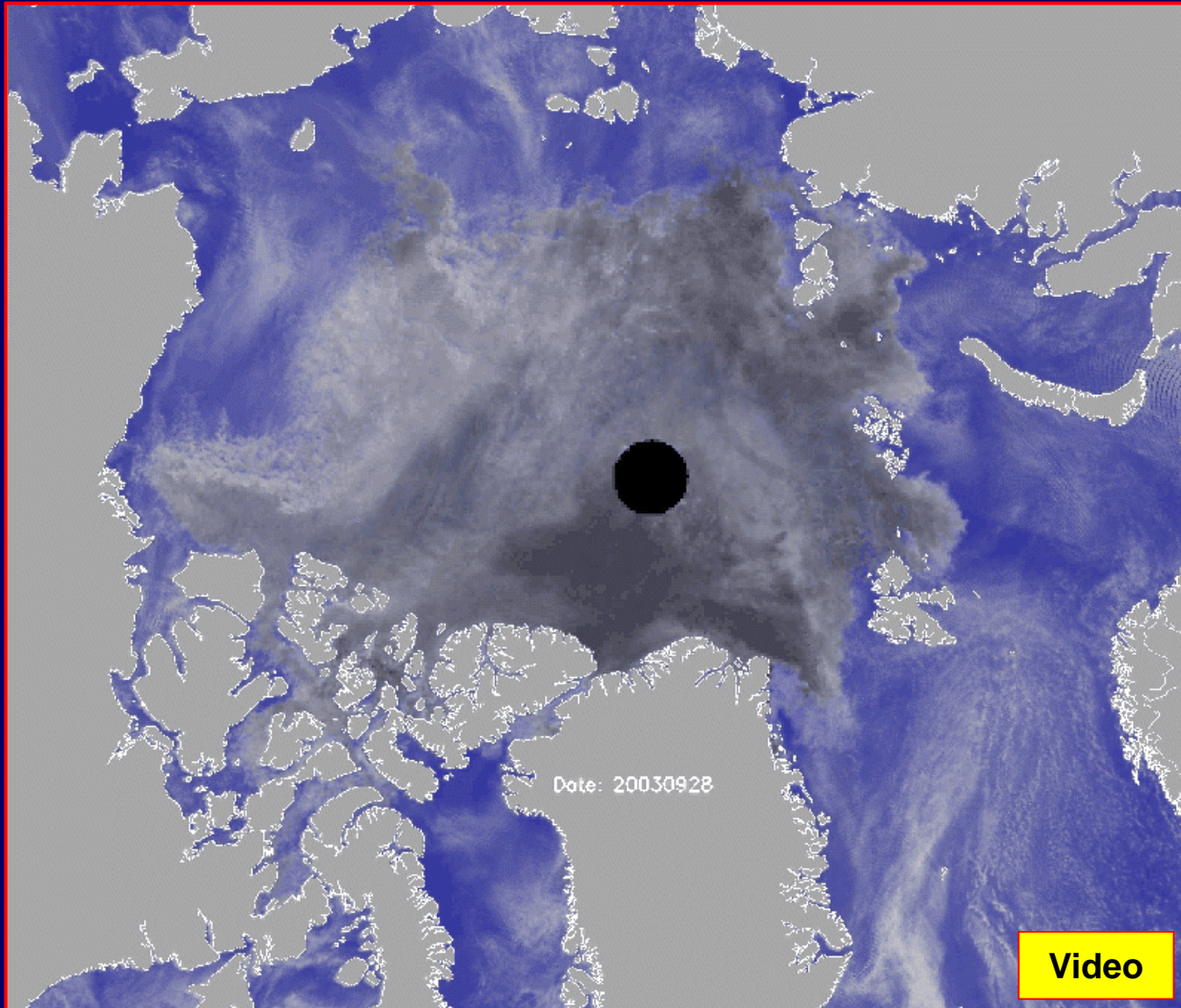
- **Glimpse of the Arctic offshore**
- **Global perspective on the Oil & Gas Industry's offshore experience**
- **Possible scope of development in the offshore**
- **Relationship between the two concepts**
 - Marine Protected Areas
 - Oil & Gas development

