



Final Plan of Cooperation 2012 BeaufortSPAN™ West

July 2012

Prepared for

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ACRONYMS AND ABBREVIATIONS

2D	two-dimensional
AEWC	Alaska Eskimo Whaling Commission
BOEM	Bureau of Ocean Energy Management
CAA	Conflict Avoidance Agreement
CFR	Code of Federal Regulations
Com Center	Communication Center
FLIR	forward looking infrared
ft	foot/feet
G&G	Geological and Geophysical
ICAS	Iñupiat Community of the Arctic Slope
IHA	Incidental Harassment Authorization
ION	ION Geophysical Corporation
km	kilometer(s)
KSOP	Kuukpikmiut Subsistence Oversight Panel, Inc.
LOA	Letter of Authorization
m	meter(s)
mi	mile(s)
MMO(s)	Marine Mammal Observer(s)
NMFS	National Marine Fisheries Service
M/V	Marine Vessel
POC	Plan of Cooperation
SAR	Search and Rescue
USFWS	US Fish and Wildlife Service

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1.0 INTRODUCTION

ION Geophysical Corporation (ION) plans to conduct an exploratory two-dimensional marine seismic survey in the Beaufort Sea of Alaska during fall 2012 (2012 BeaufortSPAN™ West Program). This program was originally proposed for fall of 2010 but was postponed to 2012 because of technical complications with the seismic vessel.

The program is planned for fall and early winter, in broken ice conditions from October 1, 2012, through December 15, 2012. The primary project area extends from the US/Canadian border in the east to Point Barrow in the west. Two shorter transect lines will extend west of Point Barrow into the Chukchi Sea and three short tie lines are proposed near the US/Russian border, as shown on Figure 1. The bathymetry of the proposed project area ranges from shallow (e.g., less than 65 feet [ft] / 20 meters [m]) to relatively deep (greater than 11,000 ft / 3,500 m) water over the continental shelf, the continental slope, and the abyssal plain.

Two vessels will be used for 2012 operations. The Marine Vessel (M/V) *Geo Arctic* will be the seismic source vessel; the M/V *Polar Prince* will act as the icebreaker vessel. The icebreaker will travel 0.5 to 1.0 kilometers (km) (0.3 to 0.6 miles [mi]) ahead of the source vessel to break and clear ice. There is no air support planned or necessary for the proposed activities.

For mitigation and operational reasons, the project area has been bisected by a line that runs from 70.5° N, 150.5° W to 73° N, 148° W; the portion east of this line is referred to as the “Eastern Project Area” and the portion to the west is the “Western Project Area.” The seismic survey vessels will enter the Eastern Project Area from Canadian waters and begin survey activities around October 1, 2012. Approximately November 1, 2012, the survey vessels will begin survey activities in the Western Project Area. Upon completion of the survey program, vessels will exit the Western Project Area and travel south through the Chukchi and Bering seas.

The survey has been timed to take place when most marine mammals will have migrated out of the project area. Starting the survey in the east allows a greater buffer with migrating marine mammals, because typical marine mammal migrations are from the east (Beaufort Sea) to the west (Chukchi Sea); therefore, it is expected that interference with marine mammal migrations will be minimized. The timing and location of the surveys are also designed to prevent conflicts with subsistence activities.

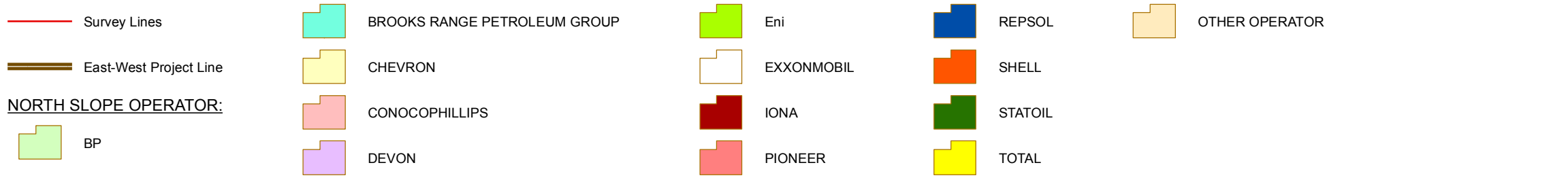
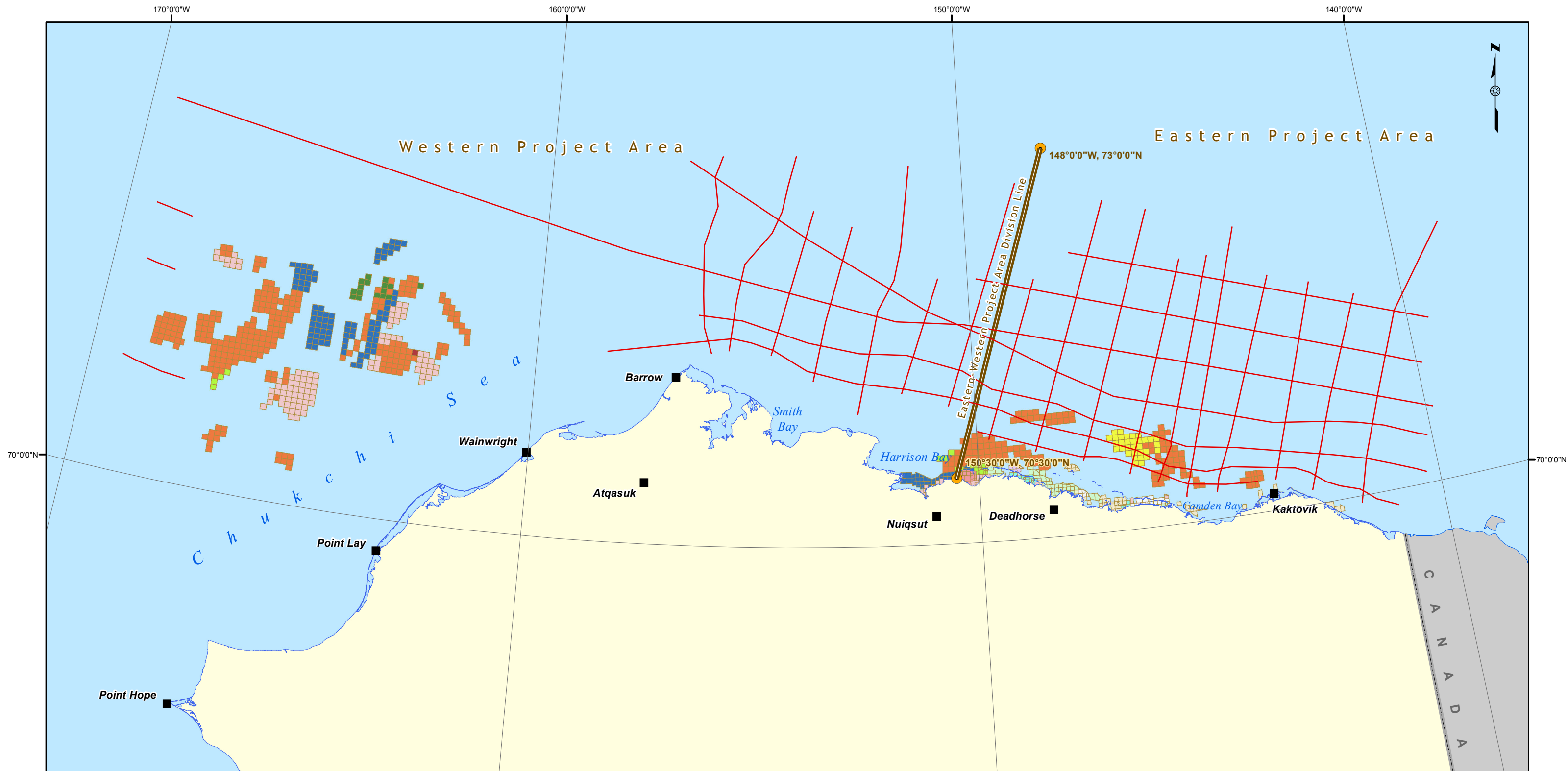
1.1 Purpose

This Plan of Cooperation (POC) outlines the measures to avoid any potential conflicts between subsistence activities and the proposed 2012 BeaufortSPAN™ West Program. A copy of the Draft POC was provided to affected communities in May 2012. Potential conflicts between the proposed offshore activities and subsistence activities were identified during leadership and public meetings held in 2009 – 2012 in Barrow, Nuiqsut, Kaktovik, and Wainwright. When appropriate, comments and questions regarding potential conflicts have been incorporated into this POC. A complete list of meetings can be found in Section 2.2.

1.2 Permits

Federal permit applications were submitted to the US Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and the Bureau of Ocean Energy Management (BOEM). This section lists the permits required from the three agencies.

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**2012 BeaufortSPAN™ West Program
Project Area**



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1.2.1 National Marine Fisheries Service

To obtain an Incidental Harassment Authorization (IHA) from the NMFS, ION must demonstrate that it has developed a POC in accordance with federal regulations [50 Code of Federal Regulations [CFR] 216.104(a)(12)]. If the proposed activities will take place in or near traditional Arctic subsistence hunting areas and/or may affect the availability of a species or stock of marine mammals for subsistence use, the POC must identify what measures will be taken to minimize adverse impacts on the availability of whales and seals for subsistence use. At a minimum, the POC must include the following:

- A statement that the applicant has provided the affected communities with a Draft POC
- A schedule for meeting with the affected subsistence communities to discuss proposed activities and resolve potential conflicts related to proposed operations
- A description of the measures the applicant has taken, or will take, to ensure that the proposed activities will not interfere with subsistence hunting
- A plan to continue to meet with the affected subsistence communities, both before and during operations, to resolve conflicts and notify communities of operational changes

1.2.2 US Fish and Wildlife Service

To obtain a Letter of Authorization (LOA) from the USFWS for the nonlethal incidental take of Pacific walrus and polar bear, ION must demonstrate that it has developed a POC in accordance with 50 CFR 18.124. If the proposed activities will take place in or near a traditional subsistence hunting area, the POC must identify what measures will be taken to minimize adverse impacts on the availability of polar bear and Pacific walrus for subsistence use.

1.2.3 Bureau of Ocean Energy Management

A Geological and Geophysical (G&G) permit is required from BOEM, pursuant to 30 CFR 551.4, for ION to conduct geological or geophysical exploration for mineral resources. The G&G permit will allow ION to conduct the seismic survey in accordance with appropriate statutes, regulations, and stipulations for a specified length of time and in a specified area.

1.3 Description of Proposed Project

The purpose of the proposed 2012 BeaufortSPAN™ West Program is to image the subsurface geological structures in the region, providing geologists and geophysicists with information to better evaluate prospects for potential oil and gas reserves. The data obtained will allow ION to view and interpret large-scale subsurface geologic structural features. This information will provide critical insight into the geologic evolution, basin architecture, and depositional and structural history of the petroleum system. The program is designed to support future oil and gas exploration within the area of coverage.

The proposed geophysical data acquisition will be conducted for approximately 76 days from about October 1 to December 15, 2012. All permits have been requested from October 1 to December 15, 2012 to allow for contingencies and weather delays. Approximately 7,175 km of seismic data are planned to be acquired, not including transits when the airguns are not operating, during powerup, powerdown, or sound source verification.

The *Geo Arctic* and the *Polar Prince* will leave from Tuktoyaktuk, Canada, during late September and enter the Alaskan Beaufort Sea from Canadian waters. The survey vessels access the survey area from

Canadian waters and will begin seismic survey activities no earlier than October 1, 2012, or upon completion of the Kaktovik and Nuiqsut subsistence bowhead whale hunts, whichever is later. At the beginning of the survey, acousticians will deploy hydrophones to collect sound source measurements and determine marine mammal safety and disturbance radii.

Weather and ice permitting, ION plans to initiate survey operations within the Eastern Project Area (Figure 1) in offshore waters greater than 1,000 meters deep in early October. Beginning work in this area is expected to minimize impacts to bowhead whales since bowheads are expected to be least abundant in this area. The survey will then progress to shallower waters in the Eastern Survey Area before moving to the Western Survey Area (Figure 1) in late October or early November after the bowhead whale subsistence hunt from Barrow is complete.

To the extent practicable, the *Geo Arctic* will travel along pre-determined lines, dependent upon ice conditions. The seismic vessels will operate in ice conditions ranging from open water to ice coverage up to 10/10th ice. However, the survey cannot take place in thick multi-year ice as both the icebreaker and seismic vessel must make continuous forward progress at 3 to 4 knots while the airgun array discharges. In order for the survey to proceed, areas of high ice concentration will have to consist of mostly newly forming juvenile first year ice or young first year ice less than 0.5 meters thick.

After the survey is complete, or when ice and weather conditions dictate, the vessels will exit to the south passing through the Chukchi and Bering seas.

2.0 PLAN OF COOPERATION FOR CONFLICT AVOIDANCE

The Draft POC for the proposed 2012 activities was submitted to the USFWS and NMFS, as well as to potentially affected subsistence communities and members of marine mammal co-management groups, for comment. Where appropriate, comments and suggestions from leadership and members of potentially affected subsistence communities and subsistence stakeholder groups have been incorporated into this document.

To further support conflict avoidance with North Slope subsistence communities, ION signed the Conflict Avoidance Agreement (CAA) at the 2012 Open Water Meeting on 6 March 2012 in Anchorage.

2.1 Affected Subsistence Communities and Stakeholders

The following subsistence and community groups have been identified by ION as being potentially affected by the proposed activities. ION has included and will include these groups in the POC process and will continue to meet with representatives of each group. Because many of the marine mammal co-management groups (e.g., Alaska Ice Seal Committee) have members in several communities, representatives from the potentially affected communities were individually invited to leadership and/or public meetings so that their input could be solicited. Copies of invitation letters and the letters notifying subsistence and community groups of the delay of the proposed 2010 and 2011 BeaufortSPAN™ West Program are provided in Appendix A.

- Alaska Eskimo Whaling Commission (AEWC)
- Alaska Ice Seal Committee
- Alaska Nanuuq Commission
- Iñupiat Community of the Arctic Slope (ICAS)
- Kuukpikmiut Subsistence Oversight Panel, Inc. (KSOP)
- Native Village of Nuiqsut
- Native Village of Barrow
- Native Village of Kaktovik
- Village Whaling Captains Associations of Kaktovik, Nuiqsut, Barrow, and Wainwright

2.2 Meetings with Communities and Subsistence Users

Presentations to community and stakeholder groups began in late 2009 and will continue through 2012. These meetings are designed to share information and to document concerns and comments regarding impacts to subsistence activities. Tables 2-1, 2-2, and 2-3 list potentially affected communities and subsistence users and the dates and location of their leadership and/or public meetings with ION.

ION held public and leadership meetings in February of 2012 to present the 2012 program. ION also plans a status meeting with communities in August 2012 before beginning survey activities. ION intends to hire community members in Barrow, Nuiqsut, Kaktovik, and possibly Wainwright as Village Liaisons. The Village Liaisons will be responsible for informing community members about ION's project activities, reporting any questions or concerns about the project to the designated ION representative, and passing on ION's responses to community members. The Village Liaisons will also inform community members upon completion of survey activities.

Table 2-1 2010 Meetings and Correspondence with Potentially Affected Stakeholders and Subsistence Users

Community/ Stakeholder	Date	Location	Notes
NSB Department of Wildlife Management	15 December 2009	Barrow	Met with Robert Suydam of NSB to discuss proposed project.
AEWC and Village Whaling Captains	12–13 February 2010	Barrow	Presented the proposed project to AEWC as part of the 2010 Annual Captains' Mini-Convention.
Kaktovik Leadership	16 March 2010	Anchorage	Meeting with Kaktovik mayor and president of Kaktovik Iñupiat Corporation scheduled, but canceled because of illness.
Nuiqsut Leadership	17 March 2010	Nuiqsut	Met with KSOP and Native Village of Nuiqsut. Thomas Napageak Jr., mayor of Nuiqsut, was present.
NSB Planning Commission	18 March 2010	Barrow	Presented the proposed project to NSB Planning Commission. Representatives of NSB Planning Department were present.
Barrow Leadership	18 March 2010	Barrow	Met with NSB Dept. of Wildlife Management, ICAS, and Native Village of Barrow.
NMFS Open Water Meeting	22–24 March 2010	Anchorage	Presented at NMFS Open Water Meeting.
NMFS Peer Review Panel	25 March 2010	Anchorage	Presented to NMFS Peer Review Panel.
Barrow Public Meeting	8 April 2010	Barrow	Presented the proposed project at a public meeting held at Iñupiat Heritage Center from 7 p.m. to 9 p.m.
Kaktovik Public Meeting	10 April 2010	Kaktovik	Presented the proposed project at a public meeting held at Kaktovik Community Center from 7 p.m. to 9 p.m.
Nuiqsut Public Meeting	17 April 2010	Nuiqsut	Presented the proposed project at a public meeting held at Kisik Community Center from 7 p.m. to 9 p.m. before beginning of proposed operations.
Kaktovik Status Report	3 August 2010	Kaktovik	ION provided a report on the project status at the Kaktovik Community Center from 7 p.m. to 9 p.m.
Nuiqsut Status Report	4 August 2010	Nuiqsut	ION provided a report on the project status at the Kisik Community Center from 7 p.m. to 9 p.m., before beginning of proposed operations.
Barrow Status Report	5 August 2010	Barrow	ION provided a report on the project status at the Iñupiat Heritage Center from 7 p.m. to 9 p.m., before beginning of proposed operations.
NSB Planning Commission	30 September 2010	Barrow	Notified NSB Planning Commission that the 2010 BeaufortSPAN™ West Program would be delayed a year because of technical complications with the seismic vessel.
Notice of Project Delay	30 September 2010	Barrow	Notified Barrow, Nuiqsut, and Kaktovik leadership and subsistence users' groups via letter that the 2010 BeaufortSPAN™ West Program would be delayed a year because of technical complications with the seismic vessel.
AEWC	7-8 December 2010	Barrow	Presented the proposed project to the AEWC at its Fourth Quarter Meeting.

Notes:

AEWC = Alaska Eskimo Whaling Commission
 ICAS = Iñupiat Community of the Arctic Slope
 KSOP = Kuukpikmiut Subsistence Oversight Panel, Inc.
 NMFS = National Marine Fisheries Service
 NSB = North Slope Borough

Table 2-2 2011 Meetings and Correspondence with Potentially Affected Stakeholders and Subsistence Users

Community/Stakeholder	Date	Location	Notes
AEWC and Village Whaling Captains	18 February 2011	Barrow	Presented the proposed project to the AEWC as part of the 2011 Annual Captains' Mini-Convention.
Barrow Public Meeting	19 February 2011	Barrow	Presented the proposed project at a public meeting held at the Iñupiat Heritage Center from 7 p.m. to 9 p.m. Invitations to the public meeting were sent to Barrow leadership before the public meeting.
Nuiqsut Public Meeting	21 February 2011	Nuiqsut	Presented the proposed project at a public meeting held at the Kuukpik Corporation Hotel from 7 p.m. to 9 p.m. Invitations to the public meeting were sent to Nuiqsut leadership before the public meeting.
Kaktovik Public Meeting	22 February 2011	Kaktovik	ION attempted to host a public meeting in Kaktovik at the Kaktovik Community Center from 7 p.m. to 9 p.m., but the meeting was cancelled because of weather. Invitations to the public meeting were sent to Kaktovik leadership before the public meeting.
NSB Planning Commission	24 February 2011	Barrow	Presented proposed project to NSB Planning Commission. Representatives of NSB Planning Department were present.
NMFS Open Water Meeting	7–8 March 2011	Anchorage	Presented at NMFS Open Water Meeting.
NMFS Peer Review Panel	9 March 2011	Anchorage	Presented to NMFS Peer Review Panel.
NSB Planning Commission	18 April 2011	Barrow	Submitted a letter to NSB Planning Commission members addressing questions raised at the 24 February 2011 Planning Commission meeting.
Kaktovik Leadership and Public Meeting	18 April 2011	Kaktovik	Presented the proposed project at a leadership and public meeting held at the Kaktovik Community Center from 5 p.m. to 6 p.m. This was a reschedule of the planned February meeting that was canceled because of weather.
Nuiqsut Leadership Meeting	19 April 2011	Nuiqsut	ION attempted to meet with Leadership in Nuiqsut, including KSOP, the Native Village of Nuiqsut, the City of Nuiqsut, Kuukpik Corp., and the Nuiqsut Whaling Captains' Association. The meeting was cancelled because of weather.
Barrow Leadership Meeting	20 April 2011	Barrow	ION notified Barrow leadership that it would be in Barrow this day and that ION would be happy to meet with members of Barrow leadership. Because of timing (preparation for Barrow spring whale hunt), no meetings were scheduled.
Notice of Project Delay	7 July 2011	Multiple Locations	Notified Barrow, Nuiqsut, Kaktovik, and NSB leadership via a letter that the 2011 BeaufortSPAN™ West Program would be delayed a year.
AEWC Second Quarter Meeting	21–22 July 2011	Fairbanks	Notified AEWC Commissioners of the project delay.
Notice of Project Delay	16 August 2011	Kaktovik	ION notified leadership in Kaktovik that the 2011 BeaufortSPAN™ West Program would be delayed a year.
Notice of Project Delay	17 August 2011	Barrow	ION notified leadership in Barrow that the 2011 BeaufortSPAN™ West Program would be delayed a year because of uncertainty in the availability of the M/V <i>Polar Explorer</i> .
Notice of Project Delay	18 August 2011	Nuiqsut	ION notified leadership in Nuiqsut that the 2011 BeaufortSPAN™ West Program would be delayed a year.

Notes:

AEWC = Alaska Eskimo Whaling Commission
 KSOP = Kuukpikmiut Subsistence Oversight Panel, Inc.
 NMFS = National Marine Fisheries Service
 NSB = North Slope Borough

Table 2-3 2012 Meetings and Correspondence with Potentially Affected Stakeholders and Subsistence Users

Community/Stakeholder	Date	Location	Notes
Kaktovik Public Meeting	23 January 2012	Kaktovik	ION presented the proposed 2012 project to leadership and community members in Kaktovik.
Barrow Whaling Captains' Association	25 January 2012	Barrow	ION presented the proposed 2012 project to the Barrow Whaling Captains' Association over dinner at Pepe's Restaurant. Approximately 40 whaling captains attended.
Barrow Public Meeting	25 January 2012	Barrow	ION presented the proposed 2012 project at a public meeting held at the Iñupiat Heritage Center from 7 p.m. to 9 p.m. Invitations to the public meeting were sent to Barrow leadership before the public meeting.
AEWC Mini-Convention	16–17 February 2012	Barrow	ION participated in the AEWC Mini-Convention and presented information about the proposed 2012 project.
Wainwright Whaling Captains' Association	20 February 2012	Wainwright	ION presented the proposed 2012 project to the Wainwright Whaling Captains' Association. The focus was on transit from the project site near Barrow through the Chukchi Sea after completion of the seismic survey.
Nuiqsut Public Meeting	21 February 2012	Nuiqsut	ION presented the 2012 proposed project at a public meeting held at the Community Center from 6 p.m. to 8 p.m. Invitations to the public meeting and fliers were sent to Nuiqsut leadership before the public meeting.
NMFS Open Water Meeting	5–9 March 2012	Anchorage	ION presented the proposed 2012 project at the Open Water Meeting.
Meeting with members of AEWC	6 March 2012	Anchorage	ION reviewed and signed the Conflict Avoidance Agreement with AEWC.
NSB Planning Commission	28 June 2012	Barrow	ION presented the proposed project to NSB Planning Commission. Representatives of NSB Planning Department were present.
Barrow Status Report	August 2012 (proposed)	Barrow	ION will provide an update of the proposed project before beginning operations.
Nuiqsut Status Report	August 2012 (proposed)	Nuiqsut	ION will provide an update of the proposed project before beginning operations.
Kaktovik Status Report	August 2012 (proposed)	Kaktovik	ION will provide an update of the proposed project before beginning operations.
Wainwright Status Report	August 2012 (potential)	Wainwright	ION will provide an update of the proposed project before beginning operations. This may include a meeting in Wainwright or be via letter.

Notes:

ION's 2012 Monitoring Plan was not reviewed at the 2012 Peer Review Panel held in Seattle on January 2012. The Peer Review Panel determined that there had been insufficient changes from previous versions reviewed at the 2010 and 2011 Peer Review Panels to warrant review.

AEWC = Alaska Eskimo Whaling Commission

2.3 Communications Center and Emergency Response

An Emergency Communications Center will be established in Deadhorse to provide emergency communication and support to ION's 2012 BeaufortSPAN™ West Program. The Emergency Communications Center will be staffed by three operators to allow 24 hours a day, 7 days a week operation during the survey operational window. Vessels will be required to report in to the Emergency Communications Center a minimum of every six hours to provide information about the vessel's location, speed, and direction. The Emergency Communication Center will be notified if there are any significant changes in plans or any potentially unsafe or unanticipated conditions (e.g., weather, ice conditions). The Emergency Communication Center is intended to provide emergency communication and support, and is not intended to meet the requirements for communications centers outlined in the AEW CAA.

In addition to being on standby for vessel communications and needs, the Com Center will serve as a conduit for communication between the operating vessels and the Village Liaisons in Barrow, Nuiqsut, Kaktovik, and possibly Wainwright.

In the event of an emergency, ION will coordinate with North Slope Borough (NSB) Search and Rescue (SAR). ION has been in communication with NSB SAR to coordinate activities since 2010 and will continue close communication with them. It is anticipated that, if an emergency occurs requiring NSB SAR response, the NSB SAR helicopter stationed in Barrow will be available. A list of meetings with SAR operators, including NSB SAR and Barrow SAR, can be found in Table 2-4. In addition, ION has spoken with the US Coast Guard regarding their capabilities to respond to an emergency in the Beaufort Sea.

The *Polar Prince* will have a physician assistant and a full clinic onboard the vessel in the event of a medical emergency. If a medical evacuation is necessary, both the *Geo Arctic* and the *Polar Prince* have helicopter decks capable of accommodating the NSB SAR helicopters. The *Polar Prince* will be the main emergency support vessel and will support the medical treatment and transportation of injured or ill personnel to medical facilities.

Table 2-4 Meetings with Barrow Volunteer Search and Rescue and North Slope Borough Search and Rescue

Community/Stakeholder	Date	Location	Notes
Barrow Volunteer SAR	2 September 2010	Barrow	Discussed proposed Communications Center.
Barrow Volunteer SAR	30 September 2010	Barrow	Discussed proposed Communications Center agreement.
NSB SAR	30 September 2010	Barrow	Discussed emergency response protocol and capabilities.
NSB SAR	20 April 2011	Barrow	ION met with NSB SAR to discuss the Communications Center and emergency response protocol and needs.
NSB SAR	25 June 2012	Barrow	ION met with NSB SAR to discuss the Communications Center and emergency response protocol and needs.

Notes:

NSB = North Slope Borough
SAR = Search and Rescue

2.4 Meeting Summaries

Agendas, flyers, notes, comments, and sign-in sheets from the following meetings are included in Appendix B. Meetings that have occurred include:

2.4.1 Meetings in 2010

- North Slope Borough Department of Wildlife Management, 18 March 2010
- ICAS meeting, 18 March 2010
- Native Village of Barrow, 18 March 2010
- Barrow Public Meeting, 8 April 2010
- Kaktovik Public Meeting, 10 April 2010
- Nuiqsut Public Meeting, 17 April 2010

2.4.2 Meetings in 2011

- Barrow Public Meeting, 19 February 2011
- Nuiqsut Public Meeting, 21 February 2011
- Kaktovik Leadership and Public Meeting, 18 April 2011
- Kaktovik Leadership Meeting, 16 August 2011
- Barrow Leadership Meeting, 16 August 2011
- Nuiqsut Leadership Meeting, 18 August 2011

2.4.3 Meetings in 2012

- Kaktovik Public Meeting, 12 January 2012
- Barrow Whaling Captains' Association Meeting, 25 January 2012
- Barrow Public Meeting, 25 January 2012
- AEWG Mini-Convention, February 2012
- Wainwright Whaling Captains' Association Meeting, 20 February 2012
- Nuiqsut Public Meeting, 21 February 2012
- Open Water Meeting, 5–9 March 2012
- Barrow Status Report, August 2012 (proposed)
- Nuiqsut Status Report, August 2012 (proposed)
- Kaktovik Status Report, August 2012 (proposed)
- Wainwright Status Report, August 2012 (potential)

2.5 Project Information and Presentation Materials

Copies of presentation materials provided at the leadership meetings and the public meetings are included in Appendix C.

2.6 Comments to Draft Plan of Cooperation

Throughout the POC process, ION has responded to community and subsistence users' comments and concerns and, when appropriate, incorporated both comments and responses into the Draft POC or Final POC. The 2012 Draft POC was submitted to the potentially affected communities and stakeholder groups for further comment in May 2012. No additional comments or responses were received for the Draft POC.

3.0 PROPOSED MITIGATION

This Final POC includes the proposed measures for mitigation and avoidance of conflicts with subsistence use activities, and procedures to communicate with subsistence users developed as a result of meetings with community and subsistence users.

ION proposes to avoid potential conflicts with subsistence users by timing their activities to take place when subsistence hunting is not anticipated. The program is scheduled to start after whaling activities have concluded for the season and most marine mammals have migrated out of the project area (October for the Eastern Project Area; November for the Western Project Area). The survey will be conducted from east to west, following behind the whale migration and thus limiting potential effects on whales and the subsistence harvest. The survey vessel will not enter the US Beaufort Sea before 1 October 2012, or the completion of Kaktovik bowhead whaling, whichever is later. Seismic operations will be confined to the eastern project area until completion of Barrow fall bowhead whaling (expected to be approximately 1 November 2012).

Subsistence hunting of seals is not anticipated to begin until shore-fast ice is formed, typically in January.

3.1 Marine Mammal Monitoring and Mitigation

A plan to monitor for marine mammals during offshore operations and mitigate impacts is required by the NMFS and USFWS. Proposed monitoring is included in Section 11 of the IHA application and Section 2 of the LOA application. Proposed mitigation measures are included in Section 13 of the IHA application and Section 2 of the LOA application.

3.2 Proposed Conflict Avoidance Measures

ION has developed its operational schedule so that there is very little opportunity to interfere with subsistence activities. Program features include the following elements:

- Schedule the seismic survey so that seismic operations in the eastern survey area do not begin until 1 October 2012, or the completion of Kaktovik bowhead whaling, whichever is later.
- Schedule the seismic survey so that seismic operations in the western survey area do not begin until completion of Barrow fall bowhead whaling (expected to be approximately 1 November 2012).
- Schedule the seismic survey between 1 October 2012, and mid-December 2012 to avoid periods of higher abundance of marine mammal species that are present during the open-water season.
- Plan the survey to proceed from the eastern to western US Beaufort Sea to avoid, as much as possible, any remaining migratory animals and associated subsistence activities.
- Complete the survey before development of shore-fast ice, typically in January. The survey would be completed before the time when ringed seals would establish and enter lairs for reproductive purposes.

Other operational activities that will minimize the disturbance of marine mammals include the following measures:

- Safety radii have been modeled for the proposed seismic source and will be measured during sound-source verification as part of project operations before beginning seismic work.
- Ramp-up and soft-start methods will be employed when initiating airguns and seismic operations. This will allow any marine mammals in the area an opportunity to swim away from the source before the full energy is emitted.
- Marine mammal observers (MMOs), also referred to a Protected Species Observers, will actively watch for signs and sightings of marine mammals and will initiate power-down, shut down, or speed and course alterations if marine mammals are observed in or entering safety radii. MMOs located on the icebreaker will use big-eye binoculars during daylight, and a forward-looking infrared (FLIR) camera during darkness.
- Vessel lights, large spotlights, and night vision equipment will also be used during darkness and low-light conditions.
- A record of all marine mammals within safety radii will be maintained. Periodic updates will be made to the USFWS and the NMFS as required by the LOA and IHA, respectively.

Appendix A
2010–2012 Invitation, Notification, and Response Letters

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**2010 April Community Meeting
Invitation Letters**

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April 2, 2010

Thomas Olemaun, Executive Director
Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: Leadership Meeting with ION Geophysical, Inc.

Dear Mr. Olemaun:

On behalf of ION Geophysical, Inc. (ION), my colleagues and I would like to thank you for taking the time to meet with us regarding the proposed ION BeaufortSPAN™ West Program. We appreciate the numerous informative comments and the input that you shared addressing our planned operations.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project and the Draft POC. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

The Barrow public meeting is scheduled to take place on April 8th from 7pm to 9pm in the Multipurpose Room at the Inupiat Heritage Center. We would like to extend to you and your staff a special invitation to attend the meeting and provide your input. Refreshments and door prizes will be provided.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Once again thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/RS
15337-02-10-002A/10-026A

April 2, 2010

Harry Brower, Chairman
Alaska Eskimo Whaling Commission
P.O. Box 570
Barrow, AK 99723

Re: Leadership Meeting with ION Geophysical, Inc.

Dear Mr. Brower:

On behalf of ION Geophysical, Inc. (ION), my colleagues and I would like to thank you for taking the time to meet with us regarding the proposed ION BeaufortSPAN™ West Program. We appreciate the numerous informative comments and the input that you shared addressing our planned operations.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project and the Draft POC. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

The Barrow public meeting is scheduled to take place on April 8th from 7pm to 9pm in the Multipurpose Room at the Inupiat Heritage Center. We would like to extend a special invitation to you and any member of the marine mammal co-management groups you are a member of (the Alaska Eskimo Whaling Commission, Ice Seal Committee, the Alaska Nanuq Commission, and the Alaska Beluga Whale Committee) to attend the meeting and provide input. Refreshments and door prizes will be provided.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Once again thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/RS
15337-02-10-002A/10-026A



[CHARGED WITH INNOVATION]



April 2, 2010

George Edwardson, President
Inupiat Community of the Arctic Slope
P.O. Box 1121
Barrow, AK 99723

Re: Leadership Meeting with ION Geophysical, Inc.

Dear Mr. Edwardson:

On behalf of ION Geophysical, Inc. (ION), my colleagues and I would like to thank you for allowing your representatives, Mr. Lloyd Paningona and Ms. Helen Simmonds to meet with us regarding the proposed ION BeaufortSPAN™ West Program and for providing your input at the Open Water Meeting. We appreciate the information that you have shared addressing our planned operations.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project and the Draft POC. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

The Barrow public meeting is scheduled to take place on April 8th from 7pm to 9pm in the Multipurpose Room at the Inupiat Heritage Center. We would like to extend to you and your staff a special invitation to attend the public meeting and provide your input. Refreshments and door prizes will be provided.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Once again thank you for your time and have a wonderful day.

Sincerely,

Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Lloyd Paningona, ICAS
Helen Simmonds, ICAS
Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/RS
15337-02-10-002A/10-026A



April 2, 2010

Joseph Sage, Boardmember
Alaska Eskimo Walrus Commission
c/o Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: Leadership Meeting with ION Geophysical, Inc.

Dear Mr. Sage:

ION Geophysical, Inc. (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Barrow public meeting is scheduled to take place on April 8th from 7pm to 9pm in the Multipurpose Room at the Inupiat Heritage Center. We would like to extend a special invitation to you and any member of the Alaska Eskimo Walrus Commission to attend the public meeting and provide your input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Barrow.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/RS
15337-02-10-002A/10-026A

April 2, 2010

Edward Itta, Mayor
North Slope Borough
P.O. Box 69
Barrow, AK 99723

Re: Leadership Meeting with ION Geophysical, Inc.

Dear Mayor Itta:

On behalf of ION Geophysical, Inc. (ION), my colleagues and I would like to thank you for allowing your representative, Mr. Andy Mack, to meet with us regarding the proposed ION BeaufortSPAN™ West Program. We appreciate the input that Mr. Mack has shared addressing our planned operations.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project and the Draft POC. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

The Barrow public meeting is scheduled to take place on April 8th from 7pm to 9pm in the Multipurpose Room at the Inupiat Heritage Center. We would like to extend to you a special invitation to attend the meeting and provide your input. Refreshments and door prizes will be provided.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Once again thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Andy Mack, Special Assistant to Mayor Itta, NSB
Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/RS
15337-02-10-002A/10-026A



[CHARGED WITH INNOVATION]



April 2, 2010

Taquilik Hepa
North Slope Borough Department of Wildlife Management
P.O. Box 69
Barrow, AK 99723

Re: Leadership Meeting with ION Geophysical, Inc.

