

ALASKA REGION OCS ACTIVITY HIGHLIGHTS
OCS Scientific Committee Meeting
Santa Barbara, California
May 22-24, 2012

Dee Williams, Ph.D.
Studies Chief

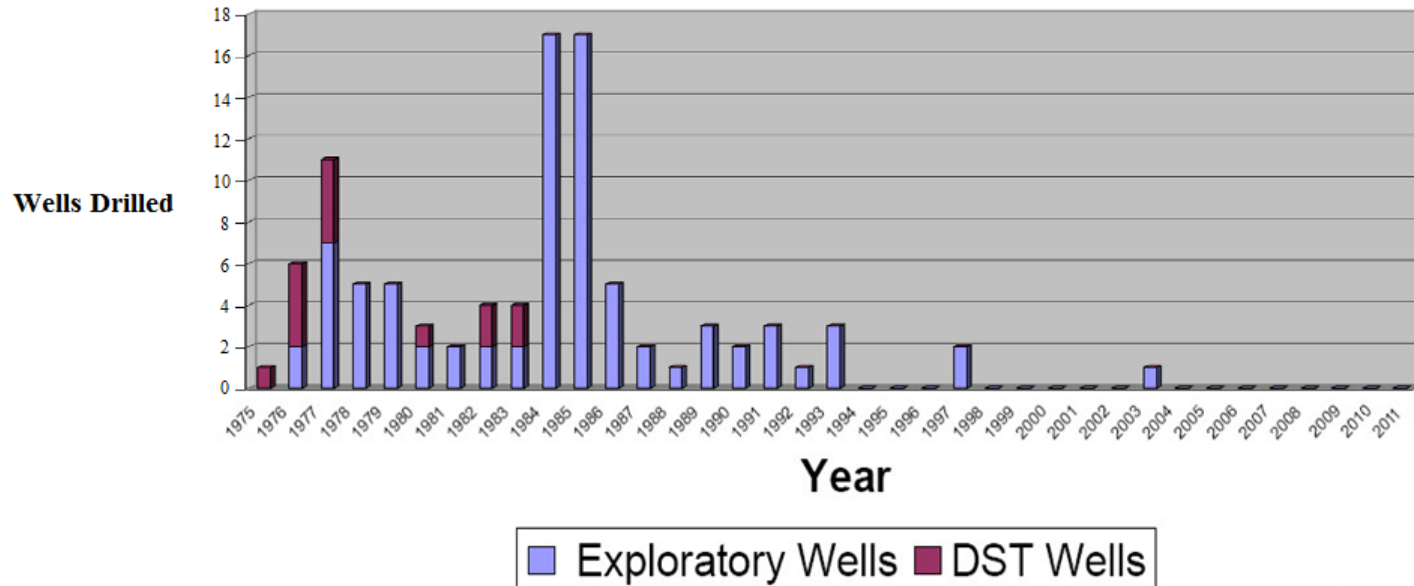


Historic Exploration Drilling

There have been 84 exploration wells and 14 DST wells drilled in Alaska.

Beaufort Sea -	30	St. George Basin -	10
Chukchi Sea -	5	Cook Inlet -	13
Norton Sound -	6	Gulf of Alaska -	12
Navarin Basin -	8		

