



# Final Plan of Cooperation 2011 Shallow Hazards Survey Chukchi Sea, Alaska

---

July 2011

Prepared by

**Statoil USA E&P Inc.**  
2130 CityWest Boulevard, Suite 800  
Houston, TX 77042  
[www.statoil.com](http://www.statoil.com)

and



2700 Gambell Street, Suite 200  
Anchorage, Alaska 99503



**Table of Contents**

	<b><u>Page</u></b>
ACRONYMS AND ABBREVIATIONS .....	ii
1.0 INTRODUCTION AND PURPOSE .....	1
2.0 PROJECT DESCRIPTION.....	7
2.1 Overview of the Survey .....	7
2.2 Vessels and Equipment .....	7
2.3 Shallow Hazards Survey Activities .....	8
3.0 COOPERATION ACTIVITIES .....	10
3.1 Community and Marine Mammal Co-Management Group Engagement.....	10
4.0 MEASURES TO REDUCE IMPACT.....	11
4.1 Vessel and Seismic Equipment.....	11
4.2 Marine Mammal Monitoring Program.....	11
4.3 Proposed Mitigation Measures .....	12
5.0 ON-GOING SCIENTIFIC RESEARCH .....	13
6.0 FUTURE PLAN OF COOPERATION CONSULTATIONS .....	15

**List of Tables**

Table 1	Vessel Information.....	8
---------	-------------------------	---

**List of Figures**

Figure 1	Project Area .....	3
Figure 2	Site Survey Area .....	5
Figure 3	Exclusion Zone and Safety Radii Illustration .....	12

**List of Appendices**

Appendix A	2011 Meeting Notes, Comments, and Responses
Appendix B	Invitation Flyers
Appendix C	2011 Meeting Sign-In Sheets
Appendix D	Meeting Materials – One typical Leadership Presentation, one typical Community Presentations, and meeting Posters
Appendix E	Distribution List

---

## ACRONYMS AND ABBREVIATIONS

AES	ASRC Energy Services Alaska, Inc.
AEWC	Alaska Eskimo Whaling Commission
BARC	Barrow Arctic Science Consortium
BOEMRE	Bureau of Ocean Energy Management, Regulation and Enforcement
CPAI	ConocoPhillips Alaska Inc.
dB	decibels
DP	dynamically positioned
ft	foot/feet
GPR	ground penetrating radar
HSE	Health Safety Environment
IHA	Incidental Harassment Authorization
in <sup>3</sup>	cubic inch
JIP	Joint Industry Partnership
km	kilometer(s)
km <sup>2</sup>	square kilometer(s)
LOA	Letter of Authorization
m	meter(s)
M/V	marine vessel
mi	mile(s)
mi <sup>2</sup>	square mile(s)
MMOs	marine mammal observer(s)
MMS	Minerals Management Service
NMFS	National Marine Fisheries Service
OCS	Outer Continental Shelf
POC	Plan of Cooperation
SSV	sound source verification
Statoil	Statoil USA E&P Inc.
USFWS	U.S. Fish and Wildlife Service

## 1.0 INTRODUCTION AND PURPOSE

Statoil USA E&P Inc. (Statoil) is an international energy company with operations in 34 countries including the U.S., with offices in Houston, Texas and Anchorage, Alaska. Statoil has more than 35 years of experience in oil and gas production on the Norwegian continental shelf; Statoil is committed to accommodating the world's energy needs in a responsible manner, applying technology and creating innovative business solutions. Statoil is headquartered in Norway with 20,000 employees worldwide, and is listed on the New York and Oslo stock exchanges. In February 2008, Statoil acquired 16 leases in Chukchi Sea Lease Sale 193 on the Outer Continental Shelf (OCS) and partnered with Eni for 14 of the acquired leases. Statoil later acquired a 25 percent interest in the Devil's Paw prospect operated by ConocoPhillips Alaska, Inc. (CPAI) located southwest of the Statoil leases. Statoil plans to conduct a shallow hazards survey in the Chukchi Sea during the open water season of 2011. The Project Area is shown in Figure 1, and the Site Survey Area is shown in Figure 2.

The purpose of this Final Plan of Cooperation (POC) is to document Statoil stakeholder engagement and to describe the potential measures Statoil will take, or has taken, to minimize adverse effects that its proposed shallow hazards survey may have on the availability of marine mammals for subsistence use. Statoil intends to maintain an open and transparent process with all stakeholders throughout the life cycle of activities in the Chukchi Sea, and to cooperate with the local communities to enable coexistence of subsistence activities and Statoil's planned shallow hazards survey. This document has therefore evolved as a part of Statoil's engagement process and includes information about subsistence activities and community concerns that Statoil has received.

The POC is an integral part of three major federal authorizations required for the planned project activity as noted below:

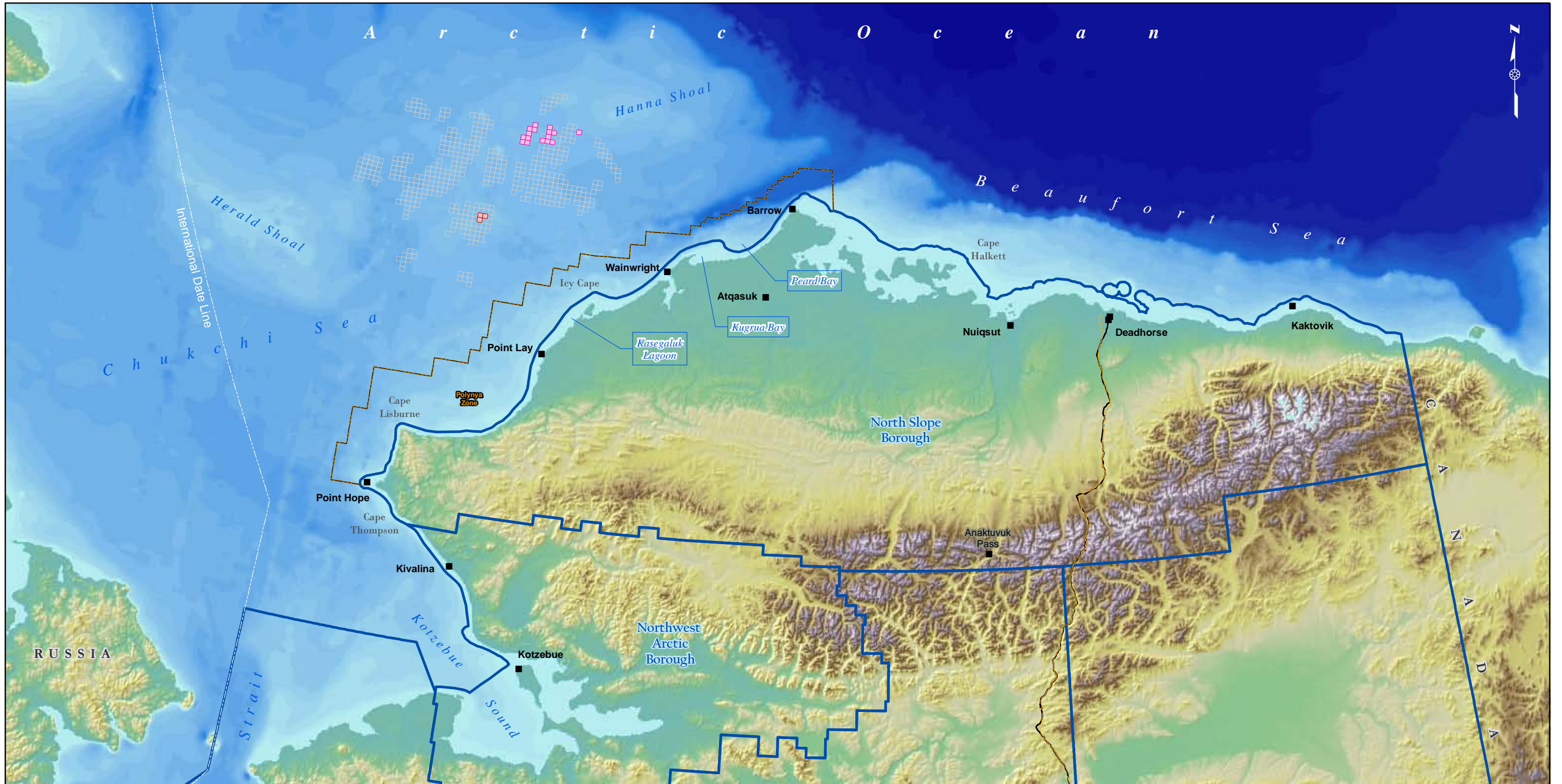
1. National Marine Fisheries Service (NMFS) Incidental Harassment Authorization (IHA),
2. U.S. Fish and Wildlife Service (USFWS) Letter of Authorization (LOA)
3. Minerals Management Service (MMS) (*now Bureau of Ocean Energy Management, Regulation and Enforcement [BOEMRE]*) OCS Chukchi Lease Sale 193 Stipulation Number 5–Conflict Avoidance Mechanisms to Protect Subsistence Whaling and Other Subsistence-Harvesting Activities.

This Final POC document contains the following information:

1. Proposed shallow hazards survey project description
2. Documentation of consultation with local communities and tribal governments
3. Mitigation measures to reduce the impact of Statoil's planned activity on subsistence
4. Ongoing Chukchi Sea scientific research; Statoil is conducting this research, and collaborating with industry partners to gather information on the marine environment.
5. Future plans for meetings and communication with the affected subsistence Chukchi Sea communities.

The Draft POC was distributed to potentially affected communities for their review and comment on 23 May 2011. This Final version summarizes comments received and agreements established between Statoil and the subsistence communities.

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



Distance to Nearest Statoil Lease in miles:	
Barrow	140
Wainwright	101
Point Lay	131
Point Hope	232
Nome	586
Dutch Harbor	1261

Distance to Nearest Statoil/ConocoPhillips Lease in miles:	
Barrow	189
Wainwright	117
Point Lay	90
Point Hope	177
Nome	530
Dutch Harbor	1205

**Lease Owner**

- Statoil
- Statoil/CPAI Lease Areas 2011 Geotechnical Soil Investigation
- All Other


  

**Legend**

- Borough
- Trans Alaska Pipeline
- Polynya Zone
- Road
- Village

**ASRC Energy Services**  
a subsidiary of Arctic Slope Regional Corporation  
**REGULATORY AND TECHNICAL SERVICES**



## Statoil

**PROJECT AREA**  
 Statoil 2011 Chukchi Sea Shallow Hazards Survey  
 Plan of Cooperation

SCALE:




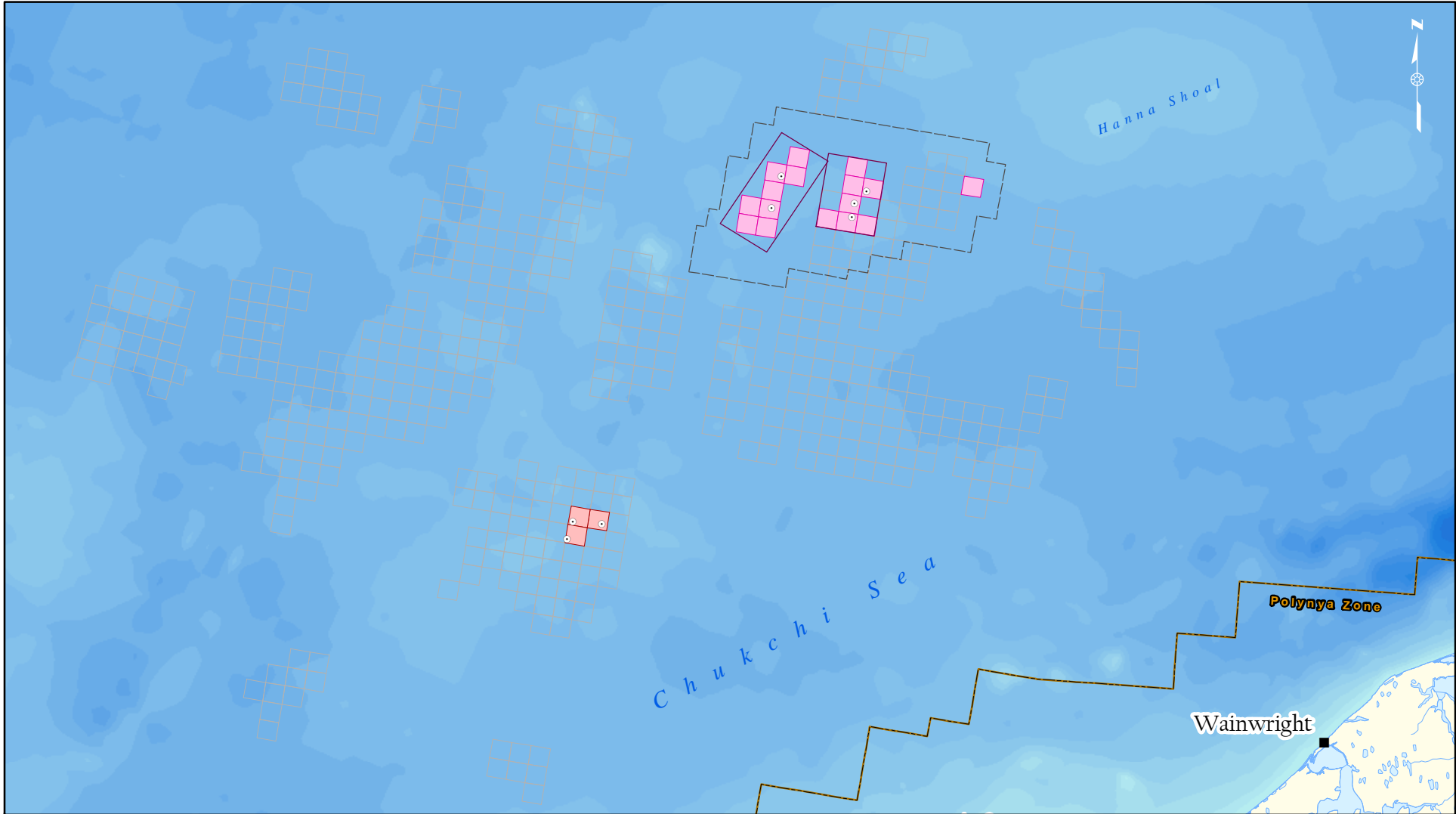
FIGURE:

1

NAD83, Alaska Albers Equal Area  
 \*Notes: The North Slope Borough and Northwest Arctic Borough boundaries extend to the 3 mile State of Alaska jurisdictional boundary.

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**





**Lease Owner**

- Statoil
- Statoil/CPAI Lease Areas 2011 Geotechnical Soil Investigation
- All Other

- Statoil Proposed Site Survey Area
- Statoil Proposed Soil Investigation Location
- 3D Seismic Survey Area 2010
- Polynya Zone
- Village



**SURVEY AREA**  
Statoil 2011 Chukchi Sea Shallow Hazards Survey  
Plan of Cooperation

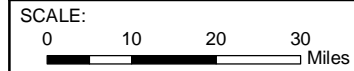


FIGURE:  
2

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**

## 2.0 PROJECT DESCRIPTION

### 2.1 Overview of the Survey

Statoil's proposed 2011 Chukchi shallow hazards surveys and soil investigations (geotechnical boreholes) are designed to collect bathymetric and shallow sub-seafloor data that allow the evaluation of potential faults, gas zones, and archaeological features at prospective exploration drilling locations. Performing the surveys prior to actual exploration drilling operations will identify any areas that may pose a hazard to those operations so they can be avoided. This project does not involve exploratory drilling. A seismic vessel and a dynamically positioned (DP) soil investigation vessel will mobilize out of Dutch Harbor, Alaska arriving at the project area on or about August 1, 2011 depending on ice and weather. The seismic contractor will be Gardline CGGVeritas and the soil investigation contractor will be Fugro.

Upon arriving at the project area, sound source verification (SSV) measurements will be collected to determine safety radii for marine mammal monitoring. Upon completion of the SSV, shallow hazards survey data acquisition is expected to continue for a maximum of 60 days and soil investigation is expected to continue for 14 days. Upon completion of data acquisition, all vessels will demobilize back to Dutch Harbor. All permits and authorizations will be requested from 1 August, 2011 to 15 November, 2011 to allow for any contingencies and weather delays.

To prepare for the regulatory and operational support needed for the 2011 Chukchi shallow hazards survey and soil investigations, Statoil has engaged the following consultants:

- ASRC Energy Services (AES) – Ancillary Activities Notice, Letter of Authorization, Plan of Cooperation, Environmental Evaluation Document, Inupiat Marine Mammal Observers (MMOs), and overall Stakeholder Engagement with local, state, and federal stakeholders
- LGL Alaska – Incidental Harassment Authorization, Marine Mammal Monitoring and Mitigation Plan, and scientific MMOs
- Gardline CGGVeritas – Shallow Hazards Survey seismic contractor
- Fugro – Geotechnical soil investigation contractor.

More detailed information regarding the marine operations of the project, the type and purpose of the equipment to be used, and the logistics involved for conducting project activities during the permitted period can be found in Section 2.3.

### 2.2 Vessels and Equipment



The shallow hazards site survey activities will be completed by one seismic vessel, the ice-strengthened marine vessel (M/V) *Duke* or similarly-equipped vessel with the following data collection instruments onboard:

- 4x10 cubic inch (in<sup>3</sup>) airgun cluster
- Single 10 in<sup>3</sup> airgun
- Kongsberg SBP3000 sub-bottom profiler
- GeoAcoustics 160D side-scan sonar
- Kongsberg EM2040 multi-beam echosounder

The soil investigation activities will be done by one DP soil investigation vessel, the *M/V Fugro Synergy*.

Vessel functions will be under the supervision of the Masters on *M/V Duke* and *M/V Fugro Synergy*. Changes will be made to adjust to the operational requirements. If necessary, similarly equipped vessels may be used for this project in place of the *M/V Duke* and *M/V Fugro Synergy*. Equipment specifications and details of these vessels are provided below in Table 1.

TABLE 1 VESSEL INFORMATION

Vessel Name	Vessel Photograph	Vessel Specifications
M/V <i>Duke</i> or similar		Length: 66.8 meters (m)  Beam: 13.0 m  Certified to Carry: 50 persons  Function: Seismic Vessel
M/V <i>Fugro Synergy</i>		Length: 103.7 m  Breadth moulded: 19.7 m  Certified to Carry: 70 persons  Function: Geotechnical Soil Investigation

m=meter(s)

## 2.3 Shallow Hazards Survey Activities

The shallow hazards and site clearance surveys will be conducted from the *M/V Duke*, while geotechnical soil investigations will be conducted from the *M/V Fugro Synergy*. The vessels will mobilize from Dutch Harbor in late July and arrive in the Chukchi Sea to begin work on or around 1 August 2011. Allowing for poor weather days, operations are expected to continue into late September or early October. However, if weather permits and all planned activities have not been completed, operations may continue as late as 15 November 2011.

## **Shallow Hazards Survey**

Shallow hazards and site clearance surveys collect bathymetric, seabed, and shallow sub-seafloor data to evaluate potential shallow faults, gas zones, and seafloor obstructions (including archaeological features) at prospective exploration drilling locations. Statoil's performance of site surveys prior to actual operations will identify potential hazard areas and how they can be avoided. The shallow hazards survey will use many of the same instruments to collect data on ice gouge, paleogeology, and other features of the seafloor. BOEMRE requires operators to provide data related to shallow hazards prior to the submittal of an Exploration Plan.

The Statoil shallow hazards and site clearance survey will use a towed airgun array consisting of four 10 in<sup>3</sup> airguns with a ~600 m (1,968 feet [ft]) towed hydrophone streamer, as well as additional lower-powered and higher frequency survey equipment for collecting bathymetric and sub-bottom data. The proposed survey will be centered on Statoil's leases in the Chukchi Sea, with some overlap onto neighboring leases or unleased acreage in order to provide uniform coverage of the area. The survey will cover a total area of ~665 square kilometers (km<sup>2</sup>) (257 square miles [mi<sup>2</sup>]) and will be located ~240 kilometers (km) (150 miles [mi]) west of Barrow and ~165 km (103 mi) northwest of Wainwright, in water depths of ~30–50 m (100–165 ft).

The Statoil 2011 shallow hazards and site clearance survey has been designed in accordance with the guidance provided in the Notice to Lessees Number 05-A01. As designed, the proposed survey lines provide a total of 1,564 km (972 mi) of coverage. This may be adjusted to include additional lines up to a maximum total of 2,500 km (1,553 mi) of survey lines within the identified survey area.

## **Soil Investigation Activities**

Soil investigation activities will also be conducted over the Statoil lease holdings and at up to three drillsite locations on CPAI operated leases. Geotechnical soil investigation is performed to collect detailed data on seafloor sediments and geological structure to a maximum depth of 100 m (328 ft). These data are then evaluated to help determine the suitability of the site as a drilling location. As part of the site survey program, 3-4 boreholes will be collected at each of up to 5 prospective drilling locations on Statoil's leases and 6-9 total boreholes will be collected from 3 potential drilling locations on leases that Statoil jointly owns with CPAI. A total maximum of 29 boreholes will be completed on the Statoil and joint CPAI/Statoil leases. Geotechnical soil investigations on Statoil-operated leases and on leases jointly held with CPAI will require ~14 days of soil investigation operations.

## **Sound Source Verification**

Upon arrival in the Project Area, the crew aboard the survey vessel will deploy the sound source array and hydrophone streamers and start operations. The sound source verification measurement will be conducted on the first seismic line to establish a safety zone. The soil investigation vessel and boring activities will be measured as part of the sound source characterization program as well. Upon completion, shallow hazards survey data acquisition is expected to continue for 60 days and soil investigation is expected to continue for 14 days. This includes the time required for data acquisition as well as anticipated downtime related to mitigation measures. Data acquisition is expected to occur 24 hours per day. Upon completion of data acquisition, the project vessels will demobilize to Dutch Harbor.

## 3.0 COOPERATION ACTIVITIES

### 3.1 Community and Marine Mammal Co-Management Group Engagement

#### 2010 Chukchi Open Water Marine Seismic Survey

In October 2009, Statoil began its community cooperation process and initial gathering of Traditional Knowledge in connection with its 2010 open water marine seismic survey. Meetings were held with Chukchi Sea community leaders at the tribal, city, regional government, and Native corporation levels. Statoil continued to engage with leaders, elders, community members, and subsistence groups, as well as local, state, and federal regulatory agencies to gather and incorporate relevant Traditional Knowledge into their 2010 project performance.

#### Proposed 2011 Shallow Hazards Site Survey Program

Following Statoil's 2010 seismic program and into 2011, additional meetings were held to engage with leaders, elders, community members, and subsistence groups to both share program results and introduce the 2011 shallow hazards site survey program. These meetings served a dual purpose; 1) Statoil was able to obtain feedback regarding their 2010 activities and 2) Statoil gathered and incorporated relevant Traditional Knowledge into planning for 2011 activities. In addition, Statoil has continued to engage local, state, and federal regulatory agencies for the same purpose. In preparation for 2011 activities, Statoil had the opportunity to engage with North Slope subsistence communities on several occasions. These meetings are listed below.

- November 9–10, 2010 presentation to the Beluga Whale Committee and attendance at the Ice Seal Committee meeting
- November 3–5, 2010 joint village meetings with CPAI in Kotzebue, Point Hope, Point Lay, Wainwright, and Barrow
- December 8–9, 2010 attendance at the 4<sup>th</sup> Quarter Alaska Eskimo Whaling Commission (AEWC) Commissioner's Meeting in Anchorage
- December 16, 2010 presentation to the North Slope Borough Planning Commission
- December 17, 2010 presentation to the North Slope Borough Wildlife Department
- February 18, 2011 attendance at the AEWC Mini-Convention Conflict Avoidance Agreement Meeting in Barrow
- March 7–8 2011 presentation at the Arctic Open Water Meeting
- March 22–26, 2011 Plan of Cooperation meetings held jointly with CPAI in Point Hope, Point Lay, Wainwright, and Barrow
- March 29–31, 2011 attendance at the North Slope Science Initiative Workshop in Barrow
- April 28, 2011 presentation to the North Slope Borough Planning Commission

Statoil will continue to engage with co-management groups, leaders, elders, community members, and subsistence groups, as well as local, state, and federal regulatory agencies to gather and incorporate relevant Traditional Knowledge into their 2011 proposed activities. Consultation, both formally and informally, will continue before, during, and after the 2011 shallow hazards survey activities. Feedback from the marine mammal co-management group representatives and subsistence users is valued by Statoil and will be useful for the planned shallow hazards survey and potential future activities.