Dear Ms. Hepa:

On behalf of ION Geophysical, Inc. (ION), my colleagues and I would like to thank you for taking the time to meet with us regarding the proposed ION BeaufortSPAN™ West Program. We appreciate the numerous informative comments and the input that you shared addressing our planned operations.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project and the Draft POC. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

The Barrow public meeting is scheduled to take place on April 8th from 7pm to 9pm in the Multipurpose Room at the Inupiat Heritage Center. We would like to extend to you and your staff a special invitation to attend the public meeting and provide your input. Refreshments and door prizes will be provided.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Once again thank you for your time and have a wonderful day.

Sincerely,

Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Robert Suydam, NSB
Harry Brower, NSB
Todd Sformo, NSB
Leslie Pierce, NSB
Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/RS
15337-02-10-002A/10-026A



[CHARGED WITH INNOVATION]



April 2, 2010

Eugene Brower, President
Barrow Whaling Captains' Association
P.O. Box 4927
Barrow, AK 99723

Re: Leadership Meeting with ION Geophysical, Inc.

Dear Mr. Brower:

ION Geophysical, Inc. (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Barrow public meeting is scheduled to take place on April 8th from 7pm to 9pm in the Multipurpose Room at the Inupiat Heritage Center. We would like to extend a special invitation to you and any member of the Barrow Whaling Captains Association to attend the public meeting and provide input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Barrow.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,

Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/RS
15337-02-10-002A/10-026A



[CHARGED WITH INNOVATION]



April 2, 2010

Isaac Akootchook, President
Native Village of Kaktovik
P.O. Box 130
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Akootchook:

ION Geophysical, Inc. (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. Some information about the program was sent to you on March 25th. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Kaktovik public meeting is scheduled to take place on April 10th from 7pm to 9pm in the Kaktovik Community Center. Refreshments and door prizes will be provided. We would like to extend a special invitation to you and any member of the Native Village of Kaktovik Board to attend the meeting and provide input. If you are available, we would be happy to meet with you at your convenience while we are in Kaktovik.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Sincerely,

Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Fenton Rexford, Native Village of Kaktovik
Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/RS
15337-02-10-002C/10-026C

April 2, 2010

Nora Jane Burns
NSB Village Liaison
P.O. Box 102
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Burns:

ION Geophysical, Inc. (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. Some information about the program was sent to you on March 25th. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Kaktovik public meeting is scheduled to take place on April 10th from 7pm to 9pm in the Kaktovik Community Center. Refreshments and door prizes will be provided. We would like to extend to you a special invitation to attend the public meeting and provide your input. If you are available, we would be happy to meet with you at your convenience while we are in Kaktovik.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/NS/RS
15337-02-10-002C/10-026C



April 2, 2010

Nathan Gordon, President
Kaktovik Inupiat Corporation
P.O. Box 73
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Gordon:

ION Geophysical, Inc. (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. Some information about the program was sent to you on March 25th. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Kaktovik public meeting is scheduled to take place on April 10th from 7pm to 9pm in the Kaktovik Community Center. Refreshments and door prizes will be provided. We would like to extend a special invitation to you and any member of the Kaktovik Inupiat Corporation (KIC) Board to attend the public meeting and provide input. If you are available, we would be happy to meet with you at your convenience while we are in Kaktovik.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Phillip Tikluk, KIC
Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/NS/RS
15337-02-10-002C/10-026C



[CHARGED WITH INNOVATION]



April 2, 2010

Fenton Rexford, President
Kaktovik Whaling Captains Association
P.O. Box 137
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Rexford:

ION Geophysical, Inc. (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. Some information about the program was sent to you on March 25th. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Kaktovik public meeting is scheduled to take place on April 10th from 7pm to 9pm in the Kaktovik Community Center. Refreshments and door prizes will be provided. We would like to extend a special invitation to you and any member of the Kaktovik Whaling Captains Association to attend the public meeting and provide input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Kaktovik.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Sincerely,

Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/NS/RS
15337-02-10-002C/10-026C

April 2, 2010

Annie Tikluk, Mayor
City of Kaktovik
P.O. Box 27
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Tikluk:

ION Geophysical, Inc. (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. Some information about the program was sent to you on March 25th. We are expecting to hold public meetings in Barrow, Nuiqsut, and Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Kaktovik public meeting is scheduled to take place on April 10th from 7pm to 9pm in the Kaktovik Community Center. Refreshments and door prizes will be provided. We would like to extend to you a special invitation to attend the public meeting and provide your input. If you are available, we would be happy to meet with you at your convenience while we are in Kaktovik.

Enclosed please find a copy of our Draft Plan of Cooperation (POC) for your review. The Draft POC describes the procedures ION will follow to avoid conflicts with subsistence activities and is designed to address your comments and concerns. A Final POC incorporating comments and suggestions from the public meetings will be submitted to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Copies will be provided to interested parties upon request.

If you have any questions or would like to provide comments on the Draft POC, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

Enclosure: Draft Plan of Cooperation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/NS/RS
15337-02-10-002C/10-026C

April 14, 2010

Billy Oyagak, President
Nuiqsut Whaling Captains Association
P.O. Box 89013
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Oyagak:

ION Geophysical, Inc. (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. We are planning to hold a public meeting in Nuiqsut to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Nuiqsut public meeting is scheduled to take place on April 17th from 7:00pm to 9:00pm in the Kusik Community Center. We would like to extend a special invitation to you and any member of the Nuiqsut Whaling Captains Association to attend the public meeting and provide your input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Nuiqsut.

If you have any questions, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/GS
15337-02-10-003/10-033

April 14, 2010

Annie Gray, Executive Director
Kuukpikmiut Subsistence Oversight Panel, Inc.
P.O. Box 89126
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Gray:

ION Geophysical, Inc. (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. We are planning to hold a public meeting in Nuiqsut to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Nuiqsut public meeting is scheduled to take place on April 17th from 7:00pm to 9:00pm in the Kusik Community Center. We would like to extend a special invitation to you and the members of KSOP, Inc. to attend the public meeting and provide your input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Nuiqsut.

If you have any questions, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/GS
15337-02-10-003/10-033



[CHARGED WITH INNOVATION]



April 14, 2010

Isaac Nukapigak, President
Kuukpik Corporation
P.O. Box 89187
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Nukapigak:

ION Geophysical, Inc. (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. We are planning to hold a public meeting in Nuiqsut to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Nuiqsut public meeting is scheduled to take place on April 17th from 7:00pm to 9:00pm in the Kusik Community Center. We would like to extend a special invitation to you and any member of Kuukpik Corporation to attend the public meeting and provide your input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Nuiqsut.

If you have any questions, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,

Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/GS
15337-02-10-003/10-033

April 14, 2010

Bernice Kaigelak, President
Native Village of Nuiqsut
P.O. Box 169
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Kaigelak:

ION Geophysical, Inc. (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. We are planning to hold a public meeting in Nuiqsut to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Nuiqsut public meeting is scheduled to take place on April 17th from 7:00pm to 9:00pm in the Kusik Community Center. We would like to extend a special invitation to you and any member of the Native Village of Nuiqsut to attend the public meeting and provide your input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Nuiqsut.

If you have any questions, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/GS
15337-02-10-003/10-033

April 14, 2010

Thomas Napageak Jr., Mayor
City of Nuiqsut
P.O. Box 89148
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Napageak:

ION Geophysical, Inc. (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010. We are planning to hold a public meeting in Nuiqsut to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project.

The Nuiqsut public meeting is scheduled to take place on April 17th from 7:00pm to 9:00pm in the Kusik Community Center. We would like to extend a special invitation to you and any member of the City of Nuiqsut to attend the public meeting and provide your input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Nuiqsut.

If you have any questions, please don't hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/EB/NS/GS
15337-02-10-003/10-033

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**2010 October Notification
of Program Delay**

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October 15, 2010

North Slope Borough Planning Commission
P.O. Box 69
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Planning Commission Member:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

On behalf of ION, my colleagues and I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provided regarding our planned operations (e.g., safe harbor locations). We look forward to working with you next year as we gear up for 2011 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Margie Fisher, NSB
Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110

October 15, 2010

Oliver Leavitt
President
Barrow Search & Rescue, Inc.
P.O. Box 0565
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Leavitt:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Patrick Suvlu, BVSAR
Price Brower, BVSAR
Eli Solomon, BVSAR
Jimmy Nayakik, BVSAR
Hubert Hopson, BVSAR
Johnny Adams, BVSAR
Fannie Suvlu, BVSAR
Arnold Brower, Jr, BVSAR
Michelle Turner, AES
AES Project File
Administrative Record

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15337-02-10-002/10-110



October 15, 2010

Patrick Suvlu
Vice President
Barrow Search & Rescue, Inc.
P.O. Box 0565
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Suvlu:

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Oliver Leavitt, BVSAR
Price Brower, BVSAR
Eli Solomon, BVSAR
Jimmy Nayakik, BVSAR
Hubert Hopson, BVSAR
Johnny Adams, BVSAR
Fannie Suvlu, BVSAR
Arnold Brower, Jr, BVSAR
Michelle Turner, AES
AES Project File
Administrative Record

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15337-02-10-002/10-110

October 15, 2010

Price Brower
Member
Barrow Search & Rescue, Inc.
P.O. Box 0565
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Brower:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Project Manager
ION Geophysical, Corp.

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Fannie Suvlu, BVSAR
Arnold Brower, Jr, BVSAR
Michelle Turner, AES
AES Project File
Administrative Record

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15337-02-10-002/10-110



October 15, 2010

Eli Solomon
Treasurer
Barrow Search & Rescue, Inc.
P.O. Box 0565
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Solomon:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Ed Nelson
Project Manager
ION Geophysical, Corp.

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Fannie Suvlu, BVSAR
Arnold Brower, Jr, BVSAR
Michelle Turner, AES
AES Project File
Administrative Record

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15337-02-10-002/10-110

October 15, 2010

Jimmy Nayakik
Member
Barrow Search & Rescue, Inc.
P.O. Box 0565
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Nayakik:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Patrick Suvlu, BVSAR
Price Brower, BVSAR
Eli Solomon, BVSAR
Oliver Leavitt, BVSAR
Hubert Hopson, BVSAR
Johnny Adams, BVSAR
Fannie Suvlu, BVSAR
Arnold Brower, Jr, BVSAR
Michelle Turner, AES
AES Project File
Administrative Record

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15337-02-10-002/10-110



October 15, 2010

Hubert Hopson
Member
Barrow Search & Rescue, Inc.
P.O. Box 0565
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Hopson:

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Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Patrick Suvlu, BVSAR
Price Brower, BVSAR
Eli Solomon, BVSAR
Jimmy Nayakik, BVSAR
Oliver Leavitt, BVSAR
Johnny Adams, BVSAR
Fannie Suvlu, BVSAR
Arnold Brower, Jr, BVSAR
Michelle Turner, AES
AES Project File
Administrative Record

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15337-02-10-002/10-110



October 15, 2010

Johnny Adams
Member
Barrow Search & Rescue, Inc.
P.O. Box 0565
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Adams:

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Patrick Suvlu, BVSAR
Price Brower, BVSAR
Eli Solomon, BVSAR
Jimmy Nayakik, BVSAR
Hubert Hopson, BVSAR
Oliver Leavitt, BVSAR
Fannie Suvlu, BVSAR
Arnold Brower, Jr, BVSAR
Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Fannie Suvlu
Barrow Search & Rescue, Inc.
P.O. Box 0565
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Ms. Suvlu:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Patrick Suvlu, BVSAR
Price Brower, BVSAR
Eli Solomon, BVSAR
Jimmy Nayakik, BVSAR
Hubert Hopson, BVSAR
Johnny Adams, BVSAR
Oliver Leavitt, BVSAR
Arnold Brower, Jr, BVSAR
Michelle Turner, AES
AES Project File
Administrative Record

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15337-02-10-002/10-110



[CHARGED WITH INNOVATION]



October 15, 2010

Arnold Brower, Jr
Barrow Search & Rescue, Inc.
P.O. Box 0565
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Brower:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Patrick Suvlu, BVSAR
Price Brower, BVSAR
Eli Solomon, BVSAR
Jimmy Nayakik, BVSAR
Hubert Hopson, BVSAR
Johnny Adams, BVSAR
Fannie Suvlu, BVSAR
Oliver Leavitt, BVSAR
Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Hugh Patkotak
North Slope Borough Search & Rescue
P.O. Box 869
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Patkotak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Price Brower, NSB
Don Meany, NSB
Richard (Pat) Patterson, NSB
April Brower, NSB
Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Edward Itta
Mayor
North Slope Borough
P.O. Box 69
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Itta:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Andy Mack, Special Assistant to the Mayor, Government and External Affairs
Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Taqulik Hepa
North Slope Borough Department of Wildlife Management
P.O. Box 69
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Ms. Hepa:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Robert Suydam, NSB
Harry Brower, NSB
Todd Sformo, NSB
Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

George Edwardson
President
Inupiat Community of the Arctic Slope
P.O. Box 1121
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Edwardson:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Lloyd Paningona, Reality Director
Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Thomas Olemaun
Executive Director
Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Olemaun:

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Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
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15337-02-10-002/10-110



October 15, 2010

Harry Brower
Chairman
Alaska Eskimo Whaling Commission
P.O. Box 570
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Brower:

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Sincerely,

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Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Joseph Sage
Board Member
Alaska Eskimo Walrus Commission
c/o Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Sage:

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Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

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October 15, 2010

Eugene Brower
President
Barrow Whaling Captains' Association
P.O. Box 4927
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Brower:

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Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

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October 15, 2010

Fenton Rexford
President
Kaktovik Whaling Captains' Association
P.O. Box 137
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Rexford:

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On behalf of ION, my colleagues and I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provided regarding our planned operations (e.g., safe harbor locations). We look forward to working with you next year as we gear up for 2011 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Isaac Akootchook
President
Native Village of Kaktovik
P.O. Box 130
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Akootchook:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Fenton Rexford, Native Village of Kaktovik
Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Nathan Gordon
President
Kaktovik Inupiat Corporation
P.O. Box 73
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Gordon:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Phillip Tikluk, Kaktovik Inupiat Corporation
Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Annie Tikluk
Mayor
City of Kaktovik
P.O. Box 27
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Ms. Tikluk:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Thomas Napageak Jr.
Mayor
City of Nuiqsut
P.O. Box 89148
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Napageak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Bernice Kaigelak
President
Native Village of Nuiqsut
P.O. Box 169
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Ms. Kaigelak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Isaac Nukapigak
President
Kuukpik Corporation
P.O. Box 89187
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Nukapigak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ed Nelson'.

Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Annie Gray
Executive Director
Kuukpikmiut Subsistence Oversight Panel, Inc.
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Ms. Gray:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Eli Nukapigak
Kuukpikmiut Subsistence Oversight Panel, Inc.
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Nukapigak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Thomas Napageak Jr.
Kuukpikmiut Subsistence Oversight Panel, Inc.
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Napageak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Jonah Nukapigak
Kuukpikmiut Subsistence Oversight Panel, Inc.
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Nukapigak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Frank Oyagak Jr.
Kuukpikmiut Subsistence Oversight Panel, Inc.
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Oyagak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



October 15, 2010

Theodore Pasanna
Kuukpikmiut Subsistence Oversight Panel, Inc.
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Pasanna:

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

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15337-02-10-002/10-110

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**2011 February Community Meeting
Invitation Letters**

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February 08, 2011

Mayor Edward Itta
North Slope Borough
P.O. Box 69
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mayor Itta:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

We are expecting to hold community meetings for the general public in Barrow, Nuiqsut, and Kaktovik to provide an update on the 2011 program and obtain feedback on the project. On behalf of ION, my colleagues and I would like to invite you to the community meeting on 2/19/2011 from 7:00 pm - 9:00 pm at the Inupiat Heritage Center.

Thank you, in advance, for taking the time to meet with us regarding the 2011 ION BeaufortSPAN™ West Program. It is important we hear your comments and suggestions. We look forward to working with you as we gear-up for 2011 activities.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Andy Mack, North Slope Borough
Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Ms. Taqulik Hepa
North Slope Borough Department of Wildlife Management
P.O. Box 69
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Ms. Hepa:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Robert Suydam, NSB
Harry Brower, NSB
Todd Sformo, NSB
Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Ms. Doreen Lampe
Inupiat Community of the Arctic Slope
P.O. Box 1121
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Ms. Lampe:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Lloyd Paningona, ICAS
Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Thomas Olemaun
Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Olemaun:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Harry Brower
Alaska Eskimo Whaling Commission
P.O. Box 570
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Brower:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Arnold Brower Jr., AEWC
Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Joseph Sage
Alaska Eskimo Walrus Commission
c/o Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Sage:


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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Eugene Brower
Barrow Whaling Captains' Association
P.O. Box 4927
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Brower:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Thank you, in advance, for taking the time to meet with us regarding the 2011 ION BeaufortSPAN™ West Program. It is important we hear your comments and suggestions. We look forward to working with you as we gear-up for 2011 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or via email at Michelle.Turner@asrcenergy.com, or Maggie Ahmaogak with AES at 907-334-1566 or via email at Maggie.Ahmaogak@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: George Ahmaogak, Sr., Barrow Whaling Captains' Association
Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Fenton Rexford
Kaktovik Whaling Captains' Association
P.O. Box 137
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Rexford:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Thank you, in advance, for taking the time to meet with us regarding the 2011 ION BeaufortSPAN™ West Program. It is important we hear your comments and suggestions. We look forward to working with you as we gear-up for 2011 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or via email at Michelle.Turner@asrcenergy.com, or Maggie Ahmaogak with AES at 907-334-1566 or via email at Maggie.Ahmaogak@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Isaac Akootchook
Native Village of Kaktovik
P.O. Box 130
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Akootchook:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or via email at Michelle.Turner@asrcenergy.com, or Maggie Ahmaogak with AES at 907-334-1566 or via email at Maggie.Ahmaogak@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Fenton Rexford, Native Village of Kaktovik
Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Nathan Gordon
Kaktovik Inupiat Corporation
P.O. Box 73
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Gordon:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Thank you, in advance, for taking the time to meet with us regarding the 2011 ION BeaufortSPAN™ West Program. It is important we hear your comments and suggestions. We look forward to working with you as we gear-up for 2011 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or via email at Michelle.Turner@asrcenergy.com, or Maggie Ahmaogak with AES at 907-334-1566 or via email at Maggie.Ahmaogak@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Phillip Tikluk, Kaktovik Inupiat Corporation
Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



October 15, 2010

Billy Oyagak
President
Nuiqsut Whaling Captains' Association
P.O. Box 89013
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed Until 2011

Dear Mr. Oyagak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2010. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2010 through mid-December 2010. However, the source vessel, *BOS Atlantic*, experienced an equipment failure and will be returning to dock in Seattle, Washington. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2011 and run through mid-December 2011.

On behalf of ION, my colleagues and I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provided regarding our planned operations (e.g., safe harbor locations). We look forward to working with you next year as we gear up for 2011 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corp.

cc: Michelle Turner, AES
AES Project File
Administrative Record

MT/NS/WW/GS
15337-02-10-002/10-110



February 08, 2011

Ms. Annie Tikluk
City of Kaktovik
P.O. Box 27
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Ms. Tikluk:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or via email at Michelle.Turner@asrcenergy.com, or Maggie Ahmaogak with AES at 907-334-1566 or via email at Maggie.Ahmaogak@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Thomas Napageak Jr.
City of Nuiqsut
P.O. Box 89148
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Napageak:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Thank you, in advance, for taking the time to meet with us regarding the 2011 ION BeaufortSPAN™ West Program. It is important we hear your comments and suggestions. We look forward to working with you as we gear-up for 2011 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or via email at Michelle.Turner@asrcenergy.com, or Maggie Ahmaogak with AES at 907-334-1566 or via email at Maggie.Ahmaogak@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Ms. Bernice Kaigelak
Native Village of Nuiqsut
P.O. Box 169
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Ms. Kaigelak:


ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Isaac Nukapigak
Kuukpik Corporation
P.O. Box 89187
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Nukapigak:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018

February 08, 2011

Ms. Annie Gray
Kuukpikmiut Subsistence Oversight Panel, Inc.
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Ms. Gray:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Eli Nukapigak, KSOP
Thomas Napageak, Jr., KSOP
Eli Kilapsuk, KSOP
Jonah Nukapigak, KSOP
Frank Oyagak, Jr., KSOP
Theodore Pausanna, KSOP
Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018



February 08, 2011

Mr. Herbert Ipalook
Nuiqsut Whaling Captains' Association
P.O. Box 89013
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Ipalook:

ION Geophysical, Corporation (ION) is proposing to conduct a 2D marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical complications with our source vessel, the *BOS Atlantic*. The 2011 ION BeaufortSPAN™ West Program operations are proposed for October 1 through mid-December, 2011.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Michelle Turner, AES
Maggie Ahmaogak, AES
AES Project File
Administrative Record

MM/MT/NS/GS
15356-02-11-001/11-018

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**2011 April Notification of
Nuiqsut Meeting Cancellation Because of Weather**

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April 27, 2011

Thomas Napageak Jr.
Mayor
City of Nuiqsut
P.O. Box 89148
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Napageak:

As you may know, ION Geophysical, Corporation (ION) scheduled a meeting with the community leadership of Nuiqsut for April 19, 2011. Unfortunately, we were unable to get to Nuiqsut on that date due to weather conditions. We apologize for not being able to hold the meeting as planned and appreciate your understanding.

The purpose of the meeting was to provide an update on the 2011 ION BeaufortSPAN™ West program and obtain feedback on the project. ION is proposing to conduct a two-dimensional (2D) marine seismic survey in the Beaufort Sea during fall 2011. The original 2010 program was postponed due to technical problems with our source vessel, the *BOS Atlantic*. The 2011 program operations are scheduled for October 1 through mid-December 2011.

Included with this letter is a copy of the presentation that would have been given at the April meeting. Though we could not make it to Nuiqsut in April, we would appreciate hearing your comments and suggestions. We expect to hold another round of meetings in August, but please feel free contact us before then.

Thank you, in advance, for taking the time to look over the materials regarding the 2011 ION BeaufortSPAN™ West Program. We look forward to working with you as we gear up for 2011 activities.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

Enclosure: 2011 ION BeaufortSPAN™ West Program Presentation

cc: Michelle Turner, AES
Meghan Larson, AES
AES Project File
Administrative Record

ML/MT/NS/GS
15356-02-11-003/11-053



April 27, 2011

Bernice Kaigelak
President
Native Village of Nuiqsut
P.O. Box 89169
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Ms. Kaigelak:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

Enclosure: 2011 ION BeaufortSPAN™ West Program Presentation

cc: Michelle Turner, AES
Meghan Larson, AES
AES Project File
Administrative Record

ML/MT/NS/GS
15356-02-11-003/11-053



April 27, 2011

Isaac Nukapigak
President
Kuukpiik Corporation
P.O. Box 89187
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Nukapigak:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

Enclosure: 2011 ION BeaufortSPAN™ West Program Presentation

cc: Michelle Turner, AES
Meghan Larson, AES
AES Project File
Administrative Record

ML/MT/NS/GS
15356-02-11-003/11-053



April 27, 2011

Herbert Ipalook
President
Nuiqsut Whaling Captains' Association
P.O. Box 89013
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Mr. Ipalook:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

Enclosure: 2011 ION BeaufortSPAN™ West Program Presentation

cc: Michelle Turner, AES
Meghan Larson, AES
AES Project File
Administrative Record

ML/MT/NS/GS
15356-02-11-003/11-053



April 27, 2011

Annie Gray
Executive Director
Kuukpikmiut Subsistence Oversight Panel, Inc.
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Proposed 2011 Program

Dear Ms. Gray:

As you may know, ION Geophysical, Corporation (ION) scheduled a meeting with the community leadership of Nuiqsut for April 19, 2011. Unfortunately, we were unable to get to Nuiqsut on that date due to weather conditions. We apologize for not being able to hold the meeting as planned and appreciate your understanding.

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If you have any questions, comments, or suggestions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or via email at Michelle.Turner@asrcenergy.com.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ed Nelson'.

Ed Nelson
Project Manager
ION Geophysical, Corporation

Enclosure: 2011 ION BeaufortSPAN™ West Program Presentation



cc: Eli Nukapigak
Thomas Napageak Jr.,
Jonah Nukapigak
Frank Oyagak Jr.
Theodore Pausanna
Gordon Brown
Dora Leavitt
Michelle Turner, AES
Meghan Larson, AES
AES Project File
Administrative Record

ML/MT/NS/GS
15356-02-11-003/11-053

**2011 April Letter
Responses to Questions Asked at the February 2011
Planning Commission Meeting**

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April 18, 2011

North Slope Borough Planning Commission
Attention: Margie Fisher
P.O. Box 69
Barrow, Alaska 99723

Re: ION 2011 BeaufortSPAN™ West Program

Dear Commissioners:

Thank you for allowing ION Geophysical, Corporation (ION) to present information on our proposed 2011 BeaufortSPAN™ West Program at the February 24th Planning Commission meeting. We appreciate the comments we received. ION will not be able to attend the April 28th Planning Commission meeting, but we wanted to provide a prompt response to your questions. Both the question and ION's response are provided below.

Question: The Planning Commission would like a report of the seismic activity and any additional studies.

Response: ION will provide the Commission with a report after completion of the 2011 BeaufortSPAN™ West Program.

Question: How far offshore is the vessel during transit when in the Chukchi Sea?

Response: The U.S. Coast Guard will be directing the vessel during transit in the Chukchi Sea. We will know the offshore distance approximately one week ahead of time.

Question: What effect do sound waves have on plankton or krill and other organisms?

Response: The impacts of seismic surveys on krill and other plankton are expected to be limited to those organisms within a few yards of the airguns. These impacts may include slowed development of exposed eggs, "stunned" organisms, or other injuries. Organisms more than a few yards away from the airguns should not be affected.

Question: Last season there was seismic activity in Canada. Did you do any recordings so we can hear how the sound travels? If so, can you bring that sound recording to Kaktovik?

Response: Ion will bring movies of the seismic activity in the Canadian Beaufort from last season to Kaktovik so that residents can see how data is acquired. New sound source verification tests (SSVs) will be required by the National Marine Fisheries Service under the Incidental Harassments Authorization for the 2011 U.S. work since the location and time period are different from previous SSVs.

Question: Last season our Canadian relatives saw two dead whales on the beach. Did ION have anything to do with this?

Response: According to the Canadian government Department of Fisheries and Oceans and Parks Canada, there was only one whale carcass that washed up on the beach. It washed up near Stokes Point in Ivvavik National Park on July 30, 2010 and was in an advanced state of decay, suggesting that it may have died in 2009. It was observed a second time in that location months later during a flyover on an unrelated project. No harmful impacts to whales or other marine mammals were observed in the Canadian Beaufort during the 2010 open water season by marine mammal observers.



Question: Is industry doing any research into limiting the sound that gets put in the water such as bubble curtains?

Response: ION is not currently conducting research on techniques to limit the sound that is put into the water.

Question: Is ION looking into Safe Harbor areas and using a local liaison to identify those areas?

Response: ION has discussed Safe Harbor with community members in Nuiqsut and Barrow. We will be discussing emergency response and Safe harbor with NSB Search and Rescue on April 20th.

If you would like to discuss the 2011 ION BeaufortSPAN™ West Program please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

CG/MT/NS/GS
15356-02-11-002/11-044

2011 June Invitation Letters to Whaling Captains' Associations

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June 24, 2011

Barrow Whaling Captains' Association
Eugene Brower, President
P.O. Box 492
Barrow, AK 99723

Re: Request to Meet With Barrow Whaling Captains' Association on August 17, 2011

Dear Mr. Brower:

ION Geophysical, Corporation (ION) is planning on conducting an exploratory two-dimensional marine seismic survey in the Beaufort Sea of Alaska. The proposed survey, titled the BeaufortSPAN™ West Program, will occur in broken ice conditions during early winter from October 1, 2011 through mid-December 2011. This program was originally proposed for fall 2010, but was delayed due to equipment issues. The primary project area will extend from the U.S./Canadian border in the east to Point Barrow in the west. All activity will occur in federal waters.

Based upon input from affected communities and the fact that ION's activities occur after the completion of fall whaling, ION believes that there is no possibility for conflict to occur; therefore, we have decided not to sign the 2011 Conflict Avoidance Agreement. ION informed the Alaska Eskimo Whaling Commission of this decision in a letter dated February 28, 2011, and publicly announced it in April, 2011, at the Open Water Meeting sponsored by the National Marine Fisheries Service.

We will be in Barrow on the evening of Wednesday, August 17, 2011, for a community meeting and would welcome the opportunity to also meet with you and the Barrow Whaling Captains' Association prior to that meeting to discuss ION's proposed project. We believe that it is in the best interests of all parties to discuss proposed activities and appreciate your willingness to meet with us.

Please feel free to forward this invitation to the other members of the Barrow Whaling Captains' Association and let me know if a meeting is possible. Any questions or concerns, you can contact me at Edward.Nelson@iongeo.com or 832-344-6852.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Harry Brower, AEWC
Johnny Aiken, AEWC
AES Project File
Administrative Record

ER/ MT/NS
15356-02-11-004/11-109

June 24, 2011

Kaktovik Whaling Captains' Association
Charlie M. Brower, President
P.O. Box 41
Kaktovik, AK 99747

Re: Request to Meet With Kaktovik Whaling Captains' Association on August 16, 2011

Dear Mr. Brower:

ION Geophysical, Corporation (ION) is planning on conducting an exploratory two-dimensional marine seismic survey in the Beaufort Sea of Alaska. The proposed survey, titled the BeaufortSPAN™ West Program, will occur in broken ice conditions during early winter from October 1, 2011 through mid-December 2011. This program was originally proposed for fall 2010, but was delayed due to equipment issues. The primary project area will extend from the U.S./Canadian border in the east to Point Barrow in the west. All activity will occur in federal waters.

Based upon input from affected communities and the fact that ION's activities occur after the completion of fall whaling, ION believes that there is no possibility for conflict to occur; therefore, we have decided not to sign the 2011 Conflict Avoidance Agreement. ION informed the Alaska Eskimo Whaling Commission of this decision in a letter dated February 28, 2011, and publicly announced it in April, 2011, at the Open Water Meeting sponsored by the National Marine Fisheries Service.

We will be in Kaktovik on Tuesday, August 16, 2011 for a community meeting and would welcome the opportunity to also meet with you and the Kaktovik Whaling Captains' Association prior to that meeting to discuss the proposed project. We believe that it is in the best interests of all parties to discuss proposed activities and appreciate your willingness to meet with us.

Please feel free to forward this invitation to the other members of the Kaktovik Whaling Captains' Association and let me know if a meeting is possible. Any questions or concerns, you can contact me at Edward.Nelson@iongeo.com or 832-344-6852.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Harry Brower, Alaska Eskimo Whaling Commission
Johnny Aiken, Alaska Eskimo Whaling Commission
AES Project File
Administrative Record

ER/ MT/NS
15356-02-11-004/11-109

June 24, 2011

Nuiqsut Whaling Captains' Association
Herbert Ipalook, President
P.O. Box 89183
Nuiqsut, AK 99789

Re: Request to Meet With Nuiqsut Whaling Captains' Association on August 18, 2011

Dear Mr. Ipalook:

ION Geophysical, Corporation (ION) is planning on conducting an exploratory two-dimensional marine seismic survey in the Beaufort Sea of Alaska. The proposed survey, titled the BeaufortSPAN™ West Program, will occur in broken ice conditions during early winter from October 1, 2011 through mid-December 2011. This program was originally proposed for fall 2010, but was delayed due to equipment issues. The primary project area will extend from the U.S./Canadian border in the east to Point Barrow in the west. All activity will occur in federal waters.

Based upon input from affected communities and the fact that ION's activities occur after the completion of fall whaling, ION believes that there is no possibility for conflict to occur; therefore, we have decided not to sign the 2011 Conflict Avoidance Agreement. ION informed the Alaska Eskimo Whaling Commission of this decision in a letter dated February 28, 2011, and publicly announced it in April, 2011, at the Open Water Meeting sponsored by the National Marine Fisheries Service.

We will be in Nuiqsut on the evening of Thursday, August 18, 2011, for a community meeting and would welcome the opportunity to also meet with you and the Nuiqsut Whaling Captains' Association prior to that meeting to discuss the proposed project. We believe that it is in the best interests of all parties to discuss proposed activities and appreciate your willingness to meet with us.

Please feel free to forward this invitation to the other members of the Nuiqsut Whaling Captains' Association and let me know if a meeting is possible. Any questions or concerns, you can contact me at Edward.Nelson@iongeo.com or 832-344-6852.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Harry Brower, AEWC
Johnny Aiken, AEWC
AES Project File
Administrative Record

ER/ MT/NS
15356-02-11-004/11-109

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**2011 July Notification
of Program Delay**

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July 14, 2011

Taquik Hepa, Director
NSB Department of Wildlife Management
P.O. Box 69
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012

Dear Ms. Hepa:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119

July 14, 2011

Hugh Patkotak, Sr., Director
NSB Search and Rescue
P.O. Box 69
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012

Dear Mr. Patkotak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ed Nelson'.

Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Price Brower, NSB Search and Rescue
Pat Patterson, NSB Search and Rescue
Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Edward Itta, Mayor
North Slope Borough
P.O. Box 69
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012

Dear Mayor Itta:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ed Nelson'.

Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Andy Mack, NSB
Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Thomas Olemaun, Executive Director
Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Olemaun:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012 and run through mid-December 2012.

We would like to invite you to meet with ION in Barrow on August 17, 2011, to discuss the 2012 program. The meeting is scheduled from 1:00 p.m. to 3:00 p.m. at the ASRC Office Conference Room on the 3rd floor of the bank building.

On behalf of ION and my colleagues, I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Price Leavitt, Executive Director
Inupiat Community of the Arctic Slope
P.O. Box 1121
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Leavitt:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012 and run through mid-December 2012.

We would like to invite you to meet with ION in Barrow on August 17, 2011, to discuss the 2012 program. The meeting is scheduled from 1:00 p.m. to 3:00 p.m. at the ASRC Office Conference Room on the 3rd floor of the bank building.

On behalf of ION and my colleagues, I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Joseph Sage, Natural Resource Director
Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Sage:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012 and run through mid-December 2012.

We would like to invite you to meet with ION in Barrow on August 17, 2011, to discuss the 2012 program. The meeting is scheduled from 1:00 p.m. to 3:00 p.m. at the ASRC Office Conference Room on the 3rd floor of the bank building.

On behalf of ION and my colleagues, I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Johnny Aiken, Executive Director
Alaska Eskimo Whaling Commission
P.O. Box 570
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Aiken:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012 and run through mid-December 2012.

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If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119

July 14, 2011

Harry Brower Jr., President
Alaska Eskimo Whaling Commission
P.O. Box 570
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Brower:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012 and run through mid-December 2012.

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If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Eugene Brower, President
Barrow Whaling Captains
Barrow Whaling Captain Association
P.O. Box 4927
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Brower:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012 and run through mid-December 2012.

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If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Doreen Lampe, President
Inupiat Community of the Arctic Slope
P.O. Box 1121
Barrow, AK 99723

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Ms. Lampe:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012 and run through mid-December 2012.

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If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Nora Jane Burns
NSB Village Coordinator
P.O. Box 102
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Ms. Burns:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

We would like to invite you to meet with ION in Kaktovik on August 16, 2011, to discuss the 2012 program. The meeting is scheduled from 7:00 p.m. to 9:00 p.m. at the Community Hall.

On behalf of ION, my colleagues and I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Fenton Rexford, Executive Director
Native Village of Kaktovik
P.O. Box 130
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Rexford:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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On behalf of ION, my colleagues and I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ed Nelson'.

Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Charles Brower, President
Kaktovik Whaling Captains
Kaktovik Whaling Captain Association
P.O. Box 137
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Brower and Kaktovik Whaling Captains:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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On behalf of ION, my colleagues and I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Annie Tikluk, Mayor
City of Kaktovik
P.O. Box 27
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Ms. Tikluk:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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On behalf of ION, my colleagues and I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Isaac Akootchook, President
Native Village of Kaktovik
P.O. Box 130
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Akootchook:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

We would like to invite you to meet with ION in Kaktovik on August 16, 2011, to discuss the 2012 program. The meeting is scheduled from 7:00 p.m. to 9:00 p.m. at the Community Hall.

On behalf of ION, my colleagues and I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Phillip Tikluk, President
Kaktovik Inupiat Corporation
P.O. Box 73
Kaktovik, AK 99747

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Tikluk:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119

July 14, 2011

Theodore Pausanna
Kuukpik Corporation/KSOP Board
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Pausanna:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

We would like to invite you to meet with ION in Nuiqsut on August 18, 2011, to discuss the 2012 program. The meeting is scheduled from 1:00 p.m. to 3:00 p.m. at the Kisik Community Center.

On behalf of ION and my colleagues, I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Jonah Nukapigak
Kuukpik Corporation/KSOP Board
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Nukapigak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

We would like to invite you to meet with ION in Nuiqsut on August 18, 2011, to discuss the 2012 program. The meeting is scheduled from 1:00 p.m. to 3:00 p.m. at the Kisik Community Center.

On behalf of ION and my colleagues, I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Isaac Nukapigak, President
Kuukpik Corporation
P.O. Box 89187
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Nukapigak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

We would like to invite you to meet with ION in Nuiqsut on August 18, 2011, to discuss the 2012 program. The meeting is scheduled from 1:00 p.m. to 3:00 p.m. at the Kisik Community Center.

On behalf of ION and my colleagues, I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Herbert Ipalook, President
Nuiqsut Whaling Captains
Nuiqsut Whaling Captain Association
P.O. Box 89103
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Ipalook and Nuiqsut Whaling Captains:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

We would like to invite you to meet with ION in Nuiqsut on August 18, 2011, to discuss the 2012 program. The meeting is scheduled from 1:00 p.m. to 3:00 p.m. at the Kisik Community Center.

On behalf of ION and my colleagues, I would like to thank you for taking the time to meet with us regarding the ION BeaufortSPAN™ West Program. We appreciate the comments and suggestions you provide regarding our planned operations. We look forward to working with you as we gear up for 2012 activities.

If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Gordon Brown Jr.
Kuukpik Corporation/KSOP Board
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Brown:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Frank Oyapak III
KSOP Board
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Oyapak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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If you have any questions, please do not hesitate to contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119

July 14, 2011

Eunice Brower, Executive Director
KSOP Board
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Ms. Brower:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Eli Nukapigak
Native Village of Nuiqsut/KSOP Board
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Nukapigak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Dora Leavitt
KSOP Board
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Ms. Leavitt:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Bernice Kaigelak, President
Native Village of Nuiqsut
P.O. Box 169
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Ms. Kaigelak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119



July 14, 2011

Thomas Napageak Jr.
Mayor and Chairman
City of Nuiqsut/Native Village of Nuiqsut/KSOP Board
P.O. Box 89126
Nuiqsut, AK 99789

Re: ION BeaufortSPAN™ West Program Delayed until 2012 and Invitation to Meet

Dear Mr. Napageak:

ION Geophysical, Corp. (ION) proposed conducting a 2D marine seismic survey in the Beaufort Sea during fall 2011. The ION BeaufortSPAN™ West Program operations were planned for October 1, 2011, through mid-December 2011. However, we have not received adequate confirmation from Transport Canada that the *Polar Explorer* will be allowed to transit the Northwest Passage in early October to justify committing the vessel to the ION BeaufortSPAN™ West Program. As a result, the BeaufortSPAN™ West Program will be delayed for one year. ION anticipates that the proposed program will begin October 1, 2012, and run through mid-December 2012.

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Once again, thank you for your time.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LO/GS
15356-02-11-008/11-119

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**2011 August Reminder E-mails for
Barrow Whaling Captains' Meeting**

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Turner, Michelle

From: Ahmaogak, Maggie
Sent: Thursday, August 11, 2011 9:13 AM
To: Edward Itta; tribal@inupiatgov.com; Rock, Rex ; aedwardsen@ukpik.com; Bob Harcharek; tolemaun@nvbarrow.net; eugenebrower@gci.net; Harry Brower; aewc1@gci.net
Cc: Turner, Michelle
Subject: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

August 11, 2011

Edward S. Itta, Mayor, North Slope Borough
Doreen Lampe, President, Inupiat Community of the Arctic Slope
Price Leavitt, Executive Director, Inupiat Community of the Arctic Slope
Rex Rock, Sr., President, Arctic Slope Regional Corporation
Anthony Edwardson, President, Ukpeagvik Inupiat Corporation
Robert Harcharek, Mayor, City of Barrow
Thomas Olemaun, President/Executive Director, Native Village of Barrow
Eugene Brower, President, Barrow Whaling Captains' Association
Harry Brower Jr., Chairman, Alaska Eskimo Whaling Commission
Johnny Aiken, Executive Director, Alaska Eskimo Whaling Commission

Dear All:

This email is sent as a reminder that Ed Nelson, Project Manager for ION Geophysical Corporation invited the Barrow Leadership to meet on August 17 to discuss their 2012 program. The meeting is scheduled from 1:00 to 3:00 pm at the ASRC 3rd Floor Conference room.

The meeting is in the ASRC Office 3rd Floor Conference room. If you have any questions, please do not hesitate to contact Michelle Turner, AES/ION Senior Project Manager at (907) 339-5460 or Michelle.Turner@asrcenergy.com or Maggie Ahmaogak, AES Community Relations Coordinator at (907)334-1566 or Maggie.Ahmaogak@asrcenergy.com. Thank you

Maggie Ahmaogak

Community Relations Coordinator | RTS
ASRC Energy Services Alaska, Inc.
2700 Gambell St, Suite 200
Anchorage, AK 99503
Desk: 907-334-1566 | Cell: 907-250-0083



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**Response to Reminder E-mails for
Barrow Whaling Captains' Meeting**

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Turner, Michelle

From: Harry Brower [Harry.Brower@north-slope.org]
Sent: Friday, August 12, 2011 8:55 AM
To: Ahmaogak, Maggie; Edward Itta; tribal@inupiatgov.com; Rock, Rex ; aedwardsen@ukpik.com; Bob Harcharek; tolemaun@nvbarrow.net; C. Eugene Brower; aewc1@gci.net
Cc: Turner, Michelle
Subject: RE: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

Good morning to all, I have prior commitments on Aug. 17 2011 to be in Point Hope, I will not be here in Barrow for the meeting. HB.

From: Ahmaogak, Maggie [<mailto:Maggie.Ahmaogak@asrcenergy.com>]
Sent: Thursday, August 11, 2011 9:13 AM
To: Edward Itta; tribal@inupiatgov.com; Rock, Rex ; aedwardsen@ukpik.com; Bob Harcharek; tolemaun@nvbarrow.net; C. Eugene Brower; Harry Brower; aewc1@gci.net
Cc: Turner, Michelle
Subject: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

August 11, 2011

Edward S. Itta, Mayor, North Slope Borough
Doreen Lampe, President, Inupiat Community of the Arctic Slope
Price Leavitt, Executive Director, Inupiat Community of the Arctic Slope
Rex Rock, Sr., President, Arctic Slope Regional Corporation
Anthony Edwardsen, President, Ukpeagvik Inupiat Corporation
Robert Harcharek, Mayor, City of Barrow
Thomas Olemaun, President/Executive Director, Native Village of Barrow
Eugene Brower, President, Barrow Whaling Captains' Association
Harry Brower Jr., Chairman, Alaska Eskimo Whaling Commission
Johnny Aiken, Executive Director, Alaska Eskimo Whaling Commission

Dear All:

This email is sent as a reminder that Ed Nelson, Project Manager for ION Geophysical Corporation invited the Barrow Leadership to meet on August 17 to discuss their 2012 program. The meeting is scheduled from 1:00 to 3:00 pm at the ASRC 3rd Floor Conference room.

The meeting is in the ASRC Office 3rd Floor Conference room. If you have any questions, please do not hesitate to contact Michelle Turner, AES/ION Senior Project Manager at (907) 339-5460 or Michelle.Turner@asrcenergy.com or Maggie Ahmaogak, AES Community Relations Coordinator at (907)334-1566 or Maggie.Ahmaogak@asrcenergy.com. Thank you

Maggie Ahmaogak

Community Relations Coordinator |RTS
ASRC Energy Services Alaska, Inc.
2700 Gambell St, Suite 200
Anchorage, AK 99503
Desk: 907-334-1566 | Cell: 907-250-0083



Turner, Michelle

From: Ahmaogak, Maggie
Sent: Friday, August 12, 2011 7:13 AM
To: Turner, Michelle; Larson, Meghan
Subject: FW: ION August 17, 2011 Meeting

From: Eugene Brower [<mailto:eugenebrower@gci.net>]
Sent: Friday, August 12, 2011 12:20 AM
To: Ahmaogak, Maggie
Cc: jadams@gci.net
Subject: Re: ION August 17, 2011 Meeting

I have not inform the Barrow whalers of this meeting and request that the meeting is rescheduled to Aug. 26,2011 due to other commimmitments I am out of town from Aug 14, until Aug. 19, 2011. Thanks Eugene----- Original Message -----

From: [Ahmaogak, Maggie](#)
To: eugenebrower@gci.net
Cc: jadams@gci.net
Sent: Monday, August 08, 2011 12:48 PM
Subject: ION August 17, 2011 Meeting

Good Afternoon, Eugene:

I hope that this email goes thru and finds you well. I am emailing you to find out if the Barrow whaling captains have been notified of the ION meeting on August 17, 2011 at the 3rd Floor ASRC Conference room from 1:00 to 3:00 PM to discuss ION's Delaying their 2011 Program and to discuss their 2012 ION Program. Thank you for your response, in advance. Your letter was dated July 14, 2011 which was sent to you inviting the Barrow whaling captains to this meeting. Quyannaq!

Maggie Ahmaogak, AES Community Relations Coordinator

Maggie Ahmaogak
Community Relations Coordinator |RTS
ASRC Energy Services Alaska, Inc.
2700 Gambell St, Suite 200
Anchorage, AK 99503
Desk: 907-334-1566 | Cell: 907-250-0083



Turner, Michelle

From: Ahmaogak, Maggie
Sent: Friday, August 12, 2011 7:14 AM
To: Turner, Michelle; Larson, Meghan
Subject: FW: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

From: Eugene Brower [<mailto:eugenebrower@gci.net>]
Sent: Friday, August 12, 2011 12:23 AM
To: Ahmaogak, Maggie; Edward Itta; tribal@inupiatgov.com; Rock, Rex ; aedwardsen@ukpik.com; Bob Harcharek; tolemaun@nvbarrow.net; Harry Brower; aewc1@gci.net
Cc: Turner, Michelle
Subject: Re: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

Due to other commitments I am not available for this meeting date and request it be change to Aug.24, or 26. Thanks Eugene Brower President of Barrow Whaling Captains Association

----- Original Message -----

From: Ahmaogak, Maggie
To: Edward Itta ; tribal@inupiatgov.com ; Rock, Rex ; aedwardsen@ukpik.com ; Bob Harcharek ; tolemaun@nvbarrow.net ; eugenebrower@gci.net ; Harry Brower ; aewc1@gci.net
Cc: Turner, Michelle
Sent: Thursday, August 11, 2011 9:13 AM
Subject: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

August 11, 2011

Edward S. Itta, Mayor, North Slope Borough
Doreen Lampe, President, Inupiat Community of the Arctic Slope
Price Leavitt, Executive Director, Inupiat Community of the Arctic Slope
Rex Rock, Sr., President, Arctic Slope Regional Corporation
Anthony Edwardsen, President, Ukpeagvik Inupiat Corporation
Robert Harcharek, Mayor, City of Barrow
Thomas Olemaun, President/Executive Director, Native Village of Barrow
Eugene Brower, President, Barrow Whaling Captains' Association
Harry Brower Jr., Chairman, Alaska Eskimo Whaling Commission
Johnny Aiken, Executive Director, Alaska Eskimo Whaling Commission

Dear All:

This email is sent as a reminder that Ed Nelson, Project Manager for ION Geophysical Corporation invited the Barrow Leadership to meet on August 17 to discuss their 2012 program. The meeting is scheduled from 1:00 to 3:00 pm at the ASRC 3rd Floor Conference room.

The meeting is in the ASRC Office 3rd Floor Conference room. If you have any questions, please do not hesitate to contact Michelle Turner, AES/ION Senior Project Manager at (907) 339-5460 or Michelle.Turner@asrcenergy.com or Maggie Ahmaogak, AES Community Relations Coordinator at (907)334-1566 or Maggie.Ahmaogak@asrcenergy.com. Thank you

Maggie Ahmaogak

Community Relations Coordinator |RTS
ASRC Energy Services Alaska, Inc.

2700 Gambell St, Suite 200
Anchorage, AK 99503
Desk: 907-334-1566 | Cell: 907-250-0083



Turner, Michelle

From: Ahmaogak, Maggie
Sent: Friday, August 12, 2011 9:20 AM
To: Larson, Meghan; Turner, Michelle
Subject: FW: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

From: Marie Itta [<mailto:Marie.Itta@north-slope.org>] **On Behalf Of** Edward Itta
Sent: Friday, August 12, 2011 9:10 AM
To: Ahmaogak, Maggie; Edward Itta; tribal@inupiatgov.com; Rock, Rex ; aedwardsen@ukpik.com; Bob Harcharek; tolemaun@nvbarrow.net; C. Eugene Brower; Harry Brower; aewc1@gci.net
Cc: Turner, Michelle
Subject: RE: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

On behalf of Mayor Itta, this is Marie Itta, Deputy Assistant
The Mayor has other commitments on the 17th as well. He will be out of town for meetings that have been on his calendar for some time.

Quyanaqpak

From: Ahmaogak, Maggie [<mailto:Maggie.Ahmaogak@asrcenergy.com>]
Sent: Thursday, August 11, 2011 9:13 AM
To: Edward Itta; tribal@inupiatgov.com; Rock, Rex ; aedwardsen@ukpik.com; Bob Harcharek; tolemaun@nvbarrow.net; C. Eugene Brower; Harry Brower; aewc1@gci.net
Cc: Turner, Michelle
Subject: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

August 11, 2011

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Maggie Ahmaogak

Community Relations Coordinator | RTS
ASRC Energy Services Alaska, Inc.
2700 Gambell St, Suite 200
Anchorage, AK 99503
Desk: 907-334-1566 | Cell: 907-250-0083



**2011 August Notification of Delay of Program
Barrow Whaling Captains' Associations and Response**

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August 12, 2011

Barrow Whaling Captains Association
Eugene Brower, President
P.O. Box 492
Barrow, AK 99723

Re: Request to Meet With Barrow Whaling Captains Association on August 17, 2011

Dear Mr. Brower:

Thank you for responding to our reminder that ION Geophysical, Corp. (ION) will be in Barrow on Wednesday, August 17, 2011, and would like to meet with you and the Barrow Whaling Captains Association. We understand that you will be unavailable to meet with ION. Unfortunately, we cannot reschedule our trip to Barrow for the following week.

We wanted to inform you in person that ION will be postponing its 2011 BeaufortSPAN™ West Program until 2012.

As you are aware from our July 14, 2011, letter to Barrow Whaling Captains Association, ION is delaying the program because the original seismic source vessel, the *BOS Atlantic*, is no longer available. When ION was able to identify an alternative vessel, the *Polar Explorer*, there was not enough time to get adequate confirmation from Transport Canada that it would be allowed to transit the Northwest Passage. ION is planning on conducting the same program from October 1 through mid-December 2012.

If your schedule changes and you are available on August 17, 2011, we would appreciate it if you could join us. We will be meeting from 1:00 p.m. to 3:00 p.m. at the ASRC Office Conference Room on the 3rd floor.

Please feel free to inform other whaling captains of the August 17, 2011, meeting. If you have any questions, please contact me at Edward.Nelson@iongeo.com or 832-344-6852.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Corporation

cc: Harry Brower, AEW
Johnny Aiken, AEW
Jake Adams, BWCA
AES Project File
Administrative Record

ML/ MT/MA/LO
15356-02-11-006/11-138

Turner, Michelle

From: Ahmaogak, Maggie
Sent: Friday, August 12, 2011 12:08 PM
To: Marie.Itta@north-slope.org
Cc: Turner, Michelle; Ed Nelson
Subject: RE: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

Marie:

Thank you for responding on behalf of Mayor Edward Itta, if he cannot attend he can designate a representative to this meeting. Thank you.

Maggie

From: Marie Itta [<mailto:Marie.Itta@north-slope.org>] **On Behalf Of** Edward Itta
Sent: Friday, August 12, 2011 9:10 AM
To: Ahmaogak, Maggie; Edward Itta; tribal@inupiatgov.com; Rock, Rex ; aedwardsen@ukpik.com; Bob Harcharek; tolemaun@nvbarrow.net; C. Eugene Brower; Harry Brower; aewc1@gci.net
Cc: Turner, Michelle
Subject: RE: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

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To: Edward Itta; tribal@inupiatgov.com; Rock, Rex ; aedwardsen@ukpik.com; Bob Harcharek; tolemaun@nvbarrow.net; C. Eugene Brower; Harry Brower; aewc1@gci.net
Cc: Turner, Michelle
Subject: ION Geophysical Meeting for August 17, 2011 ASRC 3rd Floor Conference Room

August 11, 2011

Edward S. Itta, Mayor, North Slope Borough
Doreen Lampe, President, Inupiat Community of the Arctic Slope
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Maggie Ahmaogak

Community Relations Coordinator | RTS
ASRC Energy Services Alaska, Inc.
2700 Gambell St, Suite 200
Anchorage, AK 99503
Desk: 907-334-1566 | Cell: 907-250-0083



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**2012 January Community Meeting
Invitation Letters**

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January 11, 2012

Clarice Akootchook
ASRC Village Liaison
P.O. Box 75
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Akootchook:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

We are planning to hold a public meeting in Kaktovik to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project. The Kaktovik public meeting is scheduled to take place on January 23, 2012 from 7:00pm to 9:00pm at the Community Center. We would like to extend a special invitation to you and any member of your organization to attend the public meeting and provide your input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Nuiqsut.

If you have any questions please contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com, or Meghan Larson with AES at 907-339-5492 or Meghan.Larson@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Annie Tikluk
City of Kaktovik
P.O. Box 27
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Tikluk:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003



[CHARGED WITH INNOVATION]



January 11, 2012

Nora Jane Burns
City of Kaktovik
P.O. Box 27
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Burns:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,

Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Fenton Rexford
Native Village of Kaktovik
P.O. Box 137
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Rexford:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Philip Tikluk Jr.
Kaktovik Inupiat Corporation
P.O. Box 73
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Tikluk Jr.:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003



[CHARGED WITH INNOVATION]



January 11, 2012

Bert Akootchook
Kaktovik Inupiat Corporation
P.O. Box 73
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Akootchook:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,

Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Joe Kaleak
Kaktovik Whaling Captains' Association
P.O. Box 83
Kaktovik, AK 99747

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Kaleak:

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Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Mary Cabinboy
ASRC Village Liaison
P.O. Box 266
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Cabinboy:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Thomas "Kupa" Napageak Jr.
City of Nuiqsut
P.O. Box 89148
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Napageak:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Rhoda Bennet
City of Nuiqsut
P.O. Box 89148
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Bennet:

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Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Bernice Kaigelak
Native Village of Nuiqsut
2205 2nd Avenue
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Kaigelak:

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Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Margaret Pardue
Native Village of Nuiqsut
2205 2nd Avenue
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Pardue:

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Isaac Nukapigak
Nuiqsut Whaling Captains' Association
P.O. Box 89187
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Nukapigak:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Joe Nukapigak Sr.
Kuukpik Corporation
P.O. Box 89178
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Nukapigak:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Eunice Brower
Kuukpik Subsistence Oversight Panel
P.O. Box 89126
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Brower:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Jonah Nukapigak
Kuukpik Subsistence Oversight Panel
P.O. Box 89126
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Nukapigak:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Gordon Brown Jr.
Kuukpik Subsistence Oversight Panel
P.O. Box 89126
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Brown Jr.:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Eli Nukapigak
Kuukpik Subsistence Oversight Panel
P.O. Box 89126
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Nukapigak:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Theodore Pausanna
Kuukpik Subsistence Oversight Panel
P.O. Box 89126
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Pausanna:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Frank Oyagak III
Kuukpik Subsistence Oversight Panel
P.O. Box 89126
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Oyagak:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Thomas Napageak Jr.
Kuukpik Subsistence Oversight Panel
P.O. Box 89126
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Napageak:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Isaac Nukapigak
Kuukpik Corporation
P.O. Box 89178
Nuiqsut, AK 99789

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Nukapigak:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Mayor Charlotte Brower
NSB Mayor's Office
P.O. Box 69 Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mayor Brower:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003

January 11, 2012

Jake Adams
NSB Mayor's Office
P.O. Box 69
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Adams:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-10-003/10-033

January 11, 2012

Taquik Hepa
NSB Department of Wildlife Management
P.O. Box 69
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Hepa:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Harry Brower Jr.
NSB Department of Wildlife Management
P.O. Box 69
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Brower Jr. :

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Robert Suydam
NSB Department of Wildlife Management
P.O. Box 69
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Suydam:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Price Leavitt
Inupiat Community of the Arctic Slope
P.O. Box 1121
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Leavitt:

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Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

George Edwardson
Inupiat Community of the Arctic Slope
P.O. Box 1121
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Edwardson:

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Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

George Olemaun
Inupiat Community of the Arctic Slope
P.O. Box 1121
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Olemaun:

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Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Bob Harcharek
City of Barrow
P.O. Box 629
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Harcharek:

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Thomas Olemaun
Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Olemaun:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

We are planning to hold a public meeting in Barrow to present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project. The Barrow public meeting is scheduled to take place on January 25, 2012 from 7:00pm to 9:00pm at the Inupiat Heritage Center. We would like to extend a special invitation to you and any member of your organization to attend the public meeting and provide your input. Refreshments and door prizes will be provided. If you are available, we would be happy to meet with you at your convenience while we are in Nuiqsut.

If you have any questions please contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com, or Meghan Larson with AES at 907-339-5492 or Meghan.Larson@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Charles Brower
Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Brower:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Joseph Sage
Native Village of Barrow
P.O. Box 1130
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Sage:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Grace Leavitt
AEWC
P.O. Box 69
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Ms. Leavitt:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Johnny Aiken
AEWC
P.O. Box 69
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Aiken:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Harry Brower
AEWC
P.O. Box 570
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Brower:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

January 11, 2012

Eugene Brower
Barrow Whaling Captains' Association
P.O. Box 570
Barrow, AK 99723

Re: Public Meeting with ION Geophysical, Inc.

Dear Mr. Brower:

ION Geophysical, Inc. (ION), is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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If you have any questions please contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or michelle.turner@asrcenergy.com, or Meghan Larson with AES at 907-339-5492 or Meghan.Larson@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-004

**2012 January Letter
Responses to Questions asked at
Barrow Community Meeting**

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February 3, 2012

Craig George
North Slope Borough
Department of Wildlife Management
P.O. Box 69
Barrow, AK 99723

Re: ION 2012 BeaufortSPAN™ West Community Meeting

Dear Mr. George:

Thank you for attending the ION Geophysical, Inc., (ION) community meeting on January 25, 2012, and providing input for the proposed 2012 BeaufortSPAN™ West program. I would like to correct a misstatement I made in response to a question you asked regarding airgun operations during low-visibility situations such as fog.

ION will adhere to current NMFS and USFWS protocols regarding airgun operations during low-visibility situations as described below and as stipulated in our permits:

- MMOs will conduct a 30-minute observation of the safety zone before ramp-up from a cold start (i.e., all airguns are off for 10 minutes or more). If the entire safety zone is not visible, then ramp-up from a cold start will not begin. If a marine mammal(s) is sighted within the safety zone during the 30-minute watch before ramp-up, the ramp-up will be delayed until the marine mammal(s) is sighted outside of the safety zone or the animal(s) is not sighted for at least 15–30 minutes (15 minutes for small odontocetes, pinnipeds [excluding walruses], and polar bears, or 30 minutes for mysticetes, large odontocetes, and walruses).
- During turns and transit between seismic transects, the 70-in³ mitigation airgun will remain operational. Standard ramp-up procedures will be followed when increasing the source levels from one airgun to the full array. However, keeping one airgun firing will allow a ramp-up to the full array during darkness or other periods of poor visibility on the assumption that marine mammals will be alerted by the sounds from the single airgun and can move away. In this manner, airgun operations will continue through periods of reduced visibility. Should airgun operations be discontinued for more than 10 minutes during a period of reduced visibility, then operations will not resume until the full safety zone is once again visible and MMOs have completed a 30-minute observation period.
- Visibility conditions will be documented during all observation periods.
- Specialized equipment, including night vision devices and a forward looking infrared (FLIR) camera will be tested during low-light hours. If animals are detected within the safety zone using this equipment, standard power-down and shutdown mitigation measures will be taken.

If you have any questions please contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com. Thank you for your time and have a wonderful day.



[CHARGED WITH INNOVATION]



Sincerely,

A handwritten signature in blue ink, appearing to read "Ed Nelson", is written over a light blue horizontal line.

Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: Darren Ireland, LGL Research Associates
Michelle Turner, AES
AES Project File
Administrative Record

MT/LC/DI
15378-03 12-009

**2012 February Community Meeting
Invitation Letters**

This page intentionally left blank.

February 3, 2012

Charlotte Brower
Mayor, North Slope Borough
P.O. Box 69
Barrow, AK 99723

Re: Meeting with ION Geophysical, Inc.

Dear Mrs. Brower:

ION Geophysical, Inc., (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

We will be in Barrow during February 16–17 to attend the AEW CAA meetings. While we are in Barrow, we would like to introduce ourselves. If you or your staff are interested, we would be happy to present the BeaufortSPAN™ West Program. Please let us know a time that would be convenient.

If you have any questions, please contact me at Edward.Nelson@iongeo.com, Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com. Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical, Inc.

cc: June Elavgak, Deputy Assistant to the Mayor
Michelle Turner, AES
AES Project File
Administrative Record

MT/LC
15378-03 12-011

February 15, 2012

John Hopson, Jr, Commissioner
Alaska Eskimo Whaling Commission
P.O. Box 67
Wainwright, AK 99782
Lovelle_h@hotmail.com

Re: Whaling Captains Association Meeting with ION Geophysical Corporation, Monday, February 20, 2012.

Dear Mr. Hopson:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

There is potential for the vessels involved in the BeaufortSPAN™ West Program to transit through the Chukchi Sea during fall whaling. Because of the timing, we would like to present our proposed program to the Wainwright Whaling Captains Association to obtain feedback about how we can minimize any conflict.

ION originally planned to hold a Whaling Captains Meeting in Wainwright on Thursday, January 26, 2012, but cancelled because of adverse weather conditions. We would like to extend an invitation to all members of the Wainwright Whaling Captains Association and their wives to join ION for dinner on Monday, February 20, 2012, from 5:30 PM to 8:30 PM at the Community Center. We look forward to speaking with you.

If you have any questions, please contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ER/MT/LC
15378-03-12-003/12-033

February 13, 2012

Mary Cabinboy
ASRC Village Liaison
P.O. Box 266
Nuiqsut, AK 99789
Mcabinboy@asrc.com

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Ms. Cabinboy:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

ION originally planned to hold a Public Meeting in Nuiqsut, Monday January 23, 2012 but cancelled due to adverse weather conditions. Please join ION for their rescheduled Public Meeting in Nuiqsut to be held Tuesday February 21, 2012 from 6:00 PM to 8:00 PM at the Kisik Community Center. The ION team will present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project. We would like to extend a special invitation to you and any member of your organization to attend the public meeting and provide your input. Door prizes and a light dinner of sandwiches and finger foods will be provided.

If you have any questions please contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

Mayor Thomas "Kupa" Napageak, Jr.
City of Nuiqsut
PO Box 89148
Nuiqsut, Alaska 99789
cityofnuiqsut@gmail.com

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Mayor Napageak:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

Vice Mayor Rhoda Bennett
City of Nuiqsut
PO Box 89148
Nuiqsut, Alaska 99789
rhoda.bennett@north-slope.org

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Vice Mayor Bennett:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

President Bernice Kaigelak
Native Village of Nuiqsut
Nuiqsut, Alaska 99789
native.village@astacalaska.net

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear President Kaigelak:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

Vice President Margaret Pardue
Native Village of Nuiqsut
Nuiqsut, Alaska 99789
native.village@astacalaska.net
mpardue@kuukpik.com

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Vice President Pardue:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

President Isaac Nukapigak
Kuukpik Corporation
P.O. Box 89187
Nuiqsut, Alaska 99789
inukapigak@kuukpik.com

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear President Nukapigak:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

Chairman Joe Nukapigak Sr.
Kuukpik Corporation
P.O. Box 89187
Nuiqsut, Alaska 99789
leonardlampe@kuukpik.com

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Chairman Nukapigak:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

Eunice Brower
Kuukpik Subsistence Oversight Panel (KSOP)
PO Box 89126
Nuiqsut, Alaska 99789
ksopi@astacalaska.net

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Ms. Brower:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

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Kuukpik Subsistence Oversight Panel (KSOP)
PO Box 89126
Nuiqsut, Alaska 99789
ksopi@astacalaska.net

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Mr. Nukapigak:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

ION originally planned to hold a Public Meeting in Nuiqsut, Monday January 23, 2012 but cancelled due to adverse weather conditions. Please join ION for their rescheduled Public Meeting in Nuiqsut to be held Tuesday February 21, 2012 from 6:00 PM to 8:00 PM at the Kisik Community Center. The ION team will present the BeaufortSPAN™ West Program to the general public and obtain feedback on the project. We would like to extend a special invitation to you and any member of your organization to attend the public meeting and provide your input. Door prizes and a light dinner of sandwiches and finger foods will be provided.

If you have any questions please contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

Gordon Brown, Jr.
Kuukpik Subsistence Oversight Panel (KSOP)
PO Box 89126
Nuiqsut, Alaska 99789
ksopi@astacalaska.net

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Mr. Brown:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

Eli Nukapigak
Kuukpik Subsistence Oversight Panel (KSOP)
PO Box 89126
Nuiqsut, Alaska 99789
ksopi@astacalaska.net

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Mr. Nukapigak:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
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February 13, 2012

Theodore Mark Pausanna
Kuukpik Subsistence Oversight Panel (KSOP)
PO Box 89126
Nuiqsut, Alaska 99789
ksopi@astacalaska.net

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Mr. Pausanna:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 13, 2012

Frank Oyagak III
Kuukpik Subsistence Oversight Panel (KSOP)
PO Box 89126
Nuiqsut, Alaska 99789
ksopi@astacalaska.net

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Mr. Oyagak:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

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15378-03-12-003/12-033

February 13, 2012

Chairman Thomas Napageak, Jr.
Kuukpik Subsistence Oversight Panel (KSOP)
PO Box 89126
Nuiqsut, Alaska 99789
ksopi@astacalaska.net

Re: Nuiqsut Public Meeting with ION Geophysical Corporation, Tuesday February 21, 2012.

Dear Chairman Napageak:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ML/MT/LC
15378-03-12-003/12-033

February 15, 2012

John Hopson, Jr, Commissioner
Alaska Eskimo Whaling Commission
P.O. Box 67
Wainwright, AK 99782
Lovelle_h@hotmail.com

Re: Whaling Captains Association Meeting with ION Geophysical Corporation, Monday, February 20, 2012.

Dear Mr. Hopson:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

There is potential for the vessels involved in the BeaufortSPAN™ West Program to transit through the Chukchi Sea during fall whaling. Because of the timing, we would like to present our proposed program to the Wainwright Whaling Captains Association to obtain feedback about how we can minimize any conflict.

ION originally planned to hold a Whaling Captains Meeting in Wainwright on Thursday, January 26, 2012, but cancelled because of adverse weather conditions. We would like to extend an invitation to all members of the Wainwright Whaling Captains Association and their wives to join ION for dinner on Monday, February 20, 2012, from 5:30 PM to 8:30 PM at the Community Center. We look forward to speaking with you.

If you have any questions, please contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ER/MT/LC
15378-03-12-003/12-033

February 15, 2012

Ransom Agnasagga, Alternate Commissioner
Alaska Eskimo Whaling Commission
Wainwright, AK 99782
Ransom.Agnasagga@north-slope.org

Re: Whaling Captains Association Meeting with ION Geophysical Corporation, Monday, February 20, 2012.

Dear Mr. Agnasagga:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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Thank you for your time and have a wonderful day.

Sincerely,



Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ER/MT/LC
15378-03-12-003/12-033



[CHARGED WITH INNOVATION]



February 15, 2012

Walter Nayakik, President
Wainwright Whaling Captains Association
P.O. Box 29
Wainwright, AK 99782
Fax: 907.763.2926

Re: Whaling Captains Association Meeting with ION Geophysical Corporation, Monday, February 20, 2012.

Dear President Nayakik:

ION Geophysical Corporation (ION) is proposing to conduct a two-dimensional (2D) seismic survey in the Beaufort Sea during fall 2012. This program was originally scheduled for 2010 and then for 2011, but was postponed both times because of technical issues. The proposed 2012 ION BeaufortSPAN™ West Program operations are planned for October 1, 2012, through mid-December 2012.

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If you have any questions, please contact me at Edward.Nelson@iongeo.com or Michelle Turner with ASRC Energy Services (AES) at 907-339-5460 or Michelle.Turner@asrcenergy.com.

Thank you for your time and have a wonderful day.

Sincerely,

Ed Nelson
Project Manager
ION Geophysical Corporation.

cc: Michelle Turner, AES
AES Project File
Administrative Record

ER/MT/LC
15378-03-12-003/12-033

Fax Transmittal

To: Walter Nayakik Fax Number: 907.763.2926

Company: Olgoonik Corporation Date: February 16, 2012

Total pages, including transmittal: 2

Whaling Captains Association Meeting with ION Geophysical Corporation, Monday,
Re: February 20, 2012

From: Elizabeth Rexford

Phone: (907) 339.6287 Fax Number: (907) 339.5475

Urgent Please Reply Please Comment For Review

Notes:

Good Afternoon Olgoonik,

Walter Nayakik told me to send his dinner invitation through to the Olgoonik office. Can you see that Walter gets this when he returns from the Mini-Convention?

Quyanaqpak,
~Elizabeth Rexford

Confirmation Report - Memory Send

Date & Time: Feb-16-2012 13:15
Tel line :
Machine ID :

Job number : 819
Date & Time : Feb-16 13:12
To : 919077632926
Number of pages : 002
Start time : Feb-16 13:12
End time : Feb-16 13:15
Pages sent : 002
Status : OK
Job number : 819

*** SEND SUCCESSFUL ***



Fax Transmittal

To: Walter Nayakik Fax Number: 907.763.2926
Company: Olgoonik Corporation Date: February 16, 2012
Total pages, including transmittal: 2
Whaling Captains Association Meeting with ION Geophysical Corporation, Monday,
Re: February 20, 2012

From: Elizabeth Rexford
Phone: (907) 339.6287 Fax Number: (907) 339.5475
 Urgent Please Reply Please Comment For Review

Notes:
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Quyanaqpak,
-Elizabeth Rexford

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Appendix B
2010–2012 Meeting Flyers, Sign-in Sheets, Notes, Comments, and Responses

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2010 Leadership Meetings

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Nuiqust Combined Leadership Meeting

Meeting Notes

Attendees: Eli Nukapigak, KSOP member (via telephone)
 Thomas Napageak Jr., KSOP member and Nuiqsut Mayor
 Eli Kilapsuk, KSOP member
 Jonah Nukapigak, KSOP member
 Frank Oyagak Jr., KSOP member
 Theodore Pasanna, KSOP member
 Myrna Skin, Native Village of Nuiqsut
 Josaphine Leavitt, Native Village of Nuiqsut
 Hazel Kunakuana, Native Village of Nuiqsut
 Ed Nelson, Ion, Project Manager
 Beth Haley, LGL, Marine Biologist
 Maggie Ahmaogak, AES, Stakeholder Relations
 Michelle Turner, AES, Project Manager

Date: 17 March 2010, 3pm

General – provided an overview of the proposed project using the Leadership powerpoint slide. These notes are meant to capture comments and responses from meeting attendees.