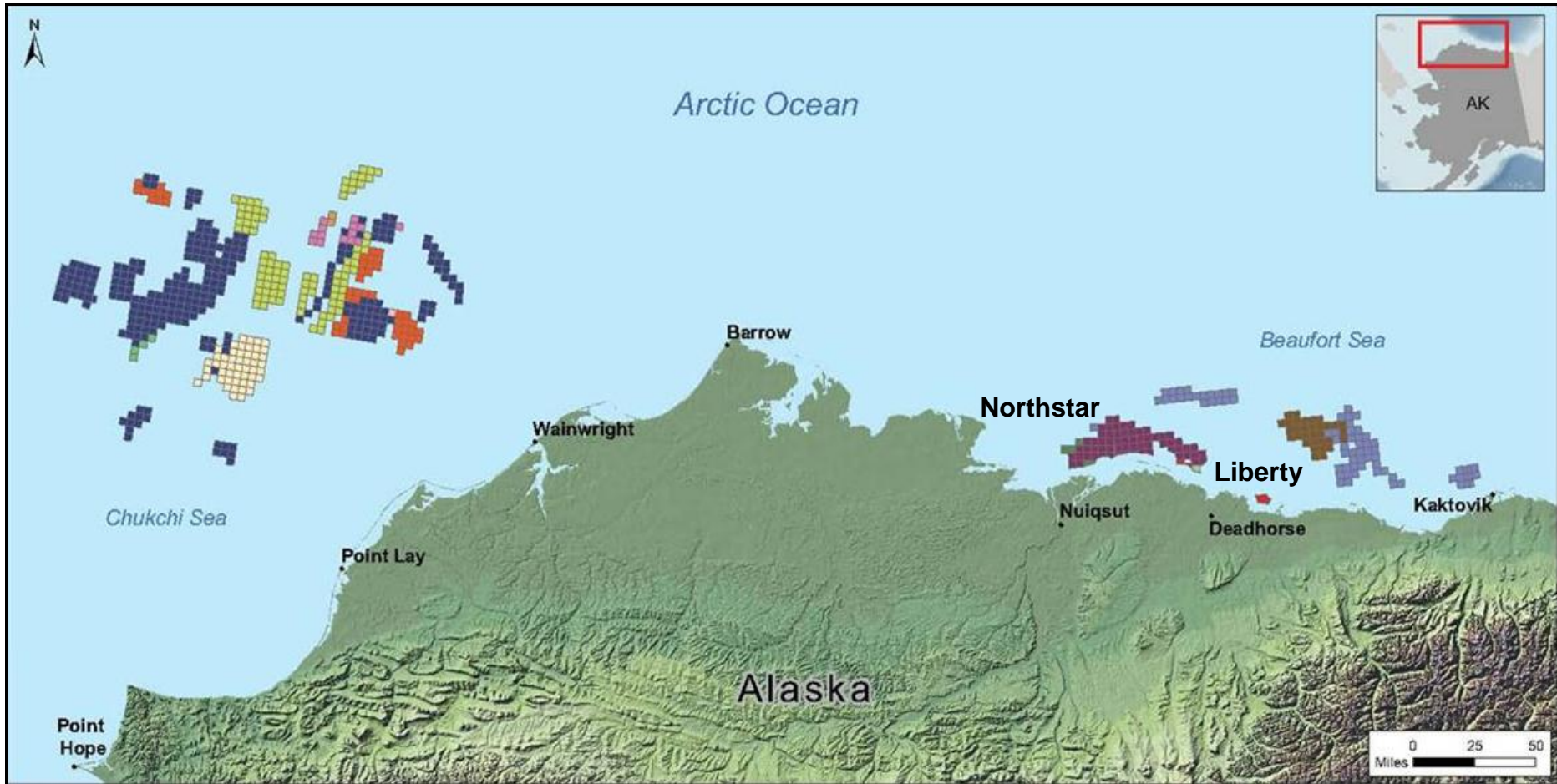
The last exploration well on the Alaska OCS was completed in January 2003, in the Beaufort Sea. The chart graphs number of exploration wells by year from 1975 through 2011.