Alaska Offshore

Beaufort Sea Sea Ice Break-up



Satellite Monitoring of Polar Pack



Sep, 2003 – May, 2004

Grounded Compression Ridges

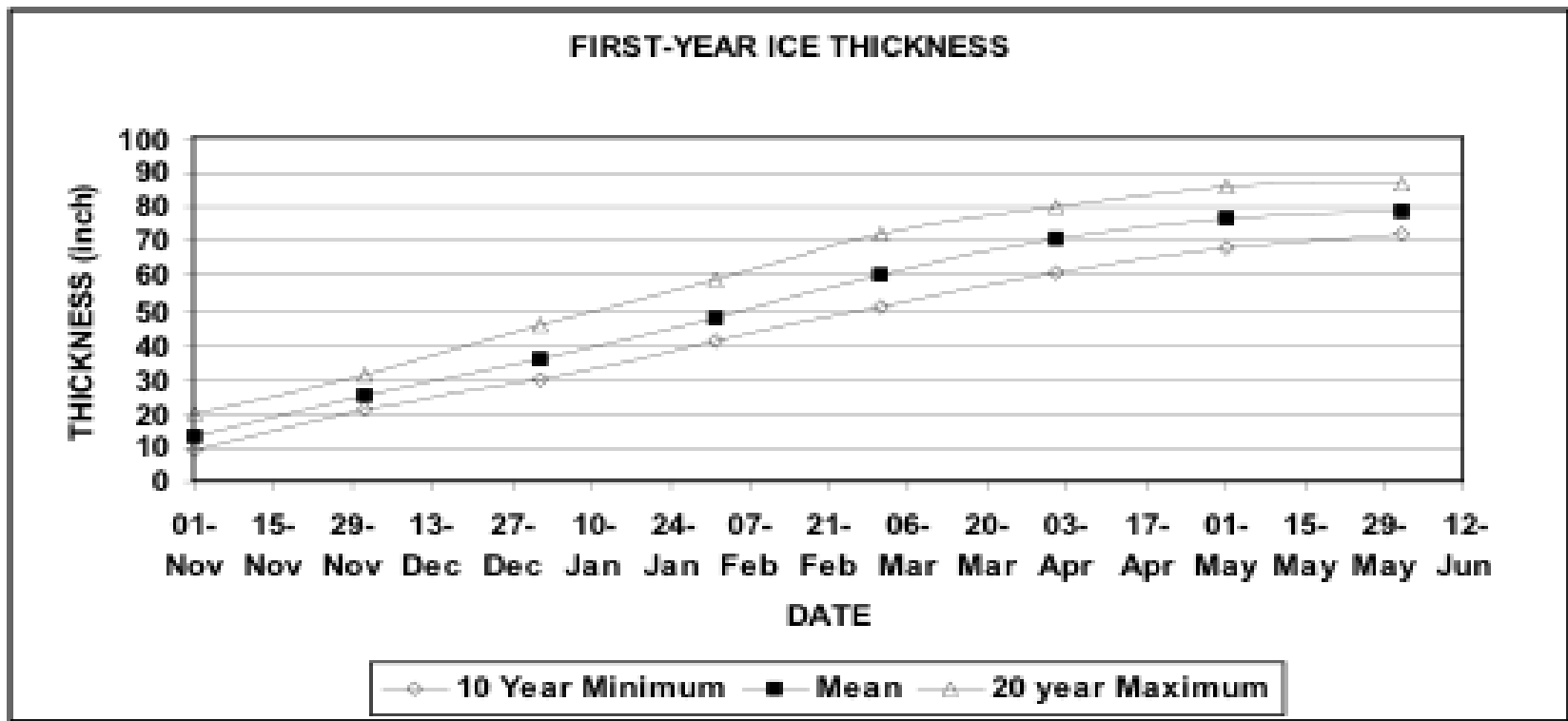


D. Dickins

Chukchi Sea – March, 2009



Landfast Ice Growth



Global Perspective on Offshore Cold Region Experience

- Caspian Sea
- Sea of Okhotsk
- Alaska Timeline

Kashagan Drilling Island



Sakhalin Structure



Industry Interest and Activity Spans the Last 100 years Alaska

Geologists look
oil possibilities

First offshore seismic
study of Alaska
(Alaska's south)

