

Sharing the Shelf

The people onshore

- Subsistence
- Cultural Stress
- Economy
- New tax base?



Marine fauna

- Protected species
 - Whales
 - Seals
 - Polar bears
 - Birds
- Fish and fisheries
- Noise in the ocean

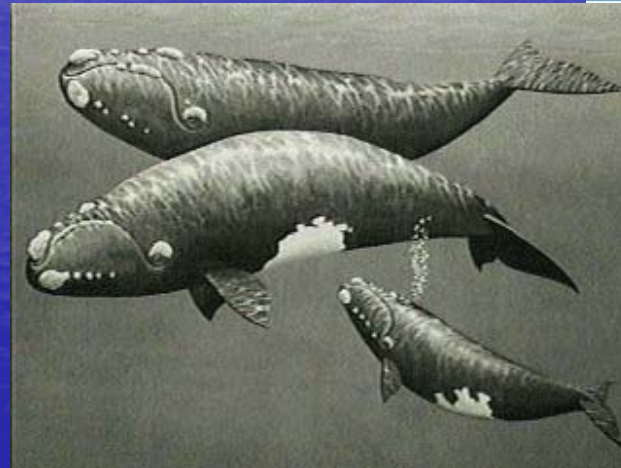


Research Planning

- Environmental Studies FY-07 Plan
 - Chukchi Sea Workshop
 - Held November 1 – 3
 - North Aleutian Basin Workshop
 - Held November 28 – 30
- Physical Oceanography
- Subsistence
- Sociology
- Economics
- Marine Mammals
- Fish
- Birds
- Fate and Effects of Discharges



John Warden



Arctic Offshore Technology Assessment of Exploration and Production Options for Cold Regions of the US Outer Continental Shelf

Objective:

- **Conduct a technology assessment for US OCS oil and gas operations in cold regions**
- **to determine what may be technically feasible in ice-covered and open water conditions.**



Sea Spray Icing of Drilling and Production

Platforms

Objective: to develop methods for quantifying the occurrence and severity of sea spray icing on oil exploration and drill rigs in the Chukchi and Beaufort Seas.

- By May 2008, algorithms will provide the ability to process weather data to determine sea spray icing severity on offshore structures



**U.S. Army Cold Regions Research
and Engineering Laboratory**



*Excellence
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Worldwide*

Assessment of Superstructure Ice Protection As Applied to Offshore Oil Operations Safety

Objective: to assess potential methods for improving safety on drilling and production vessels and platforms operating in the Chukchi and Beaufort Seas and experiencing superstructure icing by May 2008.

- **Identify ice protection technologies and evaluate their effectiveness for enhancing operational safety.**
- **Assess the potential safety improvements following application of these technologies to operations in the marine icing environment.**
- **Identify research needs and make recommendations for development of new technologies icing.**



Design Options for Offshore Pipelines in the US Beaufort and Chukchi Seas

Objective: to provide design options for Pipelines with Arctic hazards such as strudel scour, upheaval buckling, and ice gouging

- Design options include evaluation of pipeline configuration, material selection, design parameters, operating conditions, application of strain-based and design methods.
- Design issues include construction, operations, integrity management, maintenance and intervention.

C-CORE

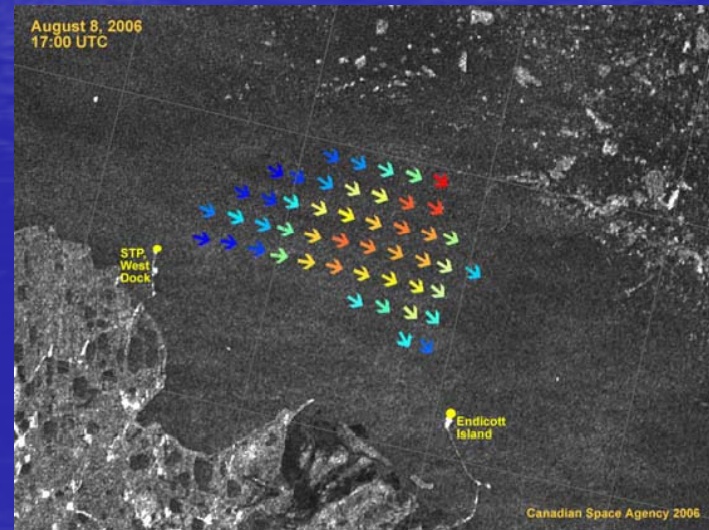
Seabed Scour and Buried-Pipeline Deformation due to Ice Ridges