Thomas	Has there been any issue in the past regarding incidental takes?
Ed	I believe that there was one take in Greenland.
Beth	To attendees: Do you agree that ice isn't fast (shorefast) by mid-December?
Thomas	It should like the time planned for the project (October through mid-December) is the best time. Nobody risks boats in November.
Thomas	Do the vessels have incinerators for waste?
Ed	Yes. We will provide you with the particulars for waste streams. AES will distribute them
Thomas	Regarding FLIR: I like this.
Attendee	Did AEWG like the idea of the program (timing)?
Ed	We talked to Eugene and Harry Brower and they seemed to like the program.
Attendee	You are taking care of our animals by doing things this way.
Eli	The time when you propose to work is the season for winds and storm surge in the area. Can you do a seismic survey during storms?
Ed	If there's a storm, we'll have to run for cover. Ion hasn't worked in this area at this time before. We would like to get input from you about safe harbor. Discussion about storms and safe harbor near barrier islands (Pole Island, Alaska Island)
Eli	Will you continue doing seismic in heavy ice conditions?
Ed	We have to take into account the safety of the crew and make sure we don't lose

Nuiqust Combined Leadership Meeting

Meeting Notes

	anything. When in doubt, we'll go to safety.
Thomas	To Eli – the boats are 300 ft long.
Ed	Even though the vessels are big, we still have to look at weather, shut down for weather.
Eli	In October you can get caught in freezeup inside the barrier islands.
Thomas	October & November is the best time to work, it's out of the way of subsistence hunters.
Ed	We want to work with subsistence hunters so that we don't interfere with their activities.
Thomas	The last project you worked well with us.
Hazel	The Native Village of Nuiqsut would like to get copies of the MMO reports like you provide to NSB Wildlife. Please sent to native.village@astacalaska.net

Native Village of Barrow

Meeting Notes

Attendees: Thomas Olemaun, Native Village of Barrow Executive Director
Ed Nelson, Ion, Project Manager
Beth Haley, LGL, Marine Biologist
Maggie Ahmaogak, AES, Stakeholder Relations
Michelle Turner, AES, Project Manager

Date: 18 March 2010, 1pm

General – provided an overview of the proposed project using the Leadership powerpoint slide. These notes are meant to capture comments and responses from meeting attendees.

In general, Mr. Olemaun did not have concerns about the project. He was interested in finding out about opportunities for local hire. Native Village of Barrow has a list of local residents who are available for hire and would like to be advised about opportunities (contact Joseph Sage or himself). Local hire opportunities for the Ion project may include Inupiat MMOs and Subsistence Advisors.

Mr. Olemaun also mentioned that spring whaling is occurring earlier in Barrow than previously. He suggested that a good time to schedule a public meeting would be April 8th or 9th, prior to the beginning of spring whaling.

Inupiat Community of the Arctic Slope

Meeting Notes

Attendees: Lloyd P, ICAS Land Manager
Helen, ICAS Board of Directors member
Ed Nelson, Ion, Project Manager
Beth Haley, LGL, Marine Biologist
Maggie Ahmaogak, AES, Stakeholder Relations
Michelle Turner, AES, Project Manager

Date: 18 March 2010, 2pm

General – provided an overview of the proposed project using the Leadership powerpoint slide. These notes are meant to capture comments and responses from meeting attendees. George Edwardson, ICAS President was unable to attend due to plane trouble.

Lloyd	How far does the noise from the source vessel travel?
Beth	Based upon modeling, the 180 dB zone (which is where NMFS requires mitigation such as powering down guns) is about ½ mile from the sound source. Ion will measure how far sounds carry (Sound Source Verification) upon beginning their program.
Lloyd	What about fueling of vessels and fuel containment?
Ed	The Ion vessels can go 6 weeks without refueling. Ion has standard procedures in place to address fueling as well as disposal of waste, etc. These procedures are similar to what we do on land that you're familiar with. We can send these procedures to you in a couple of weeks. We will keep track of waste management and document it as required by permits.
Lloyd	What about risk of crushing the vessel hulls in ice.
Ed	Both vessels are ice-class vessels. They can be frozen in the ice without damaging the ships.
Lloyd	Can you develop something that shows how the icebreaker and source vessel will actually work?
Ed	We already have something developed. We can get it to you in a couple of weeks. We can send it up as a link or send up CDs with the information.

**2010 Meeting Flyers, Sign-in Sheets, Notes,
Comments, and Responses**

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Public Notice of Barrow Community Meeting

- Who** ION Geophysical, Inc. (ION)
(working as GX Technology)
- Why** ION is proposing to conduct a 2D seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010.
- What** Present the proposed BeaufortSPAN™ West Program and obtain community feedback
- When** April 8th, 2010 at 7pm to 9pm
- Where** Inupiat Heritage Center Multi-Purpose Room

Door Prizes and Refreshments will be provided.

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BeaufortSPAN™ West Program
2010 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
BARROW, ALASKA
April 8, 2010

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
David Saganua	me	852-6910			P.O. Box 227
Shanni Ningeok		852-6916		Mumegana G-Mail.Com	P.O. Box 103
Sheldon Adams	Me	852-9340		N/A	PO Box 176
* Quincy Adams	self	852-2755		(MNO Interested) jquinc2002@yahoo.com	PO Box 176 *
MAX ADAMS	self	367-8058		none	P.O. Box 26
Qannik Ningeok	self	367-4166			Box 1407 Barrow, AK
Kate A. Brower	self	367-4455			Box 1532, BRW, AK 99725
Yug Y Ningoek	self				Box 1407 Brw



BeaufortSPAN™ West Program
2010 2D Marine Seismic Survey – Beaufort Sea

ATTENDANCE SIGN-IN SHEET
BARROW, ALASKA
April 8, 2010

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
JOSEPH AKPIK	SELF	367-4726			
Wilbur Ahtunogavuk	SELF	852-2145			P.O. Box 848
Richard Olyeak	SELF	852-6355			Box 1183
Raenelle Okpeak	SELF	852-6355			Box 1183
Susan Patkotak	SELF	852-6355			Box 1183
Perlette Patkotak	SELF	852-6355			Box 1470
Gideon Patkotak	SELF	878-5993			
Julia Ningeok	SELF	367-4166			Box 1407 Barrow, Ak 99723



BeaufortSPAN™ West Program
2010 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
BARROW, ALASKA
April 8, 2010

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Steen Leonardson	me	452 5542			Box 725
Ron Sagans	me	852-6262			Box 1755
Dora Brown		8523624			1532
Beverly Hugo	self	852-5333			Box 677
Patrick Hugo	Self	852-5333			Box 677
F. Leavitt	me	852.5542		fgleavitt@hotmail.com	Box 725
Clyde Hummel	Self	852-6296		—	Box 1296
RICK L RICE	SELF	852-6585			BOX 123C



BeaufortSPAN™ West Program
2010 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
BARROW, ALASKA
April 8, 2010

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
MASCHENA Jim Johnson	me	367-365			Box 1918
Robert Ningsok	me	367-4166			Box 407
DAVID KOCARAIK	=	852 48666			Box 8
Doreen Knodel	me	235-9054 852-3680			Box 571 Anchor Pt, AK Barrow, AK 99723
Mary Hugo	v	852-217			
Charlie Nagalik	me	852-217			
Clarence Fishel	Me	852-5325			P.O. Box 118
Nathan Fishel	Me	852-5325			P.O. Box 31



BeaufortSPAN™ West Program
2010 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
BARROW, ALASKA
April 8, 2010

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Deidre Simmons	myself	857-3309	N/A	deidre-emilyann@ hotmail	P.O Box 31
Ellen Oyogak	myself	852-3173	N/A	ellen7oyogak @hotmail.com	P.O Box 321
Thomas Olemson	myself	852-4411	N/A	tolemson@ NVbarrow.net	Box 1130
Aiden Olemson	ll	ll	ll	ll	ll
Genelle Okpeaha		852-6355			P.O. Box 1183 Barrow, AK 99723
Maq Atqsi Okpeaha		852-6355			P.O. Box 1183 Barrow, AK 99723

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Plan of Cooperation Meeting
 ION/Community of Barrow
 Inupiat Heritage Center Multi-Purpose Room
 April 8, 2010
 Presentation 7:00 – 9:00 pm
 Barrow, Alaska
 Meeting Notes

Attendees:

David Saganna	Beverly Hugo
Johnny Ningeok	Patnck Hugo
Sheldon Adams	Clyde Numnik
Quincy Adams	Rick L. Rice
Max Adams	Mascheena , Johnson
Qannik Ningeok	Robert Ningeok
Kate A. Brower	David Koganaaluk
Yugu Ningeok	Doreen Knodel
Joseph Akpik	Mary Hugo
Wilbur Ahtungaruak	Charlie Nayakik
Richard Olpeaha	Clarence Fishel
Raenelle Okpeaka	Nathan Fishel
Susan Patkotak	Deidre Simmonds
Pearletha Patkotak	Ellen Oyagak
Gideon Patkotak	Thomas Olemaun
Julia Ningeok	Aiden Olemaun
Steu	Genelle Okpeaha
Ron Saganna	Aqsi Okpeaha
Dora Brower	

The following organizations were informed of the POC Community Meeting:

Native Village of Barrow
 Inupiat Community of the Arctic Slope
 North Slope Borough Wildlife Department
 Alaska Eskimo Whaling Commission

Ed Nelson , ION Exploration Manager
 Maggie Ahmaogak, ASRC Energy Services (AES) Community Affairs
 Beth Hayley, LGL, Biologist
 Michelle Turner, ASRC Energy Services (AES) Stakeholder Engagement

General – provided an overview of the proposed ION 2010 BeaufortSPAN West project using a power point slide. These notes are meant to capture comments and responses from meeting attendees.

Public	How many decibels does your airgun operate at?
ION Representative	Before we start production we are going to run a sound source verification and that will determine the decibels. We have from 120, 160, 180, 190 decibels but we can't start anything until we run a test and submit it to the NSB, USFWS, and other agencies and then we will determine what decibel we are going to be shooting. It is all going to depend if we are going to shoot 2000 cubic inch (cu in), 1000 cu in, 4000 cu in, it is going to change so we are going to try different tests before we pick which one. All

Plan of Cooperation Meeting
 ION/Community of Barrow
 Inupiat Heritage Center Multi-Purpose Room
 April 8, 2010
 Presentation 7:00 – 9:00 pm
 Barrow, Alaska
 Meeting Notes

	<p>this will be done the first couple days around October 1st to October 5th. What we expect considering the number of guns and the size of the array and how the airgun array is configured, that the 180 decibel radius around the guns when they are operating will be about a half a mile. So if ever, the MMOs on board actually see a whale or a seal approaching half a mile, the guns will be powered down or shut down completely.</p>
Public	<p>Are you guys going to have a lookout post (a chase boat) a few miles away from your gun array? Have a chase boat (like a lookout range) like 10 miles out because pretty much you can't see within 5 or 10 miles from a vessel. It is going to affect a lot of hunters that you can't even see 20 miles or 30 miles away from the vessel.</p>
ION Representative	<p>We will not have the resources to put people 10 to 20 miles away from our vessel at that time of year. We will have MMOs on both boats is what we will have.</p>
Public	<p>What I am saying is that the sound from the boat is going to travel fast under water and it will travel 50 to 70 miles and there will be someone hunting there. It is good to have a lookout. The icebreaker is just to open up the ice right?</p>
ION Representative	<p>Yes but there will be MMOs on that boat.</p>
Public	<p>How far will the icebreaker be from your seismic vessel?</p>
ION Representative	<p>The ice breaker will be from 1600 feet to 3300 feet in front of the seismic vessel. We will have MMOs on both vessels.</p>
Public	<p>You are only looking at what you can see on the horizon for Marine Mammals. That sound travels fast underwater.</p>
ION Representative	<p>We do have some big eye binoculars and an infrared camera that can look out to sea when it is dark.</p>
Public	<p>What I am saying is that your camera will not be able to see over the horizon. You know how far they can see will only be a certain distance. Unless you have another lookout station way beyond the project area on the outside.</p>
ION Representative	<p>These guys are going to be doing their seismic during the time the ocean is forming into ice. Further in the presentation we will show pictures of the ice conditions during the planned operation. It will all come together by the end of the presentation and it will make sense as to why we want to conduct during early October.</p>
Public	<p>It is pretty much useless when you are trying to look at something that is popping out of the water, it is pretty useless. I tried those infrared, they are good for animals out of the water or on ice but anything that is in the water they do not work.</p>
ION Representative	<p>Yes, we know that but we are being encouraged by the NSB Wildlife Management Department to use it and continue to test it and give them some feedback on whether or not they can be improved. We all know that in the industry that this is one of its weaknesses but we would like to test it further and use it on this job.</p>
Public	<p>How many observers do you have on each vessel?</p>
ION Representative	<p>Well that is going to be determined by our experiments. I know that the MMOs, they work 4 hour shifts, 24 hours a day so if the permits says we need to have 6 in a boat then for us to work we will have to put 6 MMOs on each vessel so that will be a total of 12. That is going to be determined when we get our permit back.</p>

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Public	Will you be hiring MMOs?
ION Representative	Yes, ASRC is handling the MMO hiring. If people are interested please contact Michelle or Maggie. ASRC Energy Services is starting the training if you are interested please sign up here. They will be starting the training May 30 th through June 13 th and then right after you will get deployed to the ships.
Public	How does seismic testing affect the Arctic Cisco and the cod?
ION Representative	There are a couple dozen studies on how airguns affect fish and basically what has been found is that they avoid the noise. Essentially what they do first is to head towards the bottom and if they are not comfortable there because the noise is too loud for them they will disperse and that may be going on as the airgun is firing and following the track line but within (I think) 6 hours the fish usually return to the area where they usually reside.
Public	Have any of the small mammals come up floating from your seismic testing?
ION Representative	No, we have seen some carcasses while out in the field but they have been in really high decomposed states and have been dead for a long time.
Public	What does KSOP stand for?
ION Representative	Kuukpik Subsistence Oversight Panel
Public	Is there a website we can go to observe your daily activity?
ION Representative	We have a website we have a couple websites but I do not think you will be able to see our daily activity. Maggie don't we have something in place if the community wants to know where the boat is going to be and what transect line they are shooting, they can get that from who?
Maggie	They can get it from the AEWC. All of the daily activities are monitored by them per the CAA.
ION Representative	The AEWC will monitor all of our daily activities.
Maggie	Or the communication centers.
Public	Will you have a Communication Plan?
ION Representative	The Communication Plan for ION is to work through the Search and Rescue Office in Barrow. ION has contacted the president of the Barrow Search and Rescue to discuss the Communication Plans.
Maggie	ION will be contacting Oliver Leavitt, President Barrow SAR and they will be meeting with Search and Rescue officers. Because the Communication Centers for the Open Water Season for the Beaufort and Chukchi will be closed by the time they reach Barrows area, so they want to employ Barrow Search and Rescue to do their communications.
Public	Will this be going on every year?
ION Representative	No, this is a pretty big job and if we can get half of it done we will be looking at two seasons maybe two and a half early winter seasons. This is a huge job it goes from the Canadian Border all the way out to almost Point Barrow or just before it starts going west down to the Bearing Straight. So just for this project itself this is the only one I can talk about.

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Public	Is it a single hull on that Geo Explorer?
ION Representative	No it's a double hull because it is an ice class vessel.
Public	Will the ice breaker be operating west or east?
ION Representative	From the East to the West
Public	How many airguns will you have?
ION Representative	There will be 28 airguns itself ranging the smallest at 65 cubic inch and the biggest being 350 cubic inches. We will be using different arrays depending on what psi we are going to be shooting when we determine from the test.
Public	Do you test your airguns?
ION Representative	You know I think we have tested all of them but I doubt very much if we have used all of them at one time in production. They have to be tested to make sure they are all functioning because say we are only going to use 16 out of the 28 or 12 if one of them breaks down we will have to turn on another one and it needs to be tested and ready to go.
Public	How long have you been monitoring these ice movements within that polar cap where the seismic is going to be conducted?
ION Representative	We go back five years but we monitor it every day, twenty four hours a day.
Public	I mean for how many years have you monitored the ice movement, the current. This is a very powerful project from what I can see because in Greenland I can see there is different ice and hardly any current...
ION Representative	There is current in Greenland
Public	But here there is a lot of swift current and the open current is different so actually this to me is very powerful especially during the period where you guys are going to conduct this project. We can see outside of Barrow where there is ice movement, ice burms and everything builds up, the current, the wind, everything. It is a very harsh environment. It is all together very different than any other place I have been. Do you have a satellite view of the way the ice moves, I mean daily? Every day there is a harsh wind, every day that ice is moving. It is a very harsh environment.
ION Representative	Harry Brower Jr., the President of the AEWG, when we first talked to him and gave this presentation with stuff like that, that is exactly what he said. He said it is going to be rough, it's going to be tough, and it is going to be a big undertaking and we do have people going back through the years with ice satellite coverage and its movement. All of our ice coverage is going to be in real time straight from the satellite to the boat.
Public	Where is your main headquarters for ION.
ION Representative	Houston, Texas
Public	Houston, so actually you will have a daily satellite view of the ship? It will be monitored and that will include the ice movement? It is important because it is a very

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	harsh environment and this is a very risky project.
ION Representative	Yes, the ice monitoring will all be in real time
Public	Your wind conditions down in Canada the wind is coming from the land side instead of the ocean side right? You come out there and it's all open and the weather can change just like that, boom really quick.
ION Representative	You know I have worked out on the ice in the Beaufort in the winter time and the wind does not stop blowing and it changes really fast and in the winter time it is one really hard place to work.
Public	Thank you for saying that, ice conditions yea it is. There might be some young ice 9 or 10 ice like she was saying just some really small ice and then when the wind comes out boom.
ION Representative	I appreciate that input there.
Public	How often will you use your sonar? You guys have sonar off the back right?
ION Representatives	Yes, we use it all the time to check ice conditions and to check water depth.
Public	Water depth; is it constant always on?
ION Representatives	Yes, we have it on all the time.
Public	There were sometimes a while back that sonar on marine mammals is pretty hard on their ability to hear in the water. Their ears are so sensitive that sonar goes along ways it goes about a thousand miles and the intensity on their ears and the animals will go really quick. In fact under the Navy they tried it, they observed it there were no animals. That sonar technology they shut them down and told them no more sonar. All the animals, boom disappeared.
ION Representative	That is right, if I may respond to that, the Navy sonar is very different from the echo sounder that will be used onboard, it is directed out horizontally, they are trying to look around the actual sonar units. The unit that will be used onboard these vessels are looking down in a very narrow beam, directly in front of them. It is not as expansive as what the Navy is using and that is a mid frequency range and you are absolutely right that travels for miles and miles.
Public	If you are doing some seismic way out there and we have hunters up there, you never know the weather may be real bad up there and we might not start whaling until later October. Like a couple times we have started late September and we always try to start our whaling mid-September and before the end October comes around, like when you guys are going to start, the weather is bad. Mother nature, you guys bring your sonar around there, well it's going to hit Barrow, it's going to deflect whales out the other way.
ION Representative	Well again these sonar's are really different from Navy sonar's you are talking about this is a narrow beam so it should only affect animals very close to the vessel. And the whole part of these stakeholder meetings is to get your input and to hear about your concerns and there will be another meeting I expect, I cannot speak for ION. But

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	if you guys haven't caught your quota yet there will be more discussion.
Public	Actually what you are doing on this project is that you are taking a picture of the formation down below underneath am I right?
ION Representative	That is correct we are mapping....
Public	Whatever it is because when you are going towards the ocean it is a rock formation and when you go beyond the ocean it is a formation that marks where you need to drill. Because there is sand and silt and you have everything on the bottom of the ocean in both the Chukchi and the Beaufort. I hope you are going to get everything on this trip.
Public	When that sonar is on and you guys see in one direction do you see any animals? Do the lookout guys on the outside, do they see any animals on the outside around the perimeter like 5 or 10 miles out?
ION Representative	Well you are better acquainted with the equipment again, the sonar on the boat is just looking directly under the boat to find out what the water depth is, the other one just goes ahead to tell the boat the condition of the ice.
Public	The one that goes...
ION Representative	The one that goes down just gives you water depth. We have to measure water depth.
Public	I said there were signs and in fact even one direction that thing will go a long way.
ION Representative	Actually it is a fathometer. A depth finder. It is basically different it just goes down and comes back up. It really is different from the Navy sonar which you are absolutely right is looking all around. This is just looking right to the bottom.
Public	They used it they tried it and misused it by the Navy even when they were trying to get one depth down into the ground. To the bottom of the ocean they said they were doing just one direction and it took them years and years, the scientist and they figured it out that it was the sonar. When they quite using that...
ION Representative	Comparing what the US Government and how far they are ahead with all this electronic and stuff like that and comparing ION, we are nothing really. The government is using stuff that people don't even know about and we don't even know about until 20 years from now we find out that they were doing this. I don't know what to say but we are not using high powered US Navy coast guard stuff. Our equipment you can buy commercially.
Public	The lowest sonar thing they used, even in one direction checking the depth down on the bottom of the ocean, that is what you guys are using right now.
ION Representative	I thank you for that comment and I will see what I can do to get more technical information to you about our depth finder (fathometer) and we will just move forward from there. I do not have the details or the technical expertise to explain the level of detail that you want now on sonar but I can get that for you from our support people and I will make sure it gets back to you or the group here.
Public	That is still powerful and misinterpreted.
Public	What will happen if the ice skeg breaks?
ION	We have had pretty good luck with it including every year, every year after the ice

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Representative	season we bring it back on dry dock and look at it and we continue improvements on it and just hope that it doesn't break. It is pretty well built. I mean you can break it if you just pull the boat at full speed and just start mowing everything down but the boat will travel maybe 4.5 to 5 knots and sometimes slower.
Public	Really slow huh?
ION Representative	Yes, very slow.
Public	Do you guys do a survey check after you guys do all your seismic in one area within a one or two month time frame? Do you go back to that same area and check it to see how much mammal migration there is through there? They might eat there, it could be their eating spot where they go, do you go back and monitor that same area after a few months have passed?
ION Representative	To tell you the truth I just did the Nikachuck job and we did not do it there. It was inside the Thetis Island so...
Public	It's like when we go to our favorite hunting ground and some guys comes around and now we don't want to go there anymore. It is the same with the animals out there. That might be their favorite spot for spawning, their eating place and with all that equipment that you are playing with you might scare them.
ION Representative	Well we will only be towing one cable not six or twelve, I thank you for that comment.
Public	What about the range when we hunt, for example when we fire bullets will they have to stop us from hunting when you are out there? How safe will we be to not shoot your boat?
ION Representative	The timing and location of the operation will hopefully avoid this. ION will start October 1 through the middle of December.
Public	Oh, I see.
Public	What about the guys that hunt...
ION Representative	They are down on the South, the furthest east, from Canada on.
Public	October time is when all the fish come out of the rivers and the creeks and hit the ocean, right? They go out to the ocean and pretty much they stay out there and lay their eggs, you guys might be hitting the favorite spawning ground for fish. The fish go a long ways.
ION Representative	You are right about the Arctic Cod and there are not many studies about what they are doing under the ice, there are some that through using acoustics they are able to find that the fish are pretty low in the water but there are no mapped areas for Cod spawning right now we do not know where they do it. We know there is a congregation in the Eastern Beaufort and the Southern Amundsons Bay but that is something we really can't answer because there are no studies available, you are right the Arctic Cod will be out there for sure. The Arctic Cisco are probably following the salt wedge by October into the mouth of the Colville. You are right there are fish out there and thank you for your comment.
Public	Just like that one year in Nuiqsut some boys out there out by Kaktovik that fish, the

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	year before they did all their seismic stuff and the next year there were hardly any fish coming inside that river and hardly anything coming out.
ION Representative	Was that in 2006 or 2007? Studies at Endicott had predicted that there would not be a good return that year because the fisheries recruitment of the little guys that come from the Makenzie River was really poor that year and the expectation is that it had to do with the winds out of the west because it is the winds out of the west and the currents that drive the one year old fish that were just born that year towards the Colville. And it is not until they are about 6 to 8 years old that they are actually caught in the Colville and that was actually forecasted from some of the BP studies the fact that there would be bad fishing that year.



BEAUFORTSPAN™ WEST PROGRAM
2010 2D MARINE SEISMIC SURVEY -
BEAUFORT SEA

Comment Card
We appreciate your comments!

If you would like to be added to our information list, please fill out area below:

Name: Steven Lavitt Address: _____

Email: _____ Phone: _____

Comment: Depth Finder — stated that it
was a Sonar. Ed Nelson to
Clarify, and get info to Steven
Just need to write him a letter
clarifying

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Public Notice of Kaktovik Community Meeting

- Who** ION Geophysical, Inc. (ION)
(working as GX Technology)
- Why** ION is proposing to conduct a 2D seismic survey in the Beaufort Sea during fall 2010. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2010 through mid-December 2010.
- What** Present the proposed BeaufortSPAN™ West Program and obtain community feedback
- When** April 10th, 2010 at 7pm to 9pm
- Where** Kaktovik Community Center

Door Prizes and Refreshments will be provided.

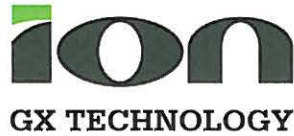
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BeaufortSPAN™ West Program
2010 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
KAKTOVIK, ALASKA
April 10, 2010

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Norma Gordon		6925			Box 116 Kaktovik AK
Marie Kawedon					Bx 81 KAK
Nora Jane Burns		600-6722			Bx 101 Kaktovik
Kimberley Ann B.					
Carla Sims Keyotuk		640-5873			16 KAKTOVIK AK 99747
Eunice A. ...		640- 8 6820			1 / (
Nathan Tagasoot		640-7881			P.O. Box 120
Charlie Naglak		640-3242			P.O. Box 14



BeaufortSPAN™ West Program
2010 2D Marine Seismic Survey - Beaufort Sea

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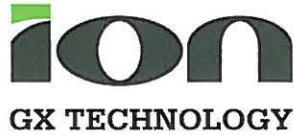
Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Larry Helander		6			Box 83
Joseph Helander					
Virginia Bowyer					Box 17
Fred TACAROOK SR					Box 17
Mildred Aishanna					Box 58
Darren Kayotuk					
Fred KALEAK		640-6213			Box 83
Jeanine Kayotuk		640-0200			Box 23



BeaufortSPAN™ West Program
2010 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
KAKTOVIK, ALASKA
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Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Nathan Gordon Sr	K.I.C	640-6925		nlgordon@gc.net	P.O. Box 116 Kaktovik 99747
John Hi Tagarook	KAK VFD	640-0030		johntagarook@hotmail.com	Box 98 Kaktovik, AK 99747
Stephanie Aishanna	TGHC	640-1311		stephanie.aishanna@north-hope.org	Box 55 Kaktovik AK 99747
Jules Lampe		640-0800			
Mickey Gordon	KIC	640-3250			P.O. Box 6 Kaktovik, AK
Fred Tagarook Jr					P.O. Box 17 Kaktovik AK
Mike Solomon	KIC	640 6200			Ro. A. x 61 Kaktovik
Ruth Tagarook	Kaktovik	640-7448			gen. del. Kaktovik Ak 99747



BeaufortSPAN™ West Program
2010 2D Marine Seismic Survey - Beaufort Sea

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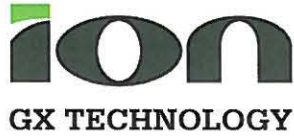
Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Marie Rexford	Self				PO Box 103 Kaktovik Alaska 99747
David Rexford	Self	640-6025			PO Box 103
Thomas Brower	Self	N/A			PO Box 21
Betty Brewer					
Annie Tikluk	City of Kaktovik	640-6313	640-6314		Box 27
Larry Tikluk	Self				
Melanie Tikluk	Self				



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Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Susan Gordon	Kaktovik	646-1210			Bx 12
Natasha Gordon		6925			116
Phil Tikluk Jr	KAKTOVIK	1270			Bx 31 99747
Robert Avey	KAKTOVIK				Box 80
EVA Avey	KAKTOVIK				Box 80
Ellis Tikluk	Kaktovik				Box 31



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Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Justin Kayotuk	Self				Box P.O. Box 72
Russell Tayamuk					Box 120
Angel Sims	Self				Box 68 Kaktovik AK
Caitlin Gallager	Self				Kaktovik
Marcus Gallager	Self				Kaktovik
Leonard Sork					Kaktovik

Plan of Cooperation Meeting
 ION/Community of Kaktovik
 Kaktovik Community Center
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Attendees:

Norma Gordon	Mike Soloman
Marie Kaveolook	Ruth Tagarook
Nora Jane Burns	Marie Rexford
Kimberley Ann B.	David Rexford
Carla Sims Kayotuk	Thomas Brower
Eunice Simms	Betty Brower
Nathan Tagarook	Annie Tikluk
Charlie Nageak	Larry Tikluk
Lievy Kaleadk	Melanie Tikluk
Joseph K.	Susan Gordon
Virginia Brower	Natasha Gordon
Fred Tagarook Sr.	Phil Tikluk Jr.
Mildred Aishanna	Robert Arey
Darren Kayotak	Eva Arey
Fred Kaleak	Ellis Tikluk
Jeanine Kayotuk	Austin Kayotuk
Nathan Gordon Sr.	Tussel Tagarook
John H. Tagarook	Angel Simms
Stephanie Aishanna	Caitlin Gallager
Jules Lampe	Marcus Gallager
Mickey Gordon	Leonard Lord
Fred Tagarook Jr.	

The following organizations were informed of the POC Community Meeting:

Native Village of Kaktovik
 Kaktovik Whaling Captains Association
 Kaktovik Inupiat Corporation
 City of Kaktovik

Ed Nelson, ION Exploration Manager
 Maggie, ASRC Energy Services (AES) Community Affairs
 Beth Hayley, LGL Biologist
 Michelle Turner, ASRC Energy Services (AES) Stakeholder Engagement Specialist

General – provided an overview of the proposed ION 2010 BeaufortSPAN West project using a power point slide. These notes are meant to capture comments and responses from meeting attendees.

Public	So you are not going to do the seismic over the ice you are going to be breaking the ice and making a trail? Is that the plan?
ION Representative	Yes that is true however basically as we go further you will see the ice conditions that we will have when we talk about the ice. We are talking about the coverage because

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	if the ice is anywhere between 1 to 1.5 feet thick we stop breaking ice at 1.5 feet thick but doing our survey in October/November depending on ice conditions we will probably have a lot of scattered ice. Our ships are only built to break ice at a maximum of 1.5 feet or 18 inches. And the actual seismic data that is being gathered is under the ice and the streamers are under the ice.
Public	Last fall we were delayed in fall Whaling and I hope that it is going to be better this coming fall. It was close to October when we were finished.
ION Representative	We will not start until the bowhead whale hunt for Kaktovik is finished.
Public	Do you carry all your fuel with you or how do you fuel your vessels?
ION Representative	We have the capacity to run six weeks before we need fuel. Basically we are looking to be out there only 6 weeks and we don't think we are going to be out there longer but if we are and we extend it to the 1 st we are working with Alaska Marine Maritime to run support for us and we are either going to bring the fuel in from the east instead of trying to come up and around when the whales are still going to be going down around Barrow we always going to try to come in from the east because the whales are moving out west and south. We don't want to get in from of the whales or bring anything in that way so that is why we are starting from the east so if we have to run support we have to go back out so we can bring our other support vessel in from the east from behind the boat from behind the survey.
Public	You say it may take you several winters to get this project done, where are you storing your vessels?
ION Representative	When we finish we are going to go down to Dutch Harbor resupply and send them off to where we are going to work for 10 months and then bring them back up here. They will be transiting to Dutch Harbor around Mid-November and hopefully before thanksgiving.
Public	On October 1 st where will you be coming from?
ION Representative	On October 1 st we will be coming over from the East.
Public	Are your vessels, what is the thickness of the vessels? Are they double hulled?
ION Representative	They are both Class A ice breakers so basically you can freeze them in and you will be ok. They are been certified to function in an ice breaking capacity. And yes, they are double hulled?



Public Notice of Nuiqsut Community Meeting

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Door Prizes and Refreshments will be provided.

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**Ion Geophysical
BeaufortWest Span Program
2010 2D Marine Seismic Survey – Beaufort Sea
ATTENDANCE SIGN-IN SHEET
NUIQSUT, ALASKA
April 17, 2010**

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
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Nannie Woods	Self	480-0041		Mrswoods@yahoo.com	P.O. Box 89002 NAT
Cindy Wasson	City	480-6744		Cindywasson@yahoo.com	PO Box 89094 Nuiqsut AK 99789
Edna Sytko	Self	480-1250		aalalak42@hotmail	Box 89323 NUIQSUT, AK 99789
Billy Oyagak	self	4807274			
Sarah Oyagak	City	480-7274		poyagak@yahoo.com	Box 89013 NUIQSUT, AK 99789
SAMANTHA C KUMAKHANA	Self	480-0050		hotmail@SAMANTHAL KUMAKHANA	P.O. Box 8911
Wendy S. Brower	self				

Ion Geophysical
BeaufortWest Span Program
2010 2D Marine Seismic Survey – Beaufort Sea
ATTENDANCE SIGN-IN SHEET
NUIQSUT, ALASKA
April 17, 2010

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Dora Leavitt	City of Nui				PO Box 59226 NUIQSUT, AK 99789
Lydia Sovelick	Self				Box 89-75 NUIQSUT
Carolyne Ahlstrom	Self				
Anita McKinnon	Kuehrite corp.				
Annette Lango	Purcell				
Irene Mander					
JOE ERICKLOOK	self				
Geary Sielek	_____				
Beverly Sielek	_____				

Flores J. P. Mander

Plan of Cooperation Meeting
 ION/Community of Nuiqsut
 Kusik Community Center
 April 17, 2010
 Presentation 7:00 – 9:00 pm
 Nuiqsut, Alaska
 Meeting Notes

Attendees:

David Arnold	Lydia Sovalik
James Talaak	Carolyn Ahkiviana
Nannie Woods	Archie Ahkiviana
Cindy Wasson	Martha Lampe
Edna Syfko	Jane Mas
Billy Oyagak	Joe Ericklook
Sarah Oyagak	George Sielak
Samantha L Kunaknana	Beverly Sielak
Wendy S. Brower	Flora Ipalook
Dora Leavitt	

The following organizations were informed of the POC Community Meeting:

- Native Village of Nuiqsut
- Kuukpik Corporation
- City of Nuiqsut
- Kuukpikmiut Subsistence Oversight Panel, Inc., (KSOP)
- Nuiqsut Whaling Captains Association

Ed Nelson, ION Project Manager
 Maggie Ahmaogak, ASRC Energy Services (AES) Community Affairs
 Beth Hayley, LGL Biologist
 Michelle Turner, ASRC Energy Services (AES) Stakeholder Engagement Specialist

General – provided an overview of the proposed 2010 ION BeaufortSPAN West project using a power point slide. These notes are meant to capture comments and responses from meeting attendees.

