



Plan of Cooperation 2013 Proposed Open Water Marine Surveys Program 2013 Chukchi Sea, Alaska

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ACRONYMS & ABBREVIATIONS

4MP	Marine Mammal Monitoring and Mitigation Plan
AEWC	Alaska Eskimo Whaling Commission
ASRC	Arctic Slope Regional Corporation
BOEM	Bureau of Ocean Energy Management
BOP	Blowout Preventer
CAA	Conflict Avoidance Agreement
CFR	Code of Federal Regulations
COCP	Critical Operations and Curtailment Plan
Com Centers	Communication and Call Centers
EA	Environmental Assessment
EP	Approved Camden Bay Exploration Plan
EPA	U.S. Department of Interior, Environmental Protection Agency
ft	foot/feet
ICAS	Inupiat Community of the Arctic Slope
IHAA	Incidental Harassment Authorization Application
IHA	Incidental Harassment Authorization
IMP	Ice Management Plan
in.	inch/inches
km	kilometer/kilometers
LCMF	LCMF Corporation, a division of Ukpeagvik Iñupiat Corporation
LOA	Letter of Authorization
m	meter/meters
mi	statute mile/miles
min	minutes
M/V	Motor Vessel
NMFS	National Marine Fisheries Service
NSB	North Slope Borough
NWAB	Northwest Arctic Borough
OCS	Outer Continental Shelf

ODPCP	Oil Discharge Prevention and Contingency Plan
OSR	oil spill response
POC	Plan of Cooperation
PSO	Protected species observer
SA	Subsistence Advisor
Shell	Shell Offshore Inc.
UIC	Ukpeagvik Iñupiat Corporation
USFWS	United States Fish and Wildlife Service

1.0 INTRODUCTION

Shell plans to complete geophysical surveys (aka Open Water Marine surveys), during the 2013 open water season in the Chukchi Sea from a single vessel. Equipment recovery and maintenance activity at Burger A will be conducted from a separate vessel, while a third vessel may be used to provide logistical support to either and/or both operations. Aircraft may be utilized for vessel support. Shell's surveys and other work are discussed as:

- Chukchi Sea Offshore Ice Gouge Surveys;
- Chukchi Sea Offshore Site Clearance and Shallow Hazards Survey; and
- Equipment Recovery and Maintenance

Location maps that show areas proposed for geophysical surveys are included as Figures 1 and 2. Figure 3 cites the location of the equipment recovery and maintenance in the Chukchi Sea.

Ice and weather conditions will influence when and where the open water marine surveys will be conducted. For initial planning purposes, Shell anticipates that the offshore geophysical surveys and equipment recovery and maintenance will be conducted within the time frame of July through October 2013.

BOEM Lease Sale 193 Stipulation No. 5 (see Attachment A), requires that all exploration operations be conducted in a manner that prevents unreasonable conflicts between oil and gas exploration activities and subsistence resources and activities. This stipulation also requires adherence to United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) regulations, which require an operator to implement a POC to mitigate the potential for conflicts between the proposed activity and traditional subsistence activities (50 Code of Federal Regulations [CFR] § 18.124(c)(4) and 50 CFR § 216.104(a)(12)). This POC documents meetings undertaken specifically to inform the stakeholders of the geophysical and geotechnical surveys and obtain their input.

The POC identifies the measures that Shell has developed in consultation with North Slope communities and subsistence user groups and will implement during its planned geophysical and geotechnical surveys to minimize any adverse effects on the availability of marine mammals for subsistence uses. In addition, the POC details Shell's communications and consultations with local communities concerning its geophysical and geotechnical surveys, potential conflicts with subsistence resources and hunting activities, and means of resolving any such conflicts (50 CFR § 18.128(d) and 50 CFR § 216.104(a) (12) (i), (ii), (iv)). Shell has documented its contacts with North Slope communities, as well as the substance of its communications with subsistence stakeholder groups. Tables summarizing Shell's communications, and responses thereto, are included in Attachment B. This POC may be supplemented, as appropriate, to reflect additional engagements with local subsistence users and any additional or revised mitigation measures that are adopted as a result of those engagements.

2.0 POC LEASE STIPULATION AND REGULATORY REQUIREMENTS

BOEM Lease Sales 193 Stipulation No. 5 (in Attachment A) requires that all exploration operations be conducted in a manner that prevents unreasonable conflicts between oil and gas activities and subsistence resources and subsistence hunting activities of the residents of the North Slope. Specifically, Stipulation No. 5 requires the operator to consult directly with potentially affected North Slope subsistence communities, the North Slope Borough (NSB), and the Alaska Eskimo Whaling Commission (AEWC).

Consultation is needed “to discuss potential conflicts with the siting, timing, and methods of proposed operations and safeguards or mitigating measures which could be implemented by the operator to prevent unreasonable conflicts.” Stipulation No. 5 also requires the operator to document its contacts and the substance of its communications with subsistence stakeholder groups during the operator’s consultation process.

The requirements of Stipulation No. 5 parallel requirements for receipt of a USFWS Letter of Authorization (LOA) and a NMFS Incidental Harassment Authorization (IHA). The LOA and IHA provide authorization for the nonlethal harassment of species protected by the Marine Mammal Protection Act. Both the USFWS and NMFS require an applicant to implement a POC to mitigate the potential for conflicts between the proposed activity and traditional subsistence activities (50 CFR § 18.124(c)(4) and 50 CFR § 216.104(a)(12)). The POC must identify the measures that will be taken to minimize any adverse effects on the availability of marine mammals for subsistence uses. In addition, both USFWS and NMFS require an applicant to communicate and consult with local subsistence communities concerning the proposed activity, potential conflicts with subsistence activities, and means of resolving any such conflicts (50 CFR § 18.128(d) and 50 CFR § 216.104(a) (12) (i), (ii), (iv)).

Figure 1 Location Map for Chukchi Sea Offshore Ice Gouge Surveys

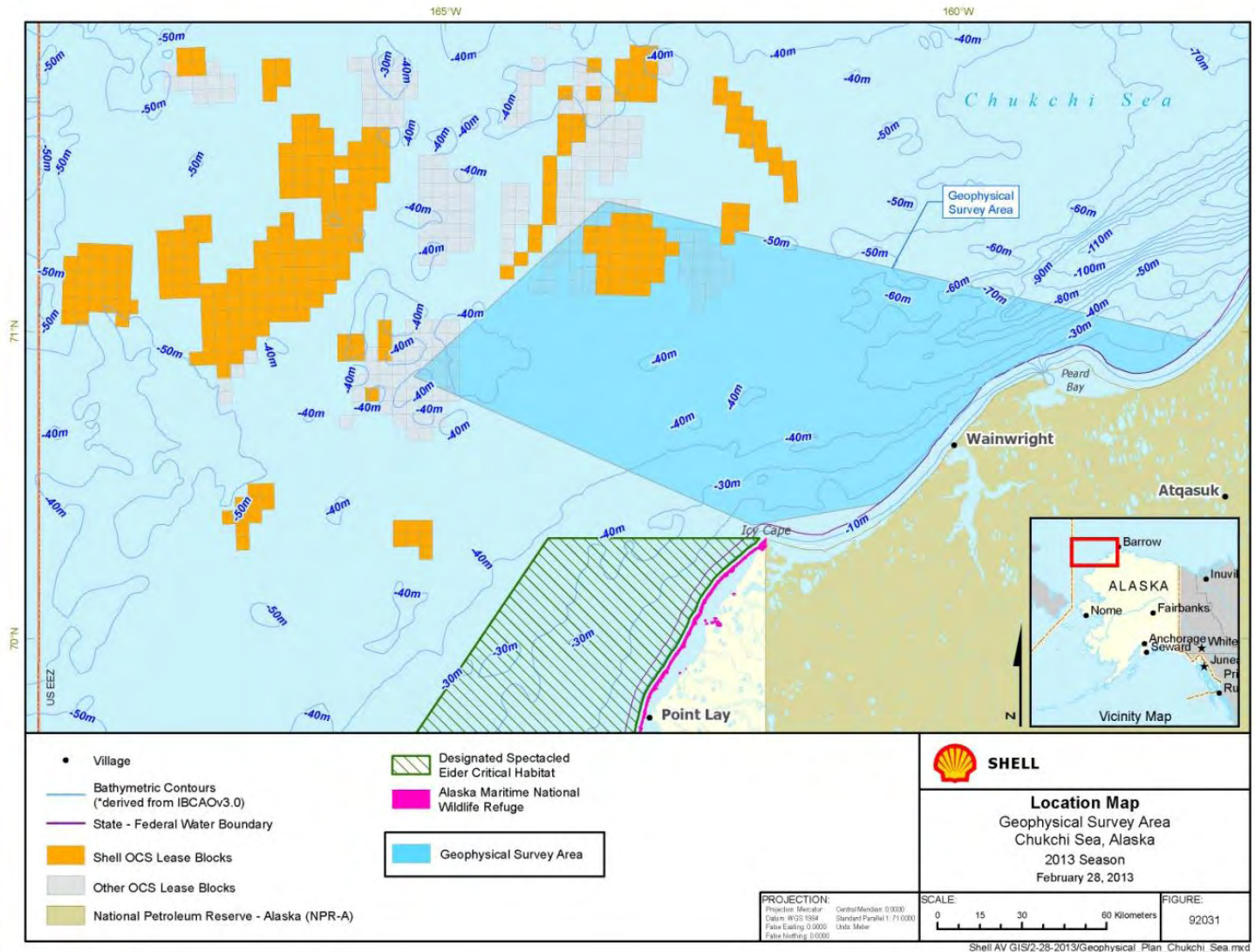


Figure 2 Location Map for Chukchi Sea Site Clearance and Shallow Hazards Surveys (Survey Area 1: Crackerjack; Survey Area 2: Burger; Survey Area 3: Northeast of Burger)