Cook Inlet - Seismic

First Cook Inlet pipeline completed

1918 1952 1956 1958 1959 1962 1963 1964 1965 1975

14,000-foot wildcat
well (Cook Inlet)

Discovery : Middle
Ground Shoal No. 1

Cook Inlet production

Seismic in
Chukchi Sea

Chukchi Sea
Burger well

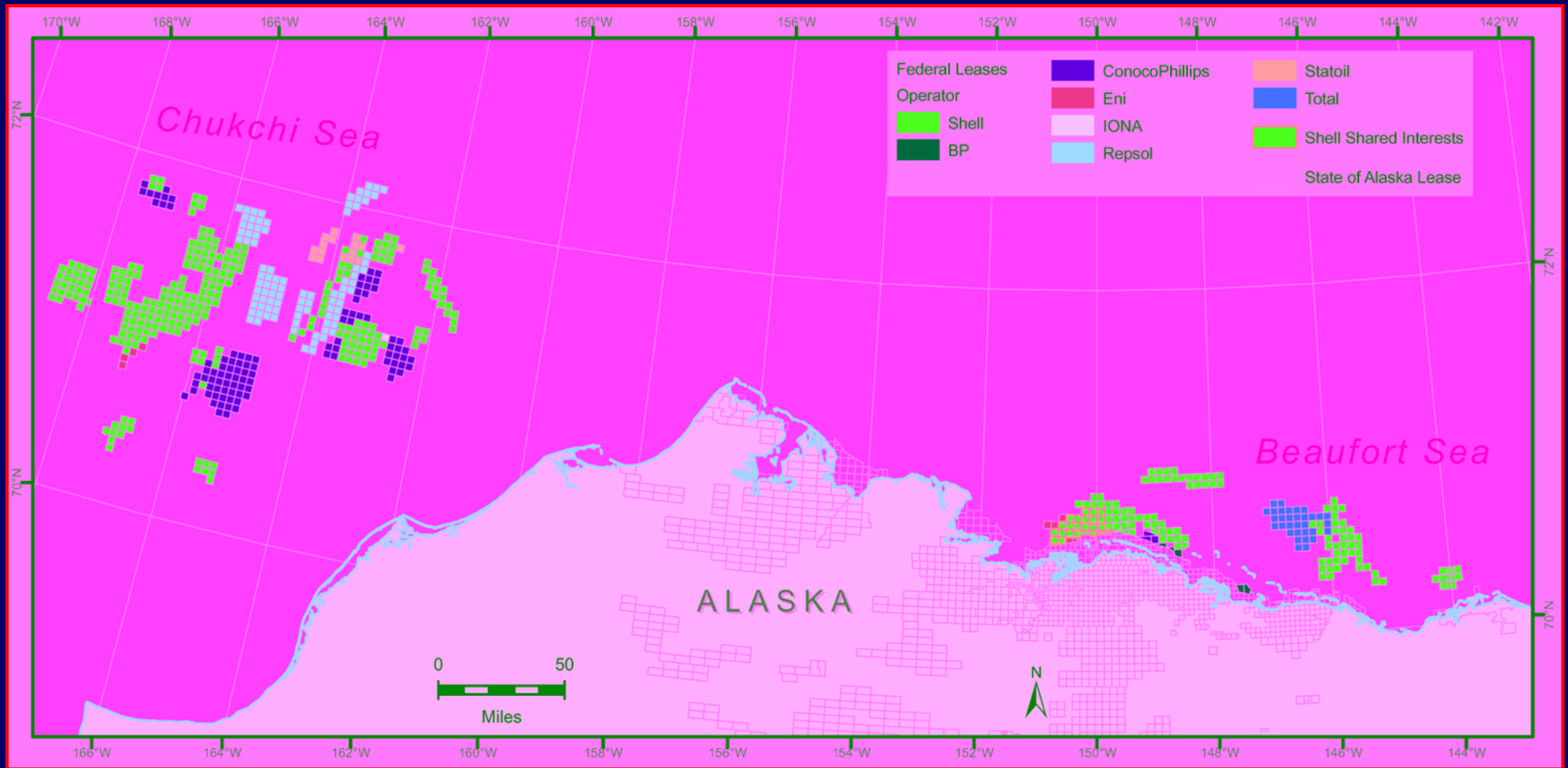
Offshore Development
Success Case
2010 - 2040