## 4.0 MEASURES TO REDUCE IMPACT

Statoil's aim is to operate in a cooperative manner to enable the coexistence of subsistence activities and Statoil's planned shallow hazards survey. Mitigation measures to be implemented during the proposed survey will be based on NMFS requirements, USFWS requirements, and on feedback received from the leadership, community, and POC meetings. Operational mitigation measures will be conducted so as to reduce the likelihood of harassment by either avoiding areas where marine mammals occur or shutting down noise-generating operations while marine mammals are present. In conjunction with Statoil's IHA application, a Marine Mammal Monitoring and Mitigation Plan was developed. This plan outlines all mitigation measures that have been designed to protect the marine mammal resources in the area, and is discussed further in section 4.2.

### 4.1 Vessel and Seismic Equipment

Statoil will use the best available technology and seismic equipment to minimize impacts to the environment. The vessels and equipment have been selected in order to minimize the environmental footprint. For example:

- The site survey and coring vessels are modern and equipped with the latest technology, waste management systems, and high Health, Safety, and Environment (HSE) standards.
- The use of airguns has been limited to a 4x10 in<sup>3</sup> array. This is considerably less than the 3,000 in<sup>3</sup> array deployed in 2010.
- The vessels and equipment have been selected to map any and all potential drilling hazards.

### 4.2 Marine Mammal Monitoring Program

Statoil will employ trained and experienced Scientific MMOs and Inupiat MMOs with Traditional Knowledge onboard the vessels to ensure that appropriate precautions are taken to avoid harassment of marine mammals, including whales, seals, walrus, or polar bears when the vessels are operating. The MMOs will be onboard the vessels during transit from Dutch Harbor, throughout the duration of the project, and during the return transit to Dutch Harbor.

The MMOs will monitor exclusion zones (safety radii) for marine mammals surrounding the seismic airgun array. Based on the results from the SSV measurements, the pre-season safety radii will be updated where applicable.

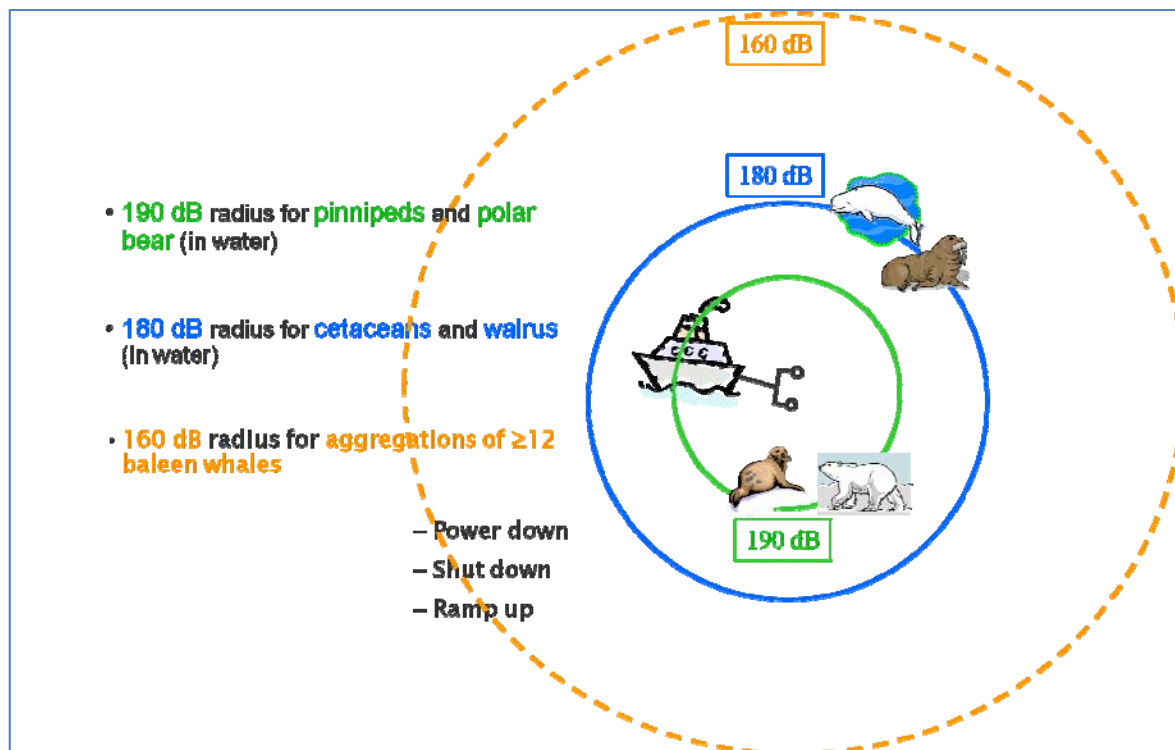
During seismic operations when there is 24 hours of daylight, five MMOs will be based aboard the site survey vessel, and at least three MMOs will be based aboard the soil investigation vessel. As the number of hours of daylight decrease in the fall, the number of MMOs on the site survey vessel may be reduced. MMOs will be located on the bridge or weather decks of the seismic and soil investigation vessels to watch for marine mammals during the vessel transit to and from the survey area and during data acquisition.

MMOs play a key role in the monitoring of the safety zones and in the implementation of mitigation measures. On the site survey vessel, their primary role is to monitor for the presence of marine mammals during all daylight airgun operations and during any nighttime ramp-up of the airguns. On the soil investigation vessel, their primary role is to monitor for the presence of marine mammals during all daylight soil investigation activities and prior to beginning nighttime activities. These observations will provide the data needed to implement the key mitigation measures. When marine mammals are observed

within or about to enter designated safety zones, airgun operations and soil investigation activities, , will power down (or shut down if necessary).

The safety zones are defined as the distance from the source to a received level of  $\geq 190$  decibels (dB) for pinnipeds and polar bears, and  $\geq 180$  dB for cetaceans and walrus. The safety zone for aggregations of marine mammals (e.g., 12 or more baleen whales or walruses in water or 4 or more whale cow/calf pairs) has been defined in accordance with permit stipulations, as the distance from the source to a received level of  $\geq 160$  dB and will also be implemented. The exclusion zones (safety radii) are illustrated below in Figure 3.

**Figure 3 Exclusion Zone and Safety Radii Illustration**



### 4.3 Proposed Mitigation Measures

Statoil will implement the following mitigation measures for the 2011 shallow hazards site survey and soil investigation.

- Use vessel and seismic equipment outfitted with the best known environmentally friendly geophysical technology to map any shallow hazards and minimize impacts to the environment.
- Establish Scientific and Inupiat MMOs on board the vessels to ensure that appropriate precautions are taken to avoid harassment of marine mammals, including whales, seals, walruses, and polar bears.
- Implement airgun array power down, shut down, and ramp-up procedures during the proposed project. Conduct acoustic measurements of the airgun array (sound source verification) at the start of the program and use to adjust the safety zones implemented by the MMOs.



- Implement the polar bear interaction plan that addresses food and waste management, personnel training, and safety and communication regarding polar bears
- Do not implement aerial surveys in 2011. Statoil has determined that it would be impractical and unsafe due to the location of the survey area, which is approximately 240 km (150 mi) offshore from Barrow.
- Participate in cost sharing for Communications Center in the Chukchi Sea coastal community of Wainwright. Vessels will communicate according to established protocol.
- Monitor ice conditions and ice movement in the project area prior to and during the shallow hazards survey.

## 5.0 ON-GOING SCIENTIFIC RESEARCH

Statoil has agreed to participate with other operators in baseline science studies in the Chukchi Sea. This will include deployment of bottom mounted acoustic recorders to determine the general acoustic footprint, and gathering of baseline science data, both in and near Statoil's lease areas. Olgoonik/Fairweather LLC will operate the research vessel and perform the following scientific baseline studies:

- Seabed, water column, and plankton sampling and studies at historical exploratory drilling locations in the Chukchi Sea;
- Studies on distribution, abundance, and ecology of Arctic marine fishes in the northeastern Chukchi Sea; and
- Offshore acoustic monitoring program using seabed acoustic recorders to record and analyze marine mammal activity in the Chukchi Sea.

Statoil is also co-funding other research work including:

- The Joint Industry Partnership (JIP) on Sound and Marine Life ([www.soundandmarinelife.org](http://www.soundandmarinelife.org)) funding about 70 research projects, some with special relevance for Arctic waters. Below are examples:
  1. Audiogram of ice pinnipeds (spotted, ringed, and bearded seals);
  2. Reaction of humpback whales to seismic surveys; humpbacks are used as a model for big baleen whales and thus the study has relevance for the Arctic baleen whales;
  3. Development of improved passive acoustic monitoring method (PAMGUARD); and
  4. Sound source characterization of single air guns and air gun arrays in order to describe the sound field also for higher frequencies.
- The JIP laboratory research out of Barrow, the Barrow Arctic Science Consortium (BARC) Facility, by the University of Fairbanks where valuable ecosystem components of the Beaufort and Chukchi Sea (arctic copepod and arctic cod) are used to investigate the effects (toxicity and biodegradation) of chemically and physically dispersed oil. All marine water used during testing is samples from either the Chukchi or Beaufort Seas.
- The Joint Industry Research Partnership performed by SINTEF (Norway) studying "Effects of dispersed oil in sub-arctic coastal areas", which use a novel methodology for constant dispersed

oil droplet exposure and exposure characterisation, sub-Arctic temperatures and both pelagic and benthic model species found in the Norwegian and Barents Seas. Data produced is designed for oil spill trajectory and risk model implementation.

- The JIP on Oil Spill in Ice where Norwegian authorities allowed an intentional oil spill in broken ice for research purposes. Existing and new technologies were tested in the field, and all technologies showed some merit in responding to an oil spill in an arctic environment. Link to available reports from the JIP is available on web (<http://www.sintef.no/Projectweb/JIP-Oil-In-Ice/Publications/>).
- The Joint Industry Research on developing and testing an improved Ground Penetrating Radar (GPR) system for detection of oil under ice (higher-powered and more directional systems). The system should be capable of expanding the practical operational window for airborne oil detection under ice using GPR, covering wider ranges of sea ice and climate conditions, extending to thicker and warmer ice sheets in late winter.
- The JIP (recently contracted and initiated) where the aim is to further develop and expand our capabilities for oil spill response in ice, by focusing on further technology development within key areas (e.g. Environmental impacts of spilled oil and response options, dispersant use in ice, in-situ burning, mechanical response, and slick modeling and detection). The JIP program timeline will be approximately 4 years in length with approximately 10 oil companies involved, and will probably be the largest Joint Industry Program on oil spill response being conducted.
- The Statoil ARCTOS Arctic Research Program (<http://saarp.arctosresearch.net/>) which is a comprehensive long-term arctic research program with the aim to increase arctic ecosystem knowledge by adding and combining knowledge on the Eastern & Western Barents Sea ecosystems. The Program will establish a baseline data series by building a benthic baseline monitoring time-series in the Barents Sea and contrasting Arctic and temperate species sensitivities to oil pollution.
- A series of experimental studies and documentation (peer reviewed papers) where the aim is to compare toxicity of Arctic versus Temperate species (e.g oil components, produced water).

---

## 6.0 FUTURE PLAN OF COOPERATION CONSULTATIONS

Statoil has more than 35 years of experience with complex project operations in challenging environments around the world, including in arctic environments. This experience along with an open and transparent approach to projects will be used as a basis to support our goal to form bonds with local Alaskan communities and subsistence user groups.

This POC document has evolved as a result of numerous engagements with community leaders, elders, the AEWG, and marine mammal co-management groups. Information gathered from these engagements has provided important information to Statoil so that it can continue to operate in a sensitive manner with regards to subsistence activities and community concerns. Statoil is grateful to the stakeholder communities for the warm welcome provided to project staff and the company looks forward to a continued positive and constructive working relationship in the future.

Statoil plans to continue to engage with the affected subsistence communities regarding its Chukchi Sea activities. In regards to the 2011 shallow hazards survey program, Statoil will present data on marine mammal sightings, and the results of our marine mammal monitoring and mitigation as part of its 90 Day Report to the regulatory authorities. Statoil will also present results, and sponsor discussions on the survey activity, to local communities after the survey. In addition, Statoil will present those results at the 2012 Arctic Open Water Meeting in Anchorage.

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**

## **Appendix A**

### **2011 Meeting Notes, Comments, and Responses**

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**

**Plan of Cooperation Meeting  
Statoil/Community of Pt. Hope  
Qalgi Center  
March 22, 2010  
5:00 – 8:45 pm  
Point Hope, Alaska**

The Plan of Cooperation meeting between Statoil and the Community of Point Hope was held March 22, 2011, from 5:00 – 8:45 pm at the Qalgi Center, Point Hope, Alaska. Also presenting at the Plan of Cooperation meeting was ConocoPhillips.

Notice of POC Community meetings was sent by ConocoPhillips to the following organizations to distribute throughout the community:

Point Hope City Office  
Tikigaq Corporation  
Point Hope Village Council

**Attendees:**

Tilly Tuzroyluk  
Ned A. Weber Sr.  
Doreen A. Koonuk  
Othniel A. Oomittuk Jr.  
Elizabeth Stone  
Jack N. Lane  
Kathy Tingook  
Mary Jane Attungana  
Florence Oktollik  
Edna Nashookpuk  
Emma George  
Crystal Hooper  
Ray Hooper  
Emily A. Tingook  
Isaac Killigvak  
Kobe Hooper  
Jaden Hooper  
Brayten Hooper  
Chester Wood  
Aggie Attungana  
Bryan S. Muktoyuk Jr.  
Briana Muktoyuk  
Henrietta B. Attungana  
James Nash

Leonard Wood  
Perry  
Henry Koonook, Tikigaq  
Lloyd Vincent, Tikigaq  
Michael Dirks Sr., Tikigaq  
Peg Frankson, Tikigaq  
Shawn Stone, Tikigaq  
Peter Frankson, Tikigaq  
Timothy Jakie Jr., Tikigaq  
Spike Milligrock, Tikigaq  
Dorcas Willie, Tikigaq  
Dora Lisbourne  
Josephe Rock  
Kris  
Isaiah Eves  
Elijah Lane Sr.  
Sally Killigvak  
Erick Nashookpuk  
Kimberly  
Morris Nashookpuk  
Jimmie Frankson Jr.  
Hazel Oktollik  
Mitchell Cannon  
Delia Stone

Amber Downey  
Kathleen Attungana  
Wesley Tuzrolyuk  
Elijah Attungana  
Doris Attungana  
Irma Hunnicutt  
Barbara Hunnicutt  
Shaynda Hunnicutt  
Edna Attungana  
Christina Tippin  
John Oktollik  
Rae Stone  
*Not Legible*  
*Not Legible*  
John Long Jr.  
Marie Casados  
Aggi Hank  
Joe Omnik  
Ella Omnik

Titus Nashookpuk Jr.  
Ned A. Weber Jr.  
Joe Frankson  
Daisy Wood  
Molly Omnik  
Iliona A. Snyder  
Isaac Snyder Jr.  
Joseph Towksjnea  
Bessie Kowunna  
Roy P. File  
Gail Gallanorn  
Robin Hanley  
*Not Legible*  
Jessica Oomittuk  
Raymond Frankson  
Ricky Nashookpuk  
Calvin Oktollik

**Introductions by Statoil of their representatives:**

Lars Sunde, VP for Statoil Alaska  
Karin Berentsen, Regulatory Compliance Manager  
Laura Erickson, Senior Coordinator  
Darren Ireland, Marine Biologist with LGL  
Dorothy Franken, Communications  
Michelle Malerich, Regulatory Affairs with ASRC Energy Services

**Introduction by ConocoPhillips of their representatives:**

Geoff Haddad, Exploration Manager  
Lisa Pekich, Community Relations Director  
Rusty Brown, Community Relations  
Caryn Rea, Biologist  
Bruce St. Pierre, Permitting

**Statoil Presentation of last year's 3D Seismic Acquisition program and this year's proposed Shallow Hazards Survey program in the Chukchi Sea was given by Karin Berentsen, Regulatory Compliance Manager.**

**ConocoPhillips Presentation of their plans, activities, and the science program was given by Jeff Haddad and Caryn Rea.**



*Do you have any seafloor data, data from ocean food for walrus?*

Last year's survey was sending sound much deeper into the ground. Caryn will talk about this later in the presentation, but the science project will take samples from two boats.

*What is your location?*

The specific location is in the pink area on the map, those are our leases.

*What is the distance between the leases?*

Around 80 to 100 miles.

*There are all these walruses out there along your area. If they are in your area do you have to shutdown?*

Yes, last season we had to power down and shut down several times during a three day period while the walruses were moving through the area.

*What kind of research are you conducting on the marine mammals?*

We will come back to that later in the presentation when the joint baseline science survey will be presented.

*Could it be that seismic testing is keeping the animals away? Having 180 and 190 dB zones is a lot of noise.*

Marine Mammals tend to stay away stay away from the boats when the seismic survey is going on. The numbers you are referring to is not what the animals are exposed to because they stay away from the vessels.

*Are the numbers of animals accurate?*

The sound may drive them away or drive them in.

*The walrus have never come to Point Lay like that before, on the beach, hunters will hunt them if they are here.*

There is not enough data to show repeated patterns. We are interested in such baseline data.

*There is not much data for how the sound affects the marine mammals. We want to see current data.*

We document as much information as we can in the Environmental Evaluation Document and we reference a lot of papers in that document.

*But you are using previous year's data.*

There are aerial survey data going back to the 1980's which covers the area.

*Is it specific to this area though?*

It did cover these areas.

*All the animals start – algae feed on plankton, little guys feed on the ecosystem, the big drifters – whales, seals, birds feed on plankton, snails, crab, worms. With an oil spill that will all be gone.*

You are leading into the science program. I have two slides to get through and then Conoco is going to speak to our science program. It is important to understand the ecosystem we are looking at all the different levels of the ecosystem. We won't tell you there is zero risk.

*The sediment gets affected during drilling, nothing can live in that 10% that is unsettled solids.*

It depends how the currents are and how they are discharged.

*There is 10% that is unsettled solids that are floating around the ocean forever right?*

Not forever, but I see what you are saying, we are in the process of figuring that out.

*The more you get to discharge the more you get away with.*

I wouldn't say we got away with it; we comply with all the regulations.

*It is going to be there forever, you are not going to find anything unless you follow the current.*

We sampled sediment from 20 years ago and there is no effect.

*What about the unsettled bulk solids? Forever, that is what happened; there was a big hole between Alaska and Russia...*

We are taking notes, let's discuss this later.

*What about Fluoride, it is ok in a safe dose but too much is bad for you. It's the same thing.*

These cuttings are safe, we do not use harmful things in the muds.

*Statement - You're going to harm whether you mean to or not.*

*We are 150 miles away, where does the current go?*

The current is traveling southwest to north east. Shallower currents depend on prevailing wind, and deep ocean currents go into the arctic. If a spill were to occur its flow direction depends on if the spill is on the surface or seabed. A spill plan is extremely important because of the remote location.

*How are you going to drill in ice?*

We are not going to drill in ice.

*That is shallow though right?*

The whole Chukchi is shallow compared to the Gulf of Mexico.

*Just exploratory?*

Yes

*Last time you were here there was a weird substance in the water.*

It was algae off the coast of Wainwright.

*We had never had that before until after you guys had done their seismic.*

We weren't doing any seismic.

*Were you aware of it?*

Yes, we were we identified it from satellite imagery. We had nothing to do with causing it.

*We are seeing a lot of changes, I think they are due to climate change.*

Do you think that is climate change happening?

*I think a lot of climate change has to do with the fact that vehicles have emissions that go into the atmosphere. Our environment is too precious to waste we have survived here for thousands of years and it has been clean. We don't want to see it ruined by an oil spill. But look what happened last year.*

What we have done due to the tragedy is studied and learned from that so we can be prepared. It has become extremely difficult for us due to what happened. BP in general was not prepared to stop that well from going. The response time was unacceptable.

*In 89' the Exxon Valdez happened, 20 years later the spill was still not cleaned. How is it going to be 20 years from now in the Gulf of Mexico? Will they be having problems, I know you are learning but it is taking too long to learn.*

It makes an impact on us to listen to you. We need to hear your concerns to make plans better for everyone. We will take your concerns and considerations and move forward.

*We are the oldest inhabited area in the western hemisphere, would you jeopardize that?*

I think Alaska and the US depend heavily on oil and I understand changing that is very difficult but I can say most people understand that the cost of fuel will not go down. A lot of things must change and we must do a lot more development and research before we can no longer rely on oil and gas.

*As aboriginal people we have the right to say no because we are losing who we are.*

Yes you have that right; you can talk to us here or to your legislature or put out a lawsuit. Lawsuits in the past have been very effective at stopping activity.

*Do typical dispersants have carcinogenics in them?*

I can't answer that, we are studying that and hope to understand it better. We will come back with more information and provide more information as it becomes available. If there are other issues, please feel free to address them.

*Is that (re: acoustic recorders) the same area that the boat will be in?*

The general area yes, and that is the reason we put so many recorders out, so we could see our area and outside the drilling area.

*Do/will you see a dramatic change in marine mammal movement, what are your guidelines on that?*

Because we are planning to drill in 2013 we are still working on Marine Mammal plans. I don't anticipate any negative impacts.

*I would think that sound will probably be a lower frequency which might affect animals in the water, just because they float on top of the water.*

We will have collected data on the sound emitted from drilling operations we will get that data before we drill out here. We will begin with modeled safety zones and perform a Sound Source Verification before operating to fresh safety radii in the project area.

*You said that the noise becomes too much and if there is an interference that is such a short window and if facing all these shutdowns due to marine mammals would it even be worth drilling at all? I mean you will get to drill half and then have to stop. If you don't finish what are you going to do to protect the well you started?*

You have to have a plan and we do, to leave the location and secure the well. That is something you would have to prove you can do and that is one reason we are collecting all this data.

*If you have a shutdown, do you have data about how wells stand up to our arctic condition?*

Well its 20 year old data but Shell drilled five wells in multiple seasons and had to secure their wells half way through; they have held up for 20 years.

*After the seismic surveys a lot of the walrus are migrating on the Siberian side and not coming this way. Have you been monitoring them?*

We don't do that the United States Fish and Wildlife Service does. We may need to look at ice data, it may show correlations between ice and walrus movements.

*I can remember when the Russian people were here and they said they had over 90,000 walrus and we are not even seeing half that.*

The USFWS is tagging walrus and what we see is that tagged animals go to Russia.

*A lot of animals caught here at that time were real skinny or sick and we could not consume them. Our food was affected by the seismic.*

When looking at how sound moves we you have to look at a lot of factors.

*190 dB will probably kill them.*

There has not been seismic every year but the previous year could have affected the next year's crop and that is why we need multiyear data.

*That baseline should have been collected 10 years ago.*

There was not lease sale 10 years ago. The data collected by scientist was done with the technology at the time. This is a question that we need to look at.

*Last time you were in Point Hope I asked about studies on smaller organism's to see if the sound affects them. I am wondering if you have any answers this time?*

We have thought about this issue quite a bit and the short answer is that continuing to go to the same area before and after seismic is done to get a snap shot on whether or not we have an effect is the best way we can answer this question. The way we are doing it now is the better way to go about it because we are looking at the entire ecosystem.