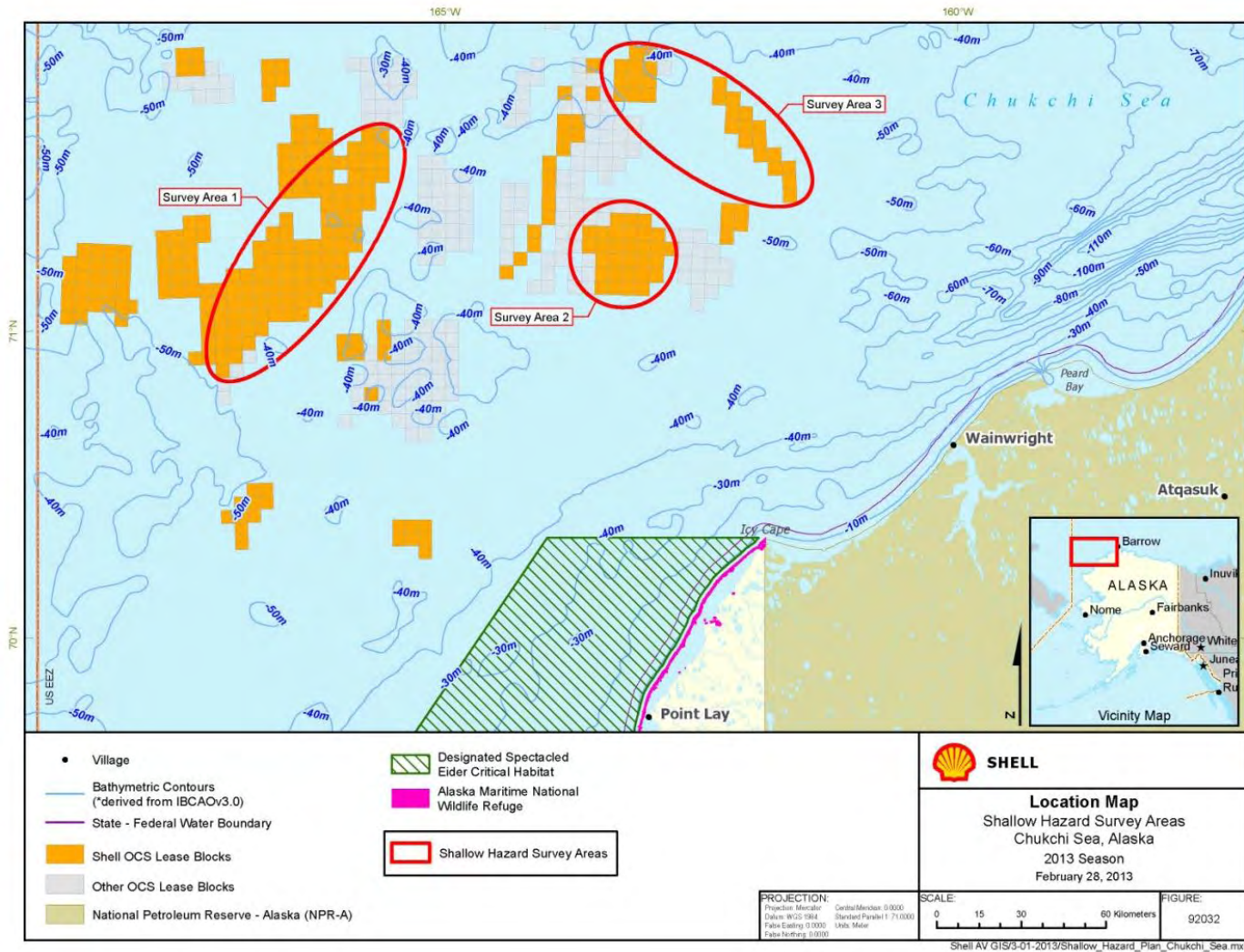
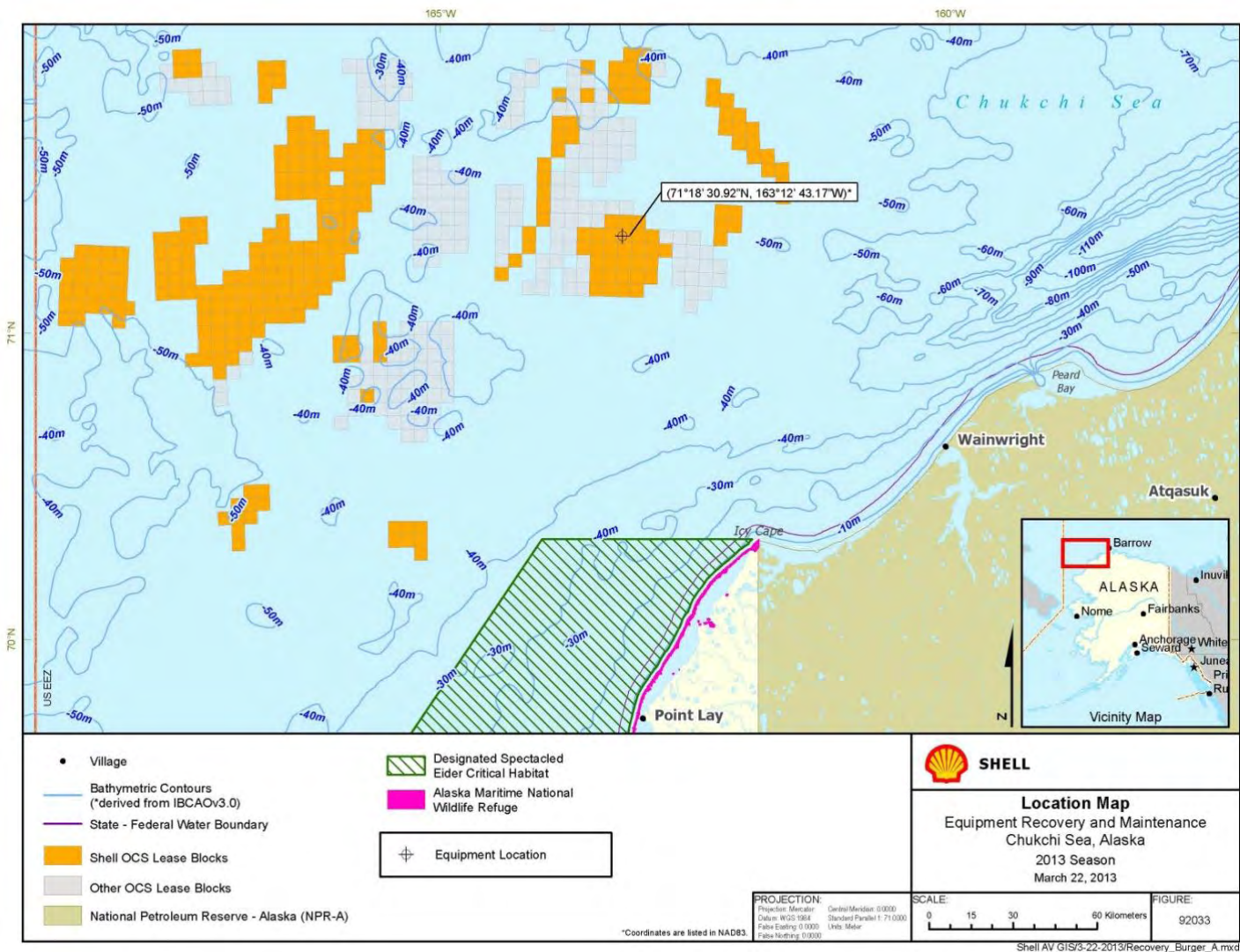


Figure 3 Location Map for Chukchi Sea Equipment Recovery and Maintenance



3.0 MEASURES IN PLACE

The following mitigation measures, plans and programs, are integral to this POC and were developed during consultation with potentially affected subsistence groups, communities, and the NSB. These measures, plans, and programs will be implemented by Shell during its geophysical surveys and equipment recovery and maintenance activity in the Chukchi Sea to monitor and mitigate potential impacts to subsistence users and resources. These measures are documented in the following sections:

- Mitigation Measures;
- Marine Mammal Monitoring and Mitigation Program (4MP); and
- Interaction and Avoidance Plan for Polar Bear and Pacific Walrus.

3.1 Geophysical Surveys and Equipment Recovery and Maintenance Activity Mitigation Measures

The mitigation measures Shell has adopted and will implement during its geophysical surveys and equipment recovery and maintenance activity are listed and discussed below. These mitigation measures reflect Shell's experience conducting exploration activities in Alaska since 2006 and its ongoing consultations with local subsistence communities to better understand their concerns and develop appropriate and effective mitigation measures to address those concerns. Shell's planned mitigation measures have been presented to community leaders and subsistence user groups starting in 2009 and have evolved since in response to comments and concerns expressed during the consultation process. Some mitigation measures appear under more than one sub-heading below, since they are pertinent to more than one "category" of mitigation measures.

3.1.1 Subsistence Mitigation Measures

Shell will implement the following mitigation measures to ensure coordination of its activities with local subsistence users to minimize further the risk of impacting marine mammals and interfering with the subsistence hunt.

Communication, Vessel and Aircraft Travel:

- During transit north to begin the surveys, Shell will notify the local communities of the transit route through the Communication and Call Centers (Com Centers).
- Vessels underway will alter course to avoid impacts to marine mammals including possible collisions, stampeding, and exclusion from access to critical resources.
- Shell has developed a Communication Plan (See Attachment C) and will coordinate activities with local subsistence users as well as Village Whaling Associations in order to minimize the risk of interfering with subsistence hunting activities, and keep current as to the timing and status of the bowhead whale migration, as well as the timing and status of other subsistence hunts. The Communication Plan includes procedures for coordination with Com Centers to be located in coastal villages along the Chukchi Sea during Shell's proposed activities.
- Shell will fund the operation of Com Centers in the coastal villages to enable communications between Shell operations and vessels, local subsistence users, and Subsistence Advisors (SAs), thereby notifying the subsistence community of any vessel transit route changes and avoiding conflicts with subsistence activities.
- Shell will employ local SAs from Chukchi Sea villages to provide consultation and guidance regarding the whale migration and subsistence hunt. The SAs will use local knowledge

(Traditional Knowledge) to gather data on subsistence lifestyle within the community and provide advice on ways to minimize and mitigate potential negative impacts to subsistence resources during the drilling and survey season. Responsibilities include reporting any subsistence concerns or conflicts; coordinating with subsistence users; reporting subsistence-related comments, concerns, and information; and advising how to avoid subsistence conflicts. They will work approximately 8-hours per day and 40-hour weeks. SAs must be from a native village located on the North Slope, speak and understand Inupiaq and must have knowledge of subsistence practices for the area. After the initial recruitment and selection of potential candidates, the hiring process will consist of a two-part interview. During the first interview a full description of the job will be given including the schedule, type of work, conditions, and requirements (including drug testing, orientation, and specialized training). The second interview will assess the candidate's previous employment, subsistence hunting experience, communication skills and ensure they have good social skills. Each SA will be based out of their home village and will be given a SA handbook. The SA handbook will give an overview of the program, program objectives, discusses recruitment, hiring, and certification, and details the SA's responsibilities. The handbook will include several forms that the SA will be using along with a Traditional Knowledge Questionnaire and subsistence use maps. The handbook will provide the SA with the information needed to identify situation they are to be alert for, their responsibilities and their authorities.