Northstar Production Island



BP Northstar (Alaska)

Beaufort / Chukchi Lease Blocks



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

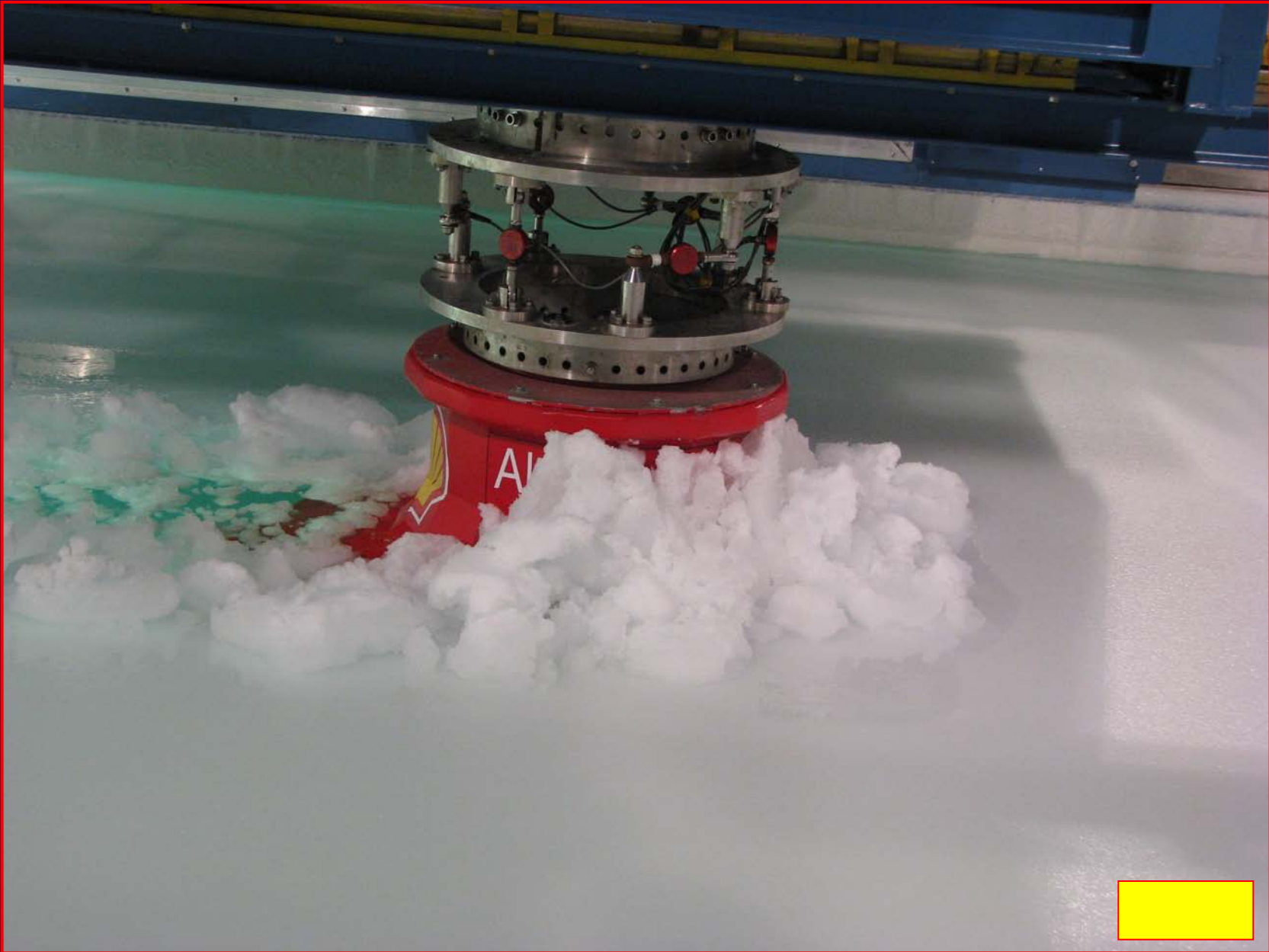
Climate Effects on Ice and Operations

Sea Ice and Weather Forecasting

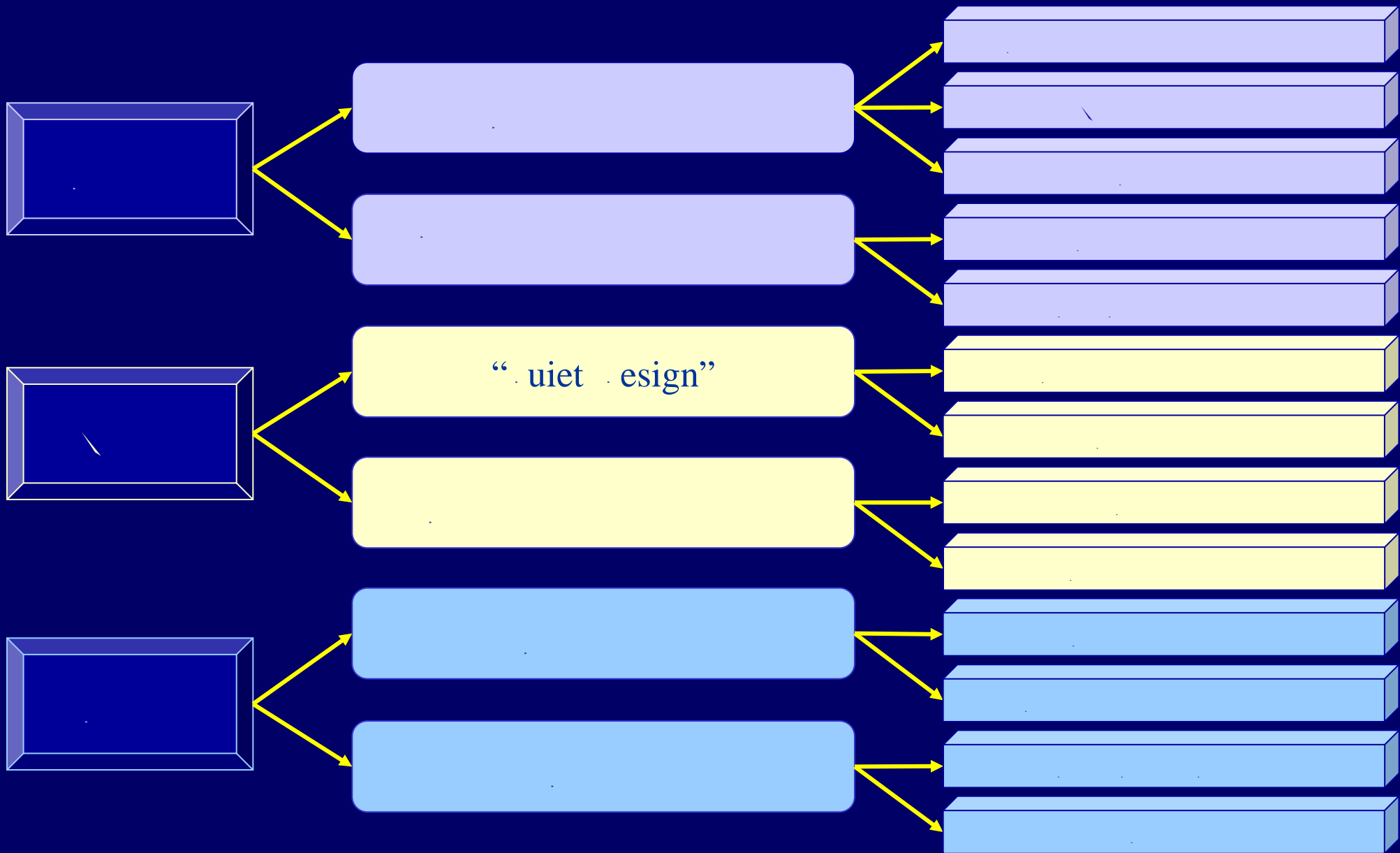
Unmanned Aircraft Systems