Public	You use the word radar and I don't know if you mean to do that or not but are we talking about the infrared wavelengths that are used by active remote sensors? You're not talking about radio waves which is what radar is?
ION Representative	No we are not talking about radio waves.
Public	Ok, so radar was just a figure of speech?
ION Representative	Yes
Public	Is that infrared a heat source type of thing?
ION Representative	Yes, it is thermal. We are doing this as part of a study for the North Slope Borough Fish and Wildlife Department; the Wildlife Management team wants us to keep testing this. It works well on land but we still need to further test it on Marine Mammals in the water, our signature is not as good and we need to continue to test it and furnish the data back home and see if we can proceed.
Public	I know you have been using these dazars for years and what does the data show? Are

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	you still studying that or is it just different every year?
ION Representative	No, the Dazars especially around North Star have been there for years. You are absolutely right and the data is being accumulated and is looked at every year and that is something that is discussed during the Open Water Meeting so you should attend. They are mapping occurrences of vocalizing whales from that data and we have a really nice corridor that is defined from those mobilizations. I don't know enough about the dazar data to tell you much more but they continue to collect data so they can be more confident about the data they have.
Public	Are the different companies accumulating all that data?
ION Representative	Yes
Public	So you guys can share that information?
ION Representative	Yep, BP and Shell, everybody is sharing the data.
Public	Ok
Public	When you do the ramp up how far apart are they? The distance for the airguns when you are shooting I know when they do seismic on land they have like a half a mile or quarter mile between shots.
ION Representative	We are going to shoot on time so I think we are going to be shooting like every 110 feet to 120 feet so we will shoot based on time instead of distance. So for example the boat will go at 4.5 knots per hour so we will be shooting on time and will roughly be 110 feet between each shot.
Public	What does ION stand for?
ION Representative	You know I don't really know what the answer is, ION basically has been in the oil and gas business for 35 years but before that we manufactured seismic equipment for the seismic companies. And then we started up GX Technologies.

2011 Notice of Program Delays Meetings

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BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
KAKTOVIK, ALASKA
AUGUST 16, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
1) MAGGIE AHMAOGAK.	AES/ION	250-8083		Maggie.Ahmagak@asrenergy.com	2700 Gamboli St. Anchorage, AK.
2) George Kaleska	Self				
3) Marie Rexford	Self	690-6025			P.O. Box 103 Kaktovik, Alaska 99747
4) Thomas Brewer		N/A			P.O. Box 21 Kaktovik AK 99747
5) Freddie KALUTK	Self	978-5721			P.O. Box 83 Kaktovik 99747
6) Ed New	ION				
7)					
8)					
9)					
10)					

Meeting Notes for ION's Program Delay Notification to Kaktovik Leadership
Kaktovik Community Center at 7pm

Attendees:

George Kaleak, Sr.
Marie Rexford
Thomas Brower
Freddie Kaleak

Notes:

Ed Nelson welcomed everyone and explained that the meeting is a courtesy visit to the community in order to announce in person that ION is delaying their BeaufortSPAN™ West program until 2012. Ed read the description of the delay that was sent to leadership in a letter in July. The delay is due to the source vessel no longer being available and a lack of guarantee from Transport Canada that the alternate vessel would be able to transit the Northwest Passage in time to move forward with 2011 plans.

For next year ION will either use the vessel they are building or a leased vessel. ION plans to have a backup plan in place for 2012 operations.

The audience asked if ION would basically have to start over. Ed said that in many ways ION would need to start over. ION needs to start over with community meetings and permitting, but many of the operational plans will remain the same. ION is still planning on having Communications Centers and Village Liaisons.

An audience member asked what happened, if the vessel broke down. Ed recapped by saying that the vessel they secured in 2010 was no longer available. The vessel/company was taken under receivership of the bank. ION needed to find a Class A Ice Breaker/Source vessel. The availability of an appropriate vessel is very limited. In addition the vessel has to pass the operating company's inspection and numerous safety checks, including a safety check done by the U.S.C.G.

ION will start gearing up again after Christmas, and will be doing village visits the first part of 2012. ION's goal is to map everything from Canada to Barrow 7.5 miles offshore. The closest line may need to move out to 10 miles so they don't run into shallow waters when they turn around with the array. ION will do an aerial survey to get a better idea of the distance they need to stay offshore.



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
BARROW, ALASKA
AUGUST 17, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
1) George Amundak, Sr	Vice President Barrow Working Corp.	852-684		George.Amundak@barrow.net	P.O. Box 338
2) Thomas Olemus	Executive Director Pres. NVB	852-4411	852-8844	tolemus@nubarrow.net	Box 1130
3) Maggie Almaspae	AES/ION	250-0083		George.Amaspae@geci.net	12801 Monterey Circle, Fairbanks, AK 99576
4) William Orick		852-2842		trunk-42@hotmail.com	833 Barrow Ak
5) Ed Nelson	ION				
6)					
7)					
8)					
9)					
10)					

Meeting Notes for ION's Program Delay Notification to Barrow Leadership
ASRC 3rd Floor on August 17, 2011 at 1:30pm

Attendees:

George Ahmaogak, SR. Vice President of the Barrow Whaling Captains Association

Thomas Olemaun, President/Executive Director of the Native Village of Barrow

William Oviok

Notes:

Ed Nelson read a paragraph statement that ION is here to do a courtesy meeting to inform the community and Barrow leadership that ION is postponing their seismic program scheduled for 2011.

Why we are postponing the 2011 program, as you are aware of after our July 14, 2011 letter to the leadership and community, ION is postponing its ION BeaufortWest™ SPAN program planned for October 1 until mid-December, 2011.

We are delaying the program because the original seismic source vessel, the *BOS Atlantic*, is no longer available. When ION was able to identify an alternative vessel, the *Explorer*, there was not adequate time to get confirmation from Transport Canada that the vessel would be allowed to transit the Northwest Passage. ION is planning on conducting the same program October 1 through mid-December 2012.

The program would be during the same timeframe as 2011 and in the same locations. Our program will remain the same other than our vessel will change. Location will be starting from the U.S./Canadian border all the way to Barrow doing seismic lines. Our job is to start from the U.S./Canadian border to Pt. Barrow. To answer Thomas Olemaun's question – to start on October 1 from the U.S./Canadian border, we will also wait until Kaktovik and Nuiqsut whaling is completed. ION is not starting until they (Kaktovik and Nuiqsut) are finished whaling. October 1 is just a date that we put in our permit. If they are not down with whaling on October 5 or 10th, we will just wait until they finish and we will come in and work.

George A. asked what about for Barrow? You are way over near the Canadian border on October 1. Ed Nelson stated when that time comes we will work with Barrow whalers and the Barrow Whaling Captains' Association. If you are working while we are starting on the Canadian side, then we will meet, and we will work together.

Thomas Olemaun asked how many miles offshore will ION be working?

Ed Nelson stated that we are looking to work about 10-12 miles from shore to 150 miles offshore. So our closest line to shore is 10 miles from shore. In our presentations we were saying 7.5 miles, after talking to some of the whaling captains in the Kaktovik area, they were saying that if we came any closer we will be running into very shallow water and might end up getting stuck. So, we are planning to cut those lines close to shore, in order to have enough room and water to be able to finish the line and make a turn toward another line. We are planning on cutting lines so that we don't get too close in, and it's too shallow that we cannot turn and get out and get stuck.

Meeting Notes for ION's Program Delay Notification to Barrow Leadership
ASRC 3rd Floor on August 17, 2011 at 1:30pm

George A. asked if they have signed the CAA.

Ed Nelson stated that ION has not signed the CAA yet but it's not to say that in 2012 is going to be the same as 2011. I think ION will honestly feel that the ION people further up the chain are starting to understand and see what's going on with the CAA. That's of course why papers have been written by AES on the permits of the CAA, its purpose of the Com-Center, the purpose of the... there are 3 white papers that I had them write. This is so those guys higher up can understand.

George A asked if ION will have the Com Center.

Yes, we will have a Com Center. We just visited the Deadhorse Com Center with Doreen Nukapigak. We will have the Com Center available throughout the project and we will locate it in Deadhorse.

George A. asked if it is located at the Service Area 10.

Yes, it will be at SA10, and we will have Inupiat Communicators from the village of Kaktovik, Barrow, and Nuiqsut in the Com Center at all times.

Thomas Olemaun asked if there will be a Com Center in Barrow.

There will be one Com Center because we feel that we will probably be the only ones out there that time of year.

Thomas Olemaun stated that for communications when we have a fall hunt, they need better communication to the village of Barrow. We have 50+ whaling captains and we go whaling from September through October, from 10 miles to 20 miles offshore and the whales migrate from the Canadian border and are coming into Barrow. You guys need to communicate with Barrow. Deadhorse, they don't know about our subsistence way of life, we need someone from Barrow. That's my concern.

Ed Nelson says okay, so we can open one up here in Barrow and have one up in Deadhorse until the whaling season's done and keep one open throughout the job. We can start with two.

George A. said maybe you can have one in Barrow until the subsistence whaling is done in Kaktovik and Nuiqsut and then the subsistence whaling in Barrow.

Ed Nelson said okay.

Thomas Olemaun stated that Barrow does not start until October 1. George A. stated that is an option the other thing I wanted to say is in the event that – remember when we had the BWCS's attend the AEWC meeting, you guys submitted your letter saying ION didn't want to sign the CAA, and then Eugene and them started saying all kinds of stuff saying that didn't have a CAA, this and that. Well, we made some amendments to the CAA from the Barrow Whaling Captains, the amendment that was there in the event that one of the parties doesn't sign the CAA, that AEWC was supposed to notify the Barrow Whaling Captains. In other words, TH AEWC was supposed to notify the Barrow Whaling Captains of the fact that so and so did not sign or have a CAA with the AEWC and that triggers the Industry Participant to work with the Barrow Whaling Captains.

Meeting Notes for ION's Program Delay Notification to Barrow Leadership
ASRC 3rd Floor on August 17, 2011 at 1:30pm

Ed Nelson stated that ION will work with the whaling Captains.

George A. stated that he just wants ION to learn the language is in the CAA, and reiterate that AEWC has to notify the Barrow whaling captains and that we are in agreement.

Ed Nelson stated that he understands.

George A. stated that in any communication that Jacob Adams, the secretary of BWCA, and George Ahmaogak S., the Vice-President be cc'd on all communications including Thomas Olemaun, President of the Native Village of Barrow.

Maggie Ahmaogak stated that ION understood. A letter from Harry Brower Jr., Chairman of the AEWC, went to Eugene Brower, President of the BWCA notifying them that ION was not signing the CAA. Therefore, ION requested a meeting with the BWCA/Barrow whaling captains (letter sent on July 14, 2011).

Discussion followed. Only Eugene received the letter from Harry Brower Jr. It stopped there, George A. was not aware of this letter.

Ed Nelson said that if we did not have the vessel problem we were ready to work with the Barrow Whaling Captains Association starting on October 1, 2011.

Thomas Olemaun, President of the Native Village of Barrow, stated that maybe ION is better off cc'ing the Secretary and Treasurer of the Barrow Whaling Captains' Association when they send letters. If the Vice-President doesn't know, then any communications from now on should be cc'd to the rest of the BWCA Board and NVB.

George A. stated that he asked Jacob Adams before Eugene went on his ASRC Retreat, that he share the communications with us. Send copies of the communications to the rest of the officers. When the CAA is not signed, it triggers the AEWC to notify the local whaling captains' associations and members.

Thomas Olemaun stated he would like to be added to the list of communications as a cc.

Ed Nelson agreed to make the distribution list and add them to ION's distribution list including all officers of the Barrow Whaling Captains' Association.

George A. stated that he did not know about the AEWC letter to Eugene Brower and ION's letter invite before Eugene left for his retreat. Clarification and understanding of the CAA amendment. Eugene did not notify the whaling captains, and kept it to himself. I certainly did not know about the letter. That's where we have miscommunications. This amendment was heavily debated amongst the Barrow Whaling Captains. Have to comment, that is why Eugene commented opposing your IHA permit by himself and objecting to your POC and IHA. The BWCA never gave him authority to oppose, it happened because he was the only one receiving the letter from the AEWC. In other words, he's the President, he's doing things on his own, objecting to your POC. He did not receive direction from the BWCA Board of Directors.

Meeting Notes for ION's Program Delay Notification to Barrow Leadership
ASRC 3rd Floor on August 17, 2011 at 1:30pm

Ed Nelso says we will make sure that we will share this with the Kaktovik Whaling Captains' Association and the Nuiqsut Whaling Captains' Association. That whatever kind of emails or letters need to go not only to the Presidents, but to the officers of the Associations. So, if there are five officers, everybody gets the same letter via hard copy and email. Both George and Thomas agreed.

George A. stated that Harry Brower, Jr. is the only one that is supposed to notify us. The issue is that you guys broke down and did not come up with a ACC and AEWG letter when to Eugene Brower, President of the BWCA.

Thomas Olemaun stated that the President should communicate with his Board when making a decision. There's 50+ people in that association in order to make a decision, must have a meeting.

Ed Nelson n stated we will crank that up when we come back in January to start moving forward again for October 1 through mid-December, 2012 project. We will need all the names of the officers of the whaling captains' associations. So, from the start whatever information coming out and coming in, everybody gets a copy from the start of 2012 on to the very end.

George A. stated that ION should be prepared to answer why they did not sign the CAA to the whaling captains. They want to know why! Maybe AEWG is playing hardball?

Ed Nelson stated that ION wanted me to come up and we've been coming up. We've been talking to you for two years and have not had very good luck with our vessels. Next year, we are building vessels and will probably use one of them; we are also negotiating with another company to get the vessel under haul now, because of what happened to BOS Atlantic. So, after this courtesy meeting, the 2011 pretty much closed out and then start a new one. Last year we started in December, Yes, we will have MMOs outland on the icebreaker, and on the source vessel; and they have to be Inupiat Communicators and all 3 people in the Com Center have to be Inupiat Communicators.

Meghan Larson stated the MMOs will be split between LGL and AES MMOs. (couldn't make out rest of conversation)

Ed Nelson- they have to have Inupiat Communicators on both vessels and com centers.

George A. not so much on the CAA, but you have to submit your POC with NMFS, and then do your meetings in the villages. Then you go for your IHA permit when you file your POC you state, this is how you will operate at such and such a time, and the area covered. Then you have Plan of Cooperation meetings in the villages; and if there are any conflicts, the villages are supposed to speak out at that time of your schedule, and then you change your plan of cooperation accordingly. That is why it is called the Plan of Cooperation. The irony is that operators such as you go for an IHA and go ahead of planning your cooperation meeting in the villages: then you communicate that you had no conflict in Kaktovik, we had no conflict in Nuiqsut, and therefore we had no conflict in Barrow with the Plan of Cooperation as you go for an IHA, and then you get what Eugene just did. He objected to your POC, he didn't even care if you had your village meetings in Kaktovik, and then Nuiqsut and Barrow, and because he does not know there is no conflict in Kaktovik in your POC , but him objected because in the name of not having a

Meeting Notes for ION's Program Delay Notification to Barrow Leadership
ASRC 3rd Floor on August 17, 2011 at 1:30pm

CAA. The irony is that what I am trying to tell you is that you don't communicate the findings of what was discussed in Kaktovik POC, on how the meeting resulted and how it resulted in Nuiqsut and Barrow. That way it would keep people from writing objecting letters to the NMFS as you move from an IHA permit you don't communicate that, nobody does. I think this is worthwhile for you to let the Barrow Whaling Captains know that you anticipate not having conflicts and get good feedback. Here's what happened in Kaktovik tra-la-la something for Nuiqsut and Barrow. The BWCA knows that you had this POC meeting and there was no conflict and communicate this in your IHA permit and in that way the whaling captains would learn and cooperate.

Ed Nelson thanked George A. and that it makes sense. George A. agreed. Thank god we record all our meetings.

We do not hear of your POC meetings with Kaktovik and Nuiqsut, and how well your POC meetings went.

Ed Nelson stated that we do get a lot of questions and we do. We get feedback and ideas or recommendations and they want information before we go back for another meeting. We bring back the answers and we incorporate the traditional knowledge that they bring and give us into our plan.

You need to get all this information to all the whaling captains instead of one person. (Thomas Olemaun)
All agreed. Get and distribute a summary of your meetings and keep everyone in the loop.

(The local whaling captains associations are organized under the auspices of the local IRA village tribal government.)

George A. stated he would be happy to get a summary of Kaktovik and Nuiqsut POC meetings. Then when you get to Barrow, and you want to go for your IHA, then you can eliminate these objection letters. Having these summary POC meeting notes – of your Plan of Cooperation, we have nothing so far --- you see? Right now we don't know if there is a conflict or not! Even NMFS doesn't know, you need to communicate – do not leave us 10 miles down.

Ion will be starting this POC process all over again. (Meghan Larson)

Thomas Olemaun asked Ed Nelson to keep him in the loop and when you come into Barrow please let me know.

Ed Nelson – We will swing by your office when we are in Barrow, just to let him know.

Thomas Olemaun requested Ion to tell him when communicating with the whaling captains.

Ed Nelson stated he appreciated all this information.

George A. the Plan of Cooperation, bottom line is know that the whalers can continue to go whaling and subsistence to continue. When this is a conflict, then you change your plan accordingly at their suggestion, bottom line everybody will look at their subsistence, they will do anything to protect their whaling. We are left out of the loop as it is. For your POC – nobody in the villages knows how they went.

Meeting Notes for ION's Program Delay Notification to Barrow Leadership
ASRC 3rd Floor on August 17, 2011 at 1:30pm

Whether or not you have conflict in Kaktovik and Nuiqsut, we don't know, and that's why Eugene wrote the letters objecting on account of you (ION) did not have a CAA. Now you have to work with the Barrow Whaling Captains.

Ed Nelson- states he fully understands and this is something that we will work forward for the coming season. Get with AES and their group and move forward in this fashion, and make sure our distribution list gets bigger and distributed to more people and offices.

No other concerns.

Manage Kaktovik and Nuiqsut the same way. Expand their distribution list also. And we will let everyone know what our findings are from each impacted village. That way Nuiqsut will know what we are doing to work with Kaktovik and then everybody knows

George A. will write up his report and communicate with the Barrow whaling captains. That ION will cancel its 2011 program.

Thomas Olemaun stated that whatever you find out there, there are oil companies out there that want to look at your studies, in the future, you know, my kids, grandkids, make sure that subsistence way of life, hopefully, there will be no 30 mile gone out there, because everything with offshore, gasoline, oil and what not you know it's just going to be concentrating on the Beaufort and Chukchi Sea, because everybody is waiting for a report of what they find. When you do your seismic or what not, put it on paper and everyone can know and start bedding in possible areas. That's what I don't want to see; wells out there. Our subsistence way of life depends on our ocean.

George A. although we use less land your information is proprietary, for your client, or what not, if there is something we want to know you don't have to go to great detail, all Thomas Olemaun and I are saying is to protect our future, if there is oil out there.

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Leadership/KSO P Mtg.

BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey – Beaufort Sea - Delay

ATTENDANCE SIGN-IN SHEET
NUIQSUT, ALASKA
August 18, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Maggie Ahimaogak	ASRC Energy Services	250-0083	337-5470	Maggie.Ahimaogak@asrcenergy.com	2700 Gambell St. Anchorage, AK. 99503
Lottie M. Evikana		480- ^{cell} 1538			P.O. Box 89105 NUIQSUT, AK -99789
Eunice M. Brower	K.S.O. P.J	480-2713	480-2714	ksopi@astacalaska.net	Po Box 81126 Nuiqsut, Ak 99789
Belva Sovabitc	Self				NUIQSUT, AK.

Meeting Notes for ION's Program Delay Notification to Nuiqsut Leadership
Nuiqsut Community Center at 1pm

Attendees:

Eunice Brower, KSOP Executive Director

Lottie M. Evikana

Belva Sovalik

Notes:

Ed Nelson welcomed Eunice and explained that the meeting is a courtesy visit to the community in order to announce in person that ION is delaying their BeaufortSPAN™ West program until 2012. Ed read the description of the delay that was sent to leadership in a letter in July. The delay is due to the source vessel no longer being available and a lack of guarantee from Transport Canada that the alternate vessel would be able to transit the Northwest Passage in time to move forward with 2011 plans.

For next year ION will either use the vessel they are building or a leased vessel. ION plans to have a backup plan in place for 2012 operations.

Eunice said that she had the notice of delay letter and would make meeting notes from the recording she took. Eunice will send the meeting notes to all Kuukpik Subsistence Oversight Panel members.

**2011 Meeting Flyers, Sign-in Sheets, Notes,
Comments, and Responses**

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Public Notice Of Barrow Community Meeting

Who: ION Geophysical, Inc. (ION)

What: ION is proposing to conduct a 2D seismic survey in the Beaufort Sea during fall 2011 starting October 1 through mid-December, 2011.

When: February 19, 2011 at 7:00pm – 9:00pm.

Where: Inupiat Heritage Center
Barrow, Alaska

Refreshments and Door Prizes will be provided

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BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey – Beaufort Sea

ATTENDANCE SIGN-IN SHEET
BARROW, ALASKA
February 19, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Beverly Tappin	Self	852-5333		bfhug@hotmail.com	Box 677 Barrow AK 99722
Patrick Tappin	Self	5333			Barrow AK
Walton Ahmaogak	Self	367-3250		multi. North-slope.com	
Bruce A. Rexford	Self	367-3641		rexfordbruce@ yaho.com Tom: phillip@nsbsd.com	Barrow, AK 5341 Box 1586 Barrow, AK
Tom Phillip	self	852-3670			Box 1586 Barrow, AK
Ginger Snow	Self	852-3235		gsnow7@ hotmail.com	Box 748 Barrow, AK
Lloyd Stein	self	852-2862		germanisupia@ yahoo.com	Box 271 Barrow AK
ROY Ahmaogak	self	—		ROY.420@hotmail	Box 44 Barrow AK
Sharon Ahmaogak	self	367 4133		zel_98@hotmail.com	Box 1726 Barrow AK
Perry O'Keefe Sr.	Self	852-4210			Box 1737 Barrow, AK 99723



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
BARROW, ALASKA
February 19, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Sandra Gray					
Naki Reilly	suq				Box 748 Barrow
Robert Snyder	NSB				
Georgiy M. Ficek	SAB				P.O. Box 1785
Patrick Swila	Self			Patrick@BARROW.com	Box 342
Ed Nelson	ION				
Patrick Swila	Self			lynnmai1ay@yahoo.com	Box 1071 Barrow
Leo Brower	Self				692 Barrow
Quinn Brower	Self				692 Barrow
Bill A. Brower	Self				692 Barrow



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
BARROW, ALASKA
February 19, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Michelle Malerich	AES	334-1150		michelle.malerich@asrcenergy.com	
Fred S. KANAYURAK	SEA	852-4975			Box 76 Barrow
David Seganna		852-6960			Box 227
Lilly Kanayurak	Self	852 5159			PO Box 1887 Barrow, AK
William ITTA	Self	878-6022			Box 962 Barrow
Marilyn Attungook	self	852 5602 367-6344			Box 692 Barrow
Lawrence Kaleak Sage	Self	852-7607			Box 349
Charles Brower	self	852-5602			Barrow Bx 692
Bobby Itta	self	852-6879			Barrow 408 Barrow, AK
Mary Hugo		852-5333			Barrow AK Box 353

Ralph Tuckfield
OF

Plan of Cooperation Meeting
 ION/Community of Barrow
 Inupiat Heritage Center Multi-Purpose Room
 February 19, 2011
 Presentation 7:00 – 9:00 pm
 Barrow, Alaska
 Meeting Notes

Attendees:

Beverly Hugo	Qicwale Brower
Patrick Hugo	Bill Brower
Walton Ahmaogak	Fred Kanayurak
Bruce Rexford	David Sagamma
Tomi Phillip	Lilly Kanayurak
Ginger Snow	William Itta
Lloyd Stein	Marilyn Ahmaogak
Roy Ahmaogak	Lawrence Sage
Sharene Ahmaogak	Charles Brower
Sandra Gray	Bobby Itta
Nanci Reilly	Mary Hugo
Robert Suydam	Ralph Tuchid
George Icea	Craig George
Patrick Suvlu	Bob Rews
Leo Brower	

The following organizations were informed of the POC Community Meetings:

Native Village of Barrow	Alaska Eskimo Walrus Commission
Native Village of Nuiqsut	North Slope Borough Wildlife Department
Inupiat Community of the Arctic Slope	Nuiqsut Whaling Captains
North Slope Borough Wildlife Department	Kaktovik Inupiat Corporation
Alaska Eskimo Whaling Commission	Kuukpik Corporation
Alaska Nanuuq Commission	City of Nuiqsut
Alaska Beluga Whale Committee	Mayor Itta, North Slope Borough
Ice Seal Committee	

The following representatives attended on behalf of ION:

Ed Nelson , ION Exploration Manager
 Maggie Ahmaogak, ASRC Energy Services (AES) Community Affairs
 Michelle Malerich, AES Stakeholder Engagement

General – ION provided an overview of the proposed ION 2011 BeaufortSPAN West project utilizing a power point presentation. These notes are meant to capture comments and responses from meeting attendees.

Public	You are talking in kilometers, we are use to miles or something like that, can you explain how many miles it will travel?
ION Representative	Yes, basically the ice breaker is a half a mile to a mile in front of the recording vessel.

Plan of Cooperation Meeting
 ION/Community of Barrow
 Inupiat Heritage Center Multi-Purpose Room
 February 19, 2011
 Presentation 7:00 – 9:00 pm
 Barrow, Alaska
 Meeting Notes

Public	This ship, how big is this ship that we are looking at? How long is the cable and how far is it behind the vessel?
ION Representative	The <i>Bos Atlantic</i> is close to 300 feet long. The cable will vary in sizes from 6 kilometers to 9 kilometers long depending on the type of survey we will be doing.
Public	What do you mean depending on the type of survey?
ION Representative	Well, sometimes when you have a longer cable there is going to be more under water geophones because the cable is longer. If they want a shorter array of geophones they will just make the cable shorter.
Public	There is going to be whaling out of Kaktovik here, we know that the whales are going to be swimming and it hasn't been mentioned by AEWG or anyone here that it would be good to appropriate money to whalers as far as fuel, knowing that the whales are going to be further and further away. Fuel for the whalers that are being threatened would be good. Since ION is a multibillion dollar corporation it would be good for you to donate to the whalers, it makes sense.
ION Representative	Yes, we have done that in the past when I was working for another company, we just basically asked what they needed. In the previous case they just wanted fuel so we brought the fuel and they picked it up.
Public	I don't think we should talk about issues that concern the AEWG because they have their own policy, they have talked about that before, we get into trouble, so in this meeting let's just talk about what you guys are doing and not involve the AEWG. Thank you.
Public	I didn't mean to include the AEWG but I think we should mention that certain crew said you gave...inaudible
ION Representative	Yes we have done that, not with ION though. This is ION's second venture into Alaska. We were here in 2006 in the Chukchi and now after making some improvements to our program we decided to come back and try it again.
Public	Inaudible....
ION Representative	Sir early on in this program we will be conducting an SSV, a Sound Source Verification Test and that will give us our safety radii. The safety radii will tell us when we have to stop shooting because of whales and then we will also know basically how far our guns are going to go. How far out our guns are going to be heard, the further out in the water it will diminish. Those tests will have to be run before we start production in the Alaskan Beaufort and also turned into the agencies to get analyzed before we start.
Public	When you start on the 1 st of October do you know how far the sound is going to travel in the water?
Public	Some of the previous surveys that have been done, in fact work that ION did in Canada last year as well as 2008 we could hear their sounds from Northstar Island and even farther to the west so this is a relatively large air gun array, the sounds can carry a long way, hundreds of miles.
ION Representative	Inaudible....
Public	Do you have a staging area for your vessels, where will you stage your vessel?

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ION Representative	We will bring them in through the Bering Straits; we will bring them up from Seattle into Dutch Harbor, up the Bering Straits, around the point and then take them over towards the job. We will have a staging area for emergencies; we are setting that up right now with ASRC and Kaktovik. We will have one in Kaktovik, in Point Thompson, in Deadhorse, in Barrow and wherever there are isolated spots that are recommended in case of emergencies.
Public	When are you anticipating taking your equipment out?
ION Representative	We are planning to move out that way in June, we started moving in June last year, we took one vessel up at a time. Up here we put an export vessel or an ice breaker, we send one boat up and as soon as we get them to the thick ice and we get them through this guy will come back across and wait here and then we will get them through whatever rough spots they have.
Public	So you are saying you are about 200-300 miles offshore?
ION Representative	We go around up here, we try to get the Coast Guard to go out there first but they go further out there. And then we come back into the Canadian area here. We still have a lot of work over here that we would like to do, that we need to tie in to these areas right here. We would like to get these done this year, we did not finish these last year because the boat lost an engine.
Public	Inaudible....
ION Representative	No, I am just talking about Alaska.
Public	Besides those lines are you doing other work in Western Canada in 2011?
ION Representative	Yes we are we are going to try, when the boat went down last year we did not complete the survey, we would like to go back and finish that and then move right in there. There is not much to do but we need to finish what we started.
Public	So when you come into the Chukchi Sea you plan on bringing your vessel up in June or July?
ION Representative	Yes, June or July, I do not have the exact date. In June, July, August, and September we will be in Alaskan waters.
Public	Did you say that ice breaker activity will occur during the summer like in September?
ION Representative	When there is hard frozen ice we will not be rattling the ice to break it that is when it is time for us to leave. As long as the ice is floating around like you saw in the picture, when the ice breaker come through it will just push the ice out of the way and that is when we can work. Once we start ramming ice it does not do us any good so when it gets to that point we just leave.
Public	I thought you were going to go around there in the middle of winter, I was going to say...
ION Representative	No, we are not going to ram and crush ice.
Public	That will be really interesting to see in regards to the Marine Mammal Observers. It will be interesting to see what is out there, what they run into, just to know. Or even from the years passed, 2006?
Public	ION doing their seismic surveys in the Fall time after the whaling is done is a really

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	<p>positive thing, avoiding most of the whales or many of the whales and avoiding the hunting season is important. By starting late in the year though it is getting dark quicker and there is a lot of ice on the water and so for your Marine Mammal Monitoring the observers are not going to be able to do a very good job because they cannot see very far because of the darkness. Even with spot lights they are going to have a really hard time monitoring. The safety zone, especially for the distance where bowheads will avoid sound and start swimming away is farther than what the Marine Mammal Observer person can see. So how are you going to deal with that? How are you going to monitor with just observers? Using an infrared camera that has been shown not to work very well for detecting whales, how are you going to deal with all of this?</p>
ION Representative	<p>ION is working with BOEMER to figure out how they will mitigate this issue. These are the exact same questions that BOEMER has come up with for us and these are answers that we need to have by the end of next week. We have people that are working on it and we are looking to get these issues worked out by the time I get back from Kaktovik. I would like to share it with you and the community when we come back.</p>
Public	<p>These are exactly the same questions that we asked last year when we had a meeting with ION, you know how are you going to monitor in these tough conditions and are you going to use acoustic monitoring. And so it is a little disappointing that you are still working on the answers or hurriedly working on the answers so I guess we would appreciate it if you could come back and give us the details at some point to the environmental wildlife management and also to the community and the whaling captains and the AEWC.</p>
ION Representative	<p>Yes, thank you for raising that issue.</p>
Public	<p>You should appropriate at least 250 thousand dollars to the whaling captains' wives to help the barrow whalers to go out and getting food supplies and what not. To lower the burden since the whales are being affected.</p>
ION Representative	<p>Any other stuff that you feel that we might be missing, please tell us today or on a comment card.</p>
Public	<p>Maybe to suggest right off, I know that last year Statoil used Passive Acoustic Monitoring and maybe you should talk to them about their findings and consider using that this year.</p>
ION Representative	<p>Thank you for your comment.</p>
Public	<p>The area that you are covering is way bigger than seismic activity that we have had before. Really diverted the migration of the bowhead whale and this is an area where our whales are migrating back and come around and they take their time coming back. When you divert a whale it goes way out there, it is the same thing with the caribou.</p>
AES Representative	<p>Please explain that you are going to start 100 miles out when you enter from Canada to the Alaskan Beaufort to ease the mind of the community here tonight. Because</p>

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	the concern is that migrating whales are just passing in from Canada and are nearshore and where you want to start is way out there and not close to the migrating whales.
ION Representative	Where we want to start is up in this block here on October 30 th . We want to start in the deeper waters and then we will move on and start going over the lines. We are going to shoot this in patches. We are going to start at the top with our first patch and then do our second and third patch. I don't know if we will get this close this year, 7.5 miles, because we will be starting in the deeper waters.
Public	Is that all going to be done in one year?
ION Representative	No, I don't think we will be able to do all 4500 – 5000 miles in one year.
Public	No, the area where you were pointing.
ION Representative	Oh yea, if we can do from here to here we will be very happy for the first year.
Public	Do your vessels carry cameras to take pictures of the ocean bottom?
ION Representative	Yes
Public	And do you follow with another vessel behind to see what damage has been done?
ION Representative	No we will only have two vessels out there sir; we will have an ice breaker and another vessel.
Public	So you don't know what happens after the seismic is done? You don't know what the bottom of the ocean looks like?
ION Representative	We are going to be working in up to 11,000 feet of water and our guns are going to be 45 feet deep. I understand what you are saying. I don't have the water depths with me but I think we are looking at about 200-300 feet at the shallowest and 11,000 feet at the deepest. I can't answer that question right now but I can get it for you.
Public	It would be nice to know what happens after the seismic is done to the bottom of the ocean.
Public	Back to my comment earlier about giving money to the whalers did you write that down? Because I want to make sure the question has been answered, it is serious you know because like was said the whales keep getting further and further out and you know it is not a joke what people go through to try to help the community out and catch a whale and it would be good to assist the whalers in a way that doesn't get involved with the CAA. It's getting closer and closer so maybe we should start with 500 thousand to help the whalers instead of 300.
ION Representative	Thank you.
Public	The ocean is full of life, it's not only the marine mammals there are fish. Why don't you have any chase vessels? Especially since this is the season for migration.
ION Representative	I don't know but I can find out why we do not have any chase vessels.
Public	Who is training your Marine Mammal Observers?

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 Meeting Notes

ION Representative	ASRC, AES.
Public	Is that through the University?
ION Representative	Well the way I look at this is that we are starting our project that the end of the regular season. So what we would like to do is pick up some local people from here in Barrow, Nuiqsut, and Kaktovik that were on previous jobs here and extend their duration. Instead of stopping in September, we could offer them work through the end of December. They will already have had the training and have been in the field.
Public	Will you be out of the state water and in the federal waters?
ION Representative	The entire time.
Public	Right now I don't think there is anyone present who is representing our leadership. Have you met with the council or the board our leaders are not here tonight?
ION Representative	We sent them all personal invitations to invite them to this meeting tonight. We sent that out two weeks ago.
Public	Well there are not representatives of our leadership here.
Public	The question is a really good one because it is a Saturday night and Saturday nights is not really a convenient or a good time. Maybe what ION needs to do is hold leadership meetings with the city and the Native Village and other groups during the day on their time so people do not have to volunteer their time to attend a meeting.
ION Representative	I agree we did do that last year and we will make room to do that this year between now and the start of the project.
AES Representative	The other reason we picked tonight is because we knew that people had been inundated with a lot of meetings over the past two weeks so we will come back for leadership meetings.
Public	The problem is that the community has a lot of questions and the leadership meetings will be separate and they will not know what has been said here tonight.
AES Representative	We understand what you are saying and the issues and the questions that have been discussed here in the community will be told to the leadership and vice versa and that is the way that we will hold all of the discussions so that all of the concerns are address.
Public	There is also a fireman's banquet going on right now.
Public	Your big boat does it have a landing strip for a helicopter?
ION Representative	Well we don't carry a helicopter but the boat does have a landing strip for the helicopter.
Public	You should help Search and Rescue by appropriating them money to buy a new helicopter.
Public	I think that anytime you have a community meeting you should notify AEWC personnel, ICAS, and NVB to have representatives here, because we don't have any here tonight. You guys should also have reported what had been said during the AEWC meeting.
ION	We did send invitations to all of the leadership and we explained that we were going to hold a community meeting. They were all noticed that this was a community

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Representative	meeting and they were invited to participate.
AES Representative	You may want to explain to the audience that you are not necessarily looking for oil and gas.
ION Representative	No, we are not. We are trying to find out where the piece of land went that use to be attached to Alaska years ago.
Public	But you are related to oil and gas.
ION Representative	Yes, we have some investors that are interested in what data we find. And we have other investors that are looking for something else.
Public	Are you sure you are not poring anything out there? Where you are looking? Have you ever done any testing on the water?
ION Representative	No we have not.
Public	Well you better start testing the water. It is not good for the water, for the salt water.
ION Representative	Thank you for your comment.
Public	Inaudible...
ION Representative	In Canada and Greenland it is very similar to Alaska. We work closely with the Canadians also due to their hunting seasons.
Public	Who are your investors, are they corporate?
ION Representative	Yes, but I don't know who they are. There are oil companies and institutions like Fairbanks and other university institutions that make up our investors.
Public	Very good meeting.
Comment Cards Submitted by Members of the Audience	
<p>19 and 20th Century Politics and the history and experiences of Inupiaq people and culture has regressed further as "The new found politics was supposed to rest upon man's natural rights, and in so far as he is nothing but a natural being upon his right to food, dress, and the reproduction of the species, this is upon his right to the necessities of life. And these right to touch and to violate but as the very content as will as the ultimate end of guilt and ... have been deprived of these rights as we enter the doors such century and how does the law of the sea recognize Inupiat rights to food dress and reproductive. Threatened, trespassed and violated by the goods, story Alaska; and compare?</p> <ul style="list-style-type: none"> • Need good monitoring; visual observers are not sufficient because of the dark, ice, etc. • Must include acoustic monitoring • Need sound source verification in shallow and deep water. Propagation different. • Impacts to prey of marine mammals??? • What are cumulative impacts, especially with work in Canada and Russia. • Forward Looking Infrared doesn't work for Bowheads. 	
Pictures of before and after seismic activities of the bottom of the ocean.	
Very good informative meeting. Thank you.	