Alaska OCS Exploration Wells 1975 -2011

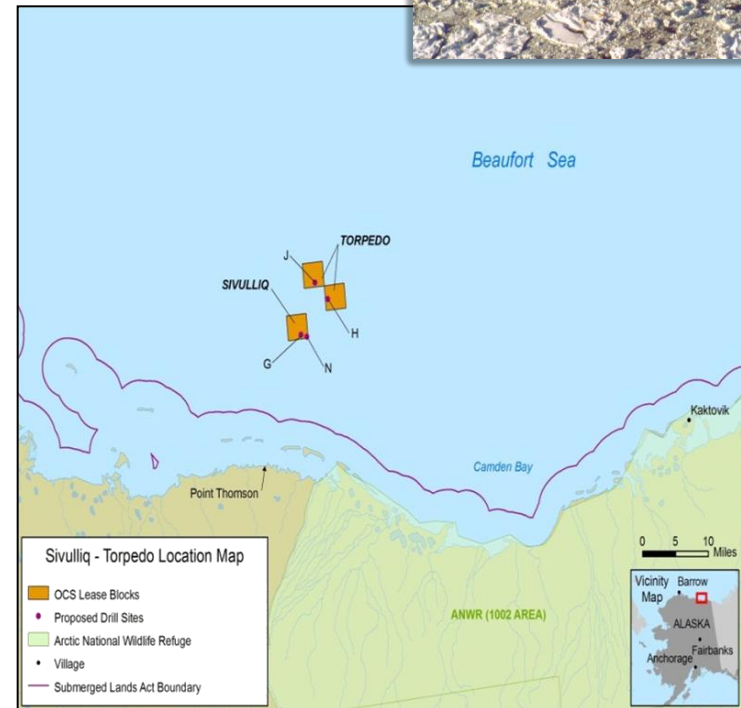


Alaska OCS Leases



Camden Bay - Shell Offshore Inc.

- Multi-year program beginning 2012
- Four exploration wells planned using the conical drilling unit (CDU) *Kulluk*
 - 2 wells to test the Sivulliq prospect
 - 2 wells to test the Torpedo prospect
- Drill sites located ~ 16-23 miles north of Point Thomson, near Camden Bay.
- Water depths ~ 110-125 feet.
- BOEM approved, with conditions, Shell's Exploration Plan on August 4, 2011.

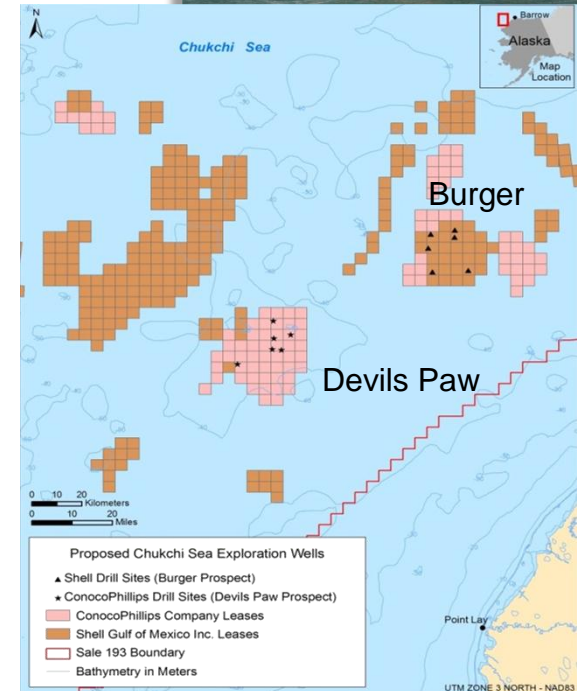


Burger Prospect - Shell Gulf of Mexico

- Multi-year program beginning 2012
- Up to six exploration wells planned using the drillship *Discoverer*.
- Drill sites located ~ 78 miles northwest of Wainwright.
- Water depths ~ 140-150 feet.
- BOEM approved, with conditions, Shell’s Exploration Plan on Dec. 16, 2011.

Devils Paw Prospect – ConocoPhillips

- Multi-year program beginning 2014
- Up to six exploration wells planned using a jack-up rig.
- Drill sites ~ 120 miles west of Wainwright.
- Water depths ~ 140 feet.
- Under BOEM review; Exploration Plan submitted March 1, 2012
- First Exploration Plan subject to BOEM’s new Air Quality authority in the Chukchi and Beaufort Seas.



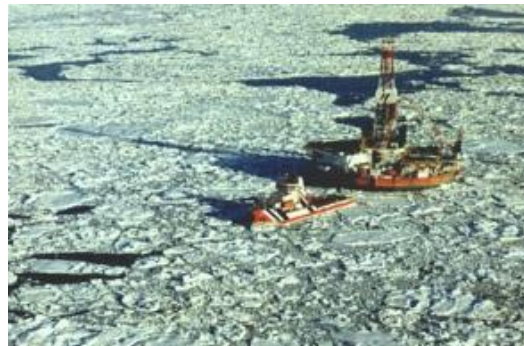
Northstar – Northstar is a joint Federal/State of Alaska unit located in the Beaufort Sea about 12 miles northwest of Prudhoe Bay. BP Exploration Alaska, Inc. (BPXA) is the lessee and operator of Northstar. The six producing Federal wells fall under BOEM/BSEE regulatory authority, the State wells fall under the State’s oversight. Since 2001, total production through June 2010 is near 145 million barrels; with the Federal portion about 26 million barrels. All the wells have been drilled and the rig has been demobilized.