*[Elder spoke in Inupiat, another community member responded to the elder in Inupiat.]*

*You need to have an interpreter at these meetings, and the meetings should be recorded.*

*We are very sorry, we did have one, but they did not show up.*

*Maybe you should find an alternate interpreter also so that if the first one does not show up we have a second, or someone on staff.*

*We appreciate your suggestion, would you or anyone in the community like to interpret for the remainder of the meeting this evening?*

*[No answer]*

*[Dialog between an elder and community members in Inupiat]*

*We apologized again and said that as Norwegians working for a Norwegian company we certainly understand how it is to speak on our second language.*

*I see that you started at 5 pm and how valuable was this meeting? Are you saying you have learned and you have comments? We have to have a clear understanding. These comments are from the bottom of our heart. If there is an oil spill you will be responsible for it. The ocean, way of life will be gone. The term "cultural genocide" keeps coming up.... That is why it is important to come to these meetings. I want to stress environmental impact. Our culture and life style will be gone. Take that into consideration that you will make our community become extinct. We have been here for thousands of years.*

*I have been thinking about offshore drilling and we understand the risks involved and what drives you as a company? The oil? Who is behind the driving? Is it Conoco Phillips shareholders, what drives them? Ultimately the shareholders and the company and because we are already producing oil preserves around the world. This is what we do, our job is to continue to do so.*

*With all the success on land particularly with the North Slope Borough for them to move offshore that is a complete turnaround. Natural gas is the next big thing, why doesn't Conoco turn to Natural Gas? It is safer.*

*Conoco in 1966 made the 1<sup>st</sup> discovery on Norwegian Continental Shelf, offshore; this is still in production several hundred thousand barrels a day, so they are very respected by Norwegians. (This statement was made to highlight Conoco's commitment to safety and their ability to work safely offshore.)*

*Could the removal of oil cause a collapse in the earth's crust?*

*The answer is no.*

*Let community members know who went on the technology tours, and provide more information about the Norway tour in May.*

### **Comment Cards that were received at the Meeting:**

- *My concern about offshore drilling is that we live on subsistence hunting, we carry our tradition strongly, and we teach our youth to carry our traditional values. When one of the speakers from Conoco Phillips said "We want to get to know you a little better", then he said something about coming here only a few times a year, to me that is not getting to us from our point of view. So basically I do not approve of offshore drilling.*
- *I would like to start by thanking Statoil for holding this meeting here at Point Hope, AK to help inform the community of future plans and past results. I was a marine mammal observer for the 2010 program aboard the Tanux I and was very pleased with Statoil's operations during that season. I*

*believe Statoil has what it takes to survey and develop seismic onto oil operations in the future and look forward to the opportunity for future employment with your company. Thank you.*

- *Thank you for taking your time to inform the natives here in Point Hope. In the future meetings it may be better to do the slide shows first, then take questions and concerns. Doing this would make it easier to have the people understand the presentation. I personally worked with AES-RTS and really go to understand the research. I really think it would be helpful to have one of the natives that worked with you go to the meetings. This can give them a different look at the company.*

These meeting notes are organized by topic and include the question asked by the meeting participant and the response from the Statoil team. The notes are not intended to represent a direct transcription, as there were notes taken at the meeting and no digital recording taken at the meeting.

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



## Statoil Plan of Cooperation Meeting

Point Hope, Alaska

March 22, 2011

Comment Card

Please fill out areas below:

Name: Crystal Hooper

Address: P.O. Box 352  
Point Hope, AK 99766

Email: hoop-rc@hotmail.com

Phone: (907) 444-4418

Thank you for taking your time  
to inform the natives here in  
Point Hope. In the future meetings  
it may be better to do the  
slide shows first, then take  
questions and concerns. Doing

this would make it easier  
to have the people understand  
the presentation. I personally  
worked with AES RTS and  
really got to understand  
the research. I really think  
it would be helpful to  
have one of the natives  
that worked with you, go  
to the meetings. This can give  
them a different look at the  
company.



## Statoil Plan of Cooperation Meeting

Point Hope, Alaska

March 22, 2011

Comment Card

Please fill out the areas below:

Name: Ray Hooper (Harold)

Address: P.O. Box 352  
Point Hope, Alaska 99766

Email: hooprc@hotmail.com

Phone: 907-444-5611

I would like to start by  
thanking Statoil for holding  
this meeting here at Point  
Hope, AK to help inform the  
community of future plans  
and past results. I was

a marine mammal observer  
for the 2010 program aboard  
the Tanuxl and was very  
pleased with Statoil's operations  
during that season I believe  
Statoil has what it takes to  
survey and develop seismic, onto  
oil operations in the future and  
look forward to the opportunity  
for future employment with your  
company. Thank you





## Statoil Plan of Cooperation Meeting

Point Hope, Alaska

March 22, 2011

Comment Card

Please fill out the areas below:

Name: Claudia Koonalok

Address: 917 Ippig St.

Pobox 239 Point Hope, AK

Email: claudia.koonalok09@hotmail.com/ want to get to know

Phone: 907-368-2924

My concerns about off-shore drilling is that we live on subsistence hunting, we carry our tradition strongly, and we teach our youth to carry ~~at~~ our

traditional values. When one of the speakers from Conoco Phillips said, "We want to get to know you a little better." Then he said something about coming here <sup>only</sup> a few times a year. To me, that is not getting to know us from our point of view. So, basically I do not approve off-shore drilling.

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**

**Plan of Cooperation Meeting  
Statoil/Community of Point Lay  
Community Center  
March 23, 2010  
12:00 – 2:30 pm  
Point Lay, Alaska**

The Plan of Cooperation meeting between Statoil and the Community of Point Lay was held March 23, 2011, from 12:00 – 2:30 pm at the Community Center, Point Lay, Alaska. Also presenting at the Plan of Cooperation meeting was ConocoPhillips.

Notice of POC Community meetings was sent by ConocoPhillips to the following organizations to distribute throughout the community:

Point Lay City Office  
Cully Corporation  
Point Hope Village Council

**Attendees:**

Robert Sampson	Chad S. Bernick, Baptist Church
Sarah Bernick	Artist Neakok
Kendra Everett	Nicholas Hank
Lucy Neakok, ASRC	JoAnne Neakok, Kali School
Matthew Lisbourne, ASRC	James Tazruk
Lily K. Anniskett, Cully Corp Board Member	Julius M. Rexford Sr., NVPL
Charlie Tazruk	William Burt
Carl Itta	Alicia Burt
Oliver Henry	Daniel Pikok
Ron Murphy, NSB Clinic	Gregg Wilbanks
Bill Tracey, NSB/PW	Perry A. Pikok
Susie Neakok, NSB	Warren Lampe
Esther Tuckfield, NSB	Eva Anniskett
Cheryl Henry	Shana Neakok
Nathan Henry	Marie Tracey, Mayor's Office
Willard Neakok, NSB Planning	

**Introductions by Statoil of their representatives:**

Lars Sunde, VP for Statoil Alaska  
Karin Berentsen, Regulatory Compliance Manager  
Laura Erickson, Senior Coordinator  
Darren Ireland, Marine Biologist with LGL  
Dorothy Franken, Communications  
Michelle Malerich, Regulatory Affairs with ASRC Energy Services

**Introduction by ConocoPhillips of their representatives:**

Geoff Haddad, Exploration Manager  
Bruce St. Pierre, Permitting Manager  
Caryn Rea, Biologist  
Lisa Pekich, Community Relations Director  
Rusty Brown, Community Relations

**Statoil Presentation of last year's 3D Seismic Acquisition program and this year's proposed Shallow Hazards Survey program in the Chukchi Sea by Karin Berentsen, Regulatory Compliance Manager.**

The following meeting notes are organized by topic and include the question asked by the meeting participant and the response from the Statoil team. The notes are not intended to represent a direct transcription.

You said you have gas lines (in Norway), are they underwater?

*Yes, they are on the seabed. Commercial fishing is very important in Norway, so the pipeline are required to be covered up. The pipelines are buried on the shoreline also.*

What is the dark area on the figure in the slide?

*The black dot is text that's hard to read, it says Ledyard Bay. Just a label, does not signify any activity.*

Is the Tanux leaving a city in the photo?

*Yes, we tried to get another photo; the vessels do a lot of international business around the world, these are international vessels.*

Were you doing seismic surveys at the time that the walrus were spotted?

*Yes, that's why we observed them. If the walrus are close we have to power-down or shut down for a period of time. We have routines to clear the area and the safety zones before the seismic is allowed to start up again. Only a mitigation gun remains running, generating a small sound to alert the animals we are there.*

Can you define clearing of the area? Is that pushing all of the animals away?

*We are not allowed to push any animals away. We observe if they are not there, and then we are allowed to continue. When they leave the area on their own, and the MMOs ensure the area is clear, seismic may begin again.*

Did you see other ships? Sunken ships?

*We did not see any sunken ships, because we were not looking at the seafloor this year, but any archaeology finds are required to be reported. We did see other vessels because there was a science survey going on. They all coordinated activity, when we went into Wainwright we coordinated with them also.*

When is your seismic survey starting?

*This year we will not have a seismic survey, we will have a site clearance survey.*

When in July are you transiting into the Chukchi Sea?

*We are going to mobilize from Dutch Harbor by the end of July, in the beginning of August we are going to transit into the survey area.*

What is this area?

*That is Ledyard Bay, a critical habitat area for Spectacled Eiders. We need to have special permissions in order for the science survey to enter that area, and no vessel is allowed while Spectacles Eiders are there. We are only allowed to be in this area because we are doing a science survey, seismic vessels would not be allowed in.*

If someone did a science survey around the area that you would like to drill oil would you put that on your ????

*There has been a lot of science work done previously. There are existing drill sites in the Chukchi already, and they're doing benthic and seafloor studies around those drill sites.*

Does it matter what we say, or are you still going to go drill for oil? Or if you have someone say can you wait until some of that oil gets cleaned up before you get started?

*We are here to listen, we want you to know that we are listening. We improve by listening to you. It is a long time span, at the earliest we would be drilling in 2013, maybe 2014. I've been working 25 years in Norway in the oil business, what people have a challenge to understand is that everyone has the impression that there is oil down there, but there is a very high uncertainty to this . We have to drill to know that there is actually oil down there. We might walk away after we drill the first well, if it is not a success. Perhaps it's only water in the rocks down there.*

I have seen the shoals out there, do you have any research on the animals that are passing through there or use that area?

*Yes, we do. There is some science and the results are very fascinating. I would very much like to hand it over to Caren for the science program results.*

**ConocoPhillips Presentation of their plans, activities, and the science program by Geoff Haddad and Caryn Rea.**

The following meeting notes are organized by topic and include the question asked by the meeting participant and the response from the Statoil team. The notes are not intended to represent a direct transcription.

If you are able to drill what is the minimum and maximum depth at the one or two wells (ConocoPhillips)?

*These are what we consider to be not very deep wells. We are looking at a depth of about 10,000 ft below the seabed. In the Gulf of Mexico they drill 30,000 ft below the seabed and further. The geology from what we know from the five wells drilled earlier is similar to the geology in our locations. We should be able to drill these wells in 30 days, assuming good weather. In the Gulf of Mexico, I've been involved with wells that take over a year to drill.*

You mentioned a donation, is that through the NSB Wildlife Department (ConocoPhillips)?

*The way that worked was the Beluga Whale Committee sent a proposal to the National Fish and Wildlife Foundation. The National Fish and Wildlife Foundation sent the proposals to companies for review to see if they would like to provide funding. So what we did is we provided funding through Fish and Wildlife Foundation to the Beluga Whale Committee for this work. It was probably a partnership between the Beluga Whale Committee and the NSB Wildlife Department because their name was on the permit also. Sounds like there were some folks from Point Lay that participated in that work.*

Those are the buoys right? That float? We found one of those a couple of years ago.

*Those were ours, they are meant to float and sit on the seafloor, but in 2008 they came up a year to early and started travelling to Russia. On the float there is a number on them to call for anyone who was to find them.*

How many did you recover?

*We recovered 6 out of 33.*

On the last slide, in the purple area, will you need to get special permits to enter?

*USFWS has been very good to work with. We send them a letter explaining our program and routes and let them know we will have a sea bird biologist onboard. They are not as concerned with what we're doing because we still remain a distance away from molting Spectacles Eiders when they are unable to fly.*

When you do get the permit to enter Ledyard Bay, you have to go in and out perpendicularly?

*Yes, when we have to submit our route to USFWS to ensure least disturbance. We've been able to do that for the last three years. Olgoonik-Fairweather will do that again this year. This year we will include the Hanna Shoal in the science study, rather than have the exact same program as last year, we will have a wider area of data.*

What is the importance of you data for walrus?

*The importance of these data, and all the data, is for us to understand when the animals are in a particular area at a particular time. When you move forward developing a plan to drill a well you want to know when you might expect to see the animals and if you expect to see a lot of animals so you can think about mitigation measure to minimize the interaction with those walrus.*

How are you going to research the subsistence of Salmon? This whole area is a migrating area. We have seals migrating at the end of August/September, we have all these walrus, belugas, we're not seeing caribou, we haven't had caribou in a couple of years, maybe they're migrating backwards.

*Our activities will be offshore in 2013 for a month to two month window. ConocoPhillips's expectation is that they will not have an impact on Point Lay's hunt. When Statoil was out last year their mitigation included shutting down when walrus is in the area, we anticipate practicing that also. We will submit an IHA and predict sound energy and safety radii to monitor for marine mammals.*

We want you to understand that we love our land so much, we don't want to see it polluted like Nuiqsut. We don't want to become an industrial community because we are the closest ones.

*Yes, understood.*

Can you play the walrus again?

*Yes.*

When did the walrus show up and how long did they stay here last year?

*They were here about a month. For hunting purposes, they start moving from the Bering Strait and moving off the ice in late April or May. The walrus pass Point Lay in May or June when the ice is breaking up.*

Can you detect that each call is a separate walrus? Can you detect that it's 500 walrus calling one time or one walrus calling 500 times?

*No we can't.*

Who do we write to for donation for our whaling captains and beluga hunting?

*Lisa will have more information about that, you can get her card.*

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



**Plan of Cooperation Meeting**  
**Statoil/Community of Wainwright**  
**Community Center**  
**March 24, 2010**  
**12:00 – 2:15 pm**  
**Point Lay, Alaska**

The Plan of Cooperation meeting between Statoil and the Community of Wainwright was held March 24, 2011, from 12:00 – 2:15 pm at the Community Center, Wainwright, Alaska. Also presenting at the Plan of Cooperation meeting was ConocoPhillips.

Notice of POC Community meetings was sent by ConocoPhillips to the following organizations to distribute throughout the community:

Wainwright City Office  
Olgoonik Corporation  
Wainwright Village Council

**Attendees:**

Dennis Aveoganna Sr.	Ben Ahmaogak
Rossman Peetook	Roy W. Ekak
Lee Segevan	Nancy Akpik
Ida Panik	Jeanette Segevan
Moses Nayakik	Fredricka Ann Ahmaogak
Raymond Negovanna	Pattilyn Driggs
Frank Bester Jr.	Eunice Ahvakana
Terry Tagarook	Susie Aguvluk
Cora I. Akpik	Bonnie Spencer
Jack Panik, WWC	Carolyn Akpik
Ralph Aveoganna	Sandra Peetook
Dorcas Nashoalook	Majorie Angashuk, NSB Fire Department
Bob Shears, OOS	Marie Icahotel, NSB Mayor's Office
Artie Kittick	Michael Tagarook
Jason Ahmaogak	Raymond Aguvluk, NVW
Lolo Ahmaogak	Judy Anashugak
Herbert Tagarook	Cora Driggs
Ellen Phillips	
Elizabeth Phillips	

**Introductions by Statoil of their representatives:**

Lars Sunde, VP for Statoil Alaska  
Karin Berentsen, Regulatory Compliance Manager  
Laura Erickson, Senior Coordinator

Darren Ireland, Marine Biologist with LGL  
Dorothy Franken, Communications  
Michelle Malerich, Regulatory Affairs with ASRC Energy Services

**Introduction by ConocoPhillips of their representatives:**

Geoff Haddad, Exploration Manager  
Lisa Pekich, Community Relations Director  
Rusty Brown, Community Relations  
Lisanne Aerts, Marine Biologist

**Statoil Presentation of last year's 3D Seismic Acquisition program and this year's proposed Shallow Hazards Survey program in the Chukchi Sea by Karin Berentsen, Regulatory Compliance Manager.**

The following meeting notes are organized by topic and include the question asked by the meeting participant and the response from the Statoil team. The notes are not intended to represent a direct transcription.

Is there any ice over there during the winter time when you're doing exploration?

*There is no sea ice in Norway because of the Gulf Stream, the warm water from the Gulf of Mexico makes a passage through the Atlantic and the North Sea, warms up the coast and ends up in the circle over Iceland (pointing to a map).*

How about sea ice?

*That means that there is no sea ice anywhere in the Norwegian Sea, but there is really harsh weather. We are used to seeing 100 ft waves in the North Sea.*

**After meeting note;** *On the mainland Norwegian coast we do not have the arctic ice, however, Norway has shorefast first year ice every winter. The fjords will also freeze up in cold weather. This is similar with what one sees on the Chukchi coast with similar challenges with pressure ridges (skrugard) and leads opening and closing depending on weather. Like you we see the weather changes over the last years affecting the amount and the length of the sea ice season.*

Have you had any spills over there?

*There have been spills, but none like what we've seen with Exxon-Valdez or Macando. There have been limited spills over the 40 years of exploration, but not anything like what we've seen in the past year.*

What are you doing, exploratory drilling?

*Yes, there have been a few wells drilled in the Barents Sea (around Snøhvit) and a development made close to the northernmost city in Norway, Hammerfest. There have been probably 20-25 wells drilled in this area, 10 in the last few years. We can find out the total number of wells that have been drilled.*

**After meeting note:** *In total more than 80 exploration wells have been drilled in the southern Norwegian Barents Sea, "Barentshavet Sør". Statoil has been the operator for more than 60 of these. The*

*Snøhvit field development where Statoil is the operator, is the only production center that has so far been established in the Barents Sea. ENI's field Goliat is under development. Both fields use or will use Hammerfest village as their base.*

How long have you been working together?

*We joined in Alaska two years ago, but have been partners for a long time in other places.*

Did you say that there is no ice there?

*There is no sea ice in this region at all.*

**After meeting note:** *On the mainland Norwegian coast we do not have the arctic ice, however, Norway has shorefast first year ice every winter. The fjords will also freeze up in cold weather. This is similar with what one sees on the Chukchi coast with similar challenges with pressure ridges (skrugard) and leads opening and closing depending on weather. Like you, we see the weather changes over the last years affecting the amount and the length of the sea ice season.*

What about icebergs?

*There are no icebergs either; we have to move up to about 79 degrees north before we get any sea ice. There are mining activities happening there (at the Island Svalbard) right now, but no exploration activities.*

What about the endangered species and marine mammals, are you working together to study them?

*We've got a number of different studies, that will be presented later in the presentation, explaining what we're doing to help understand better the marine mammals in the Chukchi Sea, specifically those that are threatened or endangered.*

When you have big meetings in Anchorage or anywhere do you take your MMOs along?

*Yes, we had two MMOs at the Open Water Meeting in Anchorage. Nova Mongoyak from Barrow and Kathleen Rock from Point Hope. We trained 13 MMOs for this survey. We wish to use them even more than we have used them so far. They have a good experience that benefit us and make us learn even more so we bring them along, unfortunately we do not have one this afternoon. So the feedback is that you would like to be able to speak with an MMO?*

Yes, so they are there if we have a question about what you actually do. We're just taking your word that you turn down the noise when there's activity in the area.

**After meeting note:** *we are obliged to issue a so called "90 day report" with all the sightings the MMO have done. Each sighting has a separate number and report.*

When you sighted the bowhead whales during seismic what did they do? Did they move further out or inland?

*We did not site them during the survey, they were observed on the way to and from the crew changes in Wainwright. The TukPuk on its way back out towards the survey area is the vessel that saw the bowheads in very late September, the 27<sup>th</sup> or 28<sup>th</sup>. The bowheads were 20-30 miles offshore of Wainwright. We did not actually see any bowheads near or around the survey area. Other surveys have seen bowheads go around seismic activity, most that have seen bowheads have been in the Beaufort,*

*because the surveys are very close to shore the bowheads head further offshore, but have split and gone on both sides of the survey before as well. There is not enough data at this point to conclusively answer that.*

In your survey area did you discover a high volume of oil or gas?

*The impression is that everyone knows that there is oil and gas there. Actually, what we are doing right now is mapping the area. We need to actually put a well in that area to get that confirmation. In the subsurface we've seen a formation that looks good, so that's why we want to go further with the investigation and prepare for a future drilling. It's after we have drilled we will know if we have a small or a big prospect, or maybe nothing at all. Those are the challenges with exploration, there is a big uncertainty.*

Are the vessels you're showing the ones that were shown in Dutch Harbor?

*No, these are specially sealed for the job that we're doing. That's why we had to introduce new boats to you, it's because they are equipped for this year's program.*

On Facebook the commentator saw that they invited a few people who were not knowledgeable, like the engineers who had questions.

*Maybe we should do something like that because Dutch Harbor is a long way away, maybe this is a way to get more people to participate in seeing the vessels. It would be great to be able to show you these vessels. We cannot promise anything right now, we need to run this through our internal processes.*

### **ConocoPhillips Presentation of their plans, activities, and the science program by Jeff Haddad and Lisanne Aerts.**

The following meeting notes are organized by topic and include the question asked by the meeting participant and the response from the Statoil team. The notes are not intended to represent a direct transcription.

Are you going to put in a heliport (ConocoPhillips)?

*Yes, it's a pad to land the helicopters, so it's a kind of a heliport. It's more to support short-term operation, it's not something big scale. If we find something we want to work on more, we may need to do something different, but the road that will be built to it will be available for public use in the future. Olgoonik will be able to use the equipment needed to construct the road and helipad in the future as they want.*

What kind of fish is that on the top right of the slide?

*It is some kind of a larval fish.*

Is that how big it will be?

*It will grow bigger. What we have noticed is that the fish we catch offshore is not very big, it's relatively small compared to fish in other areas. The bigger fish are closer to the coast areas.*

Are there less animals further out?

*We don't know, we are trying to figure it out. The good part of the study that we're doing is because we collected the fish, but we don't know if there was enough food for the fish, maybe that's a problem, or the currents or the temperature. We don't know exactly why they're not as big as we expect them to be.*

What do belugas eat?

*They eat fish.*

So there are a lot of beluga whales out there or not so much?

*The main reason we don't see belugas a lot over here is because they are out in the Beaufort and they hang out around Barrow and then they migrate back.*

Has anyone shot a bearded seal with a radar?

*This is a radio tag, one of the projects out of Kotzebue is they are tagging seals in order to track them. They also do the same with the Alaska Beluga Whale Community.*

Do we return the tag if we find it?

*Most of the time they fall off when the seals change their coat, so we usually have to tag each year. Many of the hunters in Barrow and Kotzebue help to catch the seals to tag them, maybe even some people from Wainwright.*

Where are the bearded seals tagged?

*More to the south, and they do it in the winter when there is ice.*

I read in the paper that NW area did some tagging on bearded seals before.

*Yes, they did, they started in 2006 or so. It's a project that is pretty long-going already and gives a lot of information about where the seals are going and how they're moving. ConocoPhillips is also supporting an Eskimo Walrus Commission project together with the Sea Life Center to put cameras out at the haul outs where the walrus are to learn more about what is happening there.*

How far out is the picture on the slide taken?

*I do not know.*

Way out there or closer to shore?

*It's fairly close to Kotzebue, most of the tagging has been going on near Kotzebue. These seals go a long, long ways. We're learning a lot from these tags, they go far, far north in the Chukchi Sea. It's been very good information to get about how far these seals will travel back and forth.*

Are you going to have an Oil Response Plan in case of emergency (ConocoPhillips)?

*We don't have any right now planned because we're not doing any exploration.*

That's why I bring it up, when you don't have anything to do.... On hand, right?

*These are boats out there like anyone else's boats, there are not spill response plans for the barges that bring in your supplies in the summertime either.*

Weather is a big factor.

*We will be doing a lot of work on spill response. You will hear a lot more about that as we get closer to potential drilling operations but right now it's just science programs for marine vessels out there so right*

*now there is no extra spill response for that. Shell has staged quite a bit of spill response equipment right here in town, so you do have it in the village right now, so it is starting. Shell has put it there because Shell had hoped to drill last summer and now are hoping for next summer. That work has already started to build. For the science program we have not had any extra spill response and do not plan to have any for the vessels out there, but we will for sure in the future.*

How far can the acoustic monitors hear?

*It depends on the animal. If you have a bowhead whale and their call has a very low frequency you can hear it much further than a beluga that has a higher frequency. On average, definitely a few kilometers for sure.*

You should have the meetings in the evening because the whole town is working.

*That's very good feedback, thank you.*

*Hopefully we can do an evening meeting next time.*

Send more flyers out to advertise better, advertise on KBRW.

*That's a good idea.*

*Do you like having two companies come together and present at the same time?*

*Doesn't matter.*

Will that information on other animals recorded on the acoustic monitors be available?