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GX TECHNOLOGY

BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey
Beaufort Sea, Alaska
Comment Card

Please fill out areas below:

Name: Robert Smith

Address: Box 1071
Barrow, AK

Email: rsmith1071@yahoo.com

Phone: 907-1952-3005

The 19 & 20th century politics
and the history & experiences of
Alaskan people & culture has
repressed further as "The new
book politics was supposed to
rest upon man's natural rights, &

insofar as he is nothing but a
natural being, upon his right to
'food, dress, & the reproduction of his
species, that is upon his right to
the necessities of life. And
these may touch not to violate
but as the very content as well as
the ultimate end of govt. & laws.
we have been deprived of these
rights as we enter the doors
of such century. How does the
Law of the SEA recognize inherent
rights to food, dress & reproduction.



GX TECHNOLOGY

BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey
Beaufort Sea, Alaska

Comment Card

Please fill out the areas below:

Name: Robert Snyder

Address: NSB Box 69

BRW AK

Email: robert.snyder@north-slope.org

Phone: 907 852 0350

- Need good monitoring
Visual obs. are not
sufficient because of
dark, ice, etc. Must
include acoustic
monitoring!

- Need SSV in shallow
and deep water.
Propagation different
- Impacts to prey of
marine mammals??
- What are cumulative
impacts, especially
with work in Canada
& Russia,
- FLIR doesn't work
for bowheads



GX TECHNOLOGY

BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey
Beaufort Sea, Alaska
Comment Card

Please fill out the areas below:

Name: PATRICK Suvlu

Address: Box 342

Barrow, AK 99723

Email: Pachik@barrow.com

Phone: _____

PICTURES of Before & After Seismic Activities
of the Bottom of the Ocean



GX TECHNOLOGY

BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey
Beaufort Sea, Alaska
Comment Card

Please fill out areas below:

Name: WILLIAM BITTA

Address: BOX 962

BARROW, AK 99723

Email: Wildbill1397@gmail.com

Phone: 878-6022

Very good informative
meeting -

thank you -

Public Notice Of Nuiqsut Community Meeting

Who: ION Geophysical, Inc. (ION)

What: ION is proposing to conduct a 2D seismic survey in the Beaufort Sea during fall 2011 starting October 1 through mid-December, 2011.

When: February 21, 2011 at 7:00pm – 9:00pm.

Where: Kisik Community Center
Nuiqsut, Alaska

Refreshments and Door Prizes will be provided

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BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
NUIQSUT, ALASKA
February 21, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Sam Kunukuanic		480-2940			
Eli W. N. 40-9 AK					
Billy Oyagale					
Sarah Oyagale	City				
Jimmy A. Oyagale	City of NUI	480-0010			
Vernon Long	self	480-8390			
Herbert P. 40-9 AK	whaling captain	480-5869			
Emily Panisa		480-2025 250			
margaret Brower		480-6014			
CLARE-POE-AHUPBUNAK		480-2740			



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
NUIQSUT, ALASKA
February 21, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
John Nicholls Sr	Self. ✓				
John Nicholls Jr	✓				
Alison Nicholls	✓				
Jasmine Nicholls	✓				
Nannice Nicholls	✓				
Ethan Nicholls	✓				
Rachel Nukogah	✓				
Thelma Kasak					
Maggie Ahmaogak	AES	250-0083			12801 Monterey Circle
Percy Pausanna		480-6014			



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
NUIQSUT, ALASKA
February 21, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Chris Vincent		480-6826			PO Box 89306 Nuiqsut AK 99789
Alex Kasak		" "			" "
Jay den Vincent		" "			" "
Ed Nelson					
Mary Cabinboy		480-6732		Mary-Cabinboy@live.com	Po Box 89032 Nuiqsut AK 99789
Hazel Kundene		480-2940		Katulkundene@alaska.net	P.O. Box 89096 NUIQSUT AK 99789
Sarah Kundene		480-2940			P.O. Box 89096 NUIQSUT AK 99789
Isiah Nakpigaak		480-0040			

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Plan of Cooperation Meeting
 ION/Community of Nuiqsut
 Kuukpik Hotel
 February 21, 2011
 Presentation 7:00 – 9:00 pm
 Nuiqsut, Alaska
 Meeting Notes

Attendees:

These names need to be replaced with the names from the Nuiqsut Sign-in Sheet. Maggie should have this; I did not get a chance to scan it into the k drive.

Beverly Hugo
 Patrick Hugo
 Walton Ahmaogak
 Bruce Rexford
 Tomi Phillip
 Ginger Snow
 Lloyd Stein
 Roy Ahmaogak
 Sharene Ahmaogak
 Sandra Gray
 Nanci Reilly
 Robert Suydam
 George Icea

Patrick Suvlu
 Leo Brower
 Qicwale Brower
 Bill Brower
 Fred Kanayurak
 David Sagamma
 Lilly Kanayurak
 William Itta
 Marily Ahmaogak
 Lawrence Sage
 Charles Brower
 Bobby Itta
 Mary Hugo
 Ralph Tuchid
 Craig George
 Bob Rews

The following organizations were informed of the POC Community Meetings:

Native Village of Barrow	Alaska Eskimo Walrus Commission
Native Village of Nuiqsut	North Slope Borough Wildlife Department
Inupiat Community of the Arctic Slope	Nuiqsut Whaling Captains
North Slope Borough Wildlife Department	Kaktovik Inupiat Corporation
Alaska Eskimo Whaling Commission	Kuukpik Corporation
Alaska Nanuuq Commission	City of Nuiqsut
Alaska Beluga Whale Committee	Mayor Itta, North Slope Borough
Ice Seal Committee	

The following representatives attended on behalf of ION:

Ed Nelson , ION Exploration Manager
 Maggie Ahmaogak, ASRC Energy Services (AES) Community Affairs
 Michelle Malerich, AES Stakeholder Engagement

General – ION provided an overview of the proposed ION 2011 BeaufortSPAN West project utilizing a power point presentation. These notes are meant to capture comments and responses from meeting attendees.

Public	Who are you going to hire for Marine Mammal Observers? Are they going to be native?
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Plan of Cooperation Meeting
ION/Community of Nuiqsut
Kuukpik Hotel
February 21, 2011
Presentation 7:00 – 9:00 pm
Nuiqsut, Alaska
Meeting Notes

ION Representative	Yes, Ion wants to hire Nuiqsut, Kaktovik, and Barrow MMOs. What we were thinking is that because we are starting so late we hope to extend the work of the local MMOs into December. We are going to do this by hiring the ones that have experience and had been employed the previously. This is all being handled by AES, they will do the training and hiring.
Public	What time did the meeting start?
ION Representative	We were supposed to start at 7 but we started at 7:30.
Public	Oh, I thought the meeting was supposed to be tomorrow?
AES Representative	The government meeting that is taking place tomorrow.
Public	Oh, ok.

Public Notice Of Kaktovik Community Meeting

Who: ION Geophysical, Inc. (ION)

What: ION is proposing to conduct a 2D seismic survey in the Beaufort Sea during fall 2011 starting October 1 through mid-December, 2011.

When: April 18, 2011 at 5:00pm – 6:00pm.

Where: Kaktovik Community Center
Kaktovik, Alaska

Refreshments and Door Prizes will be provided

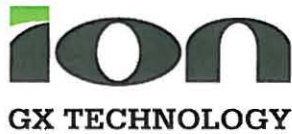
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BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
KAKTOVIK, ALASKA
APRIL 18, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Sean Kayotah Sean					
Katie Fry		907-6404			Box 25 Kaktovik, AK 99747
Adam Linn	Self	640-2035		adam.nlinne@starbend.net adam.nlinne@starbend.net	Box 64 Kaktovik
URIAH NALIKAK	Self	388-6920			
James Killbear Jr	Self	640-2047			Box 53 Kaktovik
Jim Allen Killbear	Son	11			11
Roberta Borton	Self	11			11
Amelia Sivakulak	Self	640-0031			PO Box 53 Kaktovik AK 99747
Abi Fry		6404			Box 25 Kaktovik, AK 99747



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
KAKTOVIK, ALASKA
APRIL 18, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Carla Sims Kayotak	self	640-5893		cjskayotak@msn.com	99747
Bradley Brower					
Charles M Brower	Self	640-4163			
Jeanette Akootchook					
Clarice Akootchook		640-6411			
Lucas Atshanna		640-6411			
LEE KAYOTUK		640-1300		LEE KAYOTUK MSN - LOWE	99747
Freddie KALEA		978-5721		FFKALEAK_84@HOTMAIL.COM	P.O. Box 83 KAKTOVIK
Qagau Anasuyook		858-5455			Box 745 Qagau Anasuyook
John H. Tagarook		640-0030		john.tagarook1@hotmail.com	P.O. Box 98



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
KAKTOVIK, ALASKA
APRIL 18, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Stephanie Aishanna mya Aishanna Skylar Bopiv		640-1362			Box 55
Douglas Aishanna		347-4575			Box 55
Georgianna Doty		640-2105			Box 58
Nora Jane Burns	myself	640-6722		norajaneburns@yo.com	Box 101 Kaktovik
Charles Brown					
Bette Brewer					
Annie Tagarok Justin & d'ot'it's		640-0036			Box 8 Kaktovik
George Hylork Luey Kaled	4-1f				



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
KAKTOVIK, ALASKA
APRIL 18, 2011

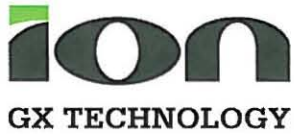
Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Peter Tagarook	CITY OF Kaktovik			P.tagarook@cityofkaktovik.com	P.O. Box #17
Therese Kayotuk	City of Kaktovik	(907) 640-0004	(907) 640-6314	tkayotuk@gmail.com	Box 44
Dorothy Sitjithani	Kaktovik	(907) 640-1442			
Chara Attichene	Kaktovik	907 640 1402			Box 56
Russell Sygum	Kaktovik	907-640-7884			120
Ruth Tagarook					
Marie Rexford	Kaktovik	640-2112			P.O. Box 103 Kaktovik 99728
Edward Rexford Sr	"	"			"
Susan Cord	"	640-1210			
Mildred Ashauer	"	640-2105			Box 58



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey – Beaufort Sea

ATTENDANCE SIGN-IN SHEET
KAKTOVIK, ALASKA
APRIL 18, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Harry Lord	self	640-6215		h.henry.lord@live.com	
Matthew Rexford	City of Kaktovik	640-2112	640-6314	matthew.rexford@gmail.com	P.O. Box 105 Kaktovik, AK 99747
BRUCE INGLANGASAK <i>Marie Kaveelook</i> Marie Kaveelook	SELF	640 1255			
Kimberley B.					
George Tagrook	Self	328-9368			Box 17
Janelle Killbear					Box 53



BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey - Beaufort Sea

ATTENDANCE SIGN-IN SHEET
KAKTOVIK, ALASKA
APRIL 18, 2011

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Fred Tagarook Jr	self	640-0031			
Brittany	self	640-0041			

Kaktovik Community Meeting Notes
Kaktovik Community Hall
April 18, 2011 5:00-6:00 pm

Is that ice just forming?

Yes, that's pancake ice.

Would you just be doing airgun seismic or dragging things below?

We are pulling cable ~45' below the ice so it doesn't get tangled, I can show you a picture. (Ed showed a picture to illustrate.)

You're going to wait on the eastern or western side until whaling is over?

We are going to wait in Canadian waters until the whaling season is complete, and will not begin before October 1, regardless. We are planning to stage in the Tuk Basin, where it will take approximately 1 ½ days to get to the project area.

We just don't want you too close and interrupting whale migration.

The permit will not be valid until October 1, and we will not begin until after whaling is complete even if that is after October 1. We will also have village liaisons in the villages to keep everyone updated.

You're waiting until Kaktovik finishes whaling? Wouldn't it be better to wait until Nuiqsut and Barrow are done too?

Subsistence representatives do not seem to object to the timeframe in Nuiqsut. There have been no outright objections regarding the timeframe. Nuiqsut will traditionally be done whaling by October 1.

What about Barrow?

Nuiqsut and Barrow are historically done by September 15. We will start work in the east and move west in order to prevent deflecting Bowhead migration heading into Barrow.

If we are done whaling will you start early?

We will not start before October 1.

What are the studies being done in Canada?

There is some research being done on krill

Seismic?

Yes, there was seismic work done in Canada, but it is not a fair study to show the results and relate to our Alaskan Beaufort project. The studies were done in July in the middle of the summer, versus in early winter. We would rather show you study results from Alaskan waters.

Did you study impacts after the airguns were used?

We had safety radii to prevent impacts, no post-airgun operation studies were done.

What happens to crab and krill?

We do have some information regarding this, basically research says that if they're within a handful of meters of the sound source effects will include slower development of eggs and some avoidance behavior from squid has been observed. Permanent impacts are unknown at this point.

Where was this study done?

We will need to get back to you.

Are you familiar with geomatic technology? The Japanese are using this in the Bristol Bay basin using shots from a satellite. The results are pretty conclusive data regarding hydrocarbon availability and resource assessment.

I don't know about geomatic technology, but if you fill out a comment card I will get back to you.

You do that all across the slope? Both latitudinal and longitudinally?

Along transect lines, every 300 meters

Exxon has a microphone in the ocean?

They have ASAR/DASARs deployed. They haven't picked them up yet, so we can't tell how far the sound travels or how loud it is. They have picked up sounds from our Canadian Beaufort operations though.

If you don't know how far the sound travels, how do you determine the safety radii?

NMFS has done modeling studies for each species to come up with the 180 and 190 dB radii. MMOs are onboard to make sure they don't enter the zone. The models are base on array volume. Conversation continued... Models are based on calculations done in the past based on water depth and array volume.

SSVs are required by the CAA...

Are they controlled tests?

Yes, they are standardized by NMFS

Is anyone collecting data on the aftereffects of seismic? The number of seals found onshore? Soft fish?

We are not currently aware of any post seismic analysis.

What does it do to the fish?

BP did Ocean Bottom Cable Seismic for their Liberty Project and followed the operation with another vessel that had dipnet trolls onboard. The results came back showing no negative results on the fish collected. Some work was done in Newfoundland on snow crabs, they showed deflection behavior. Squid offshore of Spain showed avoidance behavior when they were studied.

The first fish in Kaktovik last year did taste right.

I can try to find more information.

In response to the questions about the two dead whales found last year, we checked with the Canadian government. The DFO knew only of 1 dead whale which had extensive decay. The whale washed ashore July 30th and was being consumed by bears. The whale washed ashore before ION's work began.

Comment Card

Harry Lord, P.O. Box 36, Kaktovik, AK 99747

h.henry.lord@live.com

907-640-6215

Geomatic 3-D satellite earth penetrating radar tech PROMIS software integrated. Prosecutors Management Information System Classified Intelligence? Proprietary Tech? From the wilderness.com/PROMIS



GX TECHNOLOGY

BeaufortSPAN™ West Program
2011 2D Marine Seismic Survey
Beaufort Sea, Alaska
Comment Card

Please fill out the areas below:

Name: Harry Lord

Proprietary Tech?

Address: P.O. Box 36
Kaktovik, AK 99747

Email: h.henry.lord@live.com

From the Wilderness.com / PROMIS

Phone: (907) 640-6215

Geomatic 3-DSatelite Earth

penetrating radar tech

PROMIS software integrated

Prosecutors Management

Information System

Classified Intelligence?

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**2012 Meeting Flyers, Sign-in Sheets, Notes,
Comments, and Responses**

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Community Meeting

Please Join Us

*** 5:00 – 6:30 PM ***

Monday, January 23, 2012

Community Center

Kaktovik, AK

- Who** ION Geophysical, Inc. (ION)
- Why** ION is proposing to conduct a 2D seismic survey in the Beaufort Sea during fall 2012. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2012 through mid-December 2012.
- What** Present the proposed BeaufortSPAN™ West Program and obtain community feedback

Door Prizes and Refreshments will be provided.

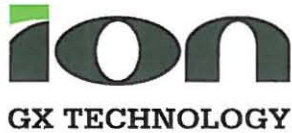
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BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey - Beaufort Sea - Delay

Attendance Sign-In Sheet
Kaktovik, Alaska
January 23, 2012
Community Center
5:00-6:30pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Clarice Akootchook	Self	640-0007		caakootchook@asrc.com	Box 112 BTT, AK 99747
Maggie Young	Self	640-2059			Box 70 Kaktovik, AK 99747
Mark Ologak	Self	640-2059			Box 70 Kaktovik AK.
Eunice Simon		640-6820			Box 57 Kaktovik, AK
Bert Akootchook	KIC	640 7983		bert@kactchook@hotmail.com	Kaktovik 99747
Pruthi Tagavook					
Bruce Diglarvook					
SAM Gordon	Self	640-2400		Samgial@yahoodom.com	Box 117 Kaktovik
Russell Tagavook	Self				P.O. Box 120
Austin Kaktovik					



BeaufortSPAN™ West Program
 2012 2D Marine Seismic Survey – Beaufort Sea - Delay

Attendance Sign-In Sheet
 📍 Kaktovik, Alaska
 January 23, 2012
 Community Center
 5:00-6:30pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Jimmy S. Sople		640-2131			Box 4 KAKTOVIK, AK.
Vicki Agard		640-0037			P.O. Box 138 KAKTOVIK AK
Nathan Tagawa		640-0020			
Nora Jane Buss		640-4722			Box 101 KAK, AK
Susan Gordon		640-0058			Kaktovik, AK
Wayne KAY/ok		640-0001			KAKTOVIK, AK
Charles Lampe		640-0016			Kaktovik, AK



BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey – Beaufort Sea - Delay

Attendance Sign-In Sheet
Kaktovik, Alaska
January 23, 2012
Community Center
5:00-6:30pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Tagarook, George	Kaktovik whaling Self captain	728-9368		taek2@hotmail.com	Kaktovik Box 19 99747
Carla Sims Kayotak	self	640-0032			KAKTOVIK

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Katovik Community Meeting 01/23/2012

Attendees:

Clarice Akootchook
 Maggie Going
 Mark Ologak
 Eunice Seino
 B....Akootchook
 Ruth Tagarook
 Bruce I.....
 Sam Gordon
 Russell Tagarook
 Austin Kayotuk

Jimmy S. Sople
 L....
 Nathan Tagarook
 Nora Jane Burns
 Susan Gordon
 Wayne Kayotuk
 Charles Lampe
 George Tagarook
 Carla Sims Kayotuk

The following organizations were informed of the POC Community Meetings:

Clarice Akootchook, ASRC Village Liaison
 Annie Tikluk, City of Kaktovik
 Nora Jane Burns, City of Kaktovik
 Fenton Rexford, Native Village of Kaktovik
 Philip Tikluk Jr., Kaktovik Inupiat Corporation
 Bert Akootchook, Kaktovik Inupiat Corporation
 Joe Kaleak, Kaktovik Whaling Captains' Association

The following representatives attended on behalf of ION:

Ed Nelson, ION Exploration Manager
 Meghan Larson, ASRC Energy Services (AES) AES Stakeholder engagement
 Inuuteq Stotts, AES Stakeholder engagement

General – ION provided an overview of the proposed ION 2011 BeaufortSPAN West project utilizing a power point presentation. These notes are meant to capture comments and responses from meeting attendees.

~4 min. Who is ION, etc.	
~7 min. Why are you doing this?	
Beaufort Span Program – earth has not always split up the way it is now.	
Questions through ~13 min.	
ION Representative	
Public	~13 min. What are your findings since 2006?
ION Representative	There have been no wells drilled, but it looks good. We're not a drilling company, so someone else would have to do that.
Public	~16 min. How long will your airguns be underwater, what is the dB?
ION Representative	8 sec.? 160, 180, and 190 dB safety radii for marine mammals.
Public	What about fish? Are you going to have someone with a fish finder?
ION Representative	No, we're not, but we've designed the survey to not have any conflict with whalers and subsistence hunters.

Public	We have fish out there year round, seals year round. Last time we had seismic around here we saw changes.
ION Representative	Studies have shown when in close proximity to sound source fish will move out of the area temporarily but no mortalities have been documented. Studies have been done with the Vladimir in the arctic. In the Gulf of Mexico studies have shown that withing 24-48 hours fish return. Fish would have to be very close to the source for response, and then they're seeing disturbance but no mortality.
Public	What were the results from 2006-2010 regarding whales?
ION Representative	We find bowheads turn away at ~160 dB as a natural self-preservation mechanism. They turn away from the boat.
Public	~25 min. Fish – Certain types of fish. Sometimes there are no fish. Last year when we got our first fish it was kind of funny. Can we send that to anyone?
ION Representative	North Slope Borough Department of Wildlife, they will have someone come out and collect and sample the fish. An employee of NSB Department of Wildlife explained a little further.
Public	~28 min. We used to work on ship in Canada; they didn't bother the bowheads when they were next to us. How do you scare them away?
ION Representative	We shut down if they are near the ship so no guns are going.
Public	Do you know who is going to get the MMO contract?
ION Representative	ASRC Energy Services.
Public	Anybody can try to get that contract?
ION Representative	Anybody can put a bid for that contract in.
Public	When I was an MMO we were working for Marsh Creek making more money than for ASRC.
Public	~37 min. Are you coming here again before seismic begins?
ION Representative	Yes, we're planning on coming back in August to give a status update – to let you know if we're on time for permits and vessel transit.
Public	Something about 3 years....
ION Representative	I hope that this is the year. The first year... last year the boat we were going to use changed ownership.
Public	Something about staying out of our oceans... You need to come back and answer questions that you're unable to answer this time. You came here to meet with us and you're not prepared to answer our questions about your results.
ION Representative	I can't bring a whole lot of results from Greenland because they won't relate very well to the Alaska project.
Public	Show us your results, prove to us you can do this without messing up our oceans.
Public	When are you going to start putting out bids for the MMO contract?
ION Representative	We can start next week.
Public	So you'll put it out for bid then?
ION Representative	Yes, we will. We will need contact info though.
Public	What do you mean by meeting with Barrow Leadership? This is my first time meeting with you.

	They've been here a number of times.
Public	Polar bears can walk on thin ice. There are a large number of seals, we see a lot on October ice.
ION Representative	
Public	How many people are on your boats? Shift changes?
ION Representative	Before we start in U.S. waters we will have a shift change in Canadian waters. No crew changes are planned after that. There will be one fuel transfer.
Public	What about your gray water, trash, etc.?
ION Representative	There will be incinerators onboard. We will take the incinerator leftovers and trash to Seattle.
Public	Alaska Workers... Will they need passports?
ION Representative	Yes, they will need passports and TWIC cards.
Public	Pt. Thomson fuel transfer... MMOs couldn't do any studying until they got into U.S. waters.
Public	~49 min. How often are you going to discharge?
Public	I don't know what the discharge frequency will be, but we will follow OCS discharge policies and take the rest to Seattle.
ION Representative	
Public	~53 min. So your trucks are going to be full? Are you going to take down the bladders? You're going to be taking...
ION Representative	I'm hoping not to use drums, but to use big bladders.
Public	So you're going to be having containment?
ION Representative	Yes.
Public	You'll be needing some containment. How big are the ladders going to be?
ION Representative	2500-5000 gallons. This is still something that's open for discussion. There are a lot of different options right now.
Public	Question...
ION Representative	We are going to fill up in Canada and use North Slope fuel for our refuel/fuel transfer.
Public	So the bladders are going to be in the village?
ION Representative	We will find a safe place...
Public	How many MMOs per ship?
ION Representative	Likely going to be 2-3 on each vessel.
Public	Are you going to be using local resources?
ION Representative	We will use as many local resources as we can.
Public	When are you starting the program?
ION Representative	No earlier than October 1.
Public	Why so late?
ION Representative	Because the design is to avoid all subsistence activities and have the least impact on the marine mammals.

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Barrow Whaling Captains Association Meeting

01/25/2012

Meeting was held over dinner at Pepe's

Eugene Brower, President of the Barrow Whaling Captain's Association was invited of the proposed meeting and asked to distribute the invitation to all the Barrow whaling captains. Approximately 40 whaling captains attended the meeting.

The following representatives attended on behalf of ION:

Ed Nelson, ION Exploration Manager
Meghan Larson, ASRC Energy Services (AES) AES Stakeholder engagement
Inuuteq Stotts, AES Stakeholder engagement

General – ION provided an overview of the proposed ION 2011 BeaufortSPAN West project utilizing a power point presentation. These notes are meant to capture comments and responses from meeting attendees.

Public	Eugene Browne Introduced the Whaling Captains
Public	Before we go any further, is there going to be any time for questions and answers? Is this going to be the same presentation as at the Mini-Convention?
ION Representative	It will be a little bit of both Mr. Hopson.
ION Representative	Ed introduced the team and ION's proposed 2012 project.
ION Representative	Showed video of operations in the Greenlandic Arctic in 2011.
Public	There is a cable there, what is that again?
ION Representative	That cable right there sir is the gravity cable. It's a gravity cable; it measures the gravity of the earth right there.
Public	Is that seismic?
ION Representative	Yes, sir.
Public	Is that an airgun press?
ION Representative	Yes, sir.
Public	How many pounds of pressure?
ION Representative	2000 psi. Our array is 4450, but 2000 psi. We will be shooting 28 guns from 65in ³ to 360in ³ .
Public	Do you watch out for animals during seismic?
ION Representative	Yes, we have MMOs. In these waters over in Greenland and Canada we use Inuviks as our MMOs.
Public	What is that bubble?
ION Representative	That's where the gun goes off. When this started coming out, people thought the guns would blow ice all over the place, but that's not the case, the guns are way too deep.
Public	One of my friends that works on seismic has seen the water go way up.
ION Representative	When you tow your guns, the closer you keep the guns to the surface it's going

	to come out on top. We tow our guns from 8 ½ meters [below water surface], which is maybe 30 feet, down to 60-70 feet. We will be working in waters 7 ½ to 155 miles offshore, we'll be working in waters from 65 ft up to 11,500 feet deep.
Public	How did you come up with October 1? How did you come up with that date?
ION Representative	We came up with that date through our design and research. We looked at past whaling seasons and we looked at since we're starting over here in the Canadian/U.S. Border and then you have Kaktovik, then Nuiqsut, then Barrow, typically Kaktovik and Nuiqsut would end right around the end of September or early October and Barrow will be way over here several hundred miles away. We are not going to be doing any kind of seismic until Kaktovik and Nuiqsut are complete with their whale hunt. That's why we picked October 1. October 1, sir, is just a start date for a permit, but it doesn't necessarily mean that's the day we are going to start because we are also telling the villagers we'll start when they've finished their whale hunt. If the whale hunt is finished on October 10, then maybe we will start on October 12. October 1, sir, is just a date that we put in there to tell the federal government that's the start of our permit date, the end of our permit date is December 15.
Public	If you're going to do that show me where your leases are, whose leases are you working on? Are you doing this to make money and sell this to the companies that have leases? Show me where the leases are, what's your intent?
ION Representative	Sir, that's a very good question. We know right now that Shell has leases over here.
Public	Sir, I don't want you to tell me they have leases over there. You need to tell me exactly where these leases are. I don't want you going out there on your own. I want to know exactly where the leases are. I don't want you scanning the arctic doing these things. You're just arbitrarily going out there shooting, killing animals. You don't have leases and you have no business out there.
ION Representative	I don't have the lease map, but I can get that information for you. I don't have that information and honestly I don't know/ [have] with me Mr. Hopson, but I will get you that information.
	[note – this information was provided to BWCA in letter sent Feb 8, 2012]
Public	You're just arbitrarily going out there shooting to sell it to the industry and maybe the state. You have to have a reason to be out there. Who's paying for you do this?
ION Representative	When we undertake these businesses, these programs, Mr. Hopson, we go out with the business model that we undertake it ourselves and then we have people that want to buy in on it. Who the buyers are, honestly at my level, I do not know. The leases, I know its public domain, I can probably find them for you and furnish it to you, but off the top of my head I do not know that also sir.
Public	Do you have a permit?
ION Representative	We don't have a permit yet, but we have filed our permit with the federal government. With BOEMRE [BOEM], NMFS, USFWS. They have not given us our permit. From what I understand we might not even get our permit until late September. We don't know, or we might not even get it at all.
Public	So if you don't get the permit it's cancelled?
ION Representative	That's right, if we don't get a permit we don't work. If they don't give us our permit until mid-October then it would really be too late for us to do anything to

	get all mobilized and geared up for it. We would probably ask to see if we can amend it and renew it for the following year.
Public	If you have to amend it, we usually start our fall whaling in the first week of October.
ION Representative	Okay.
Public	It would be good if you pick a different day if you amend for next year because you'll deflect our whales way far.
ION Representative	That's why I'm here, to get your feedback. We know there's going to be conflict because of our gun array that travels, even though we're going to be starting way over here. I'm not sure if you're going to be whaling up here, out here, or over here for the fall whale hunt. We seem to think there will be enough separation, but maybe there isn't enough separation because they will still be hearing the noise.
Public	In fact, based on the past experience with seismic activity off Barrow to the east, any time there is seismic activity the whales are deflected from their migration route. We have history to prove that we have had to go 50-60 miles out just to find the animals. This is a concern not just because of global warming; the ice receding 300-400 miles out now, any wind that picks up is going to play havoc with the whalers that are out there subsistence hunting. Water is the best conductor of sound hitting the ocean... psi, what is going to be the range? How far is the sound going to travel?
ION Representative	The acoustic company, Jasco, will run a sound source verification off the vessel. We run in different water depths from less than 100, 100-1000, and greater than 1000m because those impact how sound travels. Jasco has already done some modeling, what they predict, because they've been out there in the past, so we do have some ranges – our mitigation ranges. They estimate between 180 and 190dB to be that threshold level where they don't want whales. For 190dB in less than 100m of water that's 600m, in 100-1000 that's 180m, and greater than 1000m that's 180m. 600m is just shy of ½ mile. 180m is about 1/8 mile. The safety radii will be determined before we start the job if we get the permit. Those will be defined by the SSV test that we'll run with the gun array that we're going to be using. That's where the safety radii for the marine mammals will be set up by NMFS. Those dB levels are what have been scientifically shown to be that threshold level at which they don't expect an impact. When we have a marine mammal within that zone, and we adjust as an MMO for water depth, that's when we shut down and go quiet if there is a marine mammal around. We shut guns down and go silent if that is a marine mammal in that zone.
Public	On those cables sometimes you lose cables.
ION Representative	We use seismic streamer cables for recording, for recording the seismic data.
Public	On the ice, sometimes they might break.
Public	It's what he explained earlier, you go way underneath from the middle of the boat how many meters and then out.
ION Representative	The skag is 36-40 feet down and comes out. Instead of coming out the top of the boat it comes out the bottom of the boat. We have birds that can dive down or bring the cable up.
Public	It's like trolling for fish.
ION Representative	The same methodology.

Public	Do you have only one streamer for recording?
ION Representative	Yes, only one cable.
Public	How much noise does it make when you fire?
ION Representative	Depends on proximity to the guns, I don't know what it is at the source.
Public	What would be nice if you're going to be making presentations is to show a picture with the noise, like when you're towing and the air bubble coming up, the actual noise you're picking up is important to tell us.
ION Representative	We are doing sound source modeling with Jasco all the way to Barrow, results will be ready by the Mini-Convention. It's sound source modeling in the computer. We have not been able to go out and do a real, live test because the opportunity has not been there. This year, permit granted, we will be able to furnish those test in real time, in real life when we come back to do our close out meetings with the Whaling Commissions and the Communities.
	[note – this information was not available by Mini-Convention. BWCA was informed in letter sent Feb 8, 2012]
Public	This fall when we were whaling we hardly saw bowhead whales like we used to. It was probably too much activity in the Beaufort and we have to go far.
Public	That footage you just showed us, was from your company?
ION Representative	Yes.
Public	Then I don't see how you didn't get sound verification from that.
ION Representative	Thank you, that's a very good point. I could get their results, but would it be valid in this case? In the Alaska Beaufort at the time of the survey? We are going to be doing our testing in October and November, if those tests were being done in September or August then the water is going to be different. The results would be misleading one way or the other because of the timing of the year of the tests and the water depth.
Public	When are the starting dates on these seismic lines?
ION Representative	October 1 or after the Nuiqsut and Kaktovik whaling season.
Public	What is your estimate to be finished and up and around the Barrow area? If the start date is going to be way over there, what are your estimate dates of how long it will take you to get over to the Barrow area?
ION Representative	To be honest with you we'd be lucky to get half of that done this year. That means if we start here, we'd be lucky to get half way before we have to leave. We would have to come back again, regroup, and talk to the whalers and everybody. There is a lot of work to be done there in October and November, it's going to be rough, there will be a lot of ice. We may only be able to work 3 weeks and have to leave.
Public	Your MMOs- are you rotating from the villages for the areas that are affected during those operations? You've got Kaktovik, then you go to Nuiqsut, but when you go to Barrow we've got a big stretch. We'd like to see an MMO from our region.
ION Representative	We are going to hire MMOs out of every village. And we will have an emergency call center. We will be hiring out of each village.
Public	Why are you starting on those dates? You've got an offseason during the summer, its ice free. Why are you guys starting when Nuiqsut and Kaktovik whaling are done? What's going to happen with all that noise is the whales will be spooked and they will try to avoid where the noise is. I think you guys should

	do it in the offseason. That'd be like end of July, right in that area, when there's a lot of activity going on back and forth from Prudhoe to Barrow.
ION Representative	We've been conducting surveys in the Beaufort since 1979, they've been doing aerial surveys. In the time of year and area they're talking, in the upper area in greater than 1000 feet of water, only 2% of whales are in that depth of water. By that date, 97% of whales will have passed through the eastern Beaufort. At that point of time in year they're expecting very low whale numbers because most whales have moved by and only 2% are in that depth or water.
Public	The whales will be coming during that time. They'll be past this point when they're starting. How do you know so much about that?
ION Representative	I'm not trying to say every whale, but the majority. Since 1979, the majority of whales have already passed that point from the aerial surveys.
Public	That's why I ask, why do you guys pick those dates when they're going to do their whaling? Why can't you do it during the offseason? Summer time, end of July. We don't hunt whales in July. If you guys started in July you might be through by August, and there's ice free water nearshore. When you get your permit, you're going to do it no matter what, right??
ION Representative	It's not no matter what. The whole intent in us shooting in October is because we feel that the majority of the whales and subsistence stuff is already migrating out and we will be behind it. We understand there's still going to be marine life out here, but they will already be migrating out and we will be behind that migration. That's the way we're looking at it.
Public	What I'm trying to say is if you get your permit you're going to do this no matter what all the way up to Barrow right?
ION Representative	If we make it that far.
Public	What we're trying to say is if you start at the end of July and go the other direction you'll be out of here by the time we're going whaling. Instead of starting from back there, it would be better going from this way. You'd be out of our hair already.
Public	Then you have Nuiqsut and Kaktovik.
Public	Everybody is trying to say why don't you guys start early and try to get as much as you can before we start whaling?
Public	He's saying their only going to be able to do half. So if you guys start from this side going this way you'd be out of Nuiqsut's way before they even whale, or Kaktovik.
Public	How long would it take to do one transect heading north?
Public	I can get the distance of that and divide it by 4.5 knots, the speed we'll be traveling.
Public	20 miles, 15 hours.
Public	Normally we start our whaling between mid-September and early October and continue until we finish our quota. In 1990, we witness a phenomena, we started whaling in mid-September, but we didn't see any whales for about 3 weeks. Finally someone found some in early October near Cape Simpson. We came to find out there was a seismic ship operating out there, the Arctic Rose. There were no whales, absolutely nothing while we were out there. We didn't find the whales until we were about 40 miles out; that is the kind of impact we're trying to avoid.

Public	<p>Have you studied effects of airguns on fish and smaller krill, planktons? [inaudible] That's the beginning of the wildlife. I haven't seen or heard any studies from you guys... [inaudible] what they eat, what the animals eat. Fish go by from Canada and north to Alaska; they travel from south and go north. [inaudible] I think everybody's wrong here because you guys shouldn't be out there until you give us the right, perfect answer that there will be no harm. You guys shouldn't be out there because of no studies of animals.</p>
ION Representative	<p>There have been studies done on fish and seismic because seismic has been going on around the world. Recently they've ramped up research on it, but a lot of it is hard to measure. They do show that fish tend to exhibit avoidance behavior and get out of the way. There was a study off of Kaktovik, off Liberty; they followed behind the seismic vessel. They were trawling behind it to see if they were seeing any dead fish and to see what they were getting. They didn't see any impact with that particular study. They did the same thing in the Gulf of Mexico in a really prominent fishing area. They trawled right after seismic went through and there was a diminished count. They trawled again two days later but the fish they saw had returned, they got the returns they expected. There was a temporary displacement of the fish, but they did come back. When they've done other studies when they've had the fish close to the source, they don't see death or mortality unless that fish are within meters of the source, the fish do exhibit avoidance and try to get away though.</p>
Public	<p>Do you guys have fish finders where you could see under the water? Do you have any of that equipment under the ship so you can see fish, bearded seals, or oogaruks?</p>
ION Representative	<p>We have what you call a Forward Looking Infrared Camera that detects heat, but if you're talking about underwater, no sir. It's basically if there are marine mammals out on the ice or a head sticking out you can image and see what kind of marine mammal it is. We don't have anything under the water to see what's swimming.</p>
Public	<p>You guys should get that kind of equipment first before you begin. Who know if you guys destroy a lot of fish or not. A lot of seals are being sick.</p>
Public	<p>The reason we are opposing your start date is because if we have to tow whales from a great distance the meat gets bad because it stays the same temperature and it cooks itself. We lose the meat, the heart, the kidneys, the intestines. If you don't get your clearance to start this October, we would recommend that if you have to do it next year you do it in July and August.</p>
Public	<p>Where do the fish study reports come from? What I heard earlier is that there are no studies that satisfy what everyone wants to know about. What kind of reports are you referring to and how do we get a hold of that?</p>
ION Representative	<p>We can get a hold of them and provide a copy.</p>
	<p>[note – this information was provided to BWCA in letter sent Feb 8, 2012]</p>
Public	<p>You can bring them to the Mini-Convention.</p>

Public	<p>I would like to support what Henry said earlier about the start date. Going west to east would be good to have an earlier start date. You'd be starting at a period of time when there is no whaling in Barrow. Some of the concerns raised, our whales that were caught in the past, in 1988 the was caught so far away it took so long to tow it back and we got caught in a storm and we did not have the ability to cut the stomach to get the gas out it spoiled the meat on the way in. In the past, when the whalers made note that the whales veered off so far that we couldn't get them in the right place to harvest resonates when you're going to do seismic so close when active whaling will be going on. Scientists have proven that 12 miles from the source of your guns active evasive maneuvering is going on. 22miles whole pods start to turn and deflect, their rate of return back to their migration route is a concern of the whalers. We still don't know once you push them out so far when they return.</p>
	<p>[note – letter to BWCA in letter sent Feb 8, 2012 informed BWCA that this request had been passed on to ION upper management]</p>
Public	<p>Start from the western end on July 20, at 4.5 knots, 100 miles will take you three days. That's 9-10 days per line. I don't think that's going to take you a month once you establish your coordinates. It's mathematically simple. Start in July you'll have 90% of work done. To interfere with subsistence hunting is prohibited, I can't understand that and I would recommend this association and the AEWC put a stop to anything in the area of a whaling season.</p>
Public	<p>On the recommendation too, we prefer in July to do the nearshore activities. During the latter part, in August/September, go further offshore. Get the nearshore done first as a priority and then move to the outer continental shelf. That would minimize effects on some of the whale migration coming in to our communities for harvest. That would be a great recommendation to follow through on. Barrow is the biggest whale harvester of all the communities, we provide for all of our communities.</p>
Public	<p>I've heard a lot of very good comments. There is always a trust factor, the operators saying one thing and the stakeholders are asking, the permanent stakeholders that have to live by what's impacting and affecting what we feel is our livelihood. One thing that was suggested in part is when all this info is shared, the airline industry has these black boxes where everything is recorded and is shared for verification if anything happens, to what extent is that available to this industry. And the second is that we can recommend until we're blue in the face about start and end dates that would allow no disruption to our subsistence activities through our CAA process, but our argument and our concerns and expressions are with those that issue the permits. How readily are the operators going to take what we feel is going to hinder their operations to the permit issuers and say we want a game change today.</p>
Public	<p>We had a CAA meeting last year; you altered your CAA when it went out? Are you planning to do the same thing and not listen to us? You made your own changes, are you going to ignore us again?</p>
ION Representative	<p>No, Mr. Hopson. Last week before I came up here we made comments to the CAA that was requested by the AEWC. I've made comments and taken them to our corporate officers and legal for review to be resubmitted back to the AEWC. Our plan is to have our legal department look at it before we resubmit it for this</p>

	year. Earl Comstock asked us if we were going to comment on it and we said yes we would. He said please get it to us as soon as you can. I am hoping to get it to the AEWG sometime next week.
Public	We have a Mini-Convention coming up that you will need to make a presentation at.
ION Representative	Yes, we will be there.
Eugene Brower closed the meeting in Inupiaq and translated into English.	
<p>The recommendation coming from them is to do nearshore early in the spring when there are no adverse weather conditions. It would be beneficial to you and to them also. In the fall time the winds come in from both directions, they are going to hamper your operations, also our fall hunt. Our fall hunt is predicated on the weather patterns, the winds. 15-20 knots, we're not going to move, we're going to stay home depending on the ice and wind conditions. Their recommendation to you is to start early, if you can do it, nearshore and work your way out. The further out you go towards the continental shelf, the better off you're going to be. These are the recommendations they are giving to you. Also, as our elder Ben Itta says, that area has had a lot of seismic activity, over 30 years, by different operators. Where are the findings and data? Have they found anything out there? We've had how many operators come through and do seismic like you're proposing, but nothing ever comes out, it's all confidential. They're very vocal; they're very serious about the hunt.</p>	
<p>A Whaling Captain spoke in Inupiaq. He's the applicant, the application approver over there are these people, our leaders are supposed to tell him his schedule is wrong. We would like it to be done at the proper time, begin June 30, July 1. Global warming is here, let them go ahead of schedule. To intentionally go over there and obstruct our subsistence is prohibitive. We need to do something about the federal government to approve them for those dates only.</p>	
<p>A Whaling Captain spoke in Inupiaq. I have one more comment; you say you have a meeting at the Heritage Center. I want to tell you a fact; these people are the providers of the whole community. These people speak for everybody that is going to be there. [inaudible] These are the providers to the whole community. I don't know who is going to be over there, but this the party that you're going to deal with. This is the stronghold of the community; we are the people you are going to listen to. These are the people, the providers, the strong voice of our culture.</p>	
ION Representative	I understand. Thank you, sir.
Public	The closest point on the closest line – is any of that within the NSB boundaries?
ION Representative	The closest we'll come in is 7 ½ miles.
Public	How about support from nearshore?
ION Representative	Our support will come from the Polar Prince... [inaudible].
Public	I just wanted to highlight this because of the safe harbor permit in Wainwright... [inaudible].
Public	I think if you're going to end up going out there, you have to sign the CAA. The CAA is very simple. It's just to avoid conflict between the oil companies and our whalers. If you don't follow the CAA that puts our whalers in jeopardy if you happen to be out there when they are whaling, so you have to go with the CAA. The CAA is something just to avoid conflict; you don't have to change the words on it. It's just to avoid conflict, so we will know if you are out there you will have a blackout date. You don't have to reword it, we just need the CAA in place.
Public	The first line from west to east is about 7 miles offshore. They should put some

	numbers in there to identify how far offshore the lines are.
ION Representative	We can get you the lat/long and distance every so kilometers. We dissect this into sections and give you the distance of the line from the coast.
Public	Also, the questions that were raised by the Whaling Captains here, if you could respond to them by the Mini-Convention that would be nice.
ION Representative	We will send it to you and bring them as well.

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Community Meeting

Please Join Us

*** 7:00 – 9:00 PM ***

Wednesday, January 25

Inupiat Heritage Center

Barrow, AK

- Who** ION Geophysical, Inc. (ION)
- Why** ION is proposing to conduct a 2D seismic survey in the Beaufort Sea during fall 2012. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2012 through mid-December 2012.
- What** Present the proposed BeaufortSPAN™ West Program and obtain community feedback

Door Prizes and Refreshments will be provided.

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BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey - Beaufort Sea - Delay

Attendance Sign-In Sheet
Barrow, Alaska
January 25, 2012
Inupiat Heritage Center
7:00-9:00pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Leahy Hugh	Self	852-5333			Box 677 BRW AK
Daren Knodel	Self	235-9054			Box 571 Anchor Pt. AK 99556
Mary Hugo	self	852-5333			Barrow AK
Micah Mugo					Barrow AK
Rick L Rice		852-7647			1230 BRW AK
sho Lley BA		6164			PO Box 1630
Martha Hopson	Self	5448			PO Box 26 BRW AK
Arisawn Toveal	Panigeo Crew	4531		apanigeo@hotmail.com	" 1386
James Pebley	Panigeo crew	347 1030			
Prussell Mudge	self	8780648		Prussell Pro2600@hotmail.com	PO BOX 1597



BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey - Beaufort Sea - Delay

Attendance Sign-In Sheet
Barrow, Alaska
January 25, 2012
Inupiat Heritage Center
7:00-9:00pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
David Glauge	Self	367-4583		dfelauga@hotmail.com	PO Box 1838
Sadie REXFORD	SELF	852-5969		Brw	P.O. Box 424
Nancy Leawitt	self	852-2258		none	X 503
Lloyd Stein	self	852-2862		germaninupiat@yahoo.com	
Daniel Saganak	SELF	852-6960		—	PO Box 227
MAX ADAMS	SELF	855-0643		N/A	P.O. Box 26 BRW. AK 99723
Todd Stormo	NSIB DNM	852-6584		todd.stormo@north-slope.org	PO BOX 1821 Barrow AK 99723
Billie Adams	NSIB DNM				BOX 401
Isaac Okakde		852-5660		N/A	Box 342
Johnny Aiken	AKWC	852-2392			Box 570



Attendance Sign-In Sheet
Barrow, Alaska
January 25, 2012
Inupiat Heritage Center
7:00-9:00pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Steven Rufford	Self	855-1127		Steven Rufford	PO Box 2346
Thomas Kingsgar	Self	231-0599		thomas.kingsgar@selice.com	PO Box 3
Joe Lavitt	"	852 2258			Box 503
Ethel Nung ^{25AK}	Self	367-4185		—	Box 382
Toke Kana/vuk	Self	855-0343		—	Box 76
Craig George	NSB DWM	-0350		craig.george@north-slope.org	Box 69 Barrow, AK
Luther AKPK					
MARY JO BROOKER					
Forrest Olemann	Self				



BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey - Beaufort Sea - Delay

Attendance Sign-In Sheet
Barrow, Alaska
January 25, 2012
Inupiat Heritage Center
7:00-9:00pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Ryan Oyagak	Myself	4925		Ryan_@Ychoo Oyagak	Bx 1178
George Heppner	Self	6643		-	1734
A+19 AKAKY/HAPPY	ME	855 0816			

Barrow Community Meeting 1/25 7pm

Ed- Intro

Movie- Questions during the movie

Thin ice will start forming from lagoon on...

We start looking at this ice – 10 October

How about 7.5-150mi offshore

Current comes from the east it makes its way toward Barrow... Ice everywhere

How far offshore is this?

Starts in the lagoon and makes its way offshore

IF you say this is the type that will shut you down... by mid-October the lagoons are frozen like that 7.5 mi from coast – 150 miles out. That kind of ice is forming out there?

Yes by early November

East and near shore will build up ice quicker... By first week of November you'll have solid ice in the east... that's why the whaling captains...

Ice pack out there

Is that because of your permitting? Why are you not taking the whaling captains advice?

Answer...

Where are the vessels coming from?

Canada, They're coming from Tuk, Canada.

We will have daily satellite ice pictures to tell us where we can/cannot go... Mini-convention

We didn't try to ask you where the boat was coming from.

Seismic work has been done before and we haven't seen any of it...

Basically it's the people you give answer to

During foggy periods like you showed? Are you going to shoot in periods like that with limited vision?

If we can't see ½ a mile and our radius is ½ a mile we won't be shooting

Where will you be getting your MMOs from?

Kaktovik, Nuiqsut and Barrow

Energy Services has a pool of applicants and sometimes the operator takes a shortcut and goes right to the pool

We are going to hire them right out of the villages.

FEX went to the communities and held meetings. They took their time to find ice specialist and hunters- it's good to have that kind of person on your boats. They will know who to contact and how to properly address...

Someone who can talk to the hunters in our own language. Trying to give some friendly advice to find someone who can talk in both languages...

...

... it's good to have those people who really know what's going on.

I was wondering if you could tell us what is the purpose of stakeholder outreach? Are you getting approval from?...

No we are not.

What is the purpose?

It's a part of federal permit requirements

...

...

Spoke in Inupiaq

Important to note that one of the whaling captains noted earlier before you got here that this process may be best done in early July...

Going to be important for this public to know...

Collectively what types of experiences in arctic waters...ERP...

The ERP we are working on will be in conjunction w/ BRW SAR and NSB SAR we... would come...

Lastly I think it would be wise to head Mr. Adams recommendations...

Mr. Aiken... is working hard and diligently to look over the whaler's best interest...

It's not just us that we're speaking for it's our extended families that rely on our

Is ION going to sign the CAA?

I completed comments on it on Friday I submitted those to...

Do you know whether ION is planning to sign the CAA?

It's up to corporate but to be honest I feel good about it... I will have some other people up here... from me to you I feel very good about the whole thing. Better than I the last two years.

Could an airgun kill a whale??

...

Level B take?

Even with cruise ships you still have casualties with whales...

So for your ERS you're relying solely on?...

...just starting this conversation... fuel... working procedures on extraction... I will work with Oliver and his group... I talked a little but with George in Kaktovik... We're talking; as we're talking we're planning. There's still a lot of front end work that needs to be done...

In that regard we had some highly capable helicopters... not nearly as capable... operation could help with procurement of more capable...

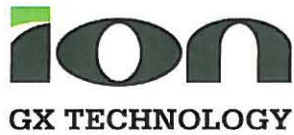
Last year when I was talking to them they didn't have a winel...

...

We're looking at that and also staging a Medivac and 206 type...

I guess I don't have to emphasize enough because you know when Johnny Aiken... represents 10 whaling committees importance of making sure the... degree that the federal government will listen to us... our fight is not with... when the federal government is starting to put covenants... to paraphrase a quote... hunger knows no law and our elders still live by that.

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BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey – Beaufort Sea - Delay

Attendance Sign-In Sheet
Wainwright, Alaska
February 20, 2012
Community Center
5:30-8:30pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Oliver Peetook	Iceberg 8	763-2418			
Sandra Peetook	Iceberg 8	763-2418			
Jason Ahmagoah	Iceberg 14	763-2620			
John Hopson J.	15	7630665			
Rossman Peetook					

(note: ≈ 4 more people were present)

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ION/Wainwright Whaling Captains Association Meeting in Nuiqsut
 Community Center
 February 20, 2012
 Presentation 5:00 – 6:00 pm
 Wainwright, Alaska
 Meeting Notes

Wainwright Whaling Captains Meeting 02/20/2012

Attendees:

John Hopson, Jr.
 Oliver Peetook
 Sandra Peetook
 Jason Ahmaogak
 Rossman Peetook
 (A few more attendees that did not sign in)

The following individuals were informed of the Wainwright Whaling Captains' Association Meeting:

Walter Nayakik, President of the Wainwright Whaling Captains Association
 John Hopson, Jr., Commissioner of Alaska Eskimo Whaling Commission
 Ransom Agnasagga, Alternate Commissioner of Alaska Eskimo Whaling Commission

The following representatives attended on behalf of ION:

Ed Nelson, ION Exploration Manager
 Darren Scott, LGL Associates (Is the company correct?)
 Michelle Turner, ASRC Energy Services (AES) AES Stakeholder engagement
 Elizabeth Rexford, AES Stakeholder engagement

General – ION provided an overview of the proposed ION 2012 BeaufortSPAN West project utilizing a power point presentation. These notes are meant to capture comments and responses from meeting attendees.

Ed- Intro	
Public	You can't fuel up in Canada? (Asked after Ed explained about refueling scenarios)
ION Representative	Well, we are going to fuel up in Canada before we start, but if we don't apply for one refueling and we need to refuel then we won't be able to. This is just a backup to come to Dutch Harbor, it would be very remote to go that far for a round-trip of ten days from here to here and back up (map)... so I would prefer we just have our barge waiting in Canada for us to get fuel for the rest of the job. But then, because of ice conditions and if we have to leave by November 15, then we have to exit going out the east side of Saint Lawrence Island, or whatever route is preferable during this time so not to interfere with anybody's hunt (10:33)... That will all be determined when that time comes, and also what the ice conditions will be... but still we have to come out this way (map), we can't go out this way and come out the Panama Canal. (10:55)
Public	What about the storm?

ION/Wainwright Whaling Captains Association Meeting in Nuiqsut
Community Center
February 20, 2012
Presentation 5:00 – 6:00 pm
Wainwright, Alaska
Meeting Notes

ION Representative	The storm? Umm... we might have to divert here (map) somewhere... into Russian waters and stay out of the way... That will be the call of the captain.
ION Representative	If I wanted to talk to someone here directly, and stuff like that, between now and October 1 st or 15 th , when we start this project... Who does ION talk to if there is activity?
Public	That's what the Com Centers are for. You communicate with the Com Centers (11:55), the Com Centers will have an understanding of what we're doing in each community. And if they are whaling you just divert, if they're not whaling then... ... That's why we have pushed so hard to keep the Com Centers open until all activity has ceased in the Arctic waters. That's why we push you guys to say "Yes, we want the Com Centers until end of December." That's why. That's what the CAA mandates – that the Com Centers are open until all activities is done in the Arctic Waters, and that includes you being the last one out of here in December. Shell and Conoco plan to be out of here in early November. It's for the safety of people, #1, irregardless to who you are or where you come from...
Public	You can try your best to try to find someone to communicate with, but the best place to do it is the Com Center because they're open and they're manned. No one will be here the entire time... The best place to go are to those that are employed to take care of that... Com Center is your concern, keep them open while you are out there and you won't have any problems.
ION Representative	We're going to open an emergency center also, that's going to stay open from the time we start and the time we completely shut down... Thank you, basically that's about it in a nutshell on how we are going to start and how far we expect to get for 2012, and then we will regroup again and see how we are going to work on this area for 2013. But like I said, we will be starting on the East and we'll shoot this in patches going west... but of course we won't be starting here (map) until Kaktovik and Nuiqsut are finished, and then we won't start here until Barrow is completed with their whale hunt...
LGL Representative	We noticed that the last couple of years you got the whale in the fall... early November...
Public	Yes October... we are pushing 30 miles offshore for these animals now and we are out there in these little tiny boats... if we are out there and need help, don't say no (laughter)... they're pushing 30 miles now in open water.
ION Representative	We will probably be swinging by here to talk to you again as we get closer, just to give you guys a status report and to move forward with our project and working with you guys for an efficient operation...
Public	Keep the Com Centers open, and I'm good – because it employs people and keep communication lines open, that's my main priority...
AES Representative	Would it be helpful for you, and for Wainwright, to have a community liaison here? Or, do you think the Com Centers meet all the requirements for communication.

ION/Wainwright Whaling Captains Association Meeting in Nuiqsut
Community Center
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Public	My answer to that is Yes – you have a liaison here and have the Com Centers open... it worked with the liaison employed through Umiat.
ION Representative	This will all be funded through us, and will be to the very end.
Public	When you look at the map, the liaison part in my opinion should go to Barter Island and Deadhorse/Nuiqsut because you'll be working in their waters... I don't get affected as much in our area, until the whales start their migration up and around – that's when we'll start seeing if you've impacted them or not because we start hunting in October... and we have gone boating for whales in November... So that's where I would see the impact... (said more about whale impacts)
ION Representative	Well, we are going to have liaisons, one from each village, and this is the first discussion having one from Wainwright though... We're going to have one from Kaktovik, Nuiqsut, and Barrow employed 24 hours / day in each village through the whole thing, and now we're probably going to have to incorporate one from Wainwright. (21:40)
AES Representative	If it's something you find useful...
Public	I think it would be... 1 because your liaison can document things, where your vessel is, what it's doing, how far away from Wainwright... and your liaison would also state in your documents when Wainwright went whaling and how far out did they go, things like that... then you have a track history of what you're doing and where you can and can't go. It's to even your own benefit to do it, and your company's benefit. If you plan on being in our waters for the next 20 years, now is the time to start documenting what we do and when we do it, and you'll have an understanding of what you can and can't do when it comes to the challenge of "here's my plan, what do you think?" Based on the knowledge you have today, you have almost none, but in 5 years when you do something it's just a stroke of a pen now because you have that information documented. So, it's almost to your own benefit to employ these people... It may not help you today or tomorrow, but in the long run you're going to find it so much easier having this information because it's information you got from the local people, it's documented. You can say "you wrote that document, let's go with it..." It's simple.
AES Representative	Do you know when the Wainwright Com Center closed last year?
Public	First week of November...

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Community Meeting

Please Join Us

*** 6:00 – 8:00 PM ***

Tuesday, February 21, 2012

Community Center

Nuiqsut, AK

- Who** ION Geophysical, Inc. (ION)
- Why** ION is proposing to conduct a 2D seismic survey in the Beaufort Sea during fall 2012. The proposed ION BeaufortSPAN™ West Program operations are planned for October 1, 2012 through mid-December 2012.
- What** Present the proposed BeaufortSPAN™ West Program and obtain community feedback

Door Prizes and Refreshments will be provided.

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BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey - Beaufort Sea - Delay

Attendance Sign-In Sheet
Nuiqsut, Alaska
February 21, 2012
Community Center
6:00-8:00pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Teresa Judkins		480-2207			Box 89243, Nui, AK
Ed Mukopigak		480-2903			Box 89008 Nui, AK
Mary Cabunby		480-6732			Box 89005 NUI
James Taaluk	City	480 6727			Box 89264
Shari Carothers					PO Box 89333 NUI
Ken Carothers	City				PO Box 89333 NUI
Belva Kaula Soroldi	Self	480-7725			PO Box 89080 Nuiqsut, AK 99781
Rob Nungie	Self	MIA	X		89324
Alice Amman					PO Box 87024
Attack Easler		907 480 6009			PO Box 89141



BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey - Beaufort Sea - Delay

Attendance Sign-In Sheet
Nuiqsut, Alaska
February 21, 2012
Community Center
6:00-8:00pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
WILLIE SIELAK	SELF				NUIQSUT, AK 99789
John M. HOPSON	SELF				NUIQSUT, AK, 99789
Lorraine M. Eureka	SELF				Nuiqsut, AK 99789-
Thomas H. Hops	SELF				Mudport AK 99789
Dawya Hopson	City				NUIQSUT, AK 99789
Ayla Hopson	SELF				NUIQSUT AK 99789
Karlul Nulpa					
Jessmin Nicholls					
John Nicholls					
Frank Kignat					



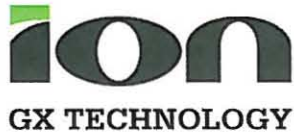
BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey - Beaufort Sea - Delay

Attendance Sign-In Sheet
Nuiqsut, Alaska
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Community Center
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Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Daniel Dorvalik		480-2224			Nuiqsut
George Hopson		480-2794			Nuiqsut
Luava Hopson 7					Nuiqsut
Dorcas Tuttle					
Eunice Pausann					Nuiqsut
Jesse Hopson					Nuiqsut
Lucy Nukapigak					Nuiqsut
Clara Nukapigak					Nuiqsut
Isaac Nukapigak	Kemkpitk Corp				Nuiqsut
Perry Matumeda	Self				BRW

Leydie Dorvalik

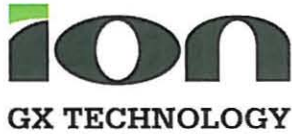
Nuiqsut



BeaufortSPAN™ West Program
 2012 2D Marine Seismic Survey – Beaufort Sea - Delay

Attendance Sign-In Sheet
 Nuiqsut, Alaska
 February 21, 2012
 Community Center
 6:00-8:00pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Daryl Hopson					P.O box 89053
Audrey Hopson					PO Box 89040
KAREN Tralock	USA	—	—	—	P.O. Box 89230 Nuiqsut, AK 99789
Raymond Ivalic					// //
Rhoda Mullen					Box 89045 Nuiqsut, AK 99789
Tom Dixon					Box 361 Nuiqsut, AK 99789
Alison Nichols	—	—	—	—	—
Mildred Kittick					
Jimmy A. Oyuzak					P.O. Box 89180 Nuiqsut, AK 99789
Billy Oyuzak					Box 89013 Nuiqsut AK



BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey – Beaufort Sea - Delay

Attendance Sign-In Sheet
Nuiqsut, Alaska
February 21, 2012
Community Center
6:00-8:00pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Martha Pausanna					P.O. Box 89062
"Susie Pausanna"					Same
"Abigail Pausanna"					Same
Ella M. Steiker					P.O. Box 89290
Roman Nukapigak					Same
Nellie Nukapigak					P.O. Box 89034
MARGARET Brower					P.O. Box 89286
Annykora Roger					RK Annykora
Verna Hopson					P.O. Box 89023
Virginia Kasak					P.O. Box 89306



BeaufortSPAN™ West Program
2012 2D Marine Seismic Survey - Beaufort Sea - Delay

Attendance Sign-In Sheet
Nuiqsut, Alaska
February 21, 2012
Community Center
6:00-8:00pm

Name (Please Print)	Representing	Phone No.	Fax No.	E-Mail	Mailing Address
Cornelia Sorvalik					P.O. Box 89023
Simon Tooruk					
Helen Tukle					NUIQSUT
Isiah Nakeerigak					

ION/Community Meeting in Nuiqsut
Community Center
February 21, 2012
Presentation 6:00 – 8:00 pm
Nuiqsut, Alaska
Meeting Notes

NOTE: STILL WORKING ON DOCUMENT!

Nuiqsut Community Meeting 02/21/2012

Attendees:

Teresa Judkins	John Nicholl(?)	Tom Dixon
Ed Nukapigak	Frank Kignak	Allison Nicholls
Mary Cabinboy	Daniel D. Sovalik	Mildred Kittick
James Taalak	George Hopson	Jimmy A. Oyagak
Sheri Carothers	Laura Hopson	Martha Pausanna
Ken Carothers	Dorcus Tukle	Susie Pausanna
Velva Patuk Sovalik	Eunice Pausanna	Abigail Pausanna
Ruth (Lampe?)	Jesse Hopson	Ella M. Stalker
Alice Ann Itta	Lucy Nukapigak	Roman Nukapigak
Patrick (Easterday?)	Clara Nukapigak	Nellie Nukapigak
Willie Sielak	Isaac Nukapigak	Margaret Browen
John M. Hopson	Perry Matumeak	Roger Ahnupkana
Lottie Evikana	Le(..?) Sovalik(?)	Verna Hopson
Thomas (...gak?)	Daryl Hopson	Virginia Kasak
Dwayne Hopson	Audrey Hopson	Cornelia Sovalik
Aglu Hopson	Karem(?) Ipalook	Simon Toovak
(Ral... Nuk...?)	Raymond Ipalook	Helen Tukle
Jasmine Nichol(s?)	Rhoda Mullen	Isaiah Nukapigak

The following organizations were informed of the Community Meeting:

ASRC Village Liason
City of Nuiqsut
Native Village of Nuiqsut
Kuukpik Corporation
Kuukpik Subsistence Oversight Panel (KSOP)

The following representatives attended on behalf of ION:

Ed Nelson, ION Exploration Manager
Darren Scott, LGL Associates (Is the company correct?)
Michelle Turner, ASRC Energy Services (AES) Community Affairs
Elizabeth Rexford, AES Stakeholder Engagement

General – ION provided an overview of the proposed ION 2012 BeaufortSPAN West project utilizing a power point presentation. These notes are meant to capture comments and responses from meeting attendees.

Ed – Intro
Translator (Edward N.) – Intro

ION/Community Meeting in Nuiqsut
 Community Center
 February 21, 2012
 Presentation 6:00 – 8:00 pm
 Nuiqsut, Alaska
 Meeting Notes

Public	Question: Why haven't you guys been participating with our CAA with the Alaska Eskimo Whaling Commissions in the past? We been trying to let you guys get involved, and have you guys sign that CAA. What are the reasons why you guys don't want to participate in that?
ION Representative	Thank you for that question. We have sent our comments into the CAA and the Mini-Convention. We are very happy with the response and the acceptance of our revisions to work with the AEWC. We will put final agreements together, with the AEWC, two weeks from now at the Open Water Meeting once we get the final draft copy of the CAA sent to us and the other industry participants.
Public	So you guys aren't going to decide to participate in that agreement with the whalers?
ION Representative	That's correct.
Public	I hope you guys don't try and back off from it, because we always need all the help we can get, especially Nuiqsut, this village
ION Representative	Yes, thank you. Sir, our survey is designed to work <i>after</i> the whaling season. So, we'll basically, after you say the whaling season is complete, then that is when we will start our job.
Public	You know, you never know how whaling will be like every year. There's been some years where we've had whales until the middle of October. It may happen here again pretty soon. Back in the 90's we used to whale until the 15 th of October, and still no luck.
ION Representative	We understand that and that is why we chose to stay away until you guys give us the green light to start our work.
Public	Thank you.
Public	Question: How will your Marine Mammal Observers be hired and where are they going to be hired from? Will you be observing around the clock?
ION Representative	Our observers will be coming from Barrow, Nuiqsut, Kaktovik, Wainwright, Atqasuk, and the villages here on the North Slope.
Public	Reason I ask is, majority of the time, most of the hiring is done out of Anchorage and people up North are not satisfied with hiring procedures.... AES has a bad reputation and record of not hiring people that know the Beaufort and Chukchi. I wish you guys could have considered another entity that has proof of hiring local folks. They have a bad reputation of hiring non-locals. There are hunters that know the areas. They make these villages a low priority... The reason I asked was because we don't see a lot of people being hired from here, they are coming from cities and have no idea of the things that go on out here... We just want to make sure that the hiring procedures are done fairly, with the villages, starting with Kaktovik and moving westward.
AES Representative	Maybe we can speak together after this and you can give me something to pass onto the people that are going about with the hiring procedures. If you have any recommendations we would love to hear them.
ION Representative	ION will be getting our MMO's through ASRC and LGL. ION will also be, in

ION/Community Meeting in Nuiqsut
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 Meeting Notes

	<p>addition to that, hiring a person locally in each village a liaison personnel that can communicate what's going on in the vessels and bring it back to the village, and keep track of everything that's going on. We will be hiring a person in each village to take care of our Inupiat communicators and to take care of ION's emergency call center. So that is our part and our role in what we're going to do in addition to having ASRC help us get the 8-10 MMO's we are going to need for our vessels (38:23)</p>
Public	<p>So you are going to get a village liaison from here, stationed in Nuiqsut?</p>
ION Representative	<p>Yes. (explains more about MMO's etc.)</p>
Public	<p>I wish you would give these village corporations that are struggling an opportunity to earn revenue. ASRC is a multi-billion-dollar company – they're not hurting at all, financially. We have village corporations that are struggling, that can use some revenue. Just because ASRC works up there, gives you their blessing and support, does not mean you have to do business with them. C'mon let's get some reality here, there's village corporations that are struggling and hanging by a thread. ASRC is a 2-billion-dollar revenue company, they're not hurting financially, I mean you guys just need to reconsider. ASRC does not represent... we may be shareholders but are in a competitive market. We have village corporations that are at the same level to compete, to provide services. Give the little guys a chance, they are hurting. ASRC has enough clients already, they do not need anymore. We have villages that are struggling, give them a chance to bid.</p>
ION Representative	<p>Thank you Isaac. Thank you... Anything else before I move onto the next slide?</p>
Public	<p>I have a question on your ERP... (54:45)... Assuming you have some kind of emergency out there and that results in you have to call Search and Rescue, might you have a vessel problem or an emergency out there, are they going to respond to ION's request?</p>
ION Representative	<p>Well, I'm hoping that they will. We are going to be working with Oliver, Captain Patterson, and we are going to ask him to help us to put a plan together. We have some backup in place... are they going to respond? We've got heli-decks that can land two 14's. On our support vessel we basically will have a doctor and have a clinic that will be with the group to run support. There are a lot of different options that we would like to discuss with the NSB, as to how we're going to get the helicopter in there if it's foggy and they can't fly (56:22). We've already discussed last year how we want to handle the fuel in case they have to go out... it's ongoing I should say... on how it will be handled the best, now that we have a third support vessel that basically has a doctor and full-blown clinic.</p>
Public	<p>The reason why I ask is because during that time of year a lot of people will be dispersing in that time of the year... Barrow is usually busy rescuing people... So if you have a chopper that is tied up, how is ION going to respond to another chopper that may need to be down there to possibly transport a person or employee or something like that.</p>

ION/Community Meeting in Nuiqsut
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 February 21, 2012
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 Meeting Notes

ION Representative	Well, we have another option, but it needs to be budgeted and appropriated (57:47). Our operational window – we’ve actually considered having a helicopter standby in Deadhorse, that’s one possibility that we’re looking at. It’s something that we will further discuss with the rescue experts in Barrow. That’s one thing that we have discussed with the SAR department just a few months ago, for something to backup with. We’ve talked with them two years in a row and they’re helping us plan, Oliver Leavitt is there. The Barrow SAR group has also given us really good ideas on what we should be doing. We’ve also heard from the whalers up there, during that time of year when that we will be working up there, it’s a new way to do things, and it’s really going to be rough, harsh, it’s going to be very extreme and very dangerous. (59:09)
ION Representative	Explained the three ships that will be operating for the project.
Public	What is the thickness on your Geo-Arctic ... Double-haul and thickness (?)... It’s not an ice breaker is it?
ION Representative	No It’s not, but it’s built to work in waters during this time of year, but it still can’t work stand-alone, it has to have (explains how the ships work, answers the public question)...
Public	You’re signing on the CAA right?
ION Representative	I just want to thank you guys, it’s good, it’s very very good... (think rep signaled yes?)
Public	It took you guys years to sign (?)... I guess you guys finally opened up your ears, instead of it going out the other year without functioning in ION’s brain (laughter)...
Public	Inupiaq speaker spoke up ... Translator → They’re just giving a little wake-up call here ION. Over the last two year or so, ION’s been avoiding to sign the CAA, they were wanting to do it their way. But, apparently, I guess apparently it didn’t work out that way... so they convinced you folks to sign with the AEWC under that agreement... and you guys have been kind of ignoring the people, trying to do it on your own without any support of any organizations. Just want to give you a heads-up with what you are telling the folks here that don’t understand very well... Just giving you a little wake-up call here...
ION Representative	Questions??
Public	I hope my statement earlier will be seriously considered (1:07:07) and responded by ION... Give the other village corporations that are hurting an opportunity to be competitive... ASRC is a multi-billion-dollar corporation, they don’t need that revenue, we have villages are hurting... Just because you have a blessing from Arctic Slope, doesn’t mean that even though we are shareholders of the regional, we are in a business market ... village corporations are there to strive to survive, to benefit their shareholders. These are multi-billion-dollar global corps ... I’ve seen how they operated, they’re very picky of who they hire, they pick their own relatives... open market ...
ION Representative	Isaac thank you, we will take that under consideration...

ION/Community Meeting in Nuiqsut
Community Center
February 21, 2012
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Meeting Notes

ION Representative	You said you won't start until October 1, would it be possible for me to borrow your big ice breaker for whaling? (laughter) C'mon, just thought I'd ask. (laughter)
Public	Question about how the prices of oil are set...
ION Representative	The oil companies will the, like Shell, are the ones that establish the prices... we just explore and look for it...
AES Representative	Door Prizes.
Public	Happy crowd.

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Appendix C
2010–2012 Meeting Materials

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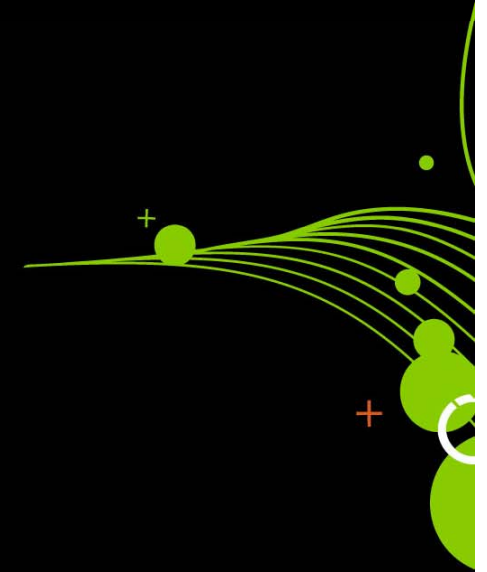
**2010 Meeting Materials -
Copy of a Typical Presentation Given at Meetings**

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2010 BeaufortSPAN West

Ed Nelson
ION GEOPHYSICAL



Introduction



- Thank you for being here. We are here to present ION's scope of operations for the BeaufortSPAN™ West Program. We appreciate your comments and input.
- The ION Geophysical Team
 - Ed Nelson – Project Manager
 - Maggie Ahmaogak – Community Relations
 - Beth Haley – Marine Biologist
 - Michelle Turner – Stakeholder Relations

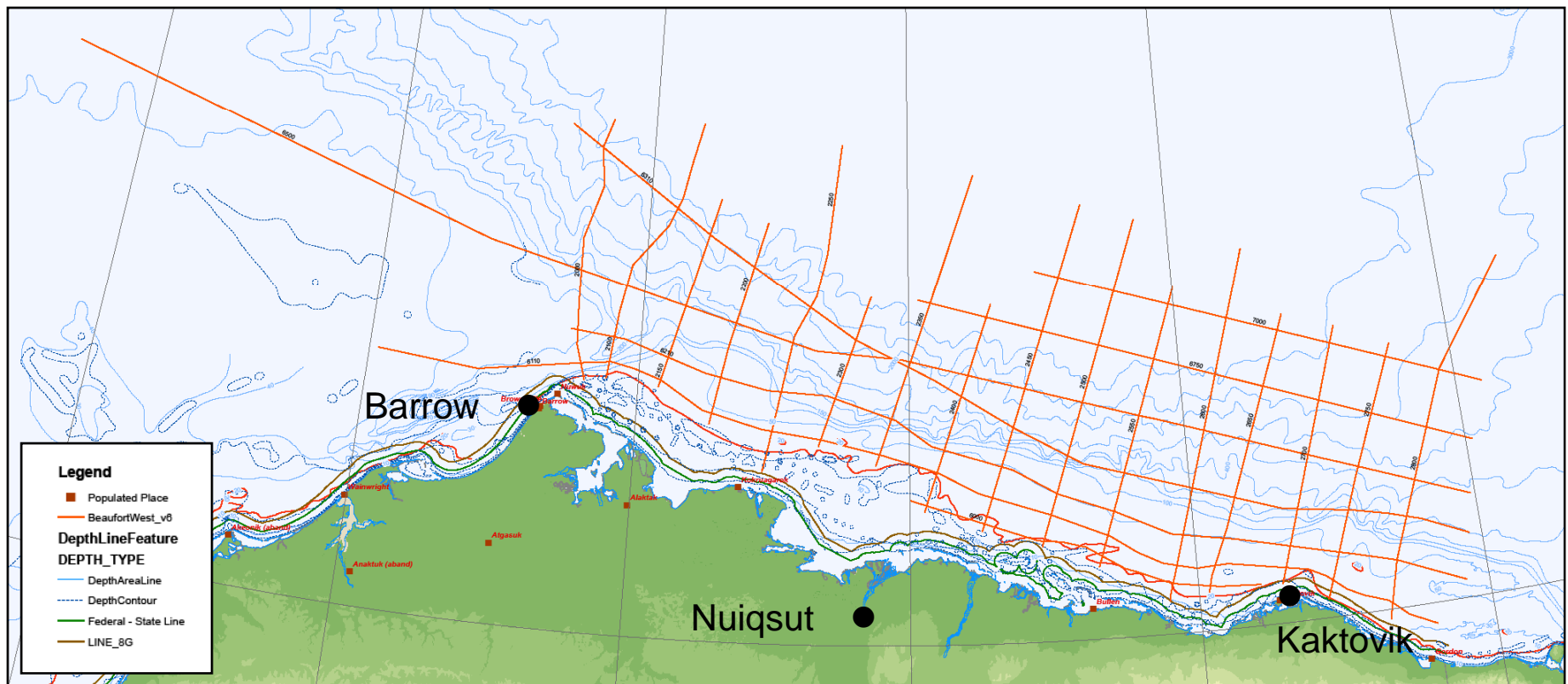
Who is ION Geophysical Corporation



- ION Geophysical Corporation is a leading provider of geophysical technology services and solutions for the global oil and gas industry. ION has over 35 years of oil & gas industry experience worldwide.
- ION is the parent company for GX Technology Corporation.
- ION is Arctic focused
 - Acquired seismic survey data in the Chukchi Sea in 2006
 - Acquired seismic survey data in Canadian Beaufort Sea in 2006, 2007, and 2008. Northeast Greenland in 2009
 - Planned marine seismic survey in the U.S. Beaufort Sea in 2010 (BeaufortSPAN™ West Program)

Location and Timeframe

- Beaufort Sea OCS (Federal Waters)
- Data acquisition in October – mid-December 2010
 - starting furthest offshore, east (U.S – Canadian border) to minimize exposure to migrating bowhead whales



Project Description



- Survey of 7,250 km (4,500 mi) of transect line (not including times when airgun is not operating)
- Water depth ranges from 20 to 3,500 m (65 to 11,500 ft) deep
- All activities will occur 12 to 250 km (7.5 to 155 miles offshore)
- Towed seismic array and hydrophone streamer from source vessel (R/V *Geo Explorer*)
- Ice breaker *Talagy* will break and clear ice ~0.5 – 1 km (1,640 – 3,300 ft) in advance of the R/V *Geo Explorer*
- Three sound sources
 - Airgun array - 4330 in³ array; 28 airguns ranging from 65 in³ to 350 in³
 - Echo sounder (measure water depth)
 - Ice profiling sounder (check ice conditions ahead of vessel)

Proposed Marine Mammal Monitoring & Mitigation

- Timing of and location of activities will avoid most marine mammals and subsistence activities
- Start 1 October and end mid-December
- Work from east (Canadian/US border) to west (Barrow)
 - Kaktovik & Nuiqsut bowhead whale hunts should be concluded by 1 October
 - Avoid October bowhead hunt in Barrow by beginning in eastern project areas
 - Mitigate impacts by completing the survey prior to the time when ringed seals establish and enter lairs for reproductive purposes and prior to most subsistence hunting

Proposed Marine Mammal Monitoring & Mitigation

- Vessel based Marine Mammal Observers
 - MMOs on ice-breaker (operating ahead of source vessel)
 - MMOs on source vessel
- Big-eye binoculars on both vessels for use during daylight
- Use of large spotlights for monitoring at night when necessary
- Forward looking infrared (FLIR) camera on ice – breaker for use during darkness

Proposed Marine Mammal Monitoring & Mitigation

- Sound source verification on sound sources and radii established
- Area around source vessel and will be monitored by MMOs for 30 minutes prior to airgun start
- Ramp-up procedures will be used
- Power down and shut down-power down procedures for marine mammals within radii will be followed

Stakeholder Outreach

- Met with NSB Wildlife Department (Robert Suydam) on December 15, 2009
- Attended AEWC 2010 Annual Captains' Mini Convention to discuss 2010 CAA (February 12 & 13, 2010)
- Leadership meetings March 16, 17, & 18, 2010 (details on next page)
- NMFS Open Water Meeting (March 22 – 24, 2010)
- NMFS Peer Review Meeting (March 25, 2010)
- Public meetings in Barrow, Nuiqsut, and Kaktovik (April 8 - 17, 2010)

Stakeholder Outreach – Leadership Meetings

- Met with Special Assistant to NSB Mayor Itta (March 16th)
- Nuiqsut (joint meeting March 17th)
 - KSOP, Inc.
 - Representatives from Native Village of Nuiqsut
 - Mayor of City of Nuiqsut (Mr. Thomas Napageak, Jr., Mayor)
- Barrow (March 18th)
 - NSB Planning Commission
 - Native Village of Barrow (Thomas Olemaun)
 - ICAS (Lloyd Panningona & Helen Simmonds)
 - NSB Department of Wildlife Management (Taquulik Hepa, Harry Brower, Todd Sformo, Leslie Pierce)

Stakeholder Outreach – Leadership Meetings

- Kaktovik
 - Scheduled meeting with Kaktovik Mayor Annie Tikluk and Kaktovik Inupiat Corporation representative Phillip Tikluk for March 16th, but it was canceled due to illness
 - Was unable to schedule appropriate date/time to meet with Native Village of Kaktovik in March due to other planned activities in Kaktovik – scheduled meeting on April 10th.

Stakeholder Outreach – Current and Upcoming

- Public meetings in affected communities
 - Barrow – Inupiat Heritage Center, April 8th 7pm – 9pm
 - Nuiqsut – Kisik Community Center April 17th 7pm – 9pm
 - Kaktovik – Community Center April 10th 7pm – 9pm
- After consultation with leadership in the affected communities, ION developed a Draft Plan of Cooperation which includes input from the communities.
- Ion will provide an update to the affected communities prior to beginning seismic operations in October (updates are tentatively scheduled for August). The communities will be informed about any changes in the project.

Conflict Avoidance Agreement

- ION is working with AEWC to develop a CAA specific to their project because of the October through mid-December timeline.
- The communication plan for ION is to work through the Search & Rescue office in Barrow.
- ION has contacted the president of the Barrow Search & Rescue to discuss the communications plan.

Survey Vessels

- R/V Geo Explorer - Seismic Vessel
 - DNV 1A1 ICE-1A* E0



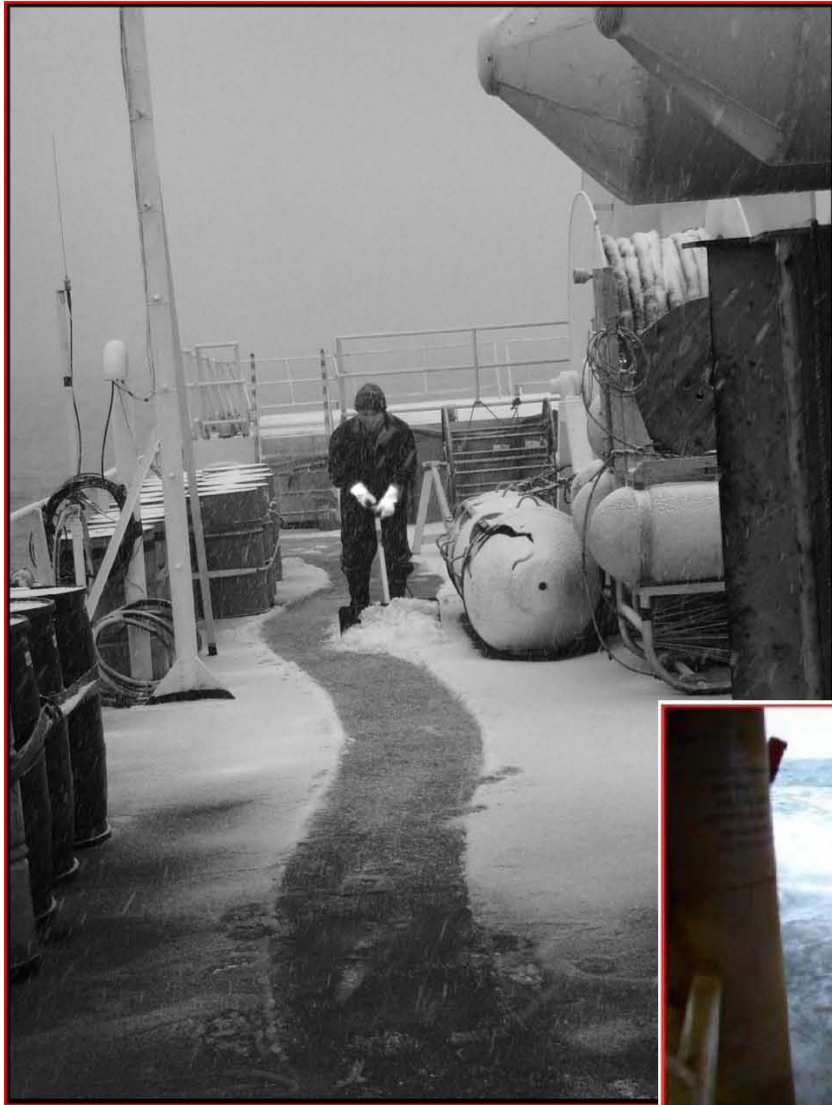
- Talagy – Icebreaker
 - Russian Icebreaker7



Ice Escort Operations



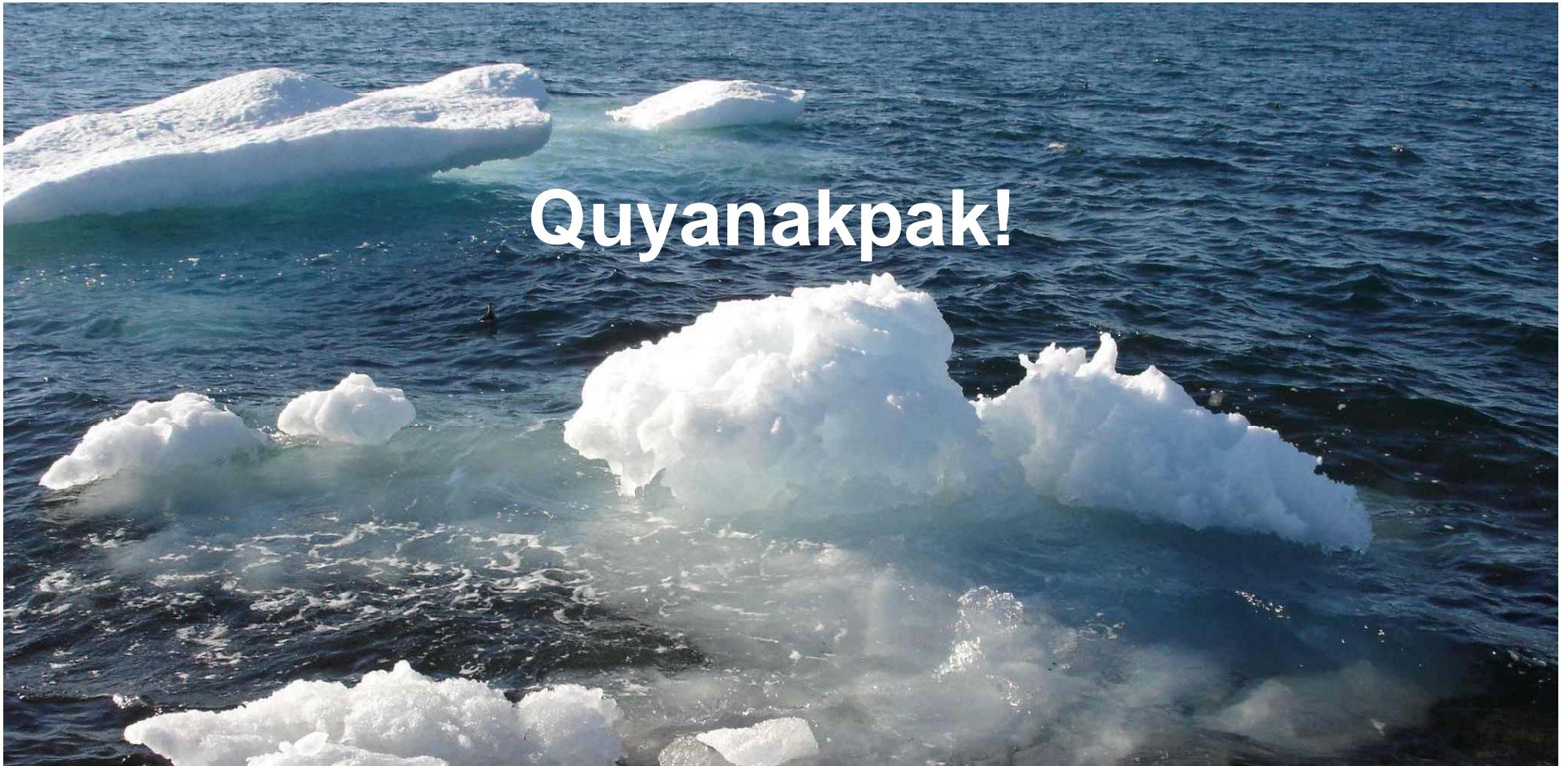
Experience In Harsh Environments



Ice Conditions Encountered During Survey Operations



ION GEOPHYSICAL



**2011 Meeting Materials -
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2011 BeaufortSPAN West

Ed Nelson
ION GEOPHYSICAL



Introduction

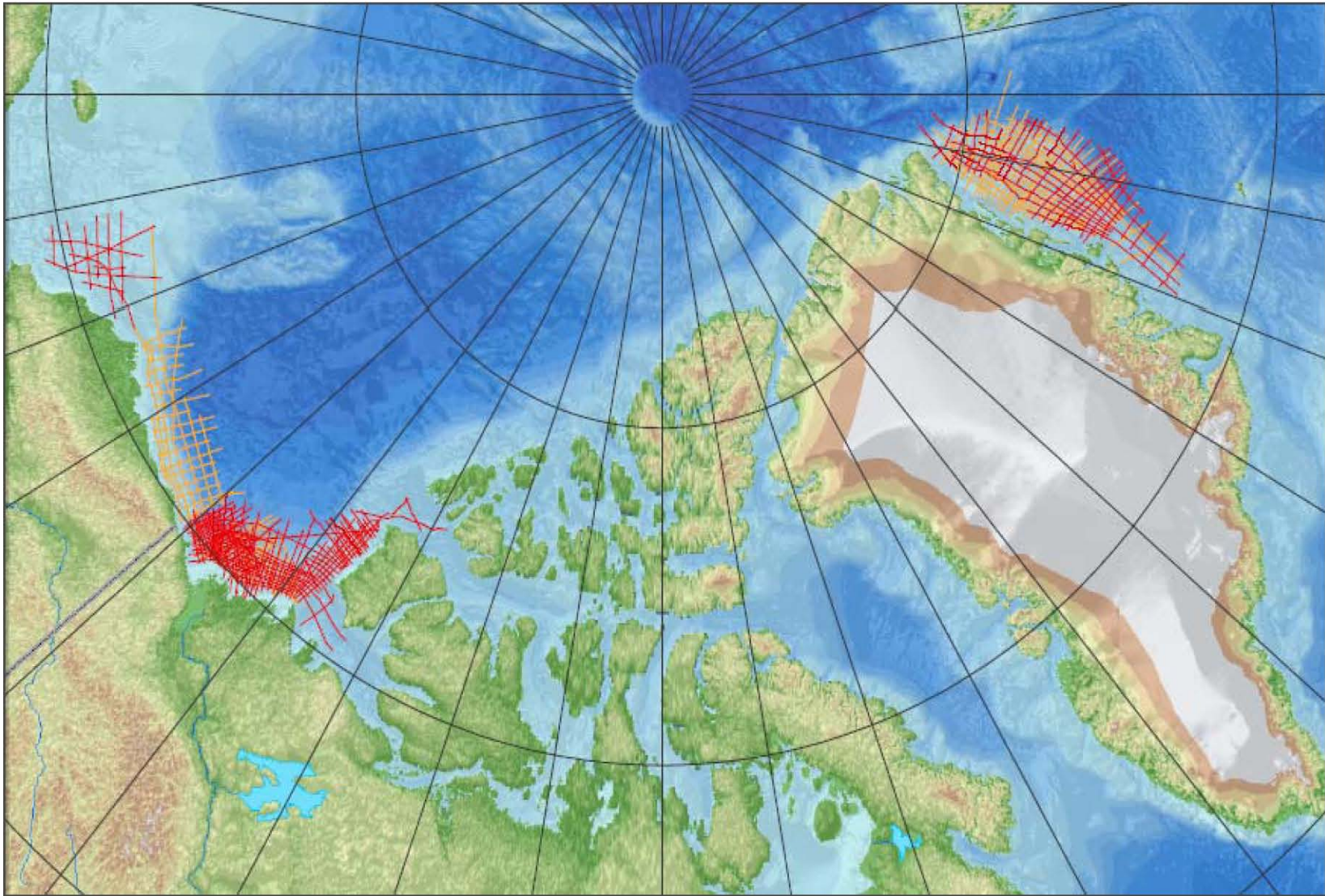
- Thank you for allowing ION to present our scope of operations for the 2011 BeaufortSPAN™ West Program.
- The ION Geophysical Team
 - Ed Nelson – ION Project Manager
 - Megan Blee – LGL Research
 - Maggie Ahmaogak – ASRC Energy Services
 - Meghan Larson – ASRC Energy Services

Who is ION Geophysical Corporation



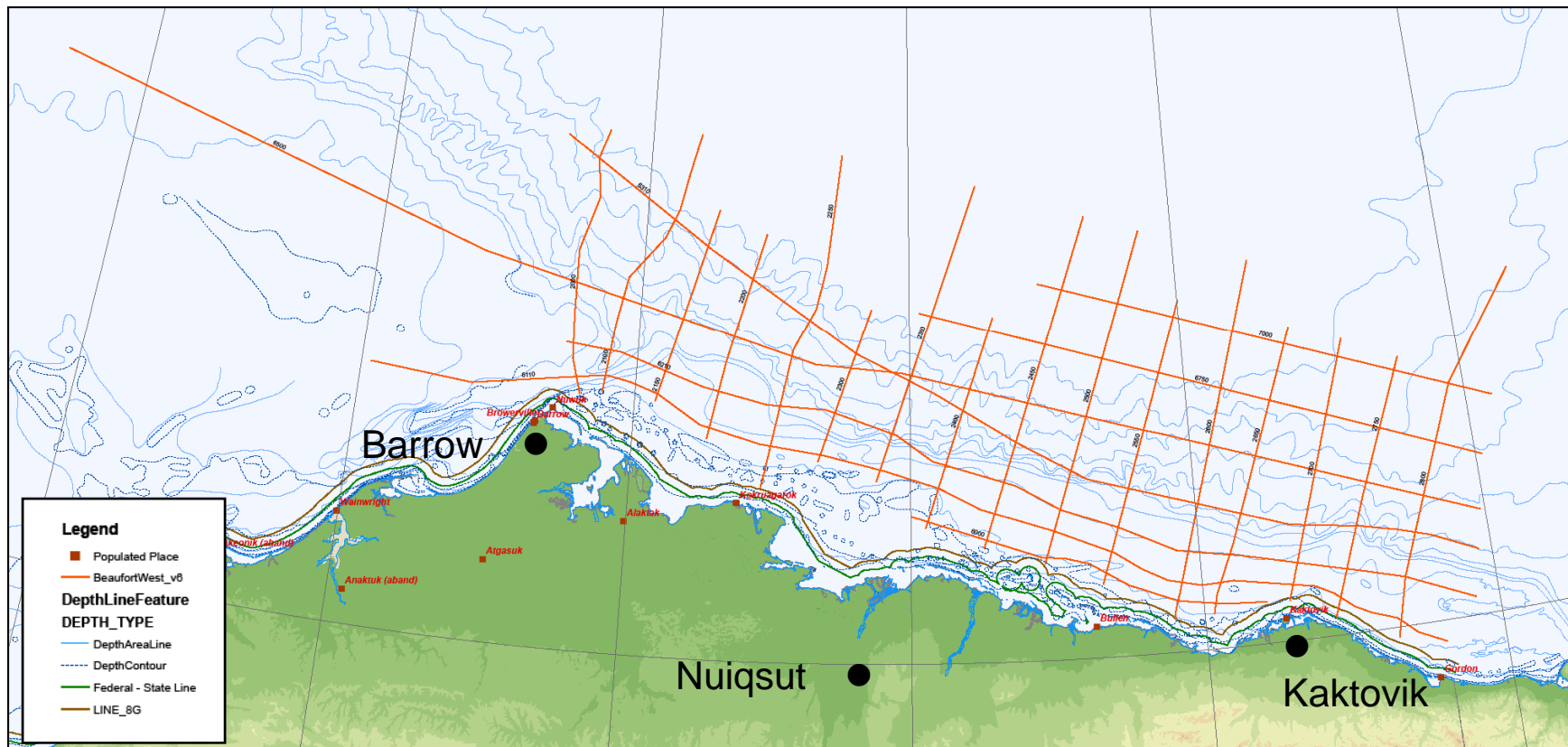
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- ION is Arctic focused
 - Acquired seismic survey data in the Chukchi Sea in 2006
 - Acquired seismic survey data in Canadian Beaufort Sea in 2006, 2007, 2008 & 2010 and Northeast Greenland in 2009 & 2010.
 - Planned marine seismic survey in the U.S. Beaufort Sea in 2011 (BeaufortSPAN™ West Program) – was originally scheduled for 2010, but postponed to 2011.

ION is Arctic Focused



Location

- Beaufort Sea OCS (Federal Waters)
- 4,500 mi of transect line; 7.5 to 155 miles offshore



BeaufortSPAN West Project Description

- 2D Seismic Survey planned for October 1 to mid-December, 2011
- Towed seismic array and hydrophone streamer from source vessel (*BOS Atlantic*)
- Ice breaker *Polar Prince* will break and clear ice ~0.5 – 1 km (1,640 – 3,300 ft) in advance of the *BOS Atlantic*
- Water depth ranges from 20 m to 3,500 m (65 ft to 11,500 ft) deep
- Two sound sources
 - Airgun array - 4330 in³ array; 28 airguns ranging from 65 in³ to 350 in³
 - Echo sounder (measure water depth)

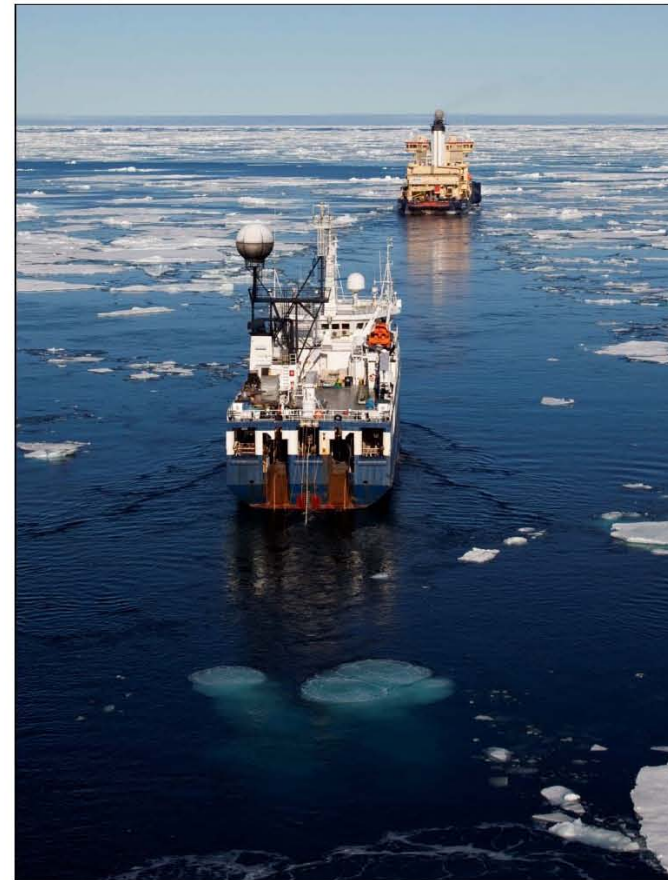
Survey Operations



Ice Escort Operations



Survey Operations



Ice Conditions Expected



Ice Conditions Expected



9/10^{ths} Ice



10/10^{ths} Ice

2011 Survey Vessels



- Suitable Vessels

- Boss Atlantic - Seismic Vessel
 - DNV 1A1 ICE-1A

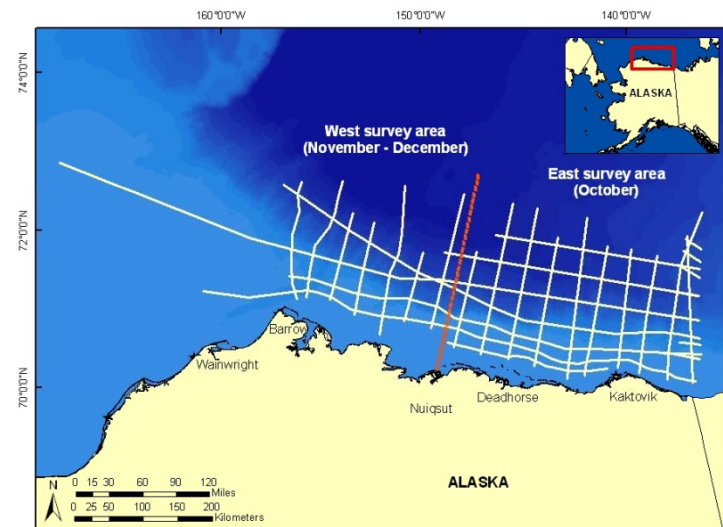


- Polar Prince – Ice Breaker
 - Lloyds Class 100A Medium Duty Ice Breaker (Arctic Class 1+)



Proposed Marine Mammal Mitigation

- Start 1 October and end mid-December
 - Timing of and location of activities will avoid most marine mammals and subsistence activities
 - Avoid impacts by completing work before ice is thick enough to support large numbers of seals and polar bears on the ice
- Work from east (Canadian/US border) to west (Barrow)
- ION will not work in an area until the whale hunt has been completed.
 - Will not work in eastern Beaufort until Kaktovik & Nuiqsut bowhead whale hunts are completed (approx. October 1)
 - Will not work in western Beaufort until Barrow whale hunts are completed (approx. November 1)



Proposed Marine Mammal Mitigation

- Sound source verification on sound sources and radii established
- Area around source vessel and will be monitored by MMOs for 30 minutes prior to airgun start
- Ramp-up procedures will be used
- Power down and shut down procedures for marine mammals within radii will be followed



Proposed Marine Mammal Monitoring

- Vessel based Marine Mammal Observers
- Big-eye binoculars on both vessels for use during daylight
- Use of large spotlights for monitoring at night when necessary
- Forward looking infrared (FLIR) camera on ice – breaker for use during darkness



2010 Stakeholder Outreach

- Met with the NSB Wildlife Department
- Presented project to NSB Planning Commission
- Attended AEWC 2010 Annual Captains' Mini Convention
- Presented project at the 2010 NMFS Open Water Meeting
- Met with Barrow, Nuiqsut, and Kaktovik leadership
- Held public meetings in Barrow, Nuiqsut, and Kaktovik
- Attended AEWC 2010 4th Quarter Meeting

2011 Stakeholder Outreach

- Attended AEWC 2011 Annual Captains' Mini Convention (Feb 18th)
- Held public meetings in Barrow (Feb 19th) and Nuiqsut (Feb 21st)
- Presented project to the NSB Planning Commission (Feb 24)
- Public meeting scheduled for Kaktovik (Feb 22nd) was canceled due to weather – rescheduled for April 18th
- Additional meetings in Barrow and Nuiqsut on April 19th & 20th
- ION will present an update to communities in August 2011

Communication

- Ion will have a system to respond to community questions and concerns during the project's operational window.
- ION is developing a system to respond to emergencies during its operational window.

ion

[CHARGED WITH INNOVATION]



vision



evolution



innovation



solution



collaboration

ION GEOPHYSICAL



Quyanaqpak!

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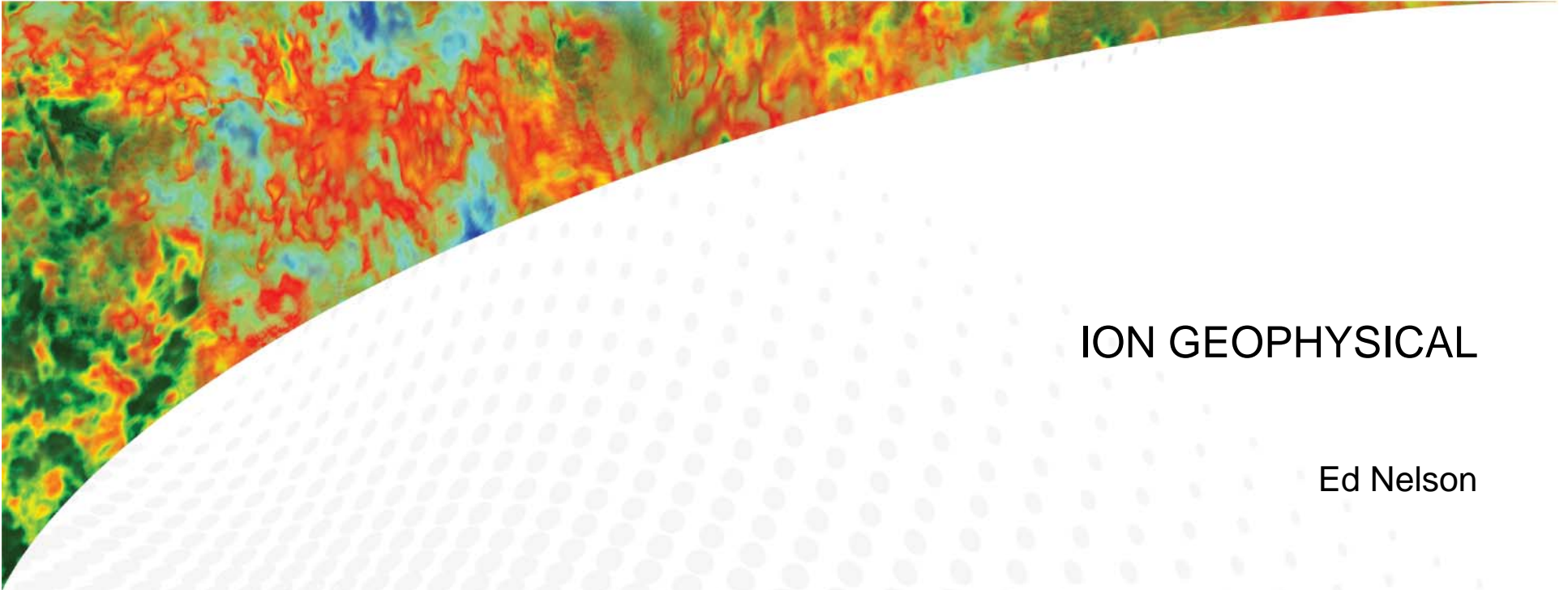
**2012 Meeting Materials -
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2012 BeaufortSPAN West



ION GEOPHYSICAL

Ed Nelson

Introduction