- Aircraft, should any be used in support of crew changes for these surveys, shall not operate below 1,500 ft (457 m) unless the aircraft is engaged in marine mammal monitoring, approaching, landing or taking off, in poor weather (fog or low ceilings) in an emergency situation.

3.1.2 Marine Mammal Mitigation Measures

Marine mammal mitigation measures will utilize PSOs to ensure that the geophysical surveys and equipment recovery and maintenance vessel activities do not disturb marine mammal resources and avoid unreasonable interference with the subsistence hunt of those resources. PSOs will be stationed on the geophysical and equipment recovery and maintenance activity vessels to monitor the exclusion zone (areas within isopleths of certain sound levels for different species) for marine mammals. For the vessels in transit, if a marine mammal is sighted from a vessel within its respective safety radius, the vessel will reduce activity (e.g., reduce speed and/or change course) and noise level to ensure that the animal is not exposed to sound above their respective safety levels. Full activity will not be resumed until all marine mammals are outside of any relevant, regulatory exclusion zone and there are no other marine mammals likely to enter any such exclusion zone.

If anchored, the vessel will remain at anchor and continue ongoing operations if approached by a marine mammal. The anchored vessel will remain in place and continue ongoing operations to avoid possibly causing avoidance behavior by suddenly changing noise conditions.

For complete PSO protocol refer to the 4MP.

In addition to the use of PSOs, Shell will implement the following measures to avoid disturbances to marine mammals that potentially could rise to the level of incidental take, and ensure coordination of its activities with local subsistence users to minimize further the risk of impacting marine mammals and interfering with the subsistence hunt.

Vessel and Aircraft Travel:

- A 4MP protocol.
- Aircraft will not operate within 1,500 ft (457 m) of whale groups.

- Aircraft and vessels will not operate within 0.5 mi (0.8 km) of walrus or polar bears when observed on water or ice, nor within 0.5 mi (0.8 km) of polar bears and 1.0 mi (1.6 km) of walrus on land. Due to their importance as polar bear summer resting habitat, flight paths for aircraft will be offset from the coastlines of Chukchi Sea barrier islands by at least 0.5 mile (0.8 km) and 1,500 ft above ground level.
- When within 900 ft (274 m) of whales, vessels will reduce speed to less than 5 knots, avoid separating members from a group defined as being three or more whales observed within a 1,640 ft (500 m) area displaying behaviors of directed or coordinated activity (e.g., group feeding) and avoid multiple course changes.
- Vessel speed to be reduced during inclement weather conditions in order to avoid collisions with marine mammals.
- Aircraft shall not operate below 1,500 ft (457 m) unless the aircraft is engaged in marine mammal monitoring, approaching, landing or taking off, in poor weather (fog or low ceilings) in an emergency situation.
- Shell will also implement non-PSO flight restrictions, should any be used in support of crew changes for these surveys, prohibiting aircraft from flying within 1,000 ft (300 m) of marine mammals or below 1,500 ft (457 m) altitude (except during takeoffs and landings or in emergency situations) while over land or sea. This flight will also help avoid disturbance of and collisions with birds.
- All transit will be coordinated and collaborated with Com Centers as practicable.

3.2 Marine Mammal Monitoring and Mitigation Program

Under 50 CFR 218.108, NMFS requires any holder of an IHA in Arctic waters to complete monitoring and reporting requirements established in the IHA and published regulations. Additionally, the USFWS requires all applicants for LOAs to conduct monitoring under 50 CFR 18.128, and BOEM requires an industry bowhead whale monitoring program under Stipulation 4 of Lease Sale 193. To meet these requirements, a 4MP was developed for the geophysical surveys. The 4MP is designed to avoid, minimize, and mitigate potential adverse impacts to marine mammal subsistence resources that may result from offshore activities. The 4MP for Shell's geophysical surveys and equipment recovery and maintenance activity has been sent to NMFS along with the surveys IHA application, to the USFWS along with an LOA application, and to BOEM. The 4MP includes the following provisions:

- PSOs – PSOs will support the geophysical survey and equipment recovery and maintenance activity vessels while in transit and all during operations in the Chukchi Seas. The shipboard PSO program is designed to provide real time observations of marine mammals by trained observers from individual vessels to document exposure to industrial activities. PSOs will be present on the geophysical survey and equipment recovery and maintenance activity vessels to monitor for the presence of marine mammals, assist maintenance of marine mammal safety radii and exclusion zones around the vessels, monitor and record avoidance or exposure behaviors, and communicate with the Com Centers and local subsistence hunters by marine radio. The experience and abilities of the NSB residents in sighting and identifying marine mammals during Shell's exploration programs contributed significantly to the success of Shell's previous monitoring and mitigation program.
- Acoustic Recorders – A combination of recorder technology, such as pop-up or Directional Autonomous Seafloor Acoustic Recorder buoys, to monitor wide area distribution of marine mammals, specifically bowhead whales, in relation to Shell's proposed activities.

3.3 Interaction and Avoidance Plan for Polar Bear and Pacific Walrus

Shell has prepared an interaction and avoidance plan for polar bear and Pacific walrus to meet the requirements of 50 CFR 18.128 for holders of LOAs issued by the USFWS. The plan outlines procedures for mitigating potential impacts to polar bear and Pacific walrus, as well as monitoring program requirements. Measures in the plan which cover all Shell activities are summarized here.

- New polar bear dens, identified by industry, local residents, and regulatory agencies are reported annually and will be incorporated into project plans to ensure both bear and worker safety. Bear dens discovered during operations will be reported to the designated USFWS representatives.
- Trash will be collected and separated so that all food-associated waste is placed in an appropriate bear-resistant dumpster.
- Hazardous wastes, if generated, would be transported off-site for disposal at an approved facility.
- Employees will be prohibited from directly feeding animals or deliberately leaving food for polar bears and other animals.
- If a polar bear is observed, all on-site personnel will be alerted so that work activities can be altered or stopped to avoid interactions. Personnel will contact the designated USFWS representative whenever a polar bear is sighted. Depending on the distance between the polar bear and the activities this may mean retreating to the safety of vehicles, emergency shelter, temporary buildings, or other safe haven.
- When a polar bear is observed, a designated bear watcher will be assigned to ensure continuous monitoring of the bear's movements. The On-Scene Shell Supervisor will be contacted before any bear hazing activities. Trained polar bear hazers and bear guards will support field operations.
- Vessels will observe a 0.5 mi (0.8 km) exclusion zone around any polar bear observed on water, land or ice, walruses on water or ice, but 1.0 mi (1.6 km) of walruses observed on land during transit. Due to their importance as polar bear summer resting habitat, flight paths for aircraft will be offset from the coastlines of Chukchi Sea barrier islands by at least 0.5 mile (0.8 km) and 1,500 ft above ground level.
- Aircraft will maintain 1,500 ft (457 m) minimum altitude within 0.5 mi (0.8 km) of polar bears on ice or land and walruses on ice, but 1.0 mi (1.6 km) of walruses hauled out on land. Helicopters will maintain 3,000 (914 m) minimum altitude within 1.0 mi (1.6 km) of walruses hauled out on land.
- Polar bear monitoring, reporting, and survey activities will be conducted in accordance with those outlined in 78 FR 35364.

4.0 AFFECTED SUBSISTENCE COMMUNITY MEETINGS

Affected subsistence communities that were consulted in October and November 2012 and May 2013 regarding Shell's geophysical surveys and equipment recovery and maintenance activity include Barrow, Nuiqsut, Kaktovik, Wainwright, and Point Lay. Additionally, Shell met with the NSB Assembly. During the May 2013, Shell revisited Chukchi Sea communities (see Table 4.2-1) to communicate revisions to Shell's 2013 open water marine surveys program. A Shell contracted aircraft was not able to land at Wainwright during this May trip, due to the soft condition of the airstrip. Shell will engage with Wainwright independent of this last POC trip.

4.1 Community Meeting Summaries

Table 4.2-1 provides a list of public meetings attended by Shell while developing this POC. Comment analysis tables for these meetings summarize feedback from the communities on Shell’s planned geophysical surveys and equipment recovery and maintenance activity activities. These comments analysis tables, with responses from Shell and corresponding mitigation measures pertinent to the comment are included in Attachment B. Presentation materials are also present in Attachment B.

Table 4.2-1 POC Meeting Dates and Locations

2012	Meeting Location	Meeting Attendees – Position
23 October	Point Lay	Plan of Cooperation Community Meeting
24 October	Wainwright	Plan of Cooperation Community Meeting
26 October	Kaktovik	Plan of Cooperation Community Meeting
29 October	Barrow	Plan of Cooperation Community Meeting
30 October	Nuiqsut	Plan of Cooperation Community Meeting
6 November	Barrow	NSB Assembly Workshop Meeting
2013		
20 May	Point Lay	Plan of Cooperation Community Meeting
21 May	Point Hope	Plan of Cooperation Community Meeting
22 May	Barrow	Plan of Cooperation Community Meeting
23 May	Wainwright	Postponed byShell due to runway conditions
29 May	Kaktovik	Plan of Cooperation Community Meeting

4.2 Project Information and Presentation Materials

To present consistent and concise information regarding the planned geophysical surveys and equipment recovery and maintenance activity, Shell prepared presentation materials summarizing the proposed activities for 2013, including these surveys. The slides applicable to these surveys are attached in Attachment B.

4.3 Meeting Process

Prior to Shell’s public meetings, meeting notices and flyers were sent to each of the communities. Announcements of Shell meetings were also transmitted by VHF radio to all the communities.

Community meetings are designed to allow the public to voice their concerns and speak one-on-one with project experts. Comment cards with a Shell return address were left with the communities and a toll free phone number and e-mail address were provided in case questions arose after the meeting. Food was provided and door prizes were given out to create a friendly environment and encourage attendance. Every effort was made to ensure the maximum amount of feedback was received and that all questions were addressed and answered to the fullest extent possible.

After each meeting, comment cards were gathered and compiled in a comment analysis table. A separate comment analysis table was completed for each POC meeting, the NSB Assembly Meeting, and each community meeting. These tables are included in Attachment B.

5.0 CONCLUSION

As discussed in Section 4, and detailed in the documents attached here, stakeholders have been provided information relevant to the project and have been invited to offer input on potential environmental, social, and health impacts, as well as and proposed mitigation and conflict avoidance measures. Shell is seeking alignment with stakeholders and, where appropriate and feasible, will incorporate the recommendations of stakeholders into project planning.