Year Round Jack Up

Cone Structure Model Test



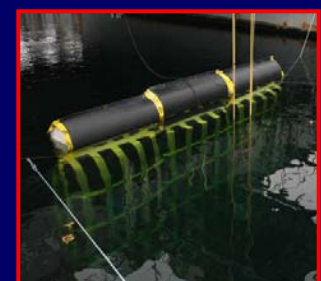
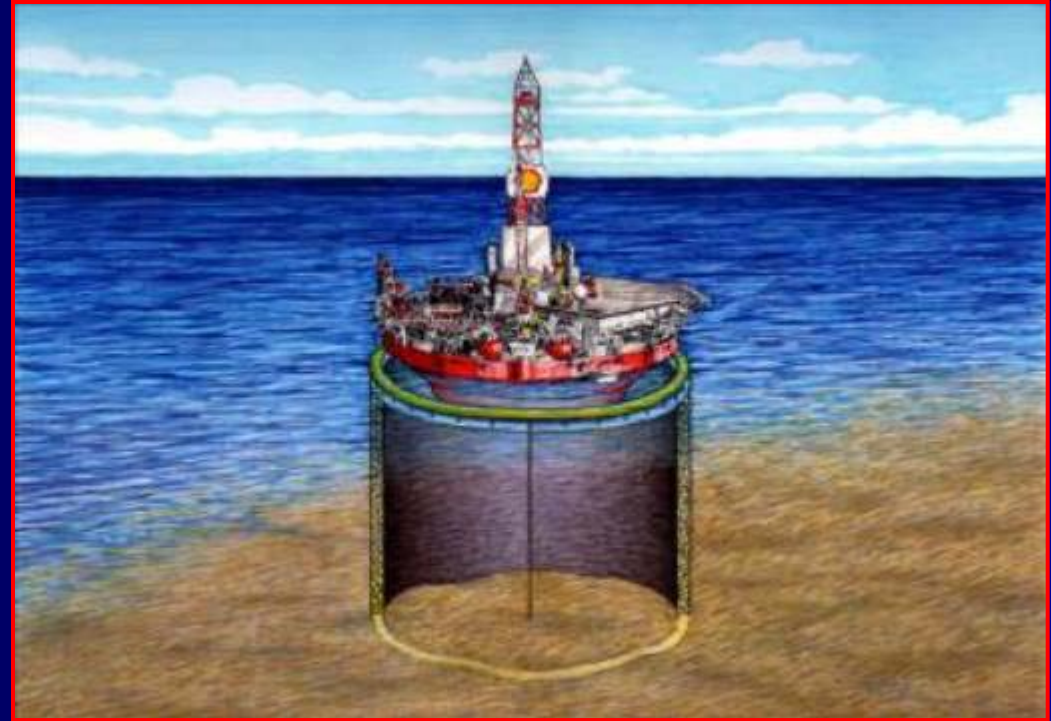
Marine Sound Project