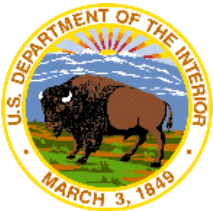
Liberty – The Liberty prospect is located in the central Beaufort Sea about 5-8 miles east of the existing Endicott Satellite Drilling Island (SDI). BPXA will use ultra Extended Reach Drilling (uERD) technologies to lengths of 5-8 miles, allowing the Liberty unit to be developed from an expansion of the existing Endicott Satellite Drilling Island. All drilling activity will be from surface locations on State lands using a land-based rig and surface blowout preventer. BPXA estimates that the reserves for the Liberty project are 105 million barrels of oil.



- Litigation
 - Most O&G Exploration or Development Plan approvals and Environmental Assessments are challenged in court.
- Oil Spill Cleanup
 - Ice/broken ice
- Short drilling and construction seasons
- Ice formation and movement over winter months
- Subsistence whaling
- Endangered Species and Critical Habitat



- **NOAA/BOEM WORKSHOP**
 - Feb 23-24, 2012
 - Outcomes:
 - Spill response science planning workshop
 - Enhanced coordination over ERMA
 - Enhanced collaborative study planning tool



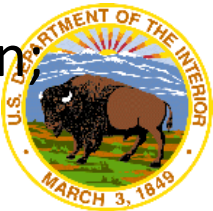
- **SOAR WORKSHOP March 14-16, 2012**
 - Goal: form research teams to undertake analysis leading to peer-reviewed papers, and identify project milestones and financial support required to complete synthetic projects
 - Progress: generation of 20 proposals around 3 themes
 - Hotspot Mechanisms and Trophic Dynamics
 - Year in the Life of Selected Seabirds and Marine Mammals
 - Responses to Step-Change in Physical Drivers of the Marine Ecosystem



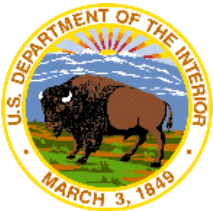
- U.S. Arctic Observing Coordination Workshop
 - March 20-22, 2012 (funded by NSF)
 - Effort to coordinate research on sea ice, permafrost, land-ice, and society/policy