As required by applicable lease sale stipulations, as well as anticipated IHA and LOA stipulations, Shell will continue to meet with the affected subsistence communities and users to resolve any conflicts and to notify the communities of any changes in its planned operations. This POC may be supplemented, as appropriate, to reflect additional engagements with local subsistence users and any additional or revised mitigation measures that are adopted as a result of those engagements. Shell respectfully submits that this POC meets its obligations under Stipulation No. 5, as well as the POC requirements established by applicable USFWS and NMFS regulations (50 CFR 216.104, 50 CFR 18.124 and 128).

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Attachment A
OCS Lease Sale 202 Stipulations

Leasing Activities Information



U.S. Department of the Interior
Minerals Management Service
Alaska OCS Region

Lease Stipulations

Oil and Gas Lease Sale 202 Beaufort Sea April 18, 2007

- Stipulation No. 1. Protection of Biological Resources
- Stipulation No. 2. Orientation Program
- Stipulation No. 3. Transportation of Hydrocarbons
- Stipulation No. 4. Industry Site-Specific Bowhead Whale-Monitoring Program
- Stipulation No. 5. Conflict Avoidance Mechanisms to Protect Subsistence Whaling and Other Subsistence-Harvesting Activities
- Stipulation No. 6. Pre-Booming Requirements for Fuel Transfers
- Stipulation No. 7. Lighting of Lease Structures to Minimize Effects to Spectacled and Steller's Eider

Stipulation No. 1. Protection of Biological Resources. If biological populations or habitats that may require additional protection are identified in the lease area by the Regional Supervisor, Field Operations (RS/FO), the RS/FO may require the lessee to conduct biological surveys to determine the extent and composition of such biological populations or habitats. The RS/FO shall give written notification to the lessee of the RS/FO's decision to require such surveys.

Based on any surveys that the RS/FO may require of the lessee or on other information available to the RS/FO on special biological resources, the RS/FO may require the lessee to:

- (1) Relocate the site of operations;
- (2) Establish to the satisfaction of the RS/FO, on the basis of a site-specific survey, either that such operations will not have a significant adverse effect upon the resource identified or that a special biological resource does not exist;
- (3) Operate during those periods of time, as established by the RS/FO, that do not adversely affect the biological resources; and/or
- (4) Modify operations to ensure that significant biological populations or habitats deserving protection are not adversely affected.

If any area of biological significance, should be discovered during the conduct of any operations on the lease, the lessee shall immediately report such findings to the RS/FO and make every reasonable effort to preserve and protect the biological resource from damage until the RS/FO has given the lessee direction with respect to its protection.

The lessee shall submit all data obtained in the course of biological surveys to the RS/FO with the locational information for drilling or other activity. The lessee may take no action that might affect the biological populations or habitats surveyed until the RS/FO provides written directions to the lessee with regard to permissible actions.

Stipulation No. 2. Orientation Program. The lessee shall include in any exploration or development and production plans submitted under 30 CFR 250.201 a proposed orientation program for all personnel involved in exploration or development and production activities (including personnel of the lessee's agents, contractors, and subcontractors) for review and approval by the RS/FO. The program shall be designed in sufficient detail to inform individuals working on the project of specific types of environmental, social, and cultural concerns that relate to the sale and adjacent areas. The program shall address the importance of not disturbing archaeological and biological resources and habitats, including endangered species, fisheries, bird colonies, and marine mammals and provide guidance on how to avoid disturbance. This guidance will include the production and distribution of information cards on endangered and/or threatened species in the sale area. The program shall be designed to increase the sensitivity and understanding of personnel to community values, customs, and lifestyles in areas in which such personnel will be operating. The orientation program shall also include information concerning avoidance of conflicts with subsistence, commercial fishing activities, and pertinent mitigation.

The program shall be attended at least once a year by all personnel involved in onsite exploration or development and production activities (including personnel of the lessee's agents, contractors, and subcontractors) and all supervisory and managerial personnel involved in lease activities of the lessee and its agents, contractors, and subcontractors.

The lessee shall maintain a record of all personnel who attend the program onsite for so long as the site is active, not to exceed 5 years. This record shall include the name and date(s) of attendance of each attendee.

Stipulation No. 3. Transportation of Hydrocarbons. Pipelines will be required: (a) if pipeline rights-of-way can be determined and obtained; (b) if laying such pipelines is technologically feasible and environmentally preferable; and (c) if, in the opinion of the lessor, pipelines can be laid without net social loss, taking into account any incremental costs of pipelines over alternative methods of transportation and any incremental benefits in the form of increased environmental protection or reduced multiple-use conflicts. The lessor specifically reserves the right to require that any pipeline used for transporting production to shore be placed in certain designated management areas. In selecting the means of transportation, consideration will be given to recommendations of any advisory groups and Federal, state, and local governments and industry.

Following the development of sufficient pipeline capacity, no crude oil production will be transported by surface vessel from offshore production sites, except in the case of an emergency. Determinations as to emergency conditions and appropriate responses to these conditions will be made by the RS/FO.

Stipulation No. 4. Industry Site-Specific Bowhead Whale-Monitoring Program. Lessees proposing to conduct exploratory drilling operations, including seismic surveys, during the bowhead whale migration will be required to conduct a site-specific monitoring program approved by the RS/FO; unless, based on the size, timing, duration, and scope of the proposed operations, the RS/FO, in consultation with the North Slope Borough (NSB) and the Alaska Eskimo Whaling Commission (AEWC), determine that a monitoring program is not necessary. The RS/FO will provide the NSB, AEWC, and the State of Alaska a minimum of 30 but no longer than 60 calendar days to review and comment on a proposed monitoring program prior to approval. The monitoring program must be approved each year before exploratory drilling operations can be commenced.

The monitoring program will be designed to assess when bowhead whales are present in the vicinity of lease operations and the extent of behavioral effects on bowhead whales due to these operations. In designing the program, lessees must consider the potential scope and extent of effects that the type of operation could have on bowhead whales. Experiences relayed by subsistence hunters indicate that, depending on the type of operations, some whales demonstrate avoidance behavior at distances of up to 35 miles. The program must also provide for the following:

- (1) Recording and reporting information on sighting of other marine mammals and the extent of behavioral effects due to operations;
- (2) Inviting an AEWC or NSB representative to participate in the monitoring program as an observer;
- (3) Coordinating the monitoring logistics beforehand with the MMS Bowhead Whale Aerial Survey Project (BWASP);
- (4) Submitting daily monitoring results to the MMS BWASP;
- (5) Submitting a draft report on the results of the monitoring program to the RS/FO within 60 days following the completion of the operation (the RS/FO will distribute this draft report to the AEWC, the NSB, the State of Alaska, and the National Oceanic and Atmospheric Administration-Fisheries [NOAA]); and
- (6) Submitting a final report on the results of the monitoring program to the RS/FO (the final report will include a discussion of the results of the peer review of the draft report and the RS/FO will distribute this report to the AEWC, the NSB, the State of Alaska, and the NOAA Fisheries).

Lessees will be required to fund an independent peer review of a proposed monitoring plan and the draft report on the results of the monitoring program. This peer review will consist of independent reviewers who have knowledge and experience in statistics, monitoring marine mammal behavior, the type and extent of the proposed operations, and an awareness of traditional knowledge. The peer reviewers will be selected by the RS/FO from experts recommended by the NSB, the AEWC, industry, NOAA Fisheries, and MMS. The results of

these peer reviews will be provided to the RS/FO for consideration in final approval of the monitoring program and the final report, with copies to the NSB, AEWC, and the State of Alaska.

In the event the lessee is seeking a Letter of Authorization (LOA) or Incidental Harassment Authorization (IHA) for incidental take from the NOAA Fisheries, the monitoring program and review process required under the LOA or IHA may satisfy the requirements of this stipulation. Lessees must advise the RS/FO when it is seeking an LOA or IHA in lieu of meeting the requirements of this stipulation and provide the RS/FO with copies of all pertinent submittals and resulting correspondence. The RS/FO will coordinate with the NOAA Fisheries and advise the lessee if the LOA or IHA will meet these requirements.

This stipulation applies to the following blocks for the time periods listed and will remain in effect until termination or modification by the Department of the Interior, after consultation with the NOAA Fisheries and the NSB.

Spring Migration Area: April 1 through June 15

OPD: NR 05-01, Dease Inlet. Blocks included:

6102-6111	6302-6321	6508-6523	6717-6723
6152-6167	6354-6371	6560-6573	
6202-6220	6404-6423	6610-6623	
6252-6270	6455-6473	6659-6673	

OPD: NR 05-02, Harrison Bay North: Blocks included:

6401-6404	6501-6506	6601-6609	6701-6716
6451-6454	6551-6556	6651-6659	

Central Fall Migration Area: September 1 through October 31

OPD: NR 05-01, Dease Inlet. Blocks included:

6102-6111	6354-6371	6610-6623	6856-6873
6152-6167	6404-6423	6659-6673	6908-6923
6202-6220	6455-6473	6706-6723	6960-6973
6252-6270	6508-6523	6756-6773	7011-7023
6302-6321	6560-6573	6806-6823	7062-7073
			7112-7123

OPD: NR 05-02, Harrison Bay North. Blocks included:

6401-6404	6601-6609	6801-6818	7001-7023
6451-6454	6651-6659	6851-6868	7051-7073
6501-6506	6701-6716	6901-6923	7101-7123
6551-6556	6751-6766	6951-6973	

OPD: NR 05-03, Teshekpuk. Blocks included:

6015-6024 6067-6072

OPD: NR 05-04, Harrison Bay. Blocks included:

6001-6023	6157-6173	6309-6324	6461-6471
6052-6073	6208-6223	6360-6374	6513-6519
6106-6123	6258-6274	6410-6424	6565-6566

OPD: NR 06-01, Beechey Point North. Blocks included:

6901-6911	6951-6962	7001-7012	7051-7062
			7101-7113

OPD: NR 06-03, Beechey Point. Blocks included:

6002-6014	6202-6220	6401-6424	6618-6624
6052-6064	6251-6274	6456-6474	6671-6674
6102-6114	6301-6324	6509-6524	6722-6724
6152-6169	6351-6374	6568-6574	6773

OPD: NR 06-04, Flaxman Island. Blocks included:

6301-6303	6451-6459	6601-6609	6751-6759
6351-6359	6501-6509	6651-6659	6802-6809
6401-6409	6551-6559	6701-6709	6856-6859

Eastern Fall Migration: August 1 through October 31

OPD: NR 06-04, Flaxman Island. Blocks included:

6360-6364	6560-6574	6760-6774	6961-6974
6410-6424	6610-6624	6810-6824	7013-7022
6460-6474	6660-6674	6860-6874	7066-7070
6510-6524	6710-6724	6910-6924	7118-7119

OPD: NR 07-03, Barter Island. Blocks included:

6401-6405	6601-6605	6801-6803	7012-7013
6451-6455	6651-6655	6851-6853	7062-7067
6501-6505	6701-6705	6901-6903	7113-7117
6551-6555	6751-6753	6962-6963	

OPD: NR 07-05, Demarcation Point. Blocks included:

6016-6022	6118-6125	6221-6226	6324-6326
6067-6072	6169-6175	6273-6276	

OPD: NR 07-06, Mackenzie Canyon. Blocks included:

6201	6251	6301	6351
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Stipulation No. 5. Conflict Avoidance Mechanisms to Protect Subsistence Whaling and Other Subsistence-Harvesting Activities. Exploration and development and production operations shall be conducted in a manner that prevents unreasonable conflicts between the oil and gas industry and subsistence activities (including, but not limited to, bowhead whale subsistence hunting).