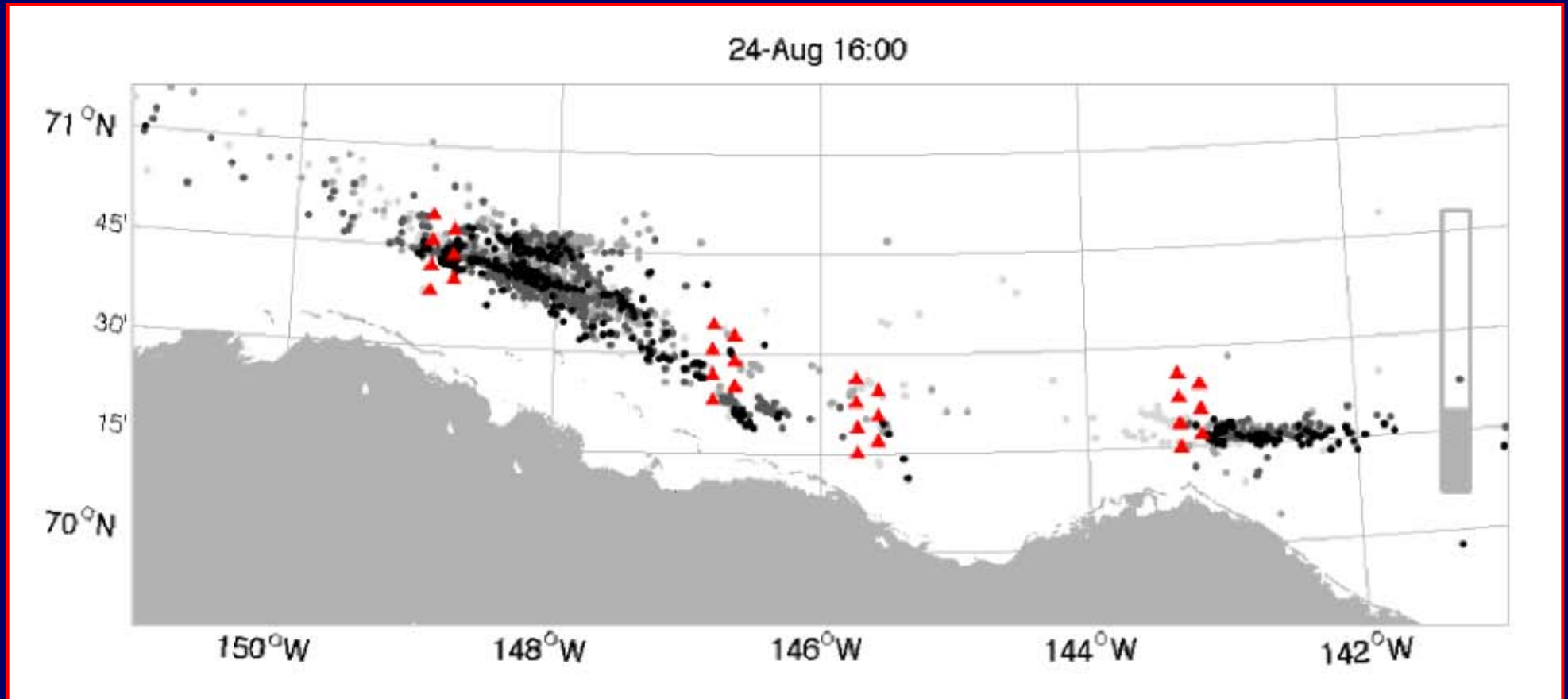
Marine Sound Mitigation

Mitigation Mechanisms

- Acoustic Barriers
 - Bubble Curtain
 - Sound Attenuation Blanket
- Equipment Isolation
 - Isolation Devices
 - Insulation
 - Structural Acoustic Damping
- Structural / Vessel Design
- Operation Control