Objective: to study factors affecting soil and pipeline deformation below scouring ice ridges in the Arctic



Environmental Studies-Ongoing about Sea Ice

- Mapping over-flooding of the landfast ice zone.
- Mapping surface currents in the Beaufort Sea.
www.salmonproject.org

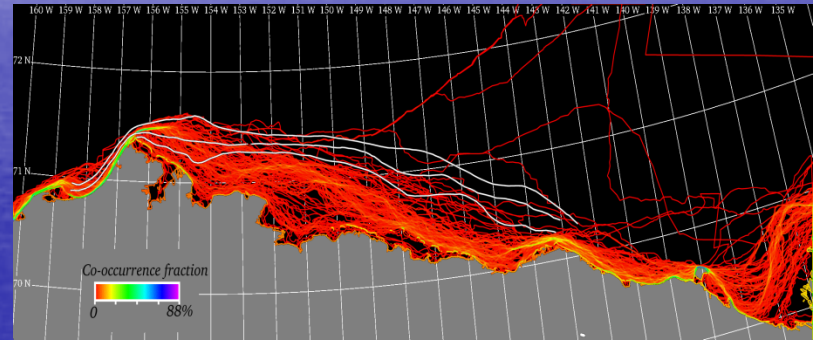
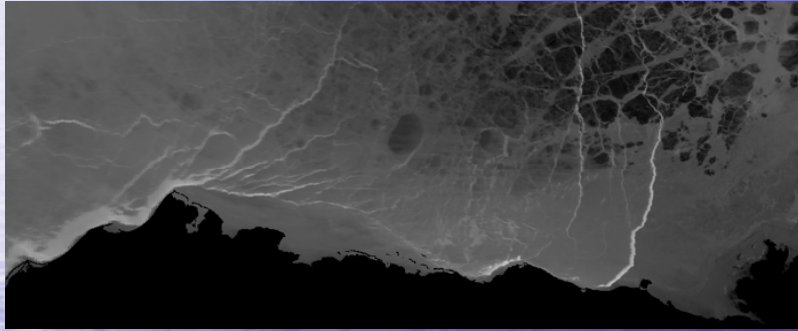


Recent Environmental Studies-Completed

Mapping Ice Conditions in the Beaufort and Chukchi Seas

Lead systems dynamics

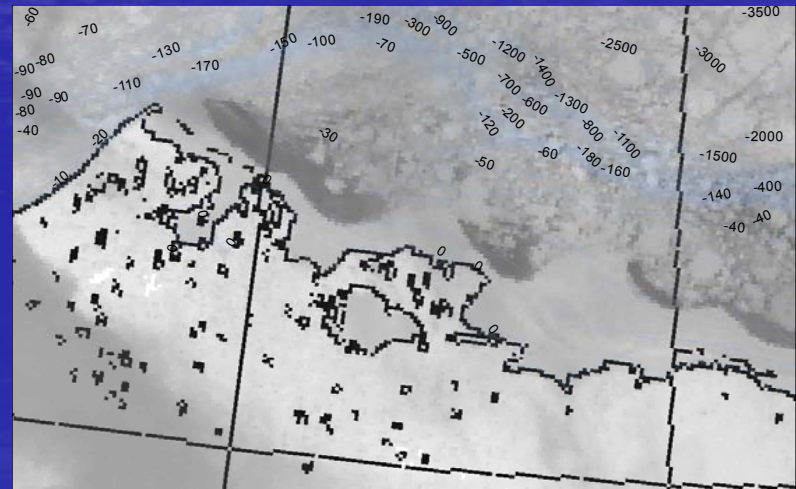
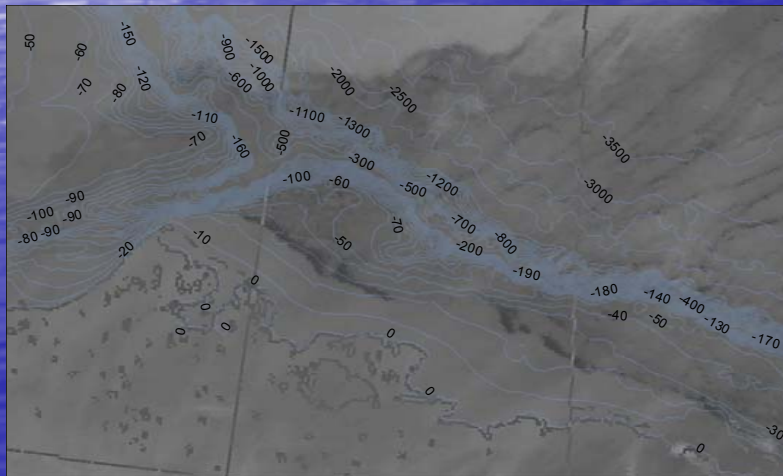
Landfast Ice