Prior to submitting an exploration plan or development and production plan (including associated oil-spill contingency plans) to MMS for activities proposed during the bowhead whale migration period, the lessee shall consult with the directly affected subsistence communities, Barrow, Kaktovik, or Nuiqsut, the North Slope Borough (NSB), and the Alaska Eskimo Whaling Commission (AEWC) to discuss potential conflicts with the siting, timing, and methods of proposed operations and safeguards or mitigating measures which could be implemented by the operator to prevent unreasonable conflicts. Through this consultation, the lessee shall make every reasonable effort, including such mechanisms as a conflict avoidance agreement, to assure that exploration, development, and production activities are compatible with whaling and other subsistence hunting activities and will not result in unreasonable interference with subsistence harvests.

A discussion of resolutions reached during this consultation process and plans for continued consultation shall be included in the exploration plan or the development and production plan. In particular, the lessee shall show in the plan how its activities, in combination with other activities in the area, will be scheduled and located to prevent unreasonable conflicts with subsistence activities. Lessees shall also include a discussion of multiple or simultaneous operations, such as ice management and seismic activities, that can be expected to occur during operations in order to more accurately assess the potential for any cumulative affects. Communities, individuals, and other entities who were involved in the consultation shall be identified in the plan. The RS/FO shall send a copy of the exploration plan or development and production plan (including associated oil-spill contingency plans) to the directly affected communities and the AEWC at the time they are submitted to the MMS to allow concurrent review and comment as part of the plan approval process.

In the event no agreement is reached between the parties, the lessee, the AEWC, the NSB, the National Oceanic and Atmospheric Administration - Fisheries (NOAA), or any of the subsistence communities that could be affected directly by the proposed activity may request that the RS/FO assemble a group consisting of representatives from the subsistence communities, AEWC, NSB, NOAA Fisheries, and the lessee(s) to specifically address the conflict and attempt to resolve the issues before making a final determination on the adequacy of the measures taken to prevent unreasonable conflicts with subsistence harvests. Upon request, the RS/FO will assemble this group if the RS/FO determines such a meeting is warranted and relevant before making a final determination on the adequacy of the measures taken to prevent unreasonable conflicts with subsistence harvests.

The lessee shall notify the RS/FO of all concerns expressed by subsistence hunters during operations and of steps taken to address such concerns. Lease-related use will be restricted when the RS/FO determines it is necessary to prevent unreasonable conflicts with local subsistence hunting activities.

In enforcing this stipulation, the RS/FO will work with other agencies and the public to assure that potential conflicts are identified and efforts are taken to avoid these conflicts.

Subsistence whaling activities occur generally during the following periods:

August to October: Kaktovik whalers use the area circumscribed from Anderson Point in Camden Bay to a point 30 kilometers north of Barter Island to Humphrey Point east of Barter Island. Nuiqsut whalers use an area extending from a line northward of the Nechelik Channel of the Colville River to Flaxman Island, seaward of the Barrier Islands.

September to October: Barrow hunters use the area circumscribed by a western boundary extending approximately 15 kilometers west of Barrow, a northern boundary 50 kilometers north of Barrow, then southeastward to a point about 50 kilometers off Cooper Island, with an eastern boundary on the east side of Dease Inlet. Occasional use may extend eastward as far as Cape Halkett.

Stipulation No. 6 - Pre-Booming Requirements for Fuel Transfers. Fuel transfers (excluding gasoline transfers) of 100 barrels or more occurring 3 weeks prior to or during the bowhead whale migration will require pre-booming of the fuel barge(s). The fuel barge must be surrounded by an oil-spill-containment boom during the entire transfer operation to help reduce any adverse effects from a fuel spill. This stipulation is applicable to the blocks and migration times listed in the stipulation on Industry Site-Specific Bowhead Whale-Monitoring. The lessee's oil-spill-contingency plans must include procedures for the pre-transfer booming of the fuel barge(s).

Stipulation No. 7. Lighting of Lease Structures to Minimize Effects to Spectacled and Steller's Eider. In accordance with the Biological Opinion for the Beaufort Sea Lease Sale 186 issued by the U.S. Fish and Wildlife Service (FWS) on October 22, 2002, and FWS's subsequent amendment of the Incidental Take Statement on September 21, 2004, lessees must adhere to lighting requirements for all exploration or delineation structures so as to minimize the likelihood that migrating spectacled or Steller's eiders will strike these structures.

Lessees are required to implement lighting requirements aimed at minimizing the radiation of light outward from exploration/delineation structures to minimize the likelihood that spectacled or Steller's eiders will strike those structures. These requirements establish a coordinated process for a performance based objective rather than pre-determined prescriptive requirements. The performance based objective is to minimize the radiation of light outward from exploration/delineation structures. Measures to be considered include but need not be limited to the following:

- Shading and/or light fixture placement to direct light inward and downward to living and work structures while minimizing light radiating upward and outward;
- Types of lights;
- Adjustment of the number and intensity of lights as needed during specific activities.
- Dark paint colors for selected surfaces;

- Low reflecting finishes or coverings for selected surfaces; and
- Facility or equipment configuration.

Lessees are encouraged to consider other technical, operational and management approaches to reduce outward light radiation that could be applied to their specific facility and operation.

If further information on bird avoidance measures becomes available that suggests modification to this lighting protocol is warranted under the Endangered Species Act to implement the reasonable and prudent measures of the Biological Opinion, MMS will issue further requirements, based on guidance from the FWS. Lessees will be required to adhere to such modifications of this protocol. The MMS will promptly notify lessees of any changes to lighting required under this stipulation.

These requirements apply to all new and existing Outer Continental Shelf oil and gas leases issued between the 156° W longitude and 146° W longitude for activities conducted between May 1 and October 31. The MMS encourages operators to consider such measures in areas to the east of 146° W longitude because occasional sightings of eiders that are now listed have been made there and because such measures could reduce the potential for collisions of other, non-ESA listed migratory birds that are protected under the Migratory Bird Treaty Act.

Nothing in this protocol is intended to reduce personnel safety or prevent compliance with other regulatory requirements (e.g. U.S. Coast Guard or Occupational Safety and Health Administration) for marking or lighting of equipment and work areas.

Lessees are required to report spectacled and/or Steller's eiders injured or killed through collisions with lease structures to the Fairbanks Fish and Wildlife Field Office, Endangered Species Branch, Fairbanks, Alaska at (907) 456-0499. We recommend that you call that office for instruction on the handling and disposal of the injured or dead bird.

Lessees must provide MMS with a written statement of measures that will be or that have been taken to meet the objective of this stipulation. Lessees must also include a plan for recording and reporting bird strikes that occur during approved activities to the MMS. This information must be included with an Exploration Plan when the EP is submitted for regulatory review and approval pursuant to 30 CFR 250.201. Lessees are encouraged to discuss their proposed measures in a pre-submittal meeting with the MMS and FWS.

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Attachment B
Communication and Consultation with North Slope Subsistence Stakeholders:
Community Meeting Comments and Responses and Presentation

Issues	Comments	Shell Response	Mitigation Measures*
Shallow Hazards Surveys	When you use the sonar which way does it go? Sideways or Straight down?	The sonar goes downwards, but the deeper the ocean floor is the wider the sonar gets. The deeper the water the wider the swath of the reading is.	A, B, E, F
Seismic Surveys	The marine mammals have sensitive ears and they were hard to find. Maybe you were using your sonar?	The protected species observers need to have the area cleared for a half hour before any start work with the air guns.	A, B, E, F
Shell's Commitment	It's not a question, but a statement. I've been coming for the last seven, eight years, and I'm glad it's Shell. I'm not saying I'm for or against. We can come and voice our complaints. When a barrel is hovering around \$200 dollars and there's 200 billion barrels you do the math. When there's a lot of money to be made in industry on our lands, we need to start being part of the process as a community. Shell comes here and shows us step by step what they are doing. It's the federal regulators that we need to aim our complaints to. Shell is doing us a courtesy by showing what they are doing, but it is the federal regulators who we need to make aware of our needs.		
Shallow Hazards Program	Can the air guns kill a group of whales?	I will never, say never, but there are no known incidences of air guns injuring, let alone killing, a whale.	A, B, E, F

Notes:

*Mitigation Measures are only assigned to applicable comments.

"Not applicable" (N/A) is used to designate comments that do not require mitigation measures as a course of action. See [Mitigation Measures Index](#) definitions according to assigned letter.