*We are recording everything coming through the area. We would like to make similar maps in the future with other mammals. Hopefully this fall we will have similar results for the other animals.*

How about the air permit? Is it just for around the coast?

*No, this is for our project almost 100 miles from here. It is a very hard permit to acquire. The reason why it is so difficult is the EPA regulates air quality 100-200 miles offshore just like they do onshore, no different. It's a very strict requirement. It's as if we are going to drill a well right next to your town, doesn't make any difference to them if it's 100 miles away or right next to your town. Same regulations, same emissions standards for all the equipment, vessels, the rig, everything. We are working to meet those guidelines. People here were having a hard time with air, thinking maybe we are polluting a lot, but we're getting a permit as if we were drilling right next to your town that's how we have to permit this. It's a long ways away, I don't think you're going to have an issue with air quality from our project.*

Is there a recording out there as we speak?

*There are overwintering recorders out there right now, and we will be putting more out for the summer. The air station is also currently collecting data about air in your village right now also.*

Statoil and Conoco are joint ventures?

*The way it works is that of the 98 leases that Conoco has, on 50 of those we have sold 25% to Statoil. What we call that is a partnership. We are working together on those 50 leases. By working together*

*Statoil learns better how to work on their leases, and we learn how to work better on our other leases.  
It's a good way to learn from each other.*

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



**Plan of Cooperation Meeting  
Statoil/Community of Barrow  
BARC Large Conference Room  
March 26, 2010  
11:30 - 2:00 pm  
Barrow, Alaska**

The Plan of Cooperation meeting between Statoil and the Community of Barrow was held March 26, 2011, from 11:30 – 2:00 pm at the BARC Large Conference Room, Barrow, Alaska. Also presenting at the Plan of Cooperation meeting was ConocoPhillips.

Notice of POC Community meetings was sent by ConocoPhillips to the following organizations to distribute throughout the community:

Barrow Arctic Research Consortium

**Attendees:**

Beverly Fay Hugo	Jimmy Ningeok Jr.
Elizabeth J. Ahgeak	Anne Jensen, UICS
Perry Matumeak	Lorena Coates
Clyde T. Numnik	Ethel Nungasak
Ilona Kemp	Rei Frankson
Patrick S. Griffin	
Susie Stine	

**Introductions by Statoil of their representatives:**

Lars Sunde, VP for Statoil Alaska  
Karin Berentsen, Regulatory Compliance Manager  
Laura Erickson, Senior Coordinator  
Darren Ireland, Marine Biologist with LGL  
Dorothy Franken, Communications  
Michelle Malerich, Regulatory Affairs with ASRC Energy Services

They are there to present the work they did last year and the work they plan to do this year. They are there to answer questions and receive feedback. Hopefully this will be constructive and a good meeting for all.

**Introduction by ConocoPhillips of their representatives:**

Geoff Haddad, Exploration Manager  
Lisa Pekich, Community Relations Director  
Rusty Brown, Community Relations  
Lisanne Aerts, Marine Biologist with Oasis

**Statoil Presentation of last year's 3D Seismic Acquisition program and this year's proposed Shallow Hazards Survey program in the Chukchi Sea by Karin Berentsen, Regulatory Compliance Manager.**

The following meeting notes are organized by topic and include the question asked by the meeting participant and the response from the Statoil team. The notes are not intended to represent a direct transcription.

Can you put all of the distances in miles instead of kilometers or the metric system?

*Yes, absolutely.*

Do you have non-smoking rooms onboard the vessel for crew members?

*Yes, there are smoking rooms or designated smoking areas, so the rooms are non-smoking. On our Norwegian ships and in our offices there is no smoking at all, it is against the law to smoke in public space in Norway. Some of the larger boats may have an indoor smoking room; otherwise there is usually a designated area on the back deck. Most of the boats up here recently have been entirely non-smoking.*

On the northern part of Norway, where you say you've got that platform [inaudible]...

*On the northern part, in the Barents Sea area, it's not a platform, it's a subsea facility with a pipeline to shore, it's the production facility of Snøhvit.*

Like Conoco was going to be doing way over by Canada? Cause I remember seeing commercials like that where they have the pipeline going through the ocean.

*Yes, maybe similar to that. I think we have a picture of that. The production facility in the Barents Sea is a small subsea facility, it would depend on the size of the field and how deep the water is. We try to design the installation so it suits exactly that project and is the best thing for that area. In Norway, we call it a risk-based approach. If it's most convenient to do a platform, we'll do a platform above sea. In the beginning, in the 70's and 80's they were concrete platforms. Now we're building production vessels or subsea facilities. The subsea facilities are expanding in numbers, it is impressive technology. We will evaluate every case and do the best according to the environment, so there is not only one solution.*

[inaudible]... Marine Mammal [inaudible]...

*What we've seen offshore Norway is really about cooperating with the fishing industry. We don't have as many subsistence activities, though we do whale. We don't have that many whales in the southern part of Norway, though they do monitor it. The biggest issue is with the fishing industry and coming to an agreement in the use of the waters. Further north you need to understand the communities and their needs, more like here.*

How deep is that when you go up north?

*It's not very deep; it's maybe 300 or 350 m deep. In the south it is much deeper, near 3000 m. That's an impression development because they have a subsea facility and the pipeline from the field climbs up sub sea to reach shore and on land.*

So that's how the seismic survey shows how far down you need to go before you get oil?

*Yes, that's right. I can show you an illustration of the vessel we used last year. It tows a sound source that is generated to the seabed and even further down. It's giving a 3-D picture kind of like a CAT scan. The important thing for us is to not have to drill so many wells. Before the technology was not as advanced. Previously they would map this area with lesser quality data than they had in the 80s in the Chukchi. Now we have more accurate data and we have found two potential good spots. The greatest uncertainty is still is if there anything in that reservoir? We can say that it looks good and this might be a potential for us, but we still need to put a well there and confirm that there is actually producible petroleum in the reservoir. We say that this is promising, but even after we drill the well we can still say that this is not what we expected or hoped for. There is a less than 50% chance that there's a good thing there. Exploration is a completely different thing than production planning; we don't have enough information for production planning yet.*

**ConocoPhillips Presentation of their plans, activities, and the science program by Jeff Haddad and Lisanne Aerts.**

The following meeting notes are organized by topic and include the question asked by the meeting participant and the response from the Statoil team. The notes are not intended to represent a direct transcription.

When you say you are monitoring the air, what exactly are you looking for?

*The main concerns that the EPA has is around Nitrous oxide and sulfur dioxide, these are considered to be emissions from engines and things like that from projects that can be harmful if there concentrations are too high. That's the information that we didn't have because none of the meteorological stations across the North Slope were making those kinds of measurements before. They're also interested in particulate matter. Very fine particulate matter can get into your lungs and stay in your lungs, so they're worried about emissions of particulate matter. Those are the kinds of things we're trying to collect data on.*

Is that from what comes out of your drilling?

*No, it's coming almost entirely from the engines from the drillship and icebreakers and any other support vessels out there. These emissions come from your car, any other generators around town. What they need and didn't know is what the baseline is in the Arctic, that's why we've started to collect that data. It's not just the total amount, it's how much you emit at a certain period of time. That's getting to be tough for us, because they monitor how much you emit in one hour. If it's past a certain amount, they will shut down your project. These standards change all the time, people are having trouble with these emissions standards. It's not just us, and it's not unique to the offshore.*

Do the buoys get dragged by the ice?

*The ice out where we have the buoys, at least recently, has not gotten anywhere near the base. If they were closer to shore they definitely would be. Where we have them out there, they are far enough out that it's deep enough water so that they are not getting dragged away, yet.*

Are the buoys submerged or on top of the water?

*They are sitting on the bottom of the ocean.*

What is the depth of the buoys? What is the buoys depth below the sea ice?

*Normally the ice is not very thick, but the deep keels can get up to 60 ft below the sea surface.*

So you have 60 ft of water and 60 ft of ice?

*That's right, when those ridges come across it's a lot of ice.*

Do you have people out there to identify the fish out there?

*We have specialists for the benthic communities that are identifying all the types of animals that live on the seabed out there.*

Can we get information on that, I'd like to know if I need to get king crab traps?

*Yes, but we haven't seen any king crab.*

Is there any halibut out there?

*No, we haven't seen any halibut out there.*

One summer when I was walking on the beach I saw a fish that looked like a halibut, it had eyes on the top.

*There are reports of some type of a flat fish out there near Prudhoe Bay.*

We would like to know what's out there down deeper.

*Sure, yeah.*

By Point Lay, if you go beach combing, you see crab legs like crazy, you say there are no crabs.

*There are crabs, but not king crabs. It's mostly brittle stars, worms, small crabs, Arctic cod, the fish we've seen have been pretty small.*

Have you seen any wolf fish?

*Yes, they are there.*

We had one wash up on shore and he actually turned out to be one of the most northern recorded wolf fish.

How far away is the Hanna Shoal?

*From Barrow to the Hanna Shoal more than 75 miles offshore, more like 100 miles offshore.*

Since there obviously is change with walrus, are you figuring out some way to work historical data and archaeological formal data into this? For example, on Hanna Shoal, there were a lot of whaling ships who later switched to walrus hunting because they couldn't get enough whales, they'd killed too many of them, and they still wanted the oil. I would think there's an awful lot of data in those logs about walrus and whale distribution between 1851 and 1910 maybe.

*I've certainly seen papers that Caryn Rea has shown me there were some reports with the logs from the whalers in the 1800's and they did log the sightings of whales when they went through. So you get a feel of where they saw them and roughly how many they saw. That is good information; you bring up a really good point.*

The thing about Traditional Knowledge here is there is a high value placed on an accurate reporting of what's been seen, there are no "fish stories". People here tend to be much more accurate about it because their decisions and lives depend on it.

*Thank you for that, that's really excellent.*

*Please comment on meeting times.*

Saturday is the best day.

*Saturday lunch or dinner?*

Saturday lunch.

Otherwise evenings, but not Wednesdays because that's a church night. If you want good turn outs door prizes are always good and tons and tons of publicity.

Having the meeting in town would best, at the Heritage Center.

You need to do it on Saturday at 1:30. Each week there is a speaker out here and they provide transportation.

*Do you think we could book one of those spots?*

It's particularly the science stuff that they're looking at so, yes.

*What about night times? Is 7-9 too late?*

6-9 would be good, as long as it's not a ball game night, and you provide enough food. Even earlier, maybe 5:30, so people can come right from work.

Get stuff on the radio.

*We will definitely improve, we will do better.*

On Saturday, they put up between 60 and 100 posters for advertisements.

Channel 1 usually works.

If you want huge turnouts you need to advertise a lot and emphasize the door prizes.

*What else, are there other things we could do to make things better?*

Announce the meetings on the VHF, almost every household has a VHF radio.

*We are two companies travelling together because we would like to test that out, but also because we want to be seen as working together and present the business in a good way. How do you like us doing this together?*

It's good.

Did you say Statoil and Conoco have done this together in Norway first?

*Yes, we've been learning from each other and hopefully figuring out how to reduce the impact offshore.*

What is your structure on oil spill clean up?

*We are working our plan, our C-Plan, right now. The big picture of the plan is that we have to show and demonstrate immediately to any spill that occurs. Of course, the first thing you are trying to do is keep a*

*spill from happening. We have a plan that is one of the best plans for anyone in the Arctic that has more redundant blow out preventers and things to prevent a release from happening. What's unique in the Arctic is that it is so remote you need to have everything on location to be able to respond immediately. You have your spill response vessels, an offshore and nearshore group, you have a boom that you can deploy offshore and on/near shore, you have to demonstrate the skimmers can pick up a certain amount of oil in a certain amount of time. You have to be able to respond within an hour. What Shell has decided to do is design a marine containment system. They are working on that plan and it would cap the well very quickly. If we use a drillship we will also use this plan, if we use a jackup rig, which is more like a land rig, there is a blow out preventer at the rig and not at the seafloor – you don't have to go underwater to get to it.*

If it breaks underwater then it will be like the Gulf.

*Someday there could be an oil spill, we can't say never, we hope never, but there's always a chance.*

*Ice could come along and break the well on the seafloor, then you would have the oil come up 60 ft to the bottom of the ice and you can't get to it. The oil will cover the bottom of the ice. What happens when something goes wrong after you've drilled the well and it is being piped to shore.*

*We will need to come up with a plan to not let that happen.*

You need to think about these things now because those are the issues that will come up later.

*We certainly recognize that it's an issue and are thinking about it and planning. I can ensure you that the Gulf accident has heightened our senses, it has been very difficult for us to watch everything that has been going on. We understand you. There are no guarantees. Whatever is humanly possible to foresee we can make plans and contingency plans for.*

There's always a risk, you just need to figure out how you're going to make it work in the winter time.

*It's not unlike the situation in Norway; we cannot clean up water with 30-100 ft waves in the winter. We have not had any major oil spills in 40 years. We need to have enough barriers to prevent an oil spill.*

You have response teams available there?

*Yes, we have response teams available in Norway, the difference is the infrastructure available. There is more in Norway, even in the north. We have to bring everything up to the Arctic.*

## **Appendix B**

### **Invitation Flyers**

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



ConocoPhillips



# Community Meeting

**Please Join Us**

**\*\* 5:00 – 6:30 \*\***

**Tuesday, March 22, 2011**

**Qalgi, Community Center  
Point Hope, AK**

Learn about:

***Chukchi Science Studies Update  
and Statoil 2011 Site Survey  
Plan of Cooperation***

**Meal Provided**

Door Prizes

  
ConocoPhillips



# Community Meeting

Please Join Us  
\*\* NOON – 1:30 PM \*\*

Wednesday, March 23, 2011

Community Center  
Point Lay, AK

Learn about:

***Chukchi Science Studies Update  
and Statoil 2011 Site Survey  
Plan of Cooperation***

**Meal Provided**

Door Prizes

ConocoPhillips



# Community Meeting

Please Join Us  
**\*\* NOON – 1:30 PM \*\***

**Thursday, March 24, 2011**

**Community Center  
Wainwright, AK**

Learn about:

***Chukchi Science Studies Update  
and Statoil 2011 Site Survey  
Plan of Cooperation***

**Meal Provided**

Door Prizes

  
ConocoPhillips



# Community Meeting

**Please Join Us**

**\*\* 11:30 – 1:00 PM \*\***

**Friday, March 25, 2011**

**BARC - Barrow, AK**

Learn about:

***Chukchi Science Studies Update  
and Statoil 2011 Site Survey  
Plan of Cooperation***

**Meal Provided**

Door Prizes

**\*\*Shuttle Service available from the Inupiat Heritage Center\*\***

## **Appendix C**

### **2011 Meeting Sign-In Sheets**

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



Attendance Sign-In Sheet  
Point Hope, Alaska  
March 22, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
1) Tillie Longenecker				
2) Ned A. Weber Sr				
3) DOREEN A KOONUK	Self	368 <sup>work</sup> 2235 #		P.O. Box 85 Pt Hope AK 99766
4) OTANIEL A OOMITTUK JR	Self		roomtemp41@ yahoo.com	Po Box 222 Pt Hope AK 99766
5) Elizabeth Stone	Self	368 2080		Box 42 Pt Hope
6) Jack n Lez	11	+		Box 73
7) Kathy Tingoid	Self	368-2420	Ktingoid@hotmai l.com	Box 12
8) Mary Jane Atlingana	Self	368-3882		Box 133
9)				



Attendance Sign-In Sheet  
Point Hope, Alaska  
March 22, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
10) Florence OKTOUK				
11) Edna Washodale				Po. Box 282
12) Emma George				_____
13) Crystal Hooper		444-4418		Box 352 Point Hope AK 99766
14) Ray Hooper		907-444-5611		Box 352
15) Emily A. Tingook		444-6127		Box 12
16) ISAAC LUTHERINA		368-2258		Box 352
17) Kobe Hooper		368-0218 444-4418	hooper@hotmail.com	Box 352 Point Hope AK
18) Jaden Hooper		368-0004 444-4418	hooper@hotmail.com	Box 352 Point Hope AK





Attendance Sign-In Sheet  
Point Hope, Alaska  
March 22, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
19) Brayten Heper		368-0418 444-4418		P.O. Box 352 Pt Hope 99766
20) Chester Wood		368-2063		P.O. Box 85 Pt Hope AK 99766
21) Reggie Attungana	PHO	434-1942		
22) Bryan S. Muktojuk Jr.	" "	434-1942		
23) Briana Muktojuk	" "	434-1942		
24) Henrietta B. Attungana	PHO	368-1280		
25) James Nash	PHO	357-3072		P.O. Box 145 Point Hope, AK 99766
26) Leonard Wood	PHO	631 2560		194
27) Perry				



Attendance Sign-In Sheet  
Point Hope, Alaska  
March 22, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
28) Henry Koonook	Tikigag	None	Muk-Tuk.og- <del>ad</del>	PO Box 34 Pt Hope, AK
29) Lloyd Vincent	Tikigag	368-1685	—	Box 126 Pt Hope AK 99766
30) MICHAEL DIRKS SR.	TIKIGAG	368-0086	michael.dirks <sup>NEPTA</sup> <del>SR</del> <sub>SR</sub>	Box 54 Pt Hope AK 99766
31) Peg Frankson	Tikigag			Box 467 Pt Hope
32) Shawn Stone	Tikigag	368-1582		Box 332 Pt Hope AK
33) Peter Zupka	Tikigag	368-0061		Box 102 Pt Hope AK
34) Tina Akie	Tikigag			Box 215 Point Hope AK
35) Spice Milligroo	Tikigag	3009		Box 43 Pt Hope AK 99766
36) Dorcas Willie	Tikigag	3009		Box 63 Pt. Hope AK 99766



Attendance Sign-In Sheet  
Point Hope, Alaska  
March 22, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
37) Don Laboure				Bx 11 PAc
38) Joseph Reche				
39) Kris				
40) Dawn Eno		368-0083		
41) Elijah Lane Sr.		368-0079		
42) Sally Kelly		602-0039		
43) Eric Nashook KBK		907 368-15-74		Box 313
44) Kimberly				
45) Morris Nashook KBK				Box 131



Attendance Sign-In Sheet  
Point Hope, Alaska  
March 22, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
46) Jimmie Frankson Jr	self	907-365-1274		P.O. Box 136
47) Hazel Atolluk		368-7377		Box 367
48) Mick McConnon	self	368-3005		Box 189
49) Delia Stone		368-2428		Box 332
50) Amber Denny	self	368-2015		Box 84
51) Kathleen Atungane	self	368-2373		Box 26
52) Wesley Suroyluk	self			
53) Elyal Atungane				
54) Doris Atungane				Box 189



Attendance Sign-In Sheet  
 Point Hope, Alaska  
 March 22, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
55) Irma Hannicutt	PHO	368-7177		Pt Hope Ak
56) Barbara Hannicutt	PHO			..
57) Shaynda Hannicutt	PHO			..
58) Edna Attungana	PHO	368-2373	-	Box 26
59) Christina Tippin	"	2163		Bx 305
60) John oktollik	pho	368-3300		Box 66
61) Pace store	PHO			
62) Mumukshu	PHO			Box 116
63) Kurt	PHO			Box 24



Attendance Sign-In Sheet  
Point Hope, Alaska  
March 22, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
64) John Long Jr	self			
65)				
66) Marie Casado	self	368 2004		P.O. Box 64 Pt. Hope, Ak 99766
67) ADRI HANK	self			
68) Dorcas Sue	self	368-0222		99766 P.O. Box 42 PHO
69) Joe Oank	self	368-6549		Box 208 Pt. Hope
70) Ella Omuth	self	368 2143		Box 184 Pt. Hope AK
71) Titus Nakhoduk Jr	self	368-2143		PO Box 155 Pt Hope Ak 99766
72) Ned & Weber Jr	self	368-2125		PO BOX 147 Pt Hope AK 99766



Attendance Sign-In Sheet  
Point Lay, Alaska  
March 23, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
1) Robert Sampson	self	833-0026	N/A	Box 59111 Point Lay, AK 99759
2) Sarah Bernick	self	833-0111	saraharnow@ gmail.com	Box 59109 Point Lay, AK 99759
3) Kendra Everett	self	833-0020		box 59104 Point Lay, AK 99759
4) Lucy Neukok	ASRC	833-2065	LNeukok@asrc.com	Box 59041 Point Lay 99759
5) Matthew Gibson	ASRC	833-7663		P.O. Box 59064 Point Lay AK, 99759
6) Lily K. Annuskett	Cully Corp Board Council Member	833-2007		PO Box 59011 Point Lay, AK
7) Charles Ferguson				
8) Carl Iha		833 2214		
9) Oliver Henry	Self	833-0016		



Attendance Sign-In Sheet  
Point Lay, Alaska  
March 23, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
10) Ron MURPHY	NSB CLINIC			
11) Bill Tracey	NSB/PW	833 2214		Box 59087
12) Susie Neakok	NSB			
13) Esther Tuckfield	NSB			
14) Cheryl Denny				P.O. box 59095
15) NATHAN HENRY		833-2041		P.O. box 59095
16) Willard Neakok	NSB Planning self	833-7854		Box 34
17) Chad S. Bernick	Baptist Church	833-3333		Box 59109 Pt Lay, AK 99759
18) Aun Q Neakok		833 1311		Box 59066 Pt Lay AK 99759





Attendance Sign-In Sheet  
Point Lay, Alaska  
March 23, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
19) Nicholas Hank		833-3010		Pt Lay Gendel
20) JoAnne Neakok	Kali School	833-7854	alaalik2000@ yahoo.com	Box 59034 Pt Lay 99759
21) James Tazruk		833-1300		Box 59071 PT. LAY AK. 99759
22) Julius M. Lexford Sr.	NYPL	907-833-0045	Julius. Lexford @North-Slope.org	Po Box 59016 Point Lay, AK 99759
23) William Burt		907-833-0003	williamj.burt@gmail	P.O. Box 59043 Point Lay AK 99759
24) Alicia Burt		907 444 5257	alicia.burt@north-slope.org	"
25) Daniel PiKok		907-444-6847	daniel-piKok@hotmail.com	
26) GREGG WILBANKS		833.0034	gregg.wilbanks @nsbsd.org	
27) Betty a Bihok		833.0049		PO BOX 59047 PT LAY AK 99759



Attendance Sign-In Sheet  
 Point Lay, Alaska  
 March 23, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
28) Warren Lampe	self	833-0063	wllampe@gmail.com	Box 39074 Point Lay, AK 99759
29) Eva Annuskettl	Self	833-0225	eva-annuskettl@yahoo.com	P.O. Box 59063 PT-LAY AK, 99759
30) Shana Nenkok	Self		harpoonerrick-23@yahoo.com	
31) Marie Tracy	Mayor's	833-2428	marie.TRACY@NORTH-SLOPE.ORG	Box 59029 PT-LAY, AK 99759
32)				
33)				
34)				
35)				
36)				



Attendance Sign-In Sheet  
Wainwright, Alaska  
March 24, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
1) Dennis Aureo ganno SA		763-5782		
2) <del>Russman</del> <del>Reetook</del>	Self	763-4774		
3) Leo Seseum	Self	763-0038	none	none
4) Pamie Sida			NSBeman	
5) Moses Nayakik	Self	763-2918		P.O. Box 56
6) Prayman Negavenna				5350 Lake Otis Prwy Apt #10
7) Frank Beston	Self	763-298		
8) Terry Tagarook	Self			
9) Ceraal, alpsite	Self	925-1227	alpsite Cera @yahoo.com	Box 88 Wainwright, AK 99782



Attendance Sign-In Sheet  
Wainwright, Alaska  
March 24, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
10) Jack Panik	wwc	—	—	POX 4 AIN
11) Ralph Avoganna		367 4815		Box 82 AIN
12) Doreas Nashogodic	self	925-1319		PO BOX 06
13) BOB SUTTER	OOB	925-1305		PO Box 162
14) antre kutack	Wainwright	763- <del>8534</del>		PO BOX 31
15) Jan Ahnuzon	Ah			Box 76
16) Lolo Ahmaogak	AIN			Box 76
17) Herbert Tagarock	AiN			Gal - Del
18) Ellen Phillips	Self	763-0034		Box 113