Before

Mid-Winter Break-Out Events of the Landfast Ice

After



Oil Spill
Research and
Exercises



International Oil in Ice Workshop 2007

Objective: To discuss recent advances in the cleanup of oil spills in ice and cold climates and to guide future R&D in areas of common interest

Registration is now open through WWW.SLROSS.COM

- **October 10-12 -- Marriott Hotel in Anchorage, AK**

- **Workshop funders**

- **Minerals Management Service**
- **Alaska Clean Seas**
- **Alaska Department of Environmental Conservation**
- **Cook Inlet Spill Prevention and Response**
- **Prince William Sound Oil Spill Recovery Institute**
- **U.S. Coast Guard.**



Planning Support for an Experimental Oil Spill in Pack Ice

Objective: plan an experimental oil spill in pack ice offshore Eastern Canada in 2007/2008 to test current technology

- Partnering with the Department of Fisheries and Oceans Canada - Center for Offshore Oil and Gas Environmental Research and the Canadian Coast Guard.



Detection of Oil on and Under Ice

Objective: to assess the technical feasibility and cost of developing and incorporating airborne oil detection systems in future field trials with oil and ice.



Co-funded by

MMS,

Alaska Clean Seas

Alaska Department of Environmental
Conservation



Arctic Oil and Gas Activities in an Ice Diminished Environment

- Arctic nations will pursue oil and gas
- Offshore, current cold weather technology is probably well-adapted to warming conditions
- Onshore operations will change
- Nearshore operations would be affected
- Will ice “be reliable”?



How to meet Challenges posed by possible climate changes

- Management based on high quality science coupled with engineering
- Adaptive management of resources and activities
- Research and incentives for new technology
- Monitoring and Evaluating changes



Partnerships (present and future information sources)

- **AOOS – Alaska Ocean Observing System**

- www.aoos.org



- **ARLIS – Alaska Resources Library and Information Services**

- www.arlis.org



- **Coastal Marine Institute**
– **University of Alaska**



- **NSSI – North Slope Science Initiative**

- **DOI, State of Alaska, North Slope Borough, et al**



<http://www.mms.gov/>

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Current Events

MMS Starts Preparation of New 5-Year OCS Leasing Program

The MMS solicited input from interested and affected parties as part of the process for preparing a new 5-year outer continental shelf oil and gas leasing program for 2002-2007. A notice in the [Federal Register](#) requested comments and suggestions for preparing the new program as well as information on issues and alternatives that should be addressed in the accompanying environmental impact statement. The [comments received have been posted](#) on this web site.

New Study Now Available

The Minerals Management Service (MMS), Gulf of Mexico OCS Region, announces the availability of a new study report, [Meteorology of the Northeastern Gulf of Mexico: Data from 1995 to 1997. Final Report](#). This study resulted in a meteorological database of the Northeastern Gulf of Mexico (NEGOM) that may serve as a "handbook" by planners or by analysts preparing initial assessment of conditions associated with nonroutine or accidental events.

Industry Awards Ceremony

Some of the best in the oil and gas industry will be honored April 4, 2001 at the Minerals Management Service annual [Industry Awards Ceremony](#) in Houston, Texas. Recipients of the 2000 Corporate Leadership Award will be recognized for performing an act or service that enhanced the MMS mission objectives.

35 States Receive Record \$800 Million

MMS Highlights

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Content: 35 States Receive Record \$800 Million

<http://www.mms.gov/alaska/>

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Minerals Management Service

Alaska OCS Region

Welcome!

Welcome to the Alaska Outer Continental Shelf (OCS) Region of the [Minerals Management Service \(MMS\)](#). MMS is a bureau of the [Department of the Interior](#). Our mission is to manage the mineral resources of the Outer Continental Shelf in an environmentally sound and safe manner.

If this is your first visit to the Alaska Region web, be sure to check out the [Regional Director's Update](#) and the [Navigation Tips](#) pages. If you have any suggestions for improvements or were unable to locate the information you were searching for, be sure to sign our [Guest Book](#) and let us know what you would like to see.

MMS issues draft Environmental Impact Statement for the proposed Liberty Development Project in the Beaufort Sea, Alaska. For the full text of the draft EIS and related documents [click here](#).

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Questions?
Need More Information?
Please Write:
[Alaska Region Public Information](#)