Proposed Mitigation Measures

- A-Communication Plan for avoiding conflicts with subsistence users.
- B-Collaboration and Communication with Whaling Associations
- C-Plan of Cooperation (will work to obtain a CAA)
- D-Will honor Camden blackout dates for Nuiqsut and Kaktovik whaling.
- E-Subsistence Advisors based in Chukchi and Beaufort Sea Villages and Kotzebue
- F-Marine Mammal Observers
- G-Robust Marine Mammal Monitoring Protocol
- H-OSR Fleet on standby 24/7 near drilling location
- I-Real time Ice and Weather Forecasting
- J-Crew change by helicopter and collaboration on routes to and from shore base



SHELL ALASKA VENTURE – PROGRAM UPDATE Barrow Plan of Cooperation Meeting



May 22, 2013

EXPLORATION DRILLING PROGRAM REVIEW



- Committed to developing Alaska's Outer Continental Shelf in a measured and responsible pace
- 2012 – first drilling season in Beaufort and Chukchi Seas in more than a decade
- 2013 – pause exploration drilling activity

2012 PROGRAM OVERVIEW

■ Offshore Operations

- Noble Discoverer and support assets in Chukchi Sea
- Kulluk and support assets in Beaufort Sea
- Search and Rescue and crew change helicopters
- Communications centers from Bering Strait to Kaktovik
- Camps on North Slope (UIC Camp in Barrow)

■ Onshore Operations

- Data gathering across prospective pipeline routes: wildlife, hydrology, habitat.
- 3 field camps (Atqasuk, Wainwright and Umiat), 2 helicopters
- Close cooperation with residents & subsistence hunters



Drill bit turning



Caribou near Umiat



Stream Studies

2012 EXPLORATION DRILLING & ONSHORE SURVEY HIGHLIGHTS

- Safely drilled 2 top-hole wells in the U.S. Arctic Ocean
- Safely completed onshore environmental science data gathering program
- Successful emergency response drills conducted
- Oil spill response teams trained and deployed
- Best in-class ice and weather forecasting
- Delivered complex logistics supply chain
- Local/regional economic boost

2012 Successes

11,877 aviation transfers on 562 rotary & 535 fixed wing flights

Made 20,000 protected species observations

Sailed 240,000 nautical miles (to the moon...& back!) in 23 vessels

No spills on 3.25 million gallons of fuel transfers



HUET (Helicopter Underwater Egress Training)

2012 EXPLORATION DRILLING PROGRAM TIMELINE



Crew transfer utilizing Billy Pugh basket

- Chukchi – Burger – **Aug. 8 – Oct. 28**
 - Anchor setting, drillship on location, drilling, mud-line cellar, end of drilling and left site
- Beaufort – Sivulliq – **Aug. 18 – Oct. 27**
 - Anchor setting, drillship on location, anchor hook-up, drilling, mud-line cellar, end of drilling and left site

ARCTIC CONTAINMENT SYSTEM UPDATE

- Arctic Containment System (ACS)
 - ACS is first of its kind, a fit-for-purpose vessel
 - Refine equipment and processes that have never been attempted before
 - Not a regulatory/statutory requirement – it's Shell commitment
- ACS is a fourth line of defense for source control
- 2012-13 Progress
 - Implemented learning's from 2012 trials
 - Successful dome deployment tests
 - Federal (BSEE) – week of March 18



2012 KULLUK GROUNDING

- Aground Sitkalidak Island (Kodiak) Dec. 31
- No lives lost, no major injuries
- No spills, minimal environmental impact
- 750+ incident response personnel
- Vessel retrieved intact
- Unified Command stood down Feb. 13
- Response to concerns of local communities
- Debris cleanup complete
- Towed to Dutch Harbor (arrived 5 March)
- Called up Shell's Oil Spill Response
 - Input from NSB, ASRC and UIC



Old Harbor clean up

2012 KULLUK

- Dry tow :
 - COSCO XRK departed Dutch Harbor 26 March
 - Arrived Singapore shipyard 15 April
- Full damage assessment and finalization of project scope and timing



LOOKING FORWARD



2012 Subsistence Advisor Program

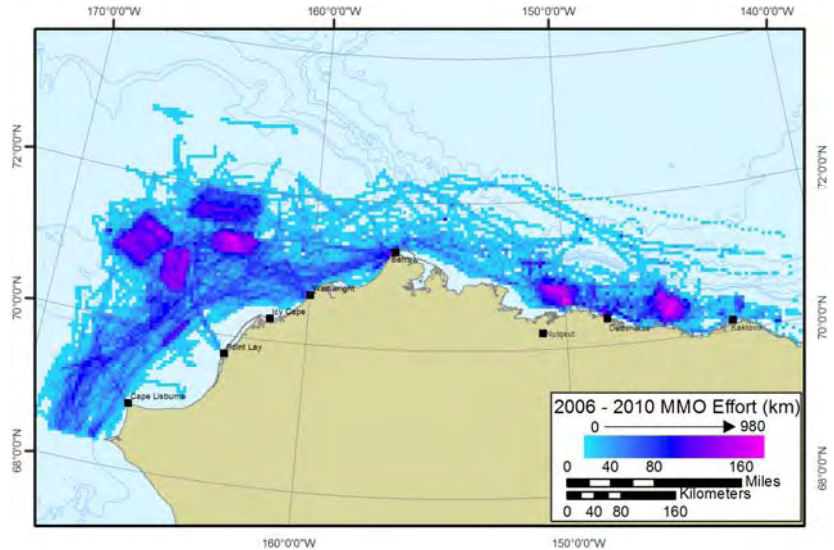


2013 PROPOSED WORK SCOPE

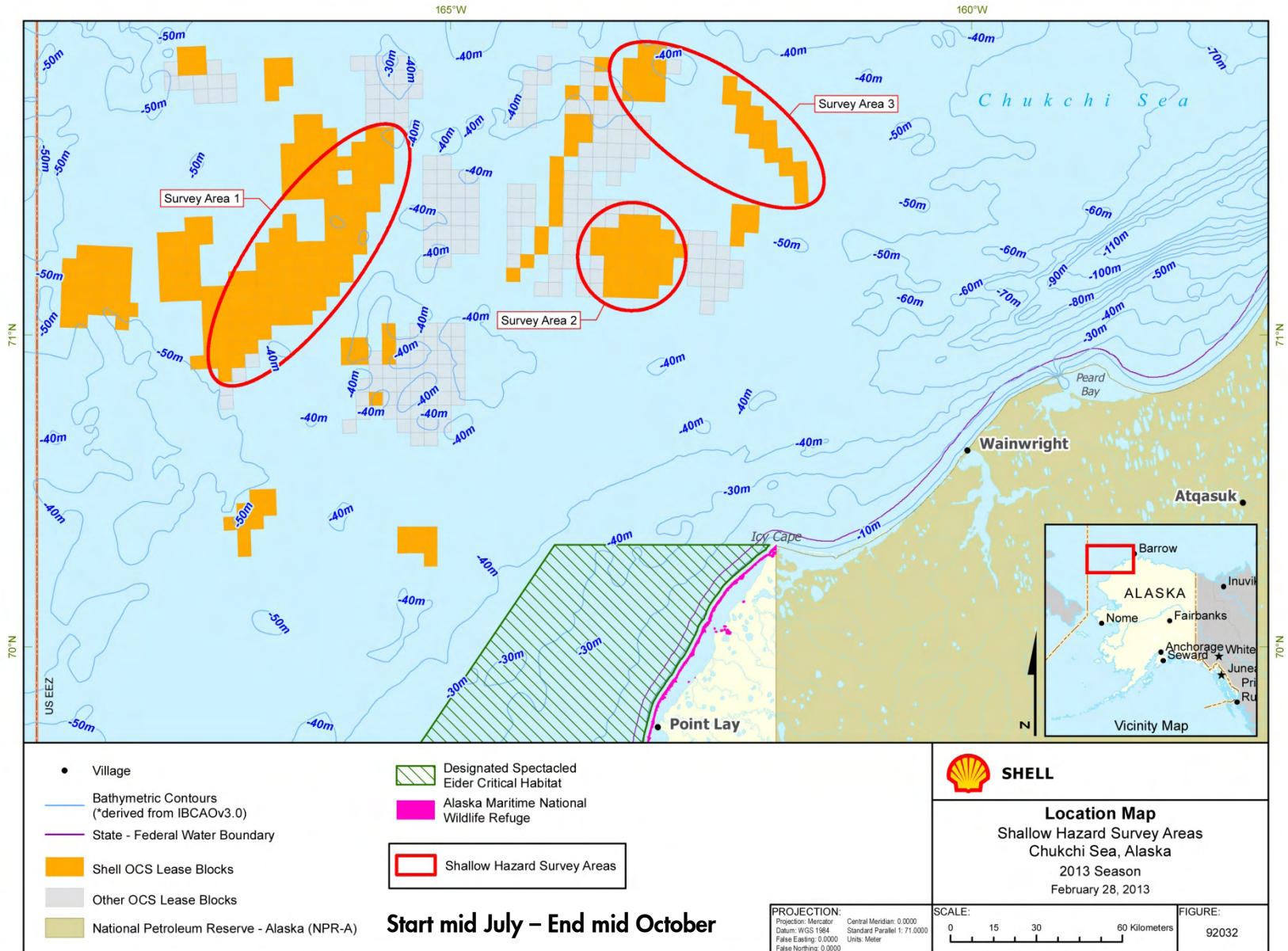


2013 SCIENCE PROGRAM

- Offshore Ecological Studies (August – October)
 - Jointly funded by ConocoPhillips, Statoil and Shell
 - Eco-system wide baseline studies in Chukchi and Beaufort Seas (benthic, zooplankton, fisheries, marine mammals, DSAR's, sea birds)
 - Ice and Metocean buoys
 - Provides critical data for ice and weather forecasting
 - Supports NOAA forecasting
 - North Slope Science Agreement
 - Addressing community information requests
 - Incorporating traditional knowledge – Recent on ice and ocean currents workshops held with representatives from each North Slope village