Attendance Sign-In Sheet  
Wainwright, Alaska  
March 24, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
19) Elizabeth Phillips				PO box 113
20) Benjamin				
21) Roy W. Ekak				P.O. Box 87
22) Nancy Akpik				BOX 126
23) Jeannette Segevan				Box 113
24) Fredricka Ann Almasagak		Home 763-3253		Box 71
25) Pattilyn Dri gap				POB 1413
26) Eunice Ahwaikana		763-2169		P.O. Box 148
27) Susie Agurluk		763-2169		PO Box 148



Attendance Sign-In Sheet  
Wainwright, Alaska  
March 24, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
28) Bonnie Spencer				
29) Carolyn Akerk				
30) Sandra Peetok				
31) Marjorie Aneshuk	N.S. Borough Fire Dept Retiree	penistand	None	
32) Maie Cahotel	NSB Managers	763-2890		PO Box 28 (Lak) Wainwright AK 99782
33) Michael Tegerode				
34) Raymond Akerk	N V W	763-0045		PO Box 35 Anchorage -
35) Gudy Anashuk		763-0201		Gen Del Wain. AK 99782
36) Corey Driggs				



Attendance Sign-In Sheet  
 Barrow, Alaska  
 March 26, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
1) Beverly Faye Hugo	Self	907 852-5333	bfhugo@hotmail.com	Box 677 Barrow AK 99723
2) Elizabeth S. Ahogak	self	852-2327		Box 802 Barrow, AK, 99723
3) PERRY MATUMEAU	Self	none	non	Gen. Del. BRW, AK
4) Clyde T. Numnik	Self	—		P.O. Box 1296 BRW, AK.
5) IONA KEMP	self	852 <sup>5421</sup> <del>808</del>	ILONA.MARIA@GMAIL.COM	—
6) Patrick S. Griffin		855 0677		Po Box 1221 <del>42112</del> Barrow
7)				
8)				
9)				



Attendance Sign-In Sheet  
 Barrow, Alaska  
 March 26, 2011



Name (Please Print)	Representing	Phone No.	E-Mail	Mailing Address
37) LISIE STINE	myself	852-4105	Qimmiqsage@gmail	Bx 83 BARROW
38) JIMMY NINGEOLC JR	"	367-6130	None	Box 103 BRW, AK 99723
39) Anne Jensen	uics	230-8228	anne.jensen@uicscience.org	Po Box 750 BRW 99723
40) Lorena Coates	Self	852-2412		P.O. Box 1221 Barrow AK
41) Ethel nungasak	self	852-7884		Box 382 Brw. AK. 99723
42) Rei Frankson	Self	852-4863		Bx 138 Brw 99723
43)				
44)				
45)				



**Appendix D**  
**Meeting Materials – One Typical Leadership Presentation, One Typical  
Community Presentations, and Meeting Posters**

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**

## **Leadership Presentation**

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



# 2011

---

## Leadership Meeting

Karin Berentsen, Regulatory Compliance Manager, Statoil  
kbe@statoil.com

Photo: Emily McCabe



# Agenda

Introduction

---

Statoil and Norway

---

Statoil 2010 Survey report and Statoil 2011 Survey plans

---

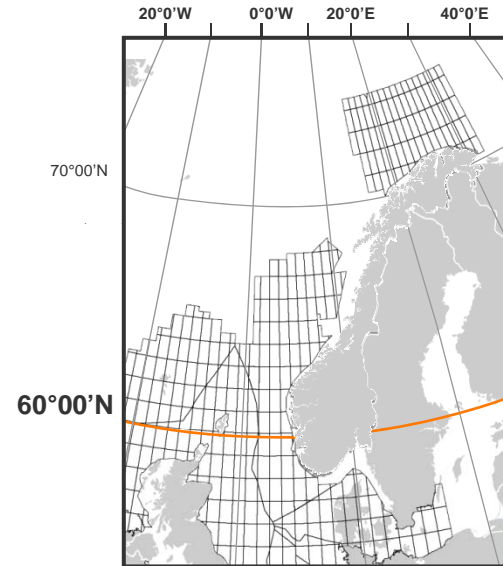
Science Surveys and Research Initiatives

---

Questions, feedback and discussions

---

# Norway – Alaska 60°00'N



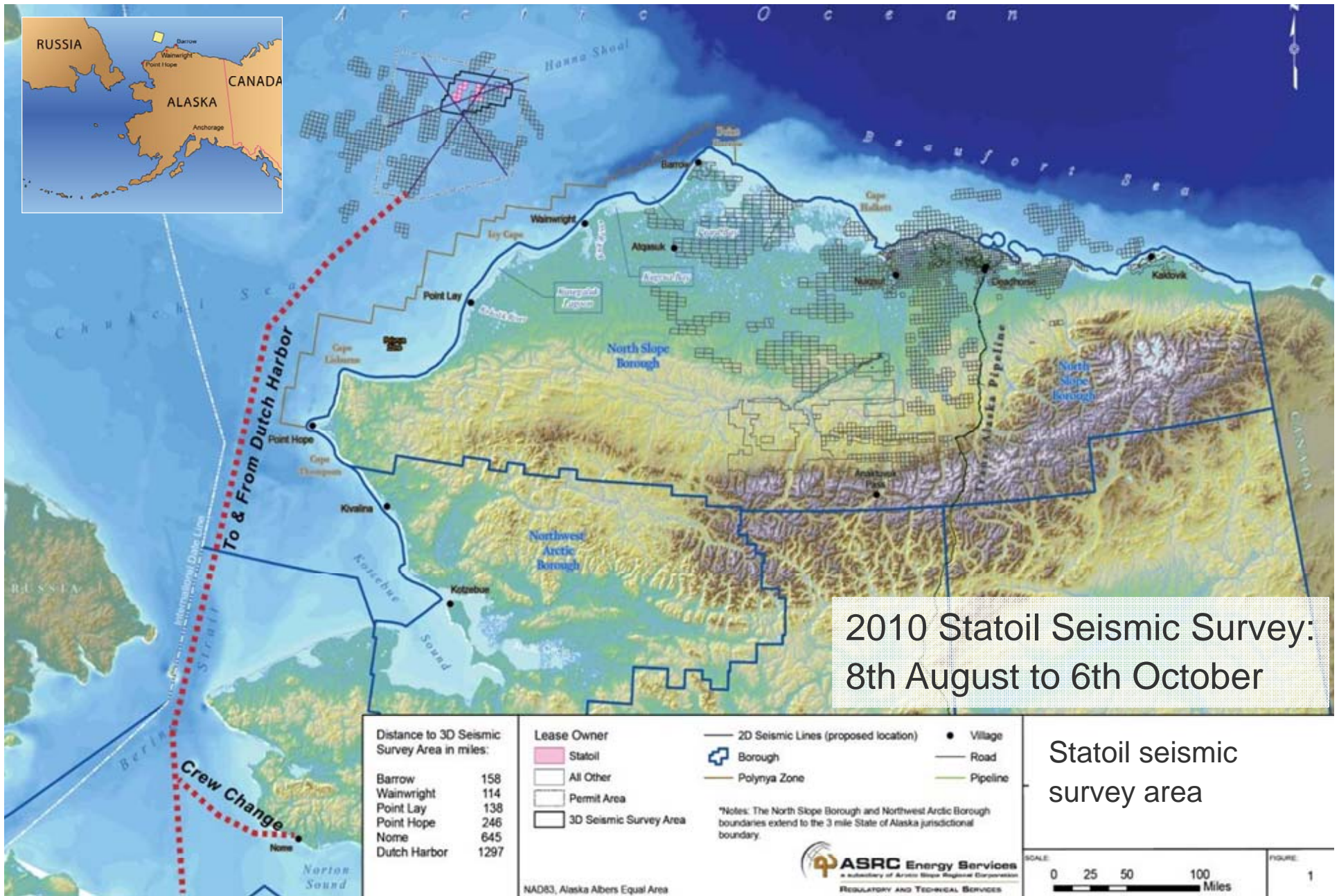
Statoil.com

ssb.no

[npd.no/en/Publications/Facts](http://npd.no/en/Publications/Facts)







2010 Statoil Seismic Survey:  
8th August to 6th October

<p>Distance to 3D Seismic Survey Area in miles:</p> <table border="1"> <tr><td>Barrow</td><td>158</td></tr> <tr><td>Wainwright</td><td>114</td></tr> <tr><td>Point Lay</td><td>138</td></tr> <tr><td>Point Hope</td><td>246</td></tr> <tr><td>Nome</td><td>645</td></tr> <tr><td>Dutch Harbor</td><td>1297</td></tr> </table>	Barrow	158	Wainwright	114	Point Lay	138	Point Hope	246	Nome	645	Dutch Harbor	1297	<p>Lease Owner</p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: pink; border: 1px solid black; margin-right: 5px;"></span> Statoil</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: white; border: 1px solid black; margin-right: 5px;"></span> All Other</li> <li><span style="display: inline-block; width: 15px; height: 15px; border: 1px dashed black; margin-right: 5px;"></span> Permit Area</li> <li><span style="display: inline-block; width: 15px; height: 15px; border: 2px solid blue; margin-right: 5px;"></span> 3D Seismic Survey Area</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; border-bottom: 1px solid blue; margin-right: 5px;"></span> 2D Seismic Lines (proposed location)</li> <li><span style="display: inline-block; width: 15px; height: 15px; border: 1px solid blue; margin-right: 5px;"></span> Borough</li> <li><span style="display: inline-block; width: 20px; border-bottom: 1px solid black; margin-right: 5px;"></span> Polymya Zone</li> <li><span style="display: inline-block; width: 10px; height: 10px; border-radius: 50%; background-color: black; margin-right: 5px;"></span> Village</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid black; margin-right: 5px;"></span> Road</li> <li><span style="display: inline-block; width: 15px; border-bottom: 1px solid green; margin-right: 5px;"></span> Pipeline</li> </ul> <p><small>*Notes: The North Slope Borough and Northwest Arctic Borough boundaries extend to the 3 mile State of Alaska jurisdictional boundary.</small></p>
Barrow	158													
Wainwright	114													
Point Lay	138													
Point Hope	246													
Nome	645													
Dutch Harbor	1297													

Statoil seismic survey area

**ASRC Energy Services**  
A subsidiary of Arctic Slope Regional Corporation  
REGULATORY AND TECHNICAL SERVICES

SCALE:

0 25 50 100 Miles

FIGURE:

1



# 2010 Statoil Seismic Survey

## Geo Celtic

- Seismic Survey Vessel
- 5 Marine Mammal Observers (MMOs) including 2 Inupiat Observers



## Tanux 1

- Primary Support Vessel for the Geo Celtic
- Typically forward of and within one mile of the *Geo Celtic*
- Small boat operations - support
- Safety Zones – assist monitoring
- 4 MMOs per crew



## M/V Norseman 1

- Primary scouting vessel
- Most of the time 'zig-zag' scouting to monitor the safety radius for whales/walrus
- Support vessel with 24-h watches (reduced as darkness increased)
- 4 MMOs per crew



# 2010 Statoil Seismic Survey

- 2 Inupiat MMOs per crew on each vessel - 1 crew change
- 24 - hours watches - 4 hour observation shifts
- MMOs onboard during survey and transit to and from the prospect area



Photo: Bill Tracey Sr., Point Lay

# 2010 Seismic Survey

## What did we see?

- Survey Start 20<sup>th</sup> August 2010
- Sightings observed from all three vessels; transits Dutch Harbor - Chukchi Sea, and Nome crew change were also surveyed:
  - No confirmed Beluga sightings
  - 1,428 pinnipeds, including 1,042 Pacific walruses;
  - 832 walruses; 28 - 31 August
  - 45 cetaceans (including 6 bowhead whales)
- Survey end date 1<sup>st</sup> October 2010



Photo: Bill Tracey Sr. , Point Lay



**Lease Owner**

- Statoil
- ConocoPhillips Alaska, Inc./Statoil
- All Other

Statoil Proposed Site Survey Area

- Statoil Proposed Soil Investigation Location
- Proposed Soil Investigation Location

3D Seismic Survey Area 2010

- Polynya Zone
- Village



**SITE SURVEY AREA**  
 Statoil 2011 Chukchi Sea  
 Shallow Hazards Survey Program  
 Plan of Operations

SCALE:



FIGURE:

2

NAD83, Alaska Albers Equal Area



# 2011 Statoil Site Survey Program

## **Seafloor Surveying & Shallow Seismic** (small air gun cluster):

- Area: Amundsen and Augustine prospect areas (up to 2500 km)

## **Soil Investigation Sampling – 3-4 bore holes (10-50m) per site:**

- Statoil Operated Acreage
  - Amundsen with 3 bore hole sites & Augustine with 2 sites
- Statoil's partner operated leases (CPAI): up to 3 sites

## **Additional Investigation:**

- Seabed mapping; ice gouge, archaeology, sedimentation layers and seafloor habitat, and regional understanding.

# Schedule of Activity

- July 15 – ships mobilize in Dutch Harbor for training and supplies
- August 1st (earliest)– arrive on location in Chukchi sea and begin site survey and soil sampling activities
- Operations concluded by early October - ice and weather conditions permitting (could continue through Mid-November if significant weather downtime)
- Eventual crew changes to occur via Nome midway through program
- In case of emergency transit via Wainwright

# 2011 Site Survey

## ***M/V Duke (former Polar Duke)***

- Contractor: CGG VeritasGardline Ltd
- Seafloor Surveying and Shallow Seismic
- Built in Norway 1983/2007
- Ice strengthened
- 219 feet with space for 50 persons
- 11.5 knot cruising speed



## ***M/V Fugro Synergy***

- Contractor: Fugro
- Soil Investigation Vessel drilling bore holes
- Built in Norway 2008
- Ice strengthened
- 340 ft with space for 70 persons
- 15 knot cruising speed





# Federal requirements for Site Survey

## Following be performed:

- Shallow borehole data
- Seafloor imagery - Bathymetry
- Archaeological Survey
- Accurate navigation
- High resolution Seismic profiles
- Water column Anomaly Detection
- Side scan sonar
- Magnetometer



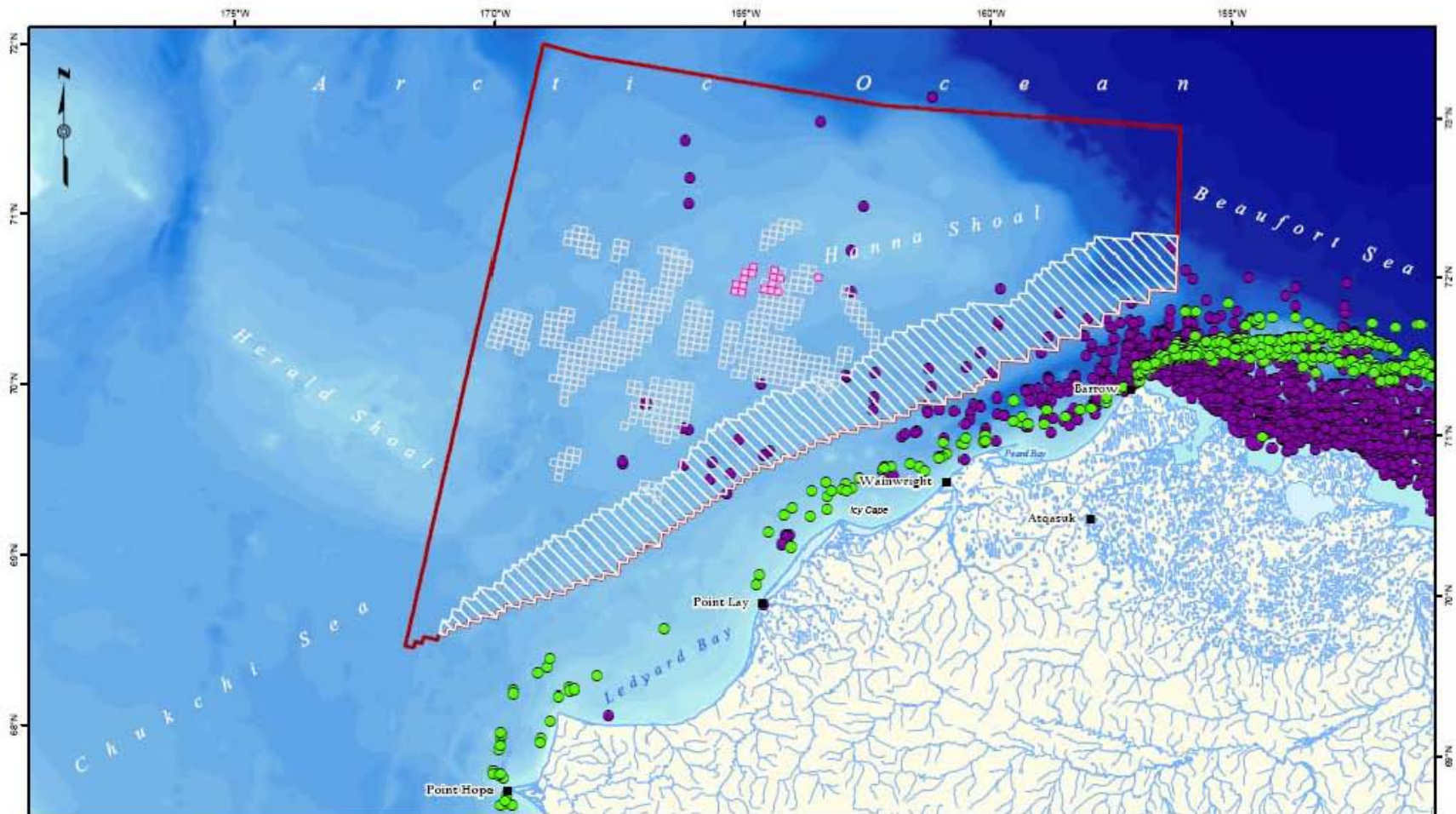
# Preparations and Applications - 2010 and 2011

## Environmental Evaluation Document :

- Survey area is 100+ miles offshore
- Not expected to conflict or interfere with the community's subsistence harvest; Marine Mammals; Whales, and other animals
- Cumulative Effects Analysis included
- Available online at:  
[http://alaska.boemre.gov/re/recentgg/10\\_01/env\\_eval.pdf](http://alaska.boemre.gov/re/recentgg/10_01/env_eval.pdf)
- **IHA Applications** with preliminary Incidental Harassment Take Estimates

## Permit Applications, Authorizations and Notices:

- **IHA:** The Incidental Harassment Authorization of Marine Mammals (Whales, seals); National Marine Fisheries Service (NMFS)
- **G&G permit;** MMS (now BOEMRE)
- **2011 Ancillary Activity Notice** (BOEMRE)
- **LOA:** Letter of Authorization for polar bears and Pacific walrus; US Fish and Wildlife Service (USFWS)



**Bowhead Whale sightings (April-June)**  
 Total number counted in sighting:

- 1 - 15
- 16 - 30
- 31 - 45
- 46 or more

**Bowhead Whale sightings (July-October)**  
 Total number counted in sighting:

- 1 - 15
- 16 - 30
- 31 - 45
- 46 or more

■ Village  
 Lease Sale 193 Area  
 Lease Blocks Under Stipulations 4, 5 & 7  
**Lease Owner**  
 Statoil  
 All Other



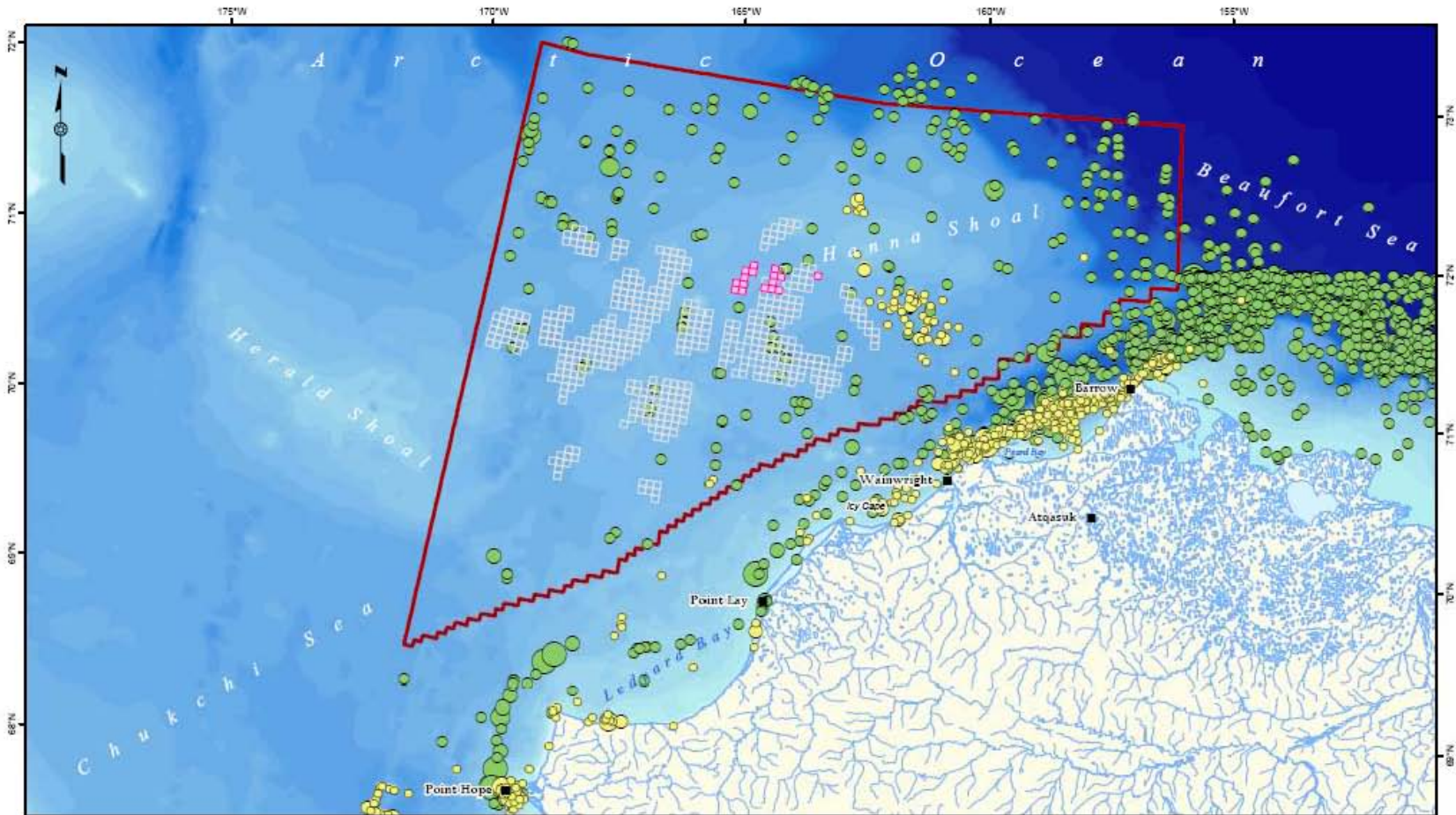
**BOWHEAD WHALE SIGHTINGS  
 IN THE CHUKCHI SEA 1979-2007**  
 Statoil 2010 Chukchi Marine Seismic Survey  
 Environmental Evaluation Document

SCALE: 0 20 40 80 Miles

FIGURE: 0

NAD83, Alaska Albers Equal Area.  
 Sighting data obtained from Mineral Management Service Bowhead Whale Aerial Survey Project Historical Database, 1979-2007.





**Beluga Whale**

Total number counted in sighting:

- 1 - 25
- 26 - 50
- 51 - 75
- 76 - 100

**Gray Whale**

Total number counted in sighting:

- 1 - 5
- 6 - 10
- 11 - 15
- 16 or more

- Village
- Lease Sale 193 Area

- Lease Owner**
- Statoil
  - All Other

NAD83, Alaska Albers Equal Area.  
Sighting data obtained from Mineral Management Service Bowhead Whale Aerial Survey Project Historical Database, 1979-2007.



**BELUGA WHALE AND GRAY WHALE  
SIGHTINGS IN THE CHUKCHI SEA 1979-2007**  
Statoil 2010 Chukchi Marine Seismic Survey  
Environmental Evaluation Document

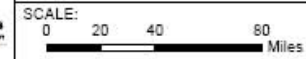


FIGURE:  
1.1-2

AES-RTS: 09-152-014.mxd, 01/19/10, R00



# Measures to Reduce Impact



## Survey Area

The survey area is located far offshore (>100 miles).

Statoil will prepare a polar bear interaction plan that addresses food and waste management, personnel training, and safety and communication regarding polar bears.



## Ice Management

Ice conditions in the project area will be monitored during the survey in order to minimize survey time and activity close to the ice edge.



## Communication and Call Centers

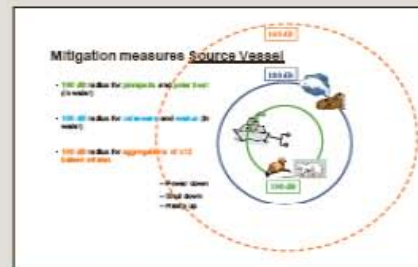
Statoil will operate communication protocols through Wainwright for emergency situations and cooperation with subsistence activities.



## Marine Mammal Monitoring

Vessels operated by Statoil will take every precaution to avoid harassment of marine mammals, including whales, seals, walrus or polar bears in the water when a vessel is operated near these animals.

- Marine Mammal Observers (MMOs) will be present on both vessels.
- Scientific and Inupiat MMOs
  - 5 on site survey vessel until mid-August, then possibly 3 or 4
  - 3 on soil sampling vessels



## Mitigation Procedures

- Establishment of safety radii through sound source verification test.
- In the established exclusion or safety zone, power down, shut down, and ramp-up procedures will be in place.

## Environmental & Baseline Science Surveys

Environmental baseline monitoring was operated by the local company Olgoonik-Fairweather and sponsored by Shell, CPAI, and Statoil. This includes:

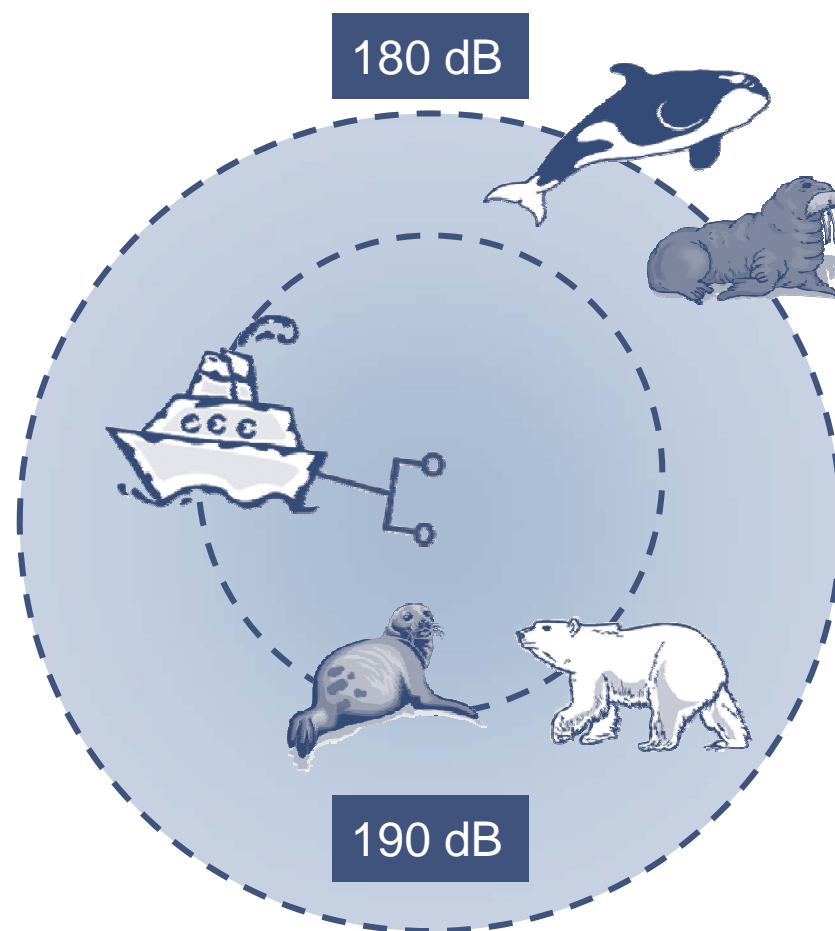
- Seabed and water sampling and analysis over old drill sites.
- Fixed seabed acoustic recorders to monitor marine mammal activity in the Chukchi Sea.
- Ecological studies of Chukchi fish populations.



Subtitle to be placed here

# Procedures to mitigate impact

- Sound source verification used to establish safety radii distances
- Observation of marine mammals in or approaching safety radii caused the seismic powered down or shut down
- **190 dB** radius for pinnipeds and polar bear (in water) – approx 750 yds.
- **180 dB** radius for cetaceans and walrus (in water) – approx 2750 yds
- **160 dB** radius for aggregations of  $\geq 12$  baleen whales – approx 5 – 8 miles



# 2011 Site Survey

- Marine Mammal Observers (MMO's) on both vessels
  - Biologist and Inupiat MMO's for reporting of "takes":
    - 5 on Site Survey Vessel
    - 3 on Coring Vessel
- At least one Inupiat MMO per vessel



Photo: Bill Tracey Sr., Point Lay

# Stakeholder Engagement

- **March 2011 North Slope Science Initiative**  
Workshop, Barrow
  - **March 2011 Plan of Cooperation meetings**  
Joint Village meetings with ConocoPhillips; Point Hope, Point Lay, Wainwright, Barrow
  - **March 2011 Open Water meeting** Anchorage
  - **February 2011, February and December 2010**  
AEWC Conventions, Anchorage and Barrow
  - **November 2010** Joint Village meetings with ConocoPhillips; Kotzebue, Point Hope, Point Lay, Wainwright, Barrow
  - **November 2010** Beluga Co-management meeting  
Ice Seal Co-management meeting
  - **October 2010** Demobilization Dutch Harbour
  - **March 2010** Open Water Meeting
  - **March 2010** Meetings with marine mammal co-management groups
  - **January 2010 Plan of Cooperation meetings**  
Pt Hope, Pt Lay, Wainwright, Barrow
  - **October and December 2009** Permit Applications
  - **October, November and December 2009**
    - Community and Leadership Meetings Barrow, Wainwright, Pt. Lay, Pt. Hope, and Kotzebue
    - NSB Planning Commission Meeting
    - NSB Wildlife department
- 2009 – 2011** communication and meetings planned and ongoing with:
- Mayor Itta and the Mayor's office, AEWC, and other stakeholders
  - Co-management groups
  - Agencies: NMFS, MMS/BOEMRE, U.S. Fish and Wildlife Service, and EPA



# The Infrared (IR) Camera

## 2010 Survey – Early Phase Research Initiative



- Camera sensitive to temperature differences
- High technology IR camera with 360° view; test had 280 °
- Mounted 24.5m above sea level,
- No Equipment in the water
- 5 pictures per sec (can see a whale blow)
- Weather dependant

- Continuous in operation 12 Aug – 4 Oct
- Manned 3-4 hours per night

### ***Main Conclusion:***

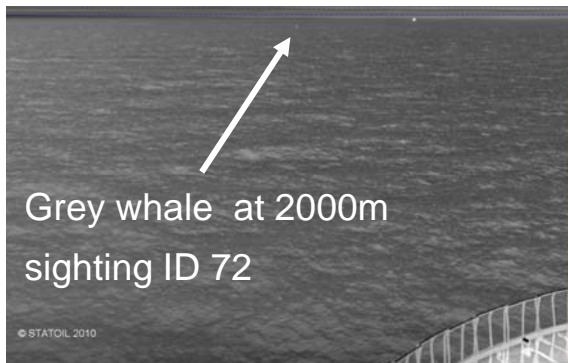
IR camera is not ready for inclusion in any mitigation requirements

# Observations made:

## Whales:

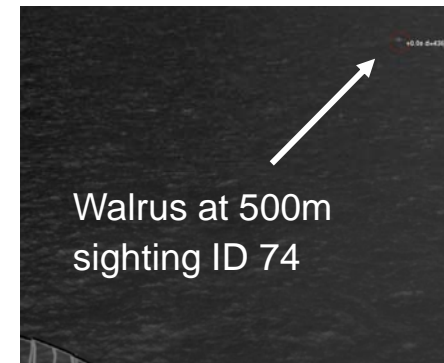
Blows of big whales visible up to 2000m  
(grey whale)

Blows of smaller whales (dall's porpoise)  
up to 500m



**Walrus:** New knowledge that Walrus has a  
IR signature when swimming on surface;  
visible up to 1500m

**Weather:** Hampered by fog, bad visibility  
and sea state as for visual observations



# 2010 Chukchi Sea Environmental Studies Program

*Last year's program – acoustic recorders*

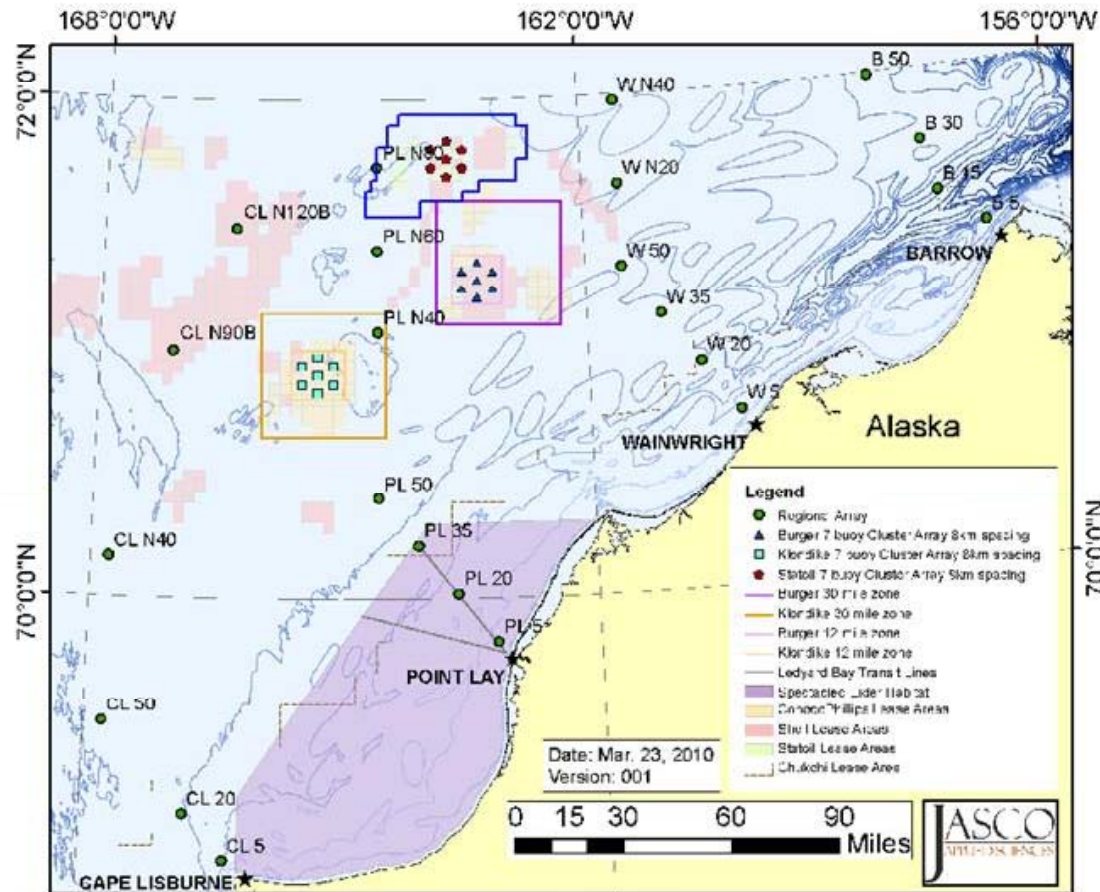


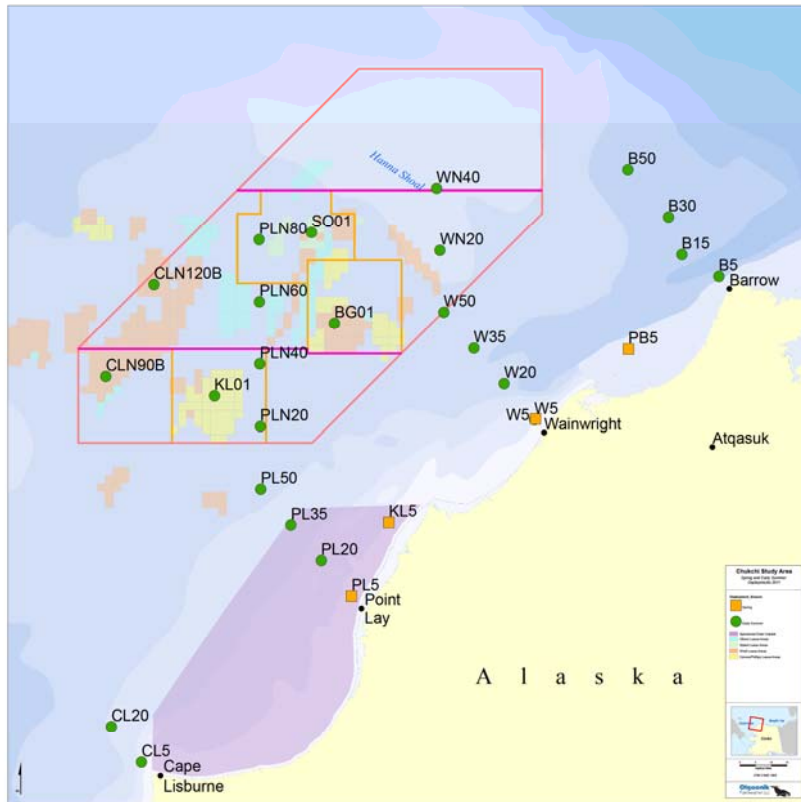
Photo: Emily McCabe

Snowy owl named  
**"The HSE Manager"** of the day  
Picture taken off the Beaufort coast  
by the 2010 scientist crew

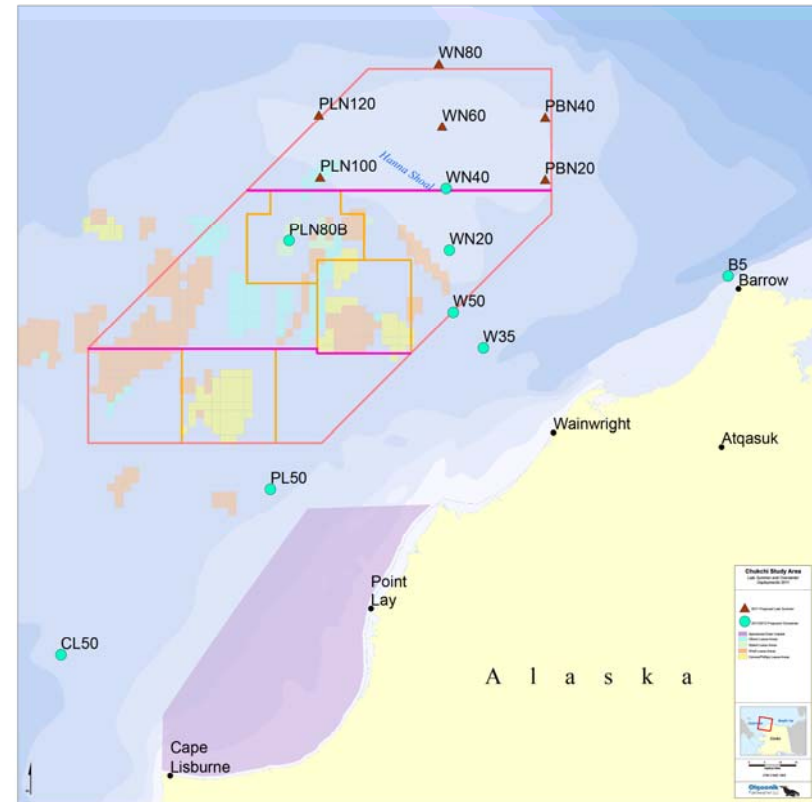
# 2011 Chukchi Sea Environmental Studies Program

## *Acoustic recorders*

Recorder Locations Spring Early summer



Recorder Locations Late Summer Overwinter



# Quyanaqpak!

Karin Berentsen  
[www.statoil.com](http://www.statoil.com)

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**

## **Community Presentation**

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



# 2011

## Plan of Cooperation Meeting

# Agenda

Welcome and introduction

---

Statoil 2010 Survey and Statoil 2011 Survey plans

---

Questions, feedback and discussions

---

ConocoPhillips presents the 2010 Science Survey results

- Operated by Olgoonik-Fairweather
  - Sponsored by the Shell, ConocoPhillips and Statoil
- 

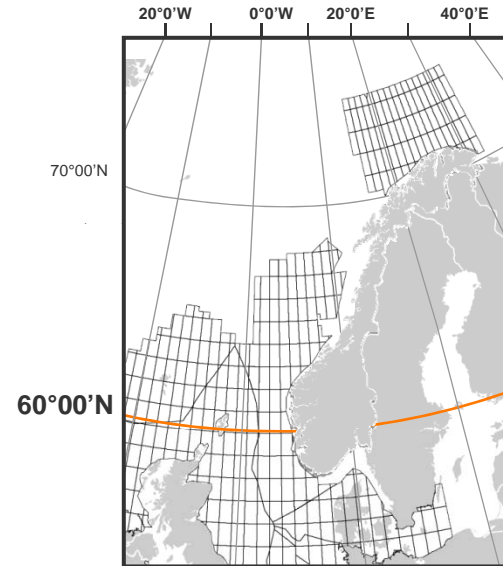
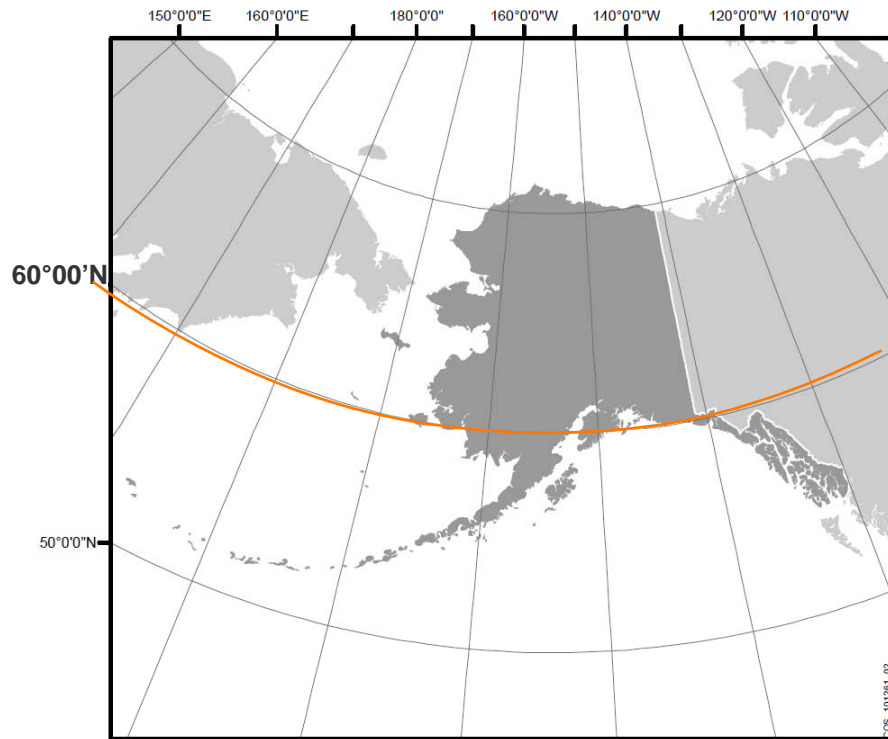
Questions and discussion

---

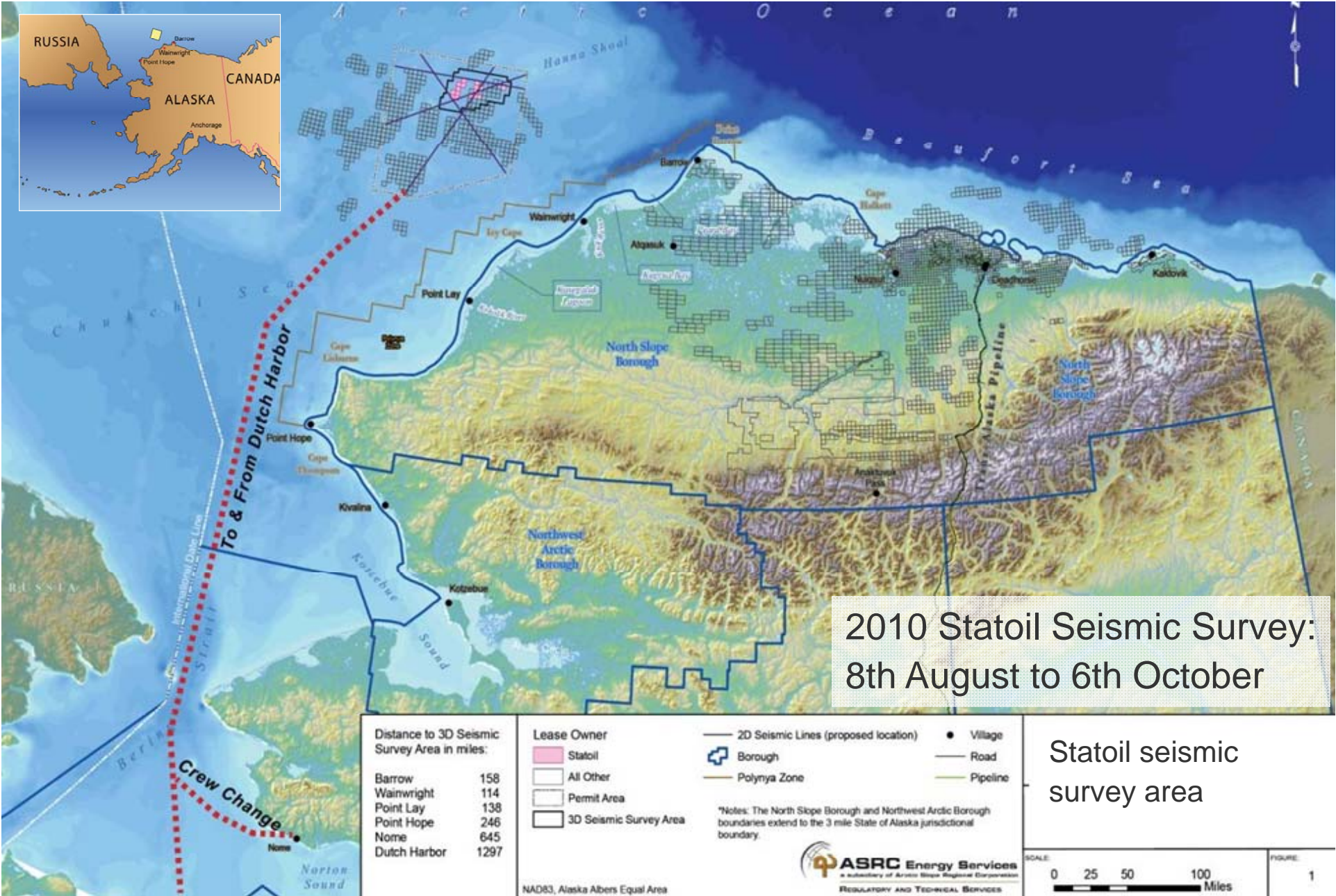
# Team introductions - Statoil

- Lars Sunde, Vice President, Alaska Operations
- Karin Berentsen, Alaska Regulatory Compliance Manager
- Darren Ireland, Senior Marine Biologist, LGL
- Laura Erickson, Alaska Senior Office Administrator
- Dorothee Franken, Communication, Statoil Houston
- Michelle Malerich, Consultant, ASRC Energy Services

# Norway – Alaska 60°00'N



Statoil.com  
ssb.no



# 2010 Statoil Seismic Survey

## Geo Celtic

- Seismic Survey Vessel
- 5 Marine Mammal Observers (MMOs) including 2 Inupiat Observers



## Tanux 1

- Primary Support Vessel for the Geo Celtic
- Typically forward of and within one mile of the *Geo Celtic*
- Small boat operations - support
- Safety Zones – assist monitoring
- 4 MMOs per crew



## M/V Norseman 1

- Primary scouting vessel
- Most of the time 'zig-zag' scouting to monitor the safety radius for whales/walrus
- Support vessel with 24-h watches (reduced as darkness increased)
- 4 MMOs per crew



# 2010 Statoil Seismic Survey

- 2 Inupiat MMOs per crew on each vessel - 1 crew change
- 24 - hours watches - 4 hour observation shifts
- MMOs onboard during survey and transit to and from the prospect area



# 2010 Seismic Survey

## What did we see?

- Survey Start 20<sup>th</sup> August 2010
- Sightings observed from all three vessels, including transits Dutch Harbor - Chukchi Sea, and Nome crew change:
  - No confirmed Beluga sightings
  - 1,428 pinnipeds, including 1,042 Pacific walruses;
  - 832 walruses; 28 - 31 August
  - 45 cetaceans (including 6 bowhead whales)
- Survey end date 1<sup>st</sup> October 2010



Photo: Bill Tracey Sr. , Point Lay



# 2011 Statoil Site Survey



Distance to Nearest Survey Activity in miles:

Barrow	135
Wainwright	75
Point Lay	92
Point Hope	214
Nome	584
Dutch Harbor	1237

<b>Lease Owner</b>	Statoil Site Survey Area	Borough
Statoil	Statoil Preliminary Core Sites	Polynya Zone
All Other	CPAI Preliminary Core Sites	Road
	Statoil Pipeline Route	Pipeline
		Village



**Statoil**

**CHUKCHI SEA PROJECT AREA**  
 Statoil 2011 Chukchi Sea Site Survey Program  
 Plan of Operations and Ancillary Activity Notice

SCALE:



FIGURE:

1

NAD83, Alaska Albers Equal Area

\*Notes: The North Slope Borough and Northwest Arctic Borough boundaries extend to the 3 mile State of Alaska jurisdictional boundary.



# 2011 Statoil Site Survey Program

## **Seafloor Surveying & Shallow Seismic** (small airgun cluster):

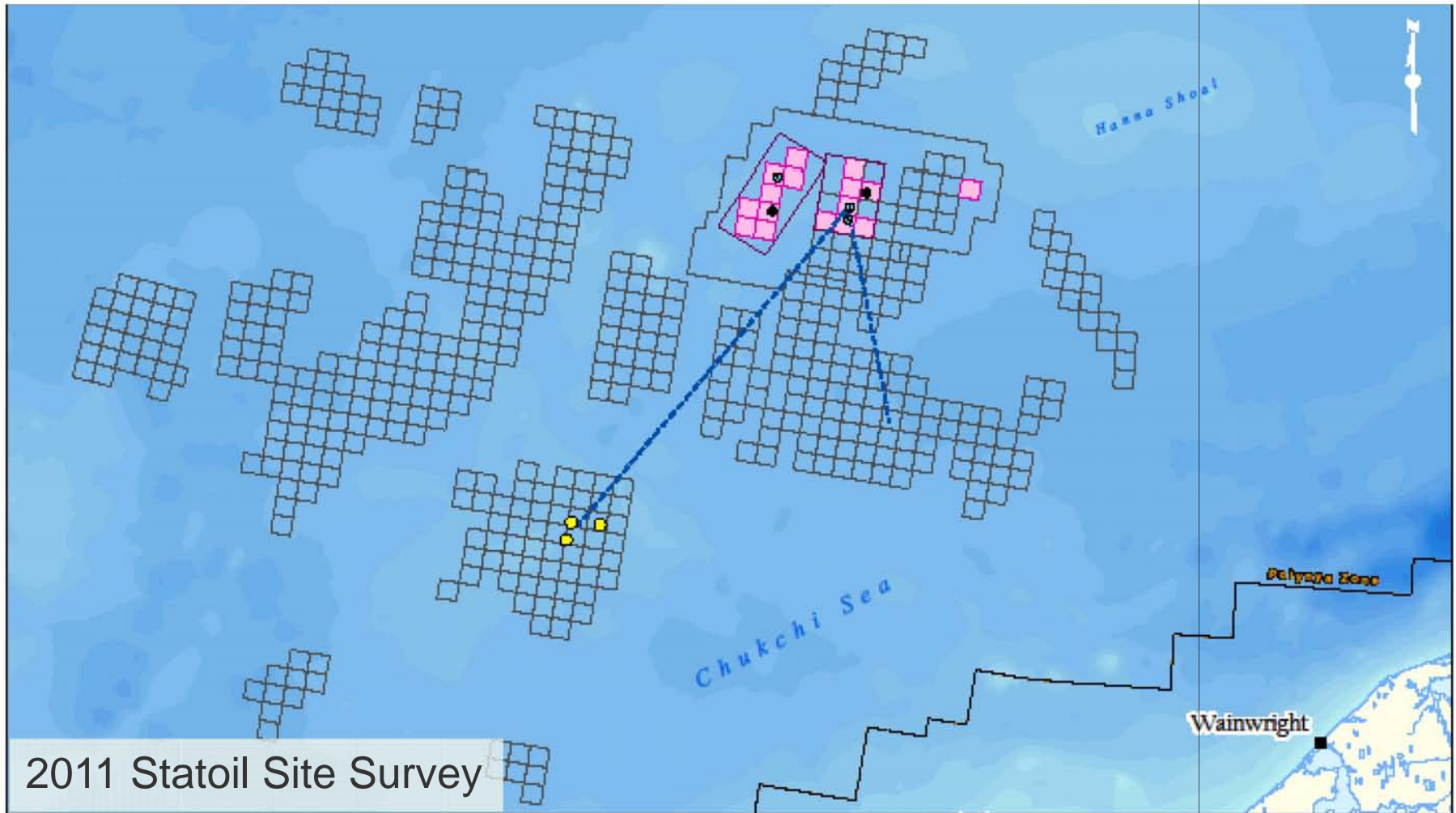
- Area: Amundsen and Augustine prospect areas (~2500 km)
- Regional understanding and pipeline route investigation

## **Soil Investigation Sampling – 3-4 bore holes (10-50m) per site:**

- Statoil Operated Acreage
  - Amundsen with 3 bore hole sites & Augustine with 2 sites
- Statoil's partner operated leases (CPAI): up to 3 sites

## **Additional Investigation and Science Program**

- Seabed mapping (~2000 km) and up to 40 shallow boreholes (10m depth);
  - ice gouge, archaeology, sedimentation layers and seafloor habitat



# 2011 Statoil Site Survey

<b>Lease Owner</b> Statoil All Other	Statoil Site Survey Area Statoil Preliminary Core Sites CPAI Preliminary Core Sites Statoil Pipeline Route	3D Seismic Survey Area 2010 Polynya Zone Village	
<p>NAD83, Alaska Albers Equal Area</p> <p style="text-align: center;"> <b>ASRC Energy Services</b>  <small>a subsidiary of Arctic Slope Regional Corporation</small>  <small>1100 LARSEN AVENUE, THUNDER BAY, ALASKA 99584</small></p>			<p style="text-align: center;"><b>SITE SURVEY AREA</b>          Statoil 2011 Chukchi Sea Site Survey          Plan of Operations and Ancillary Activities Notice</p> <p>SCALE: 0 10 20 30 Miles</p> <p>FIGURE: 2</p>



# 2011 Site Survey

## ***M/V Duke (former Polar Duke)***

- Contractor: CGG VeritasGardline Ltd
- Seafloor Surveying and Shallow Seismic
- Built in Norway 1983/2007
- Ice strengthened
- 219 feet
- Space for 50 persons
- 11.5 knot cruising speed



## ***M/V Fugro Synergy***

- Contractor: Fugro
- Soil Investigation Vessel drilling bore holes
- Built in Norway 2008
- Ice strengthened
- 340 ft
- Space for 70 persons
- 15 knot cruising speed



# Schedule of Activity

- July 15 – ships mobilize in Dutch Harbor for training and supplies
- August 1st – arrive on location in Chukchi sea and begin site survey and soil sampling activities
- Operations concluded by early October - ice and weather conditions permitting
- Operations could continue through Mid-November if significant weather downtime is experienced
- Crew changes to occur via Nome midway through program
- In case of emergency transit via Wainwright

# Federal requirements for Site Survey

## Following be performed:

- Shallow borehole data
- Seafloor imagery - Bathymetry
- Archaeological Survey
- Accurate navigation
- High resolution Seismic profiles
- Water column Anomaly Detection
- Side scan sonar
- Magnetometer



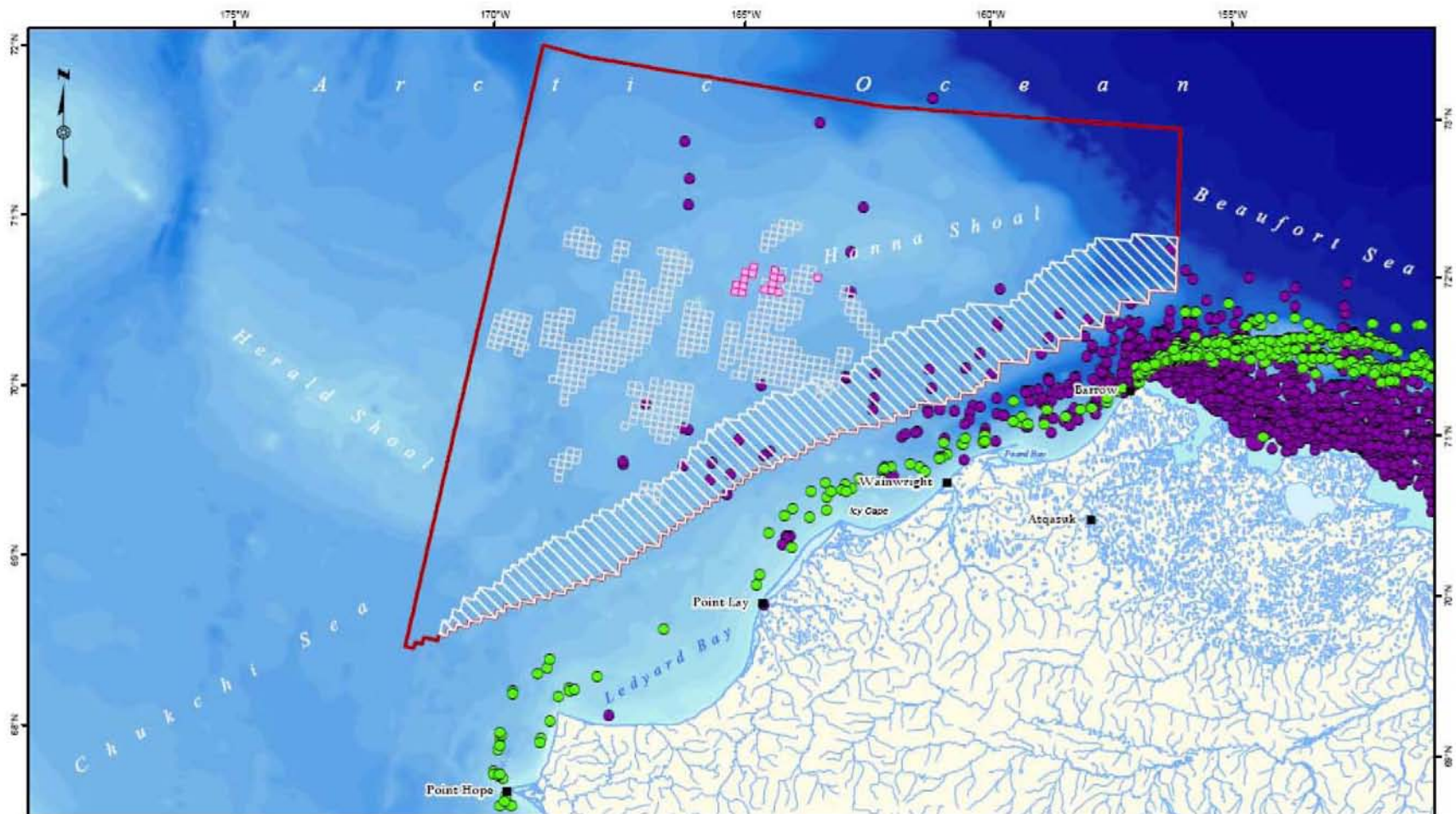
# Preparations and Applications - 2010 and 2011

## Environmental Evaluation Document :

- Survey area is 100+ miles offshore
- Not expected to conflict or interfere with the community's subsistence harvest
- Marine Mammals; Whales, and other animals
- **Cumulative Effects Analysis included**
- **IHA Applications** with preliminary Incidental Harassment Take Estimates

## Permit Applications, Authorizations and Notices:

- **IHA:** The Incidental Harassment Authorization of Marine Mammals (Whales, seals); National Marine Fisheries Service (NMFS)
- **G&G permit;** MMS (now BOEMRE)
- **2011 Ancillary Activity Notice** (BOEMRE)
- **LOA:** Letter of Authorization for polar bears and Pacific walrus; US Fish and Wildlife Service (USFWS)



**Bowhead Whale sightings (April-June)**  
 Total number counted in sighting:

- 1 - 15
- 16 - 30
- 31 - 45
- 46 or more

**Bowhead Whale sightings (July-October)**  
 Total number counted in sighting:

- 1 - 15
- 16 - 30
- 31 - 45
- 46 or more

■ Village  
 Lease Sale 193 Area  
 Lease Blocks Under Stipulations 4, 5 & 7  
**Lease Owner**  
 Statoil  
 All Other



**BOWHEAD WHALE SIGHTINGS  
 IN THE CHUKCHI SEA 1979-2007**  
 Statoil 2010 Chukchi Marine Seismic Survey  
 Environmental Evaluation Document

NAD83, Alaska Albers Equal Area.  
 Sighting data obtained from Mineral Management Service Bowhead Whale Aerial Survey Project Historical Database, 1979-2007.



SCALE: 0 20 40 80 Miles

FIGURE: 0





# Measures to Reduce Impact



## Survey Area

The survey area is located far offshore (>100 miles).

Statoil will prepare a polar bear interaction plan that addresses food and waste management, personnel training, and safety and communication regarding polar bears.



## Ice Management

Ice conditions in the project area will be monitored during the survey in order to minimize survey time and activity close to the ice edge.

## Communication and Call Centers

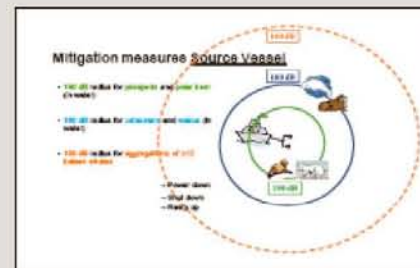
Statoil will operate communication protocols through Wainwright for emergency situations and cooperation with subsistence activities.



## Marine Mammal Monitoring

Vessels operated by Statoil will take every precaution to avoid harassment of marine mammals, including whales, seals, walrus or polar bears in the water when a vessel is operated near these animals.

- Marine Mammal Observers (MMOs) will be present on both vessels.
- Scientific and Inupiat MMOs
  - 5 on site survey vessel until mid-August, then possibly 3 or 4
  - 3 on soil sampling vessels



## Mitigation Procedures

- Establishment of safety radii through sound source verification test.
- In the established exclusion or safety zone, power down, shut down, and ramp-up procedures will be in place.

## Environmental & Baseline Science Surveys

Environmental baseline monitoring was operated by the local company Olgoonik-Fairweather and sponsored by Shell, CPAI, and Statoil. This includes:

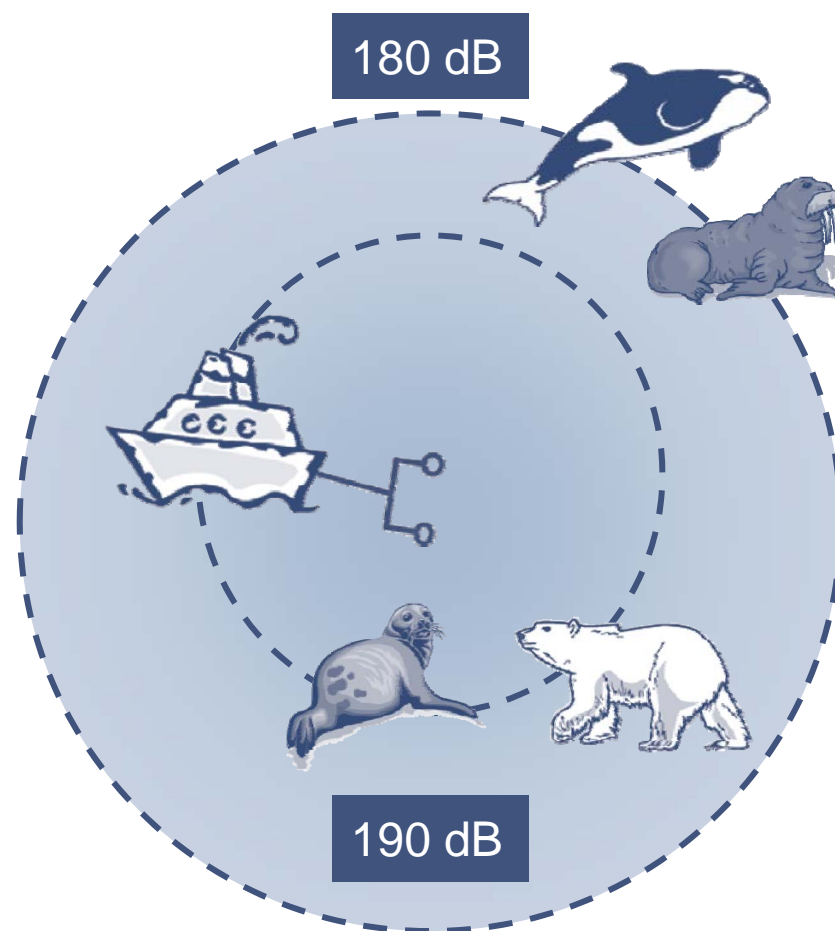
- Seabed and water sampling and analysis over old drill sites.
- Fixed seabed acoustic recorders to monitor marine mammal activity in the Chukchi Sea.
- Ecological studies of Chukchi fish populations.



Subtitle to be placed here

# Procedures to mitigate impact

- Sound source verification used to establish safety radii distances
- Observation of marine mammals in or approaching safety radii caused the seismic powered down or shut down
- **190 dB** radius for pinnipeds and polar bear (in water) – approx 750 yds.
- **180 dB** radius for cetaceans and walrus (in water) – approx 2750 yds
- **160 dB** radius for aggregations of  $\geq 12$  baleen whales – approx 5 – 8 miles



# 2011 Site Survey

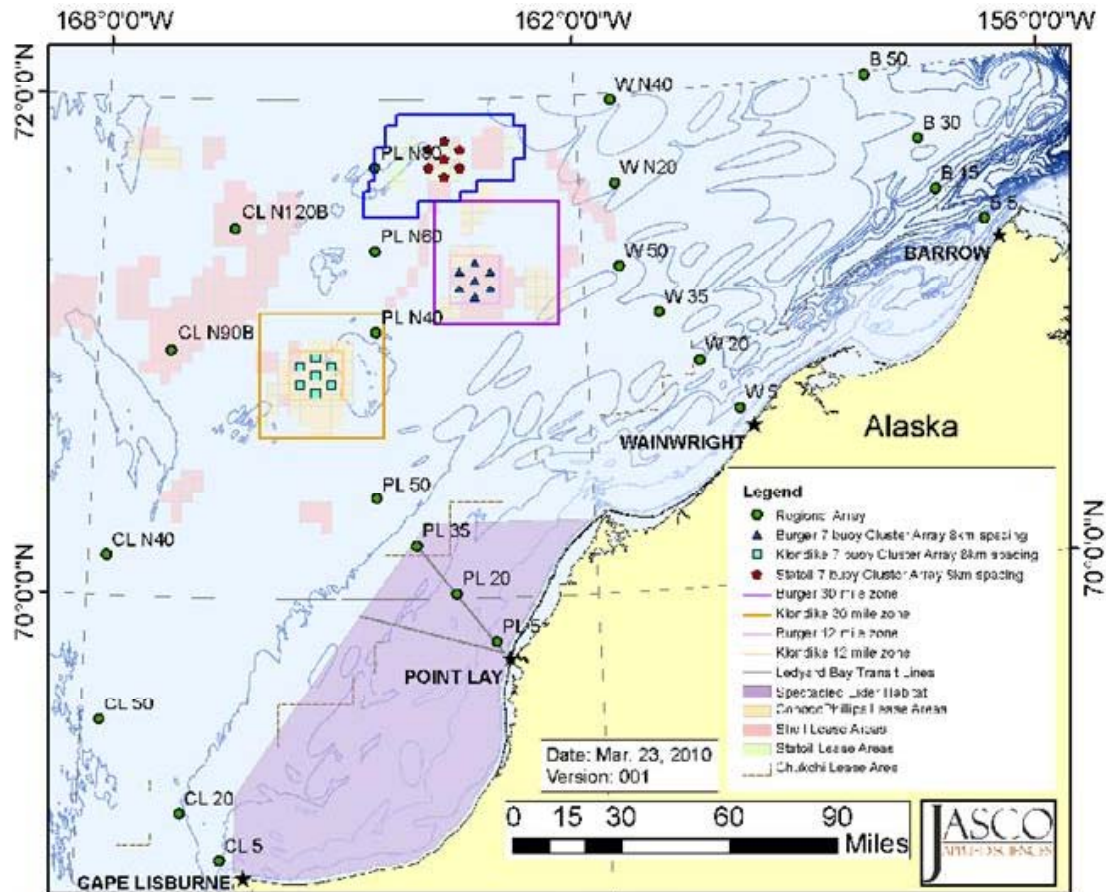
- Marine Mammal Observers (MMO's) on both vessels
  - Biologist and Inupiat MMO's for reporting of "takes":
    - 5 on Site Survey Vessel
    - 3 on Coring Vessel
- At least one Inupiat MMO per vessel



# Stakeholder Engagement

- **October and November, 2009**
    - Community and Leadership Meetings Barrow, Wainwright, Pt. Lay, Pt. Hope, and Kotzebue
  - **October and December, 2009**
    - December 2010**
      - NSB Planning Commission Meeting, NSB Wildlife Department meeting
  - **January, 2010**
    - Plan of Cooperation Meetings in Barrow, Wainwright, Pt. Lay, Pt. Hope
  - **February and December, 2010**
    - March 2011** – AEWC meeting
  - **April, 2010 and March, 2011**
    - Open Water Meeting
  - **April, 2010**
    - Meetings with marine mammal co-management groups
  - **October, 2010**
    - Beluga Committee Meeting
- 2009 – 2011** ongoing meetings with:
- Mayor Itta and the Mayor's office, and other stakeholders
  - Agencies: NMFS, MMS/BOEMRE, U.S. Fish and Wildlife Service, and EPA

# 2010 Science Survey



Operated by Olgoonik-Fairweather  
Sponsored by Shell, CPAI and Statoil

A snowy owl with white and brown mottled feathers is perched on a dark, textured ledge. The owl is looking towards the camera with its large yellow eyes. The background is dark and out of focus.