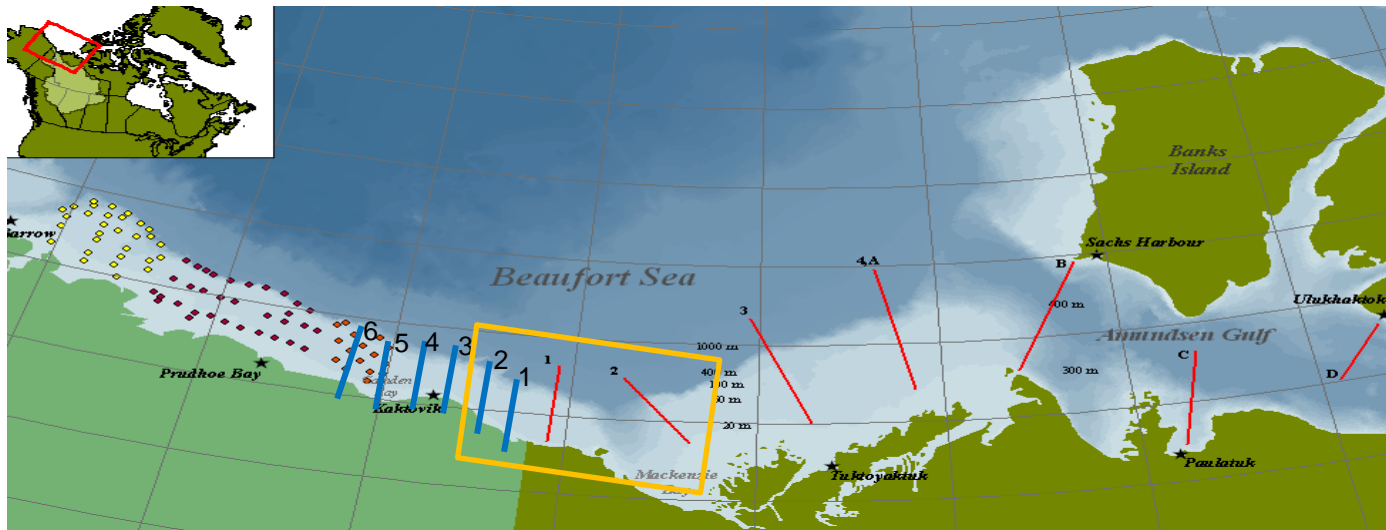
- **Loss of Sea Ice (LOSI) ICE SEAL Surveys**
 - 2012/13 Collaborative effort between BOEM, NOAA's National Marine Mammal Laboratory, and Russian colleagues at the Institution Giprorybflot in St. Petersburg, Russia
 - BOEM role: aircraft logistics support and data analysis support
 - Goal: Achieve synoptic aerial surveys in the AK Bering Sea and Sea of Okhotsk combining thermal energy sensors and high resolution imagery to provide abundance estimates and project seal movement patterns into the Chukchi Sea.
 - Progress: concluded successful April/May 2012 field season anticipate preliminary analysis and progress report by Dec



- **Notable New Starts**
 - **Chukchi/Beaufort Circulation Study**
 - \$5M Expansive HF radar, mooring, drifters, ship surveys, and glider study to capture flow regime at interface of Chukchi, Beaufort, and Arctic Basin (with UAF, NSF, WHOI, industry, IOOS)



- **Notable New Starts**
 - U.S./CANADA Transboundary Fish Survey
 - Systematic survey of lower trophic food chain
 - Overcome barriers to cross-border research
 - Collaborative Partnership with Canada Oceans



Arctic Ecosystem Integrated Survey

Where: Northern Bering Sea / Chukchi Sea

When: Aug 1 – Aug 22: Southern Chukchi Sea (leg 1)

Aug 23 - Sept 14: Northern Chukchi Sea (leg 2)

Sept 15 - Sept 29: Northern Bering Sea (leg 3)

(Vessels depart from and return to Dutch Harbor, crew changes in Nome between legs 1/2 and 2/3)

Why: Understand the distribution of marine fishes and shellfishes, and the plankton they depend upon for food, throughout the northern Bering Sea and Chukchi Sea

Knowledge and insights gained from these studies will help us to:

- evaluate effects of climate change on marine resources in the Alaskan Arctic by comparing results to earlier studies
- protect marine resources in the region from potential effects of oil & gas development by mapping the distribution and abundance of vulnerable life stages

A collaboration between:



With funding from:



Coastal Impact Assistance Program (CIAP)



A comprehensive ecosystem survey

How: Two survey vessels sampling a 30x30 mile grid:

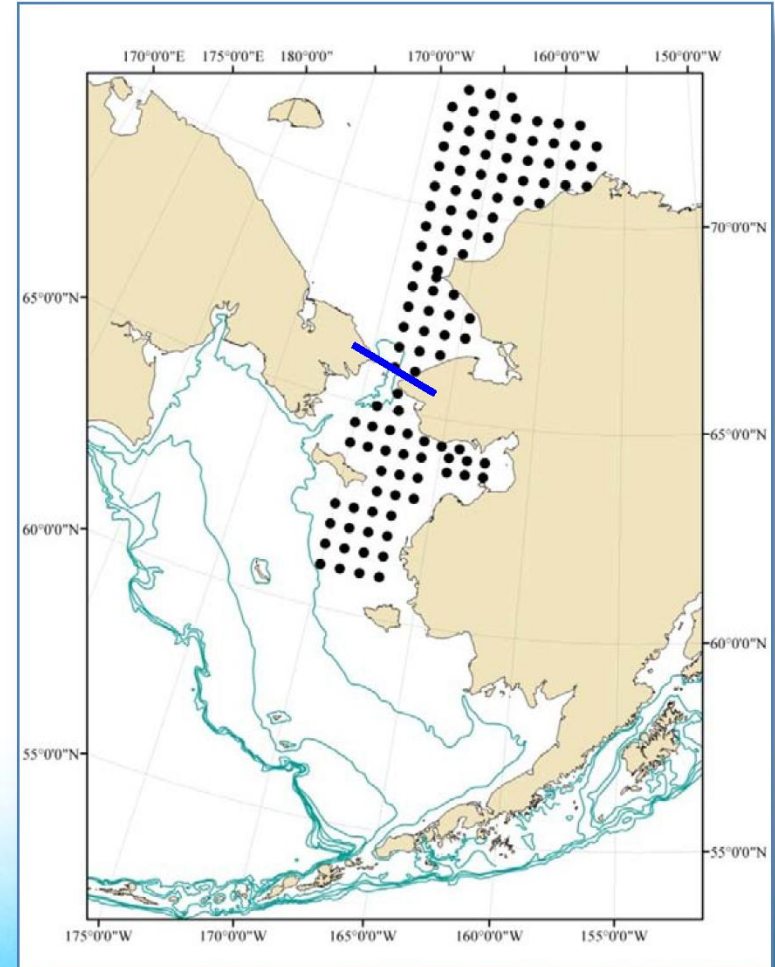
- The F/V *Bristol Explorer*, equipped with a surface trawl (top 65'), a mid-water trawl, and hydro-acoustic survey equipment will collect data on **ocean circulation and physics, water chemistry, plankton, and fishes**
- A second vessel (to be selected) will conduct bottom trawl surveys in the Chukchi Sea only to collect bottom fishes and invertebrates
- Both vessels will collect tissue samples and whole fish to study the biology of salmon, Arctic cod, saffron cod, snow crab, capelin, and other fish & invertebrates

For questions & more information:

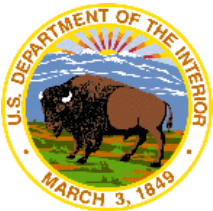
Franz Mueter, University of Alaska

fmueter@alaska.edu

(907) 796-5448



- **TRADITIONAL KNOWLEDGE ISSUE OF *OCEAN SCIENCE* JOURNAL**
 - TOC includes review of TK integration with ESP projects, NEPA process, Consultation process, DOI awards, Native perspective, TK in other regions, and “where do we go now?”



- **ONGOING ACTIVITIES**

- Coastal Marine Institute (Extension/Expansion)
- Cook Inlet Workshop (Info status/research planning)
- U.S.-Canada Northern Oil and Gas Research Forum



- Ongoing Activities
 - Coordination with
 - Arctic Landscape Conservation Cooperative
 - North Slope Science Initiative
 - Alaska Ocean Observation System
 - Oil/Gas Industry



Page No.	Discipline	Title	Ranking
39	AQ	Arctic Air Quality Impact Assessment Modeling	1
41	MM	Chukchi Acoustic, Oceanography and Zooplankton Study: Hanna Shoal (Extension of CHAOZ)	2
43	IM	Coastal Marine Institute (extension)	3
45	IM	Cook Inlet Workshop: Information Status & Research Planning	4
47	PO	Enhanced Verification and Interpretation of Arctic Ice Formation, Distribution, and Density	5
49	IM	*Support for the 2012 United States-Canada Northern Oil and Gas Research Forum	6
51	MM	*Walrus Seasonal Distribution and Habitat Use in the Eastern Chukchi Sea	7
53	FE	Physical and Chemical Analyses of Crude and Refined Oils: Laboratory and Mesoscale Oil Weathering	8
55	SS	Subsistence Mapping of Wainwright, Point Lay, and Point Hope	9
AQ = Air Quality IM = Information Management PO = Physical Oceanography		FE = Fates & Effects SS = Social Systems HE = Habitat & Ecology	MM = Marine Mammals and Protected Species REN = Renewable Energy

* Denotes project that remains contingent on collaboration with external groups.