2013 CHUKCHI SEA SHALLOW HAZARD LOCATIONS

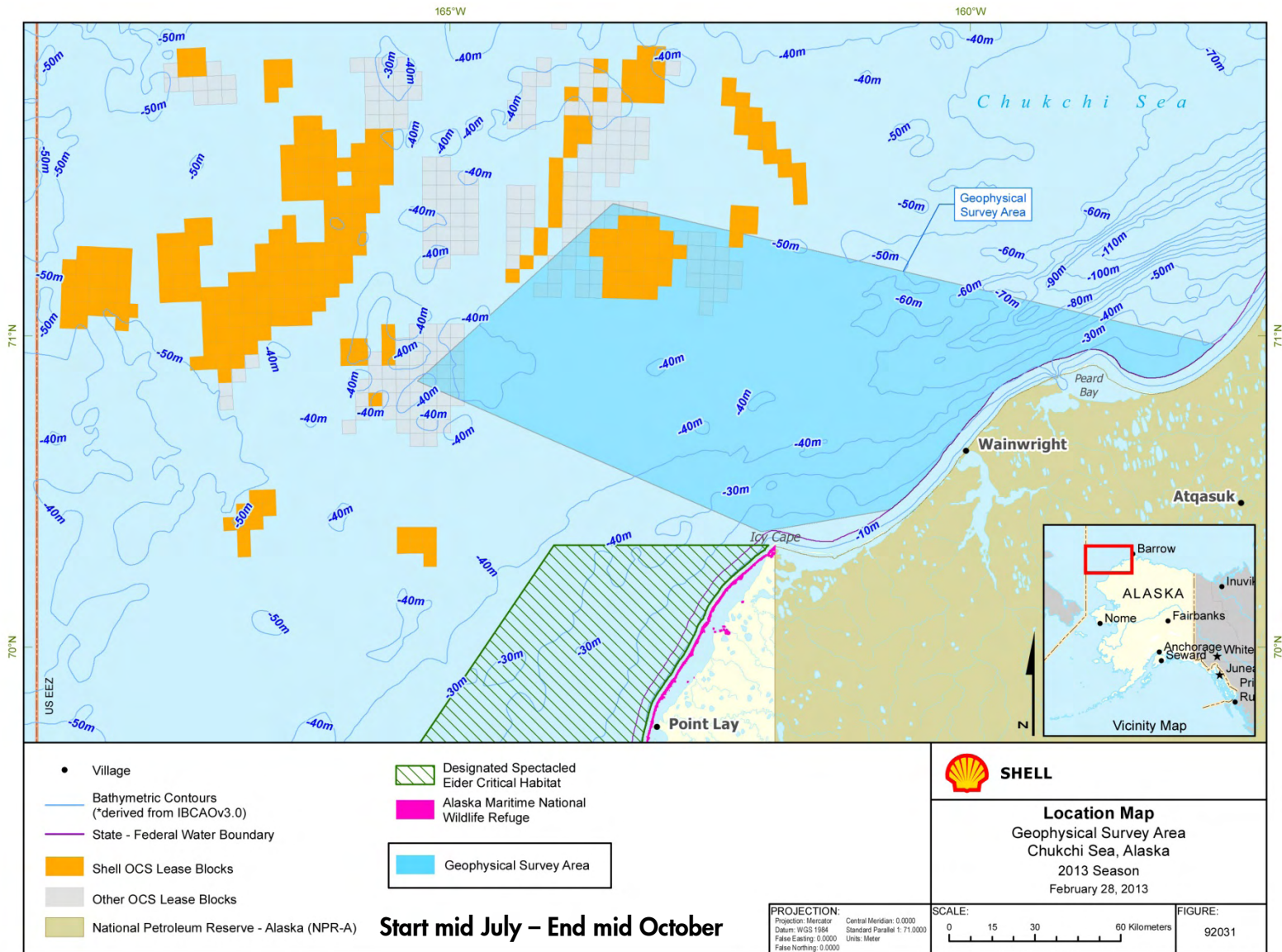


Start mid July – End mid October



Location Map
 Shallow Hazard Survey Areas
 Chukchi Sea, Alaska
 2013 Season
 February 28, 2013

2013 CHUKCHI SEA ICE GOUGE SURVEY MAP



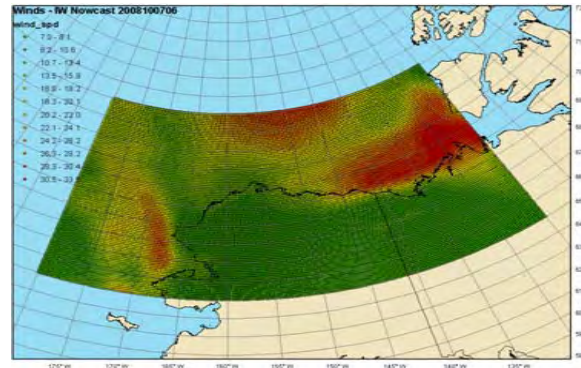
2013 MITIGATION MEASURES



- Collaboration and Communication with Whaling Associations, Walrus, Nanuq, Seal Commissions and hunters:

Photo taken by Ransom Rentenaar, 2012 Barrow SA

- Full oil spill response capabilities for each sea
- Second rig relief well capability
- Crew change by helicopter and collaboration on routes to and from operations



- Real time Ice and Weather Forecasting



- Commitment to hire Subsistence Advisors: 2012 Barrow SA , Ransom Rentenaar



- Shell Point Lay Community Liaison Officer: Sophie Henry

Shell Exploration & Production Company, Alaska Venture



- Protected Species Observers on all vessels: PSO Dennis Panigeo, Nuiqsut



- Shell Barrow Community Liaison Officers Ronald "Bun Bun" Fischer, Barrow CLO



- Communication Plan for avoiding conflicts with subsistence users

COMMUNICATION CENTERS



Nuiqsut SA, Sam Kunaknana and Paul Kaigelak



Shell Exploration & Production Company, Alaska Venture

■ Chukchi Sea Communities

- Point Hope
- Point Lay
- Wainwright
- Barrow



Annie Ahtuanguak (Nuiqsut), Deadhorse Com Center

EXPLORATION POTENTIAL PLANNING

- Planning our program as we review the 2012 drilling season
- Success in 2013 operations
- Base Plan equals Chukchi and Beaufort Sea Exploration Drilling with support assets
- But no final decision made pending preparation of two assets.





DEFINITIONS AND CAUTIONARY NOTE

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate entities. In this presentation “Shell”, “Shell group” and “Royal Dutch Shell” are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words “we”, “us” and “our” are also used to refer to subsidiaries in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies. “Subsidiaries”, “Shell subsidiaries” and “Shell companies” as used in this presentation refer to companies over which Royal Dutch Shell plc either directly or indirectly has control. Companies over which Shell has joint control are generally referred to “joint ventures” and companies over which Shell has significant influence but neither control nor joint control are referred to as “associates”. In this presentation, joint ventures and associates may also be referred to as “equity-accounted investments”. The term “Shell interest” is used for convenience to indicate the direct and/or indirect (for example, through our 23% shareholding in Woodside Petroleum Ltd.) ownership interest held by Shell in a venture, partnership or company, after exclusion of all third-party interest.

This presentation contains forward-looking statements concerning the financial condition, results of operations and businesses of Royal Dutch Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management’s current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Royal Dutch Shell to market risks and statements expressing management’s expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as “anticipate”, “believe”, “could”, “estimate”, “expect”, “goals”, “intend”, “may”, “objectives”, “outlook”, “plan”, “probably”, “project”, “risks”, “schedule”, “seek”, “should”, “target”, “will” and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this presentation, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell’s products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; and (m) changes in trading conditions. All forward-looking statements contained in this presentation are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Royal Dutch Shell’s 20-F for the year ended December 31, 2012 (available at www.shell.com/investor and www.sec.gov). These risk factors also expressly qualify all forward looking statements contained in this presentation and should be considered by the reader. Each forward-looking statement speaks only as of the date of this presentation, May 20-30, 2013. Neither Royal Dutch Shell plc nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this presentation.

We may have used certain terms, such as resources, in this presentation that United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. U.S. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov. You can also obtain these forms from the SEC by calling 1-800-SEC-0330.

2012 EXPLORATION DRILLING PROGRAM TIMELINE

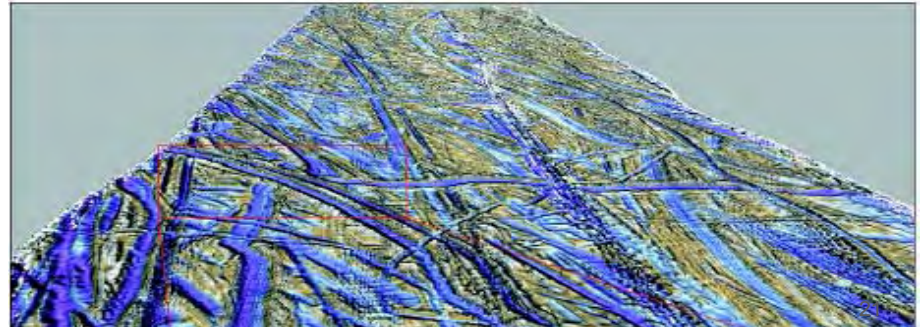
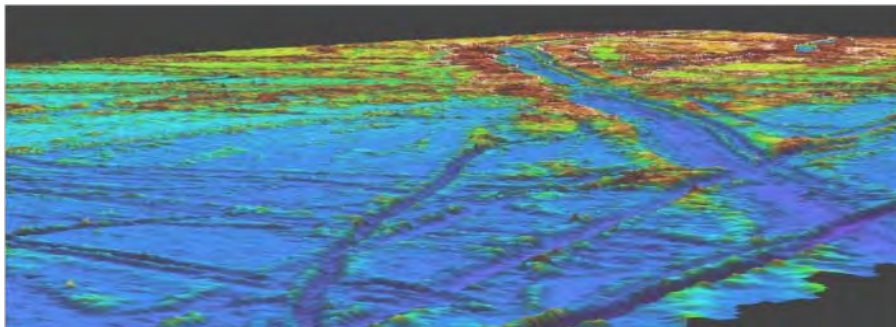
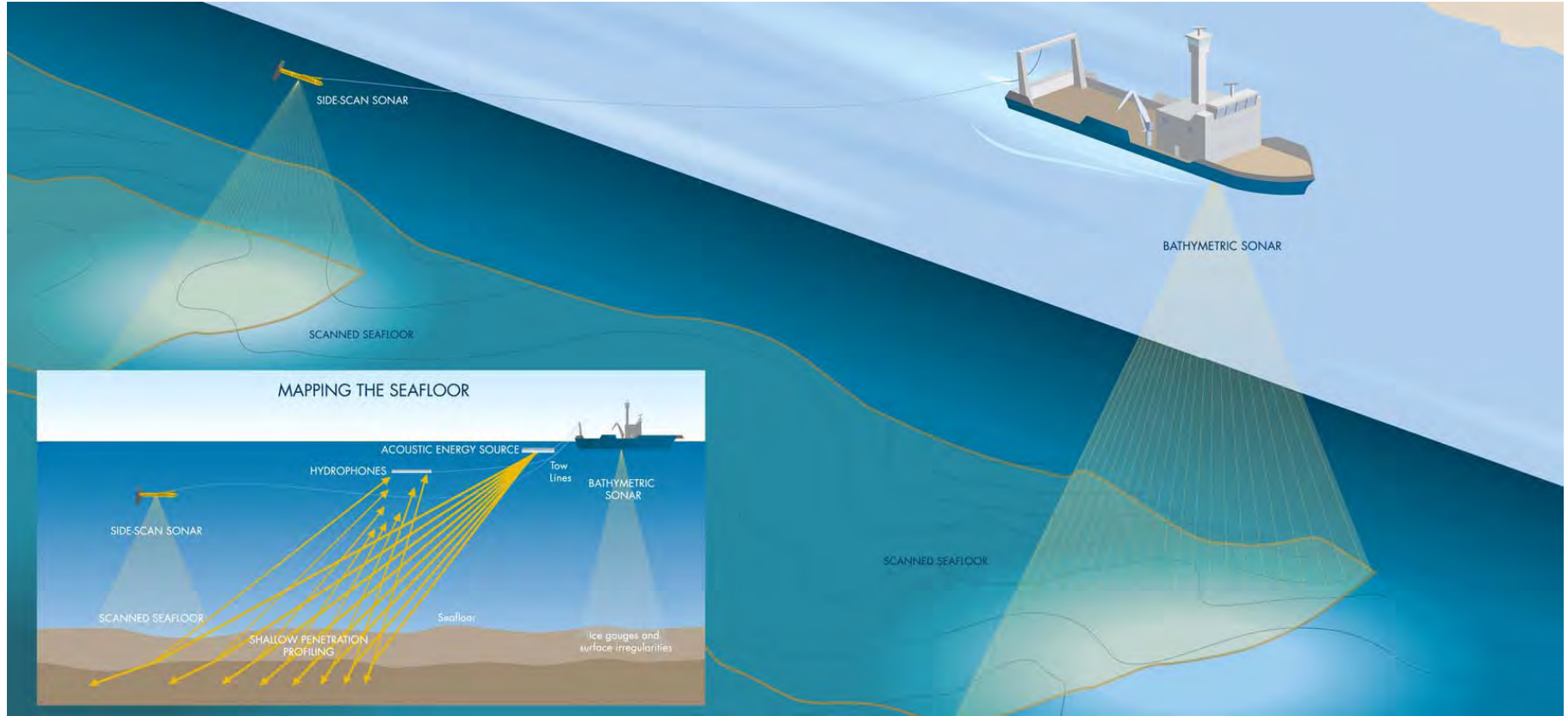