Quyanaqpak

Tusen takk

Thank you

Karin Berentsen  
kbe@statoil.com  
Tel. 907 444 3593  
www.statoil.com

Photo: Emily McCabe



## Meeting Posters

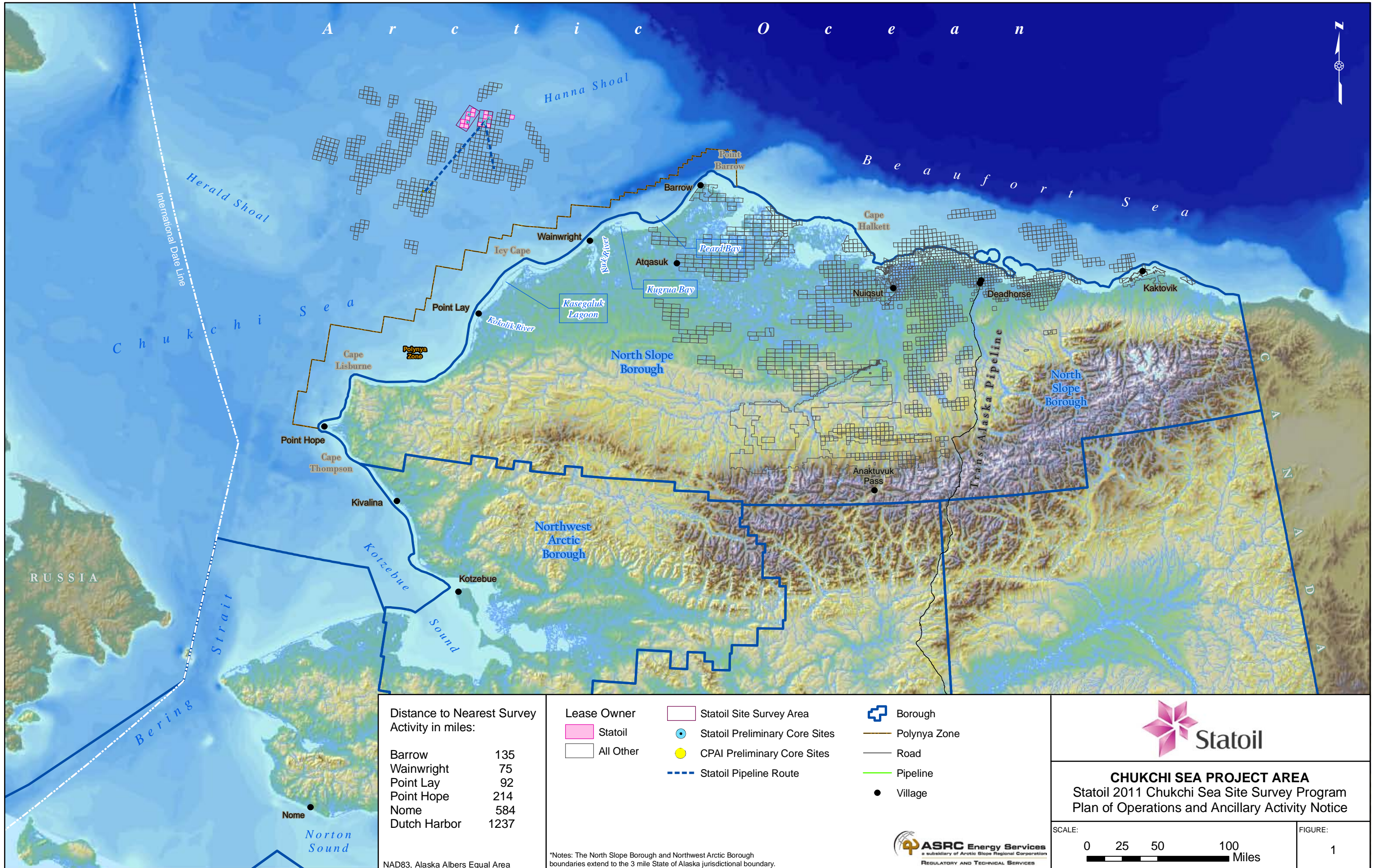
**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



Paġlagivsi  
Welcome  
Velkommen



**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



Distance to Nearest Survey Activity in miles:

Barrow	135
Wainwright	75
Point Lay	92
Point Hope	214
Nome	584
Dutch Harbor	1237

<b>Lease Owner</b>	Statoil Site Survey Area	Borough
Statoil	Statoil Preliminary Core Sites	Polynya Zone
All Other	CPAI Preliminary Core Sites	Road
	Statoil Pipeline Route	Pipeline
		Village

**CHUKCHI SEA PROJECT AREA**  
Statoil 2011 Chukchi Sea Site Survey Program  
Plan of Operations and Ancillary Activity Notice

SCALE:

FIGURE: 1

NAD83, Alaska Albers Equal Area

\*Notes: The North Slope Borough and Northwest Arctic Borough boundaries extend to the 3 mile State of Alaska jurisdictional boundary.

ASRC Energy Services  
a subsidiary of Arctic Slope Regional Corporation  
REGULATORY AND TECHNICAL SERVICES

# 2010 Vessel Transit Map



**M/V Geo Celtic**

Length: 330.7 feet  
 Breadth (max): 91.8 feet  
 Net Tonnage: 3,633 NT  
 Certified to Carry: 69 persons  
 Function: Seismic Vessel



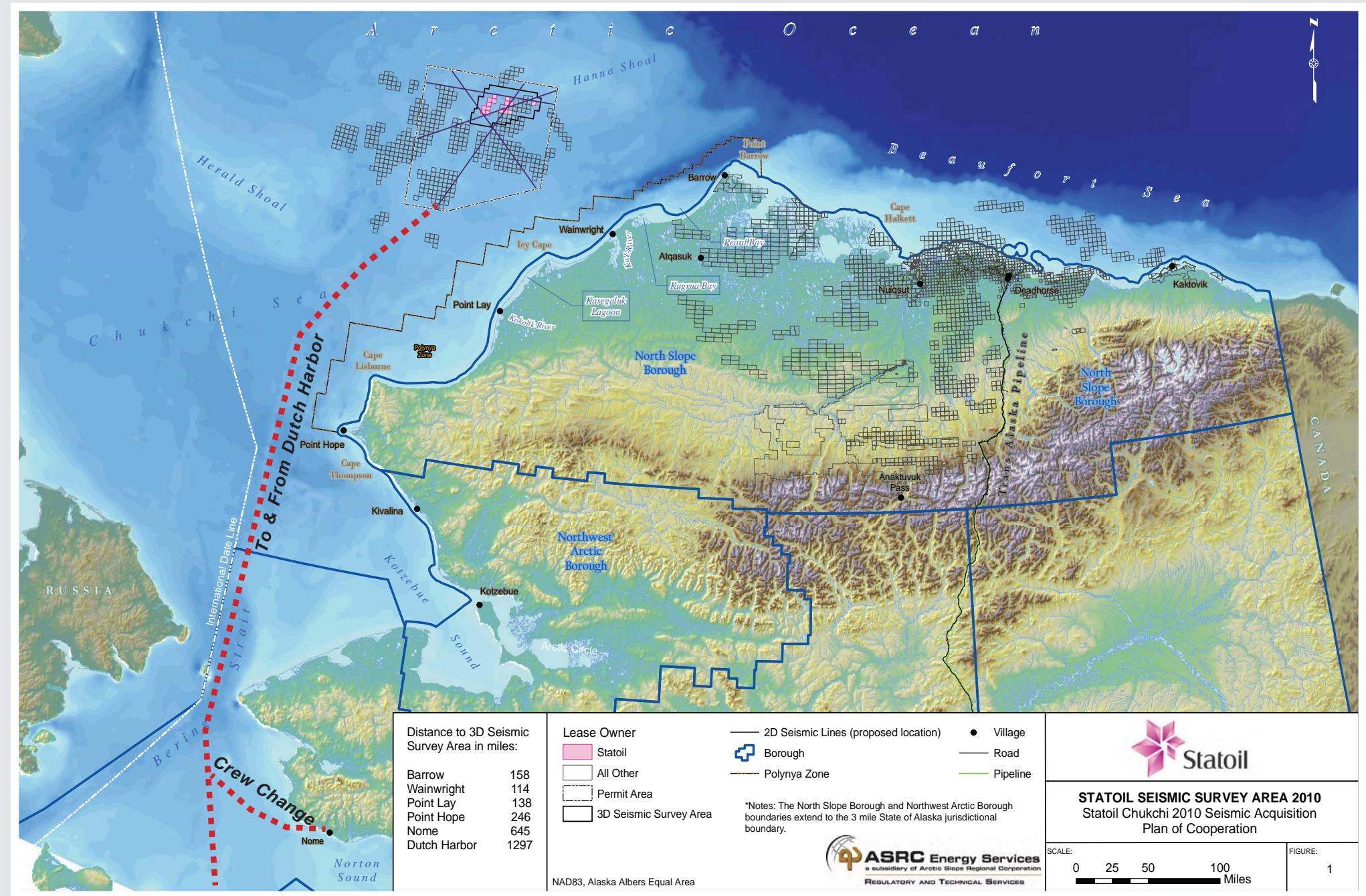
**RV Norseman**

Length: 108 feet  
 Beam: 28 feet  
 Net Tonnage: 133 NT  
 Certified to Carry: 28 persons  
 Function: Monitoring/Crew Transfer Vessel



**M/V Tanux I**

Length: 177 feet  
 Breadth: 45 feet  
 Net Tonnage: 1050 NT  
 Certified to Carry: 50 persons  
 Function: Chase/Monitoring Vessel



## DISTANCE TO 3D SEISMIC SURVEY AREA:

Barrow.....158 miles    Wainwright.....114 miles    Point Lay.....138 miles  
 Point Hope.....246 miles    Nome.....645 miles    Dutch Harbor.....1297 miles



# 2011 Vessel Transit Map



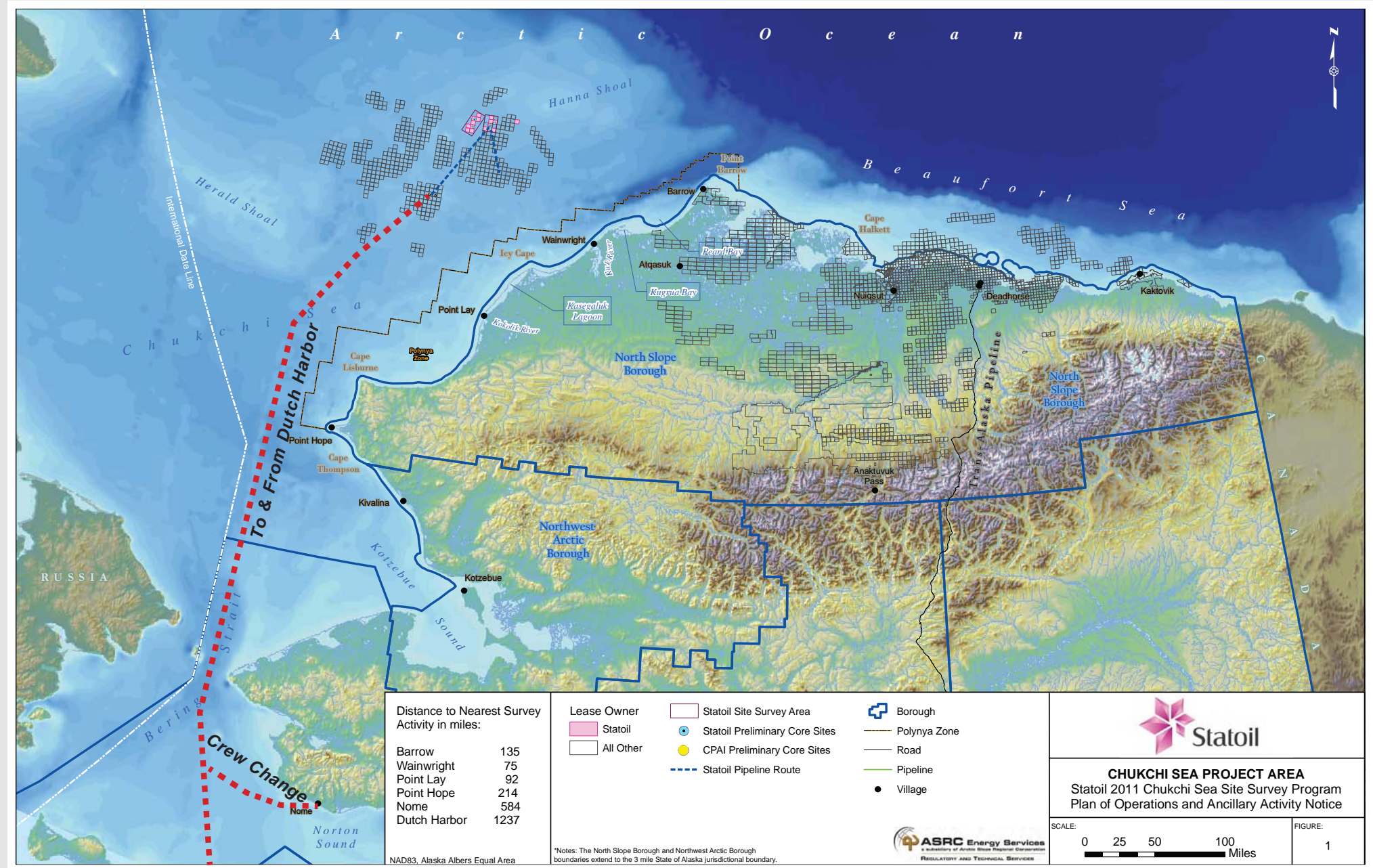
**M/V Fugro Synergy**

Length o.a.: 340 feet  
 Breadth moulded: 65 feet  
 Gross Tonnage: 5,200 t  
 Accommodations: 70 persons  
 Function: Multi-purpose geotechnical & soil investigation vessel



**M/V Duke**

Length: 219 feet  
 Beam: 43 feet  
 Net Tonnage: 610 NT  
 Accommodations: 50 persons  
 Function: Site Survey Vessel

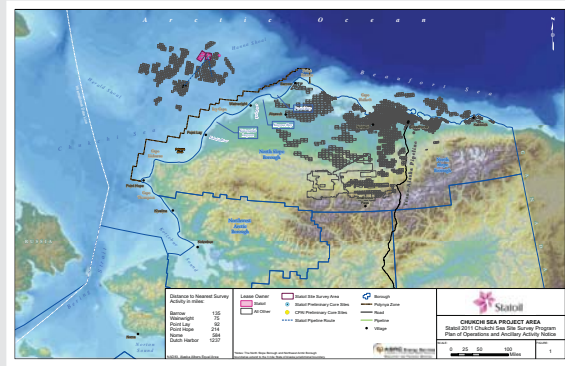


**DISTANCE TO SURVEY AREA:**

Barrow.....158 miles    Wainwright.....114 miles    Point Lay.....138 miles  
 Point Hope.....246 miles    Nome.....645 miles    Dutch Harbor.....1297 miles



# Measures to Reduce Impact



## Survey Area

The survey area is located far offshore (>100 miles).

Statoil will prepare a polar bear interaction plan that addresses food and waste management, personnel training, and safety and communication regarding polar bears.



## Ice Management

Ice conditions in the project area will be monitored during the survey in order to minimize survey time and activity close to the ice edge.



## Communication and Call Centers

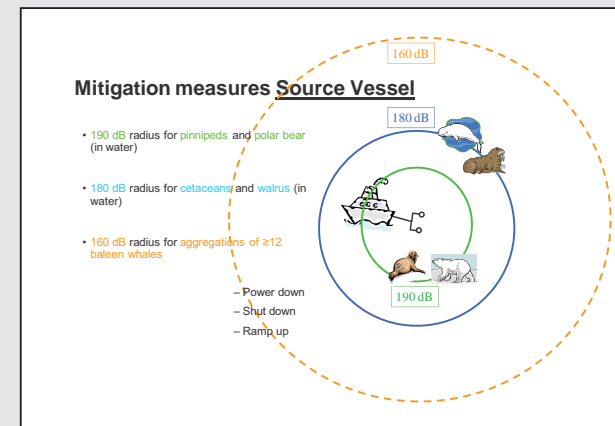
Statoil will operate communication protocols through Wainwright for emergency situations and cooperation with subsistence activities.



## Marine Mammal Monitoring

Vessels operated by Statoil will take every precaution to avoid harassment of marine mammals, including whales, seals, walrus or polar bears in the water when a vessel is operated near these animals.

- Marine Mammal Observers (MMOs) will be present on both vessels.
- Scientific and Inupiat MMOs
  - 5 on site survey vessel until mid-August, then possibly 3 or 4
  - 3 on soil sampling vessels



## Mitigation Procedures

- Establishment of safety radii through sound source verification test.
- In the established exclusion or safety zone, power down, shut down, and ramp-up procedures will be in place.

## Environmental & Baseline Science Surveys

Environmental baseline monitoring was operated by the local company Olgoonik-Fairweather and sponsored by Shell, CPAI, and Statoil. This includes:

- Seabed and water sampling and analysis over old drill sites.
- Fixed seabed acoustic recorders to monitor marine mammal activity in the Chukchi Sea.
- Ecological studies of Chukchi fish populations.

## **Appendix E**

### **Distribution List**

**THIS PAGE  
INTENTIONALLY  
LEFT BLANK**



Distribution: 1 copy each

**Borough Government Representatives**

Mayor Edward Itta  
North Slope Borough  
P.O. Box 69  
Barrow, AK 99723  
[edward.itta@north-slope.org](mailto:edward.itta@north-slope.org)

Taquilik Hepa  
NSB Wildlife Director  
P.O. Box 69  
Barrow, AK 99723  
[taquilik.hepa@north-slope.org](mailto:taquilik.hepa@north-slope.org)

Dan Forster  
NSB Planning Director  
P.O. Box 69  
Barrow, AK 99723  
[dan.forster@north-slope.org](mailto:dan.forster@north-slope.org)

Mayor Sikauruq Martha Whiting  
Northwest Arctic Borough  
P.O. Box 1110  
Kotzebue, AK 99752  
[mwhiting@nwabor.org](mailto:mwhiting@nwabor.org)

Marie Itta  
Assistant to Mayor  
North Slope Borough  
P.O. Box 69  
Barrow, AK 99723  
[marie.itta@north-slope.org](mailto:marie.itta@north-slope.org)

Herbert Kinneeveauk, Jr., President  
Tikigaq Corporation  
P.O. Box 9  
Point Hope, AK 99766  
[rock@tikigaq.com](mailto:rock@tikigaq.com)

Marie Tracey  
NSB Village Liaison  
P.O. Box 59012  
Point Lay, AK 99759  
[marie.tracey@north-slope.org](mailto:marie.tracey@north-slope.org)

Mayor Enoch Oktollik  
City of Wainwright  
P.O. Box 9  
Wainwright, AK 99782

**Native Village Representatives**

Caroline Cannon, President  
Native Village of Point Hope  
P.O. Box 109  
Point Hope, AK 99766  
[caroline.cannon@tikigaq.org](mailto:caroline.cannon@tikigaq.org)

Thomas Olemaun, President/Executive Director  
Native Village of Barrow  
P.O. Box 1130  
Barrow, AK 99723  
[tolemaun@nvb-nsn.gov](mailto:tolemaun@nvb-nsn.gov)

June Childress, President  
Wainwright Traditional Council/Olgoonik  
Corporation  
Wainwright, AK 99782  
[jchildress@olgoonik.com](mailto:jchildress@olgoonik.com)

Leo Ferrira, III, President  
Native Village of Point Lay  
P.O. Box 59  
Point Lay, Alaska 99759  
[sophie\\_henry\\_50@hotmail.com](mailto:sophie_henry_50@hotmail.com)

Cole Schaeffer, Executive Director  
Native Village of Kotzebue  
P.O. Box 296  
Kotzebue, Alaska 99752  
[linda.joule@qira.org](mailto:linda.joule@qira.org)

Lily Tuzroyluk, Executive Director  
Native Village of Point Hope  
P.O. Box 109  
Point Hope, AK 99766  
[Lilyh.tuzroyluk@tikigaq.org](mailto:Lilyh.tuzroyluk@tikigaq.org)

John Hopson, Jr., Member  
Olgoonik Corporation  
P.O. Box 29  
Wainwright, AK 99782  
[jhopson@ain.olgoonik.com](mailto:jhopson@ain.olgoonik.com)

Anthony Edwardsen, President  
Ukpeagvik Inupiat Corporation  
P.O. Box 890  
Barrow, AK 99723  
[aewardsen@ukpik.com](mailto:aewardsen@ukpik.com)

Mayor Acquilluk Hank  
City of Point Hope  
P.O. Box 169  
Point Hope, AK 99766

Dolly Norton, President  
Cully Corporation  
405 E. Fireweed Lane  
Anchorage, AK 99503  
[dnorton@cullycorp.com](mailto:dnorton@cullycorp.com)

Mayor Bob Harcharek  
City of Barrow  
P.O. Box 629  
Barrow, AK 99723  
[bob.harcharek@cityofbarrow.org](mailto:bob.harcharek@cityofbarrow.org)

### Marine Mammal Co-Management Groups

Harry Brower, Chairman  
Alaska Eskimo Whaling Commission  
P.O. Box 570  
Barrow, AK 99723  
[harry.brower@north-slope.org](mailto:harry.brower@north-slope.org)

Vera Metcalf, Executive Director  
Eskimo Walrus Commission  
P.O. Box 343  
Nome, AK 99762  
[whitefox@otz.net](mailto:whitefox@otz.net)

Johnny Aiken, Executive Director  
Alaska Eskimo Whaling Commission  
P.O. Box 570  
Barrow, AK 99723  
[aewcdir@gmail.com](mailto:aewcdir@gmail.com)

Price D. Leavitt Sr., Executive Director  
Inupiat Community of the Arctic Slope  
P.O. Box 1121  
Barrow, AK 99723  
[Icas.executive@barrow.com](mailto:Icas.executive@barrow.com)

Willie Goodwin  
Alaska Beluga Whale Committee  
P.O. Box 334  
Kotzebue, AK 99752  
[argagiaq@gmail.com](mailto:argagiaq@gmail.com)

Doreen Lampe, President  
Inupiat Community of the Arctic Slope  
P.O. Box 1121  
Barrow, AK 99723  
[Icas.executive@barrow.com](mailto:Icas.executive@barrow.com)

John Goodwin  
Alaska Ice Seal Committee  
P.O. Box 413  
Kotzebue, AK 99752  
[jgoodwin@otz.net](mailto:jgoodwin@otz.net)

Charles Johnson, Executive Director  
Nanuuq Commission  
P.O. Box 946  
Nome, AK 99762  
[cj.aknanuuq@alaska.com](mailto:cj.aknanuuq@alaska.com)

### Federal Agencies

Craig Perham  
U.S. Fish and Wildlife Service  
1011 E. Tudor Road  
Anchorage, AK 99503  
[Craig\\_Perham@fws.gov](mailto:Craig_Perham@fws.gov)

Candace Nachman  
National Marine Fisheries Service  
1315 East West Highway  
Silver Spring, MD 20910  
[candace.nachman@noaa.gov](mailto:candace.nachman@noaa.gov)

Howard Goldstein  
National Marine Fisheries Service  
1315 East West Highway  
Silver Spring, MD 20910  
[howard.goldstein@noaa.gov](mailto:howard.goldstein@noaa.gov)

James H. Lecky  
National Marine Fisheries Service  
1315 East West Highway  
Silver Spring, MD 20910  
[jim.lecky@noaa.gov](mailto:jim.lecky@noaa.gov)

P. Michael Payne  
National Marine Fisheries Service  
1315 East West Highway  
Silver Spring, MD 20910  
[michael.payne@noaa.gov](mailto:michael.payne@noaa.gov)

Brad Smith  
National Marine Fisheries Service  
222 W. 7<sup>th</sup> Ave  
P.O. Box 43  
Anchorage, AK 99512-7577  
[brad.smith@noaa.gov](mailto:brad.smith@noaa.gov)

Rance Wall, Regional Supervisor  
Bureau of Ocean Energy Management, Regulation  
and Enforcement  
3801 Centerpoint Drive, Suite 500  
Anchorage, Alaska 99503-5820  
[rance.wall@mms.gov](mailto:rance.wall@mms.gov)

Pete Sloan, Alaska Region Resource Evaluation  
G & G Permit Coordinator  
Bureau of Ocean Energy Management, Regulation  
and Enforcement  
3801 Centerpoint Drive, Suite 500  
Anchorage, AK 99503-5820  
[pete.sloan@mms.gov](mailto:pete.sloan@mms.gov)

Dan Hartung, Regulatory Analyst  
Bureau of Ocean Energy Management, Regulation  
and Enforcement  
3801 Centerpoint Drive, Suite 500  
Anchorage, Alaska 99503-5820  
[dan.hartung@mms.gov](mailto:dan.hartung@mms.gov)

Shane Guan  
National Marine Fisheries Service  
1315 East West Highway  
Silver Spring, MD 20910  
[shane.guan@noaa.gov](mailto:shane.guan@noaa.gov)

Hanh Shaw, NEPA Compliance  
U.S. Environmental Protection Agency  
1200 Sixth Avenue, Suite 900  
Seattle, Washington 98101

Joel Garlic-Miller  
US Fish and Wildlife Service  
1011 E. Tudor Road  
Anchorage, AK 99503  
[Joel\\_GarlichMiller@fws.gov](mailto:Joel_GarlichMiller@fws.gov)

Caren Mathis, Senior Project Manager  
ASRC Energy Services  
2700 Gambell Street, Suite 200  
Anchorage, AK 99503  
[caren.mathis@asrcenergy.com](mailto:caren.mathis@asrcenergy.com)

Project File  
Administrative Record

QUALITY CONTROL REVIEWER

  
Jennifer Tobey  
Associate Scientist