Whale Locating



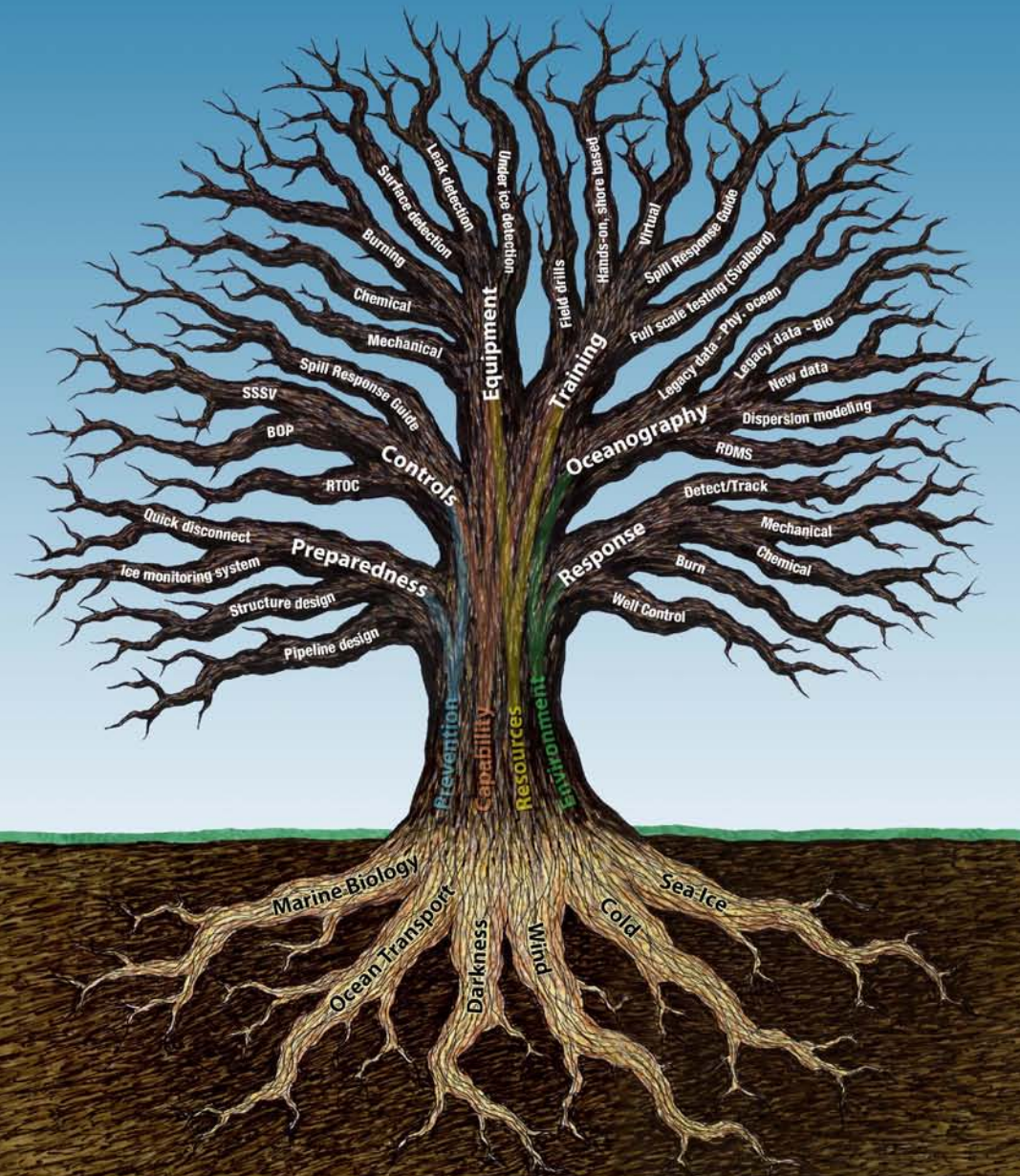
Marine Protected Areas + Oil & Gas Development

- **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**

Marine Protected Areas + Oil & Gas Development

- **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