Crew transfer utilizing Billy Pugh basket

- **Chukchi – Burger**
 - Anchor Setting Aug. 8-10
 - Drillship on location Sept. 7-21
 - Drilling Sept. 23
 - Mud-line cellar Oct. 2-4
 - End of drilling Oct. 26
 - Left site Oct. 28

- **Beaufort – Sivulliq**
 - Anchor Setting Aug. 18-22
 - Drillship on location Sept. 25
 - Anchor hook-up Sept. 25-27
 - Drilling Oct. 3
 - Mud-line cellar Oct. 13-23
 - End of drilling Oct. 27

2013 ICE GOUGE SURVEY ILLUSTRATION



NOBLE DISCOVERER

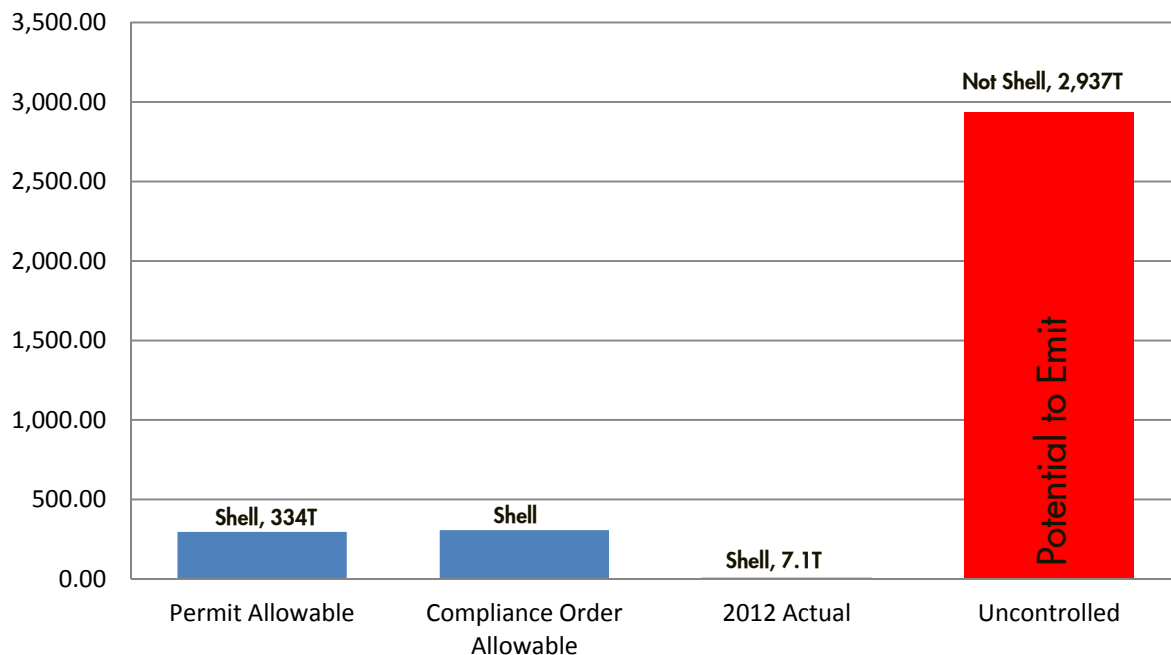
- COSCO XYK dry tow vessel
 - Arrived Seward 27 Feb, departed Seward 9 March
 - Noble dry tow with Shell assist /marine assurance
 - Arrived in shipyard in Goseong, South Korea: 24 March
- Project scope and timing to be finalized



SHELL'S REDUCTION IN AIR EMISSIONS – CHUKCHI SEA

- Shell is committed to reducing the impact of its operations to the local air shed by using emission control technologies that significantly reduce the amount of pollutants released to the atmosphere.

Discoverer OCS Source NOx Emissions (tons)



FACTOIDS:

- Permit allowed 334T
- Shell emitted 7.1T (less than 2% of total allowance)
- Without control technology potential to emit = 2,937T

Legend: T = tons

Issues	Comments	Shell Response	Mitigation Measures*
	No comments specific to the Chukchi Sea 2013 Marine Surveys were voiced.		

Notes:

*Mitigation Measures are only assigned to applicable comments.

"Not applicable" (N/A) is used to designate comments that do not require mitigation measures as a course of action. See [Mitigation Measures Index](#) definitions according to assigned letter.

2011 Proposed Mitigation Measures

- A-Communication Plan for avoiding conflicts with subsistence users.
- B-Collaboration and Communication with Whaling Associations
- C-Plan of Cooperation (will work to obtain a CAA)
- D-Will honor 2010 Camden blackout dates for Nuiqsut and Kaktovik whaling.
- E-Subsistence Advisors based in Chukchi and Beaufort Sea Villages and Kotzebue
- F-Marine Mammal Observers
- G-Robust Marine Mammal Monitoring Protocol
- H-OSR Fleet on standby 24/7 near drilling location
- I-Real time Ice and Weather Forecasting
- J-Crew change by helicopter and collaboration on routes to and from shore base

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Attachment C Communication Plan

COMMUNICATION PLAN 2013 MARINE SURVEYS CHUKCHI SEA, ALASKA

The following Communication Plan will be used during the 2013 open water marine surveys program in the Chukchi Sea to coordinate activities with local subsistence users. These users include the Alaska Eskimo Whaling Commission (AEWC), Alaska Eskimo Walrus Commission (AWC), Alaska Nanuuq Commission (ANC), Alaska Beluga Whale Committee (ABWC), Ice Sea Committee (ICS), village Whaling Captains Associations (WCA), and industry representatives. The planned Program is anticipated to continue from July through October.

The Communications Plan will be implemented in two phases. Phase I describes the guidelines already in place to ensure proper communication during the Program. Phase II describes what to do in the event Shell activities potentially affect subsistence activities and how to keep subsistence user groups informed of Shell activities. Phase I and II are designed to minimize the potential for interference of Shell activities with subsistence activities and resources and to keep operators up-to-date regarding the timing and status of the bowhead whale migration as well as the timing and status of other subsistence hunts.

Program operations will be performed in compliance with all applicable permits and authorizations, including:

- Plan of Cooperation (U.S. Fish & Wildlife Service (USFWS); National Marine Fisheries Service (NMFS) and Bureau of Ocean Energy Management (BOEM);
- Letter of Authorization per USFWS;
- Incidental Harassment Authorization per NMFS;
- Ancillary Activity Authorization per BOEM;
- Lease Stipulation 5 from Outer Continental Shelf lease sale 193 per BOEM;

PHASE I

- Protected Species Observers (PSOs) will be onboard the Program vessel(s) with responsibilities to: monitor for the presence of marine mammals; assist with the maintenance of marine mammal safety radii around vessels; monitor and record avoidance or exposure behaviors; and communicate with the Communication and Call Centers (Com Centers) and local subsistence hunters by marine radio.
- If a conflict arises between Program activities and subsistence hunting, the PSOs will immediately contact the vessel captain and the Com Centers. The Com Centers will then contact Shell's simultaneous operations response team. If avoidance is not possible, the next phase will include communication between a Shell representative and a

representative from the impacted subsistence hunter group(s) to resolve the issue and plan an alternative course of action by either industry or the subsistence groups.

- Shell will employ local Subsistence Advisors from the Chukchi Sea villages to provide consultation and guidance regarding the affected species migration, the subsistence hunt, and other subsistence activities. The Subsistence Advisors will work approximately 8-hours per day and 40-hour weeks through 2013. Responsibilities of the Subsistence Advisors will include: reporting any subsistence concerns or conflicts, within 4-hours if the conflict appears imminent, to the Com Centers (who will then contact Shell's simultaneous operations emergency response team); coordinating with subsistence users to advise on location and timing of Shell's activities; reporting subsistence-related comments, concerns, and information to Shell staff; and, advising Shell how to avoid subsistence conflicts and subsistence users. A subsistence advisor handbook will be developed and provided to each Subsistence Advisor. The handbook will outline contact numbers, communication procedures, and communication timelines for reporting and communicating potential conflict situations.
- Helicopter traffic flight restrictions will be in place to prohibit aircraft from flying within 1,000 ft (300 m) of marine mammals or below 1,500 ft (457 m) altitude, (except during takeoffs and landings, or in emergency situations), while over land or sea. If flights need to deviate from this path due to emergency landings or other unavoidable reasons, the new flight information will be immediately shared, as outlined by Shell HSSE requirements, with Com Centers so area subsistence users can be notified.
- To minimize impacts on marine mammals and subsistence hunting activities, the marine surveys vessel(s) will transit through the Chukchi Sea along a route that allows for the highest degree of safety regarding ice conditions and sea states.

PHASE II

All guidelines in Phase I will be adhered to in addition to the following:

- If potential conflicts are identified between Shell activities and subsistence activities; the Communications Plan will be used to manage the issue.
- Once transiting of vessel(s) begins through Chukchi Sea, during marine surveys activities, and during mobilization from the Chukchi Sea, depending on the pending routes and timing of transit, Shell will continue with engagements and regular communications with the AEWC, AWC, ANC, ABWC, ISC, and/or the WCAs of Barrow, Wainwright, Point Lay, and Point Hope.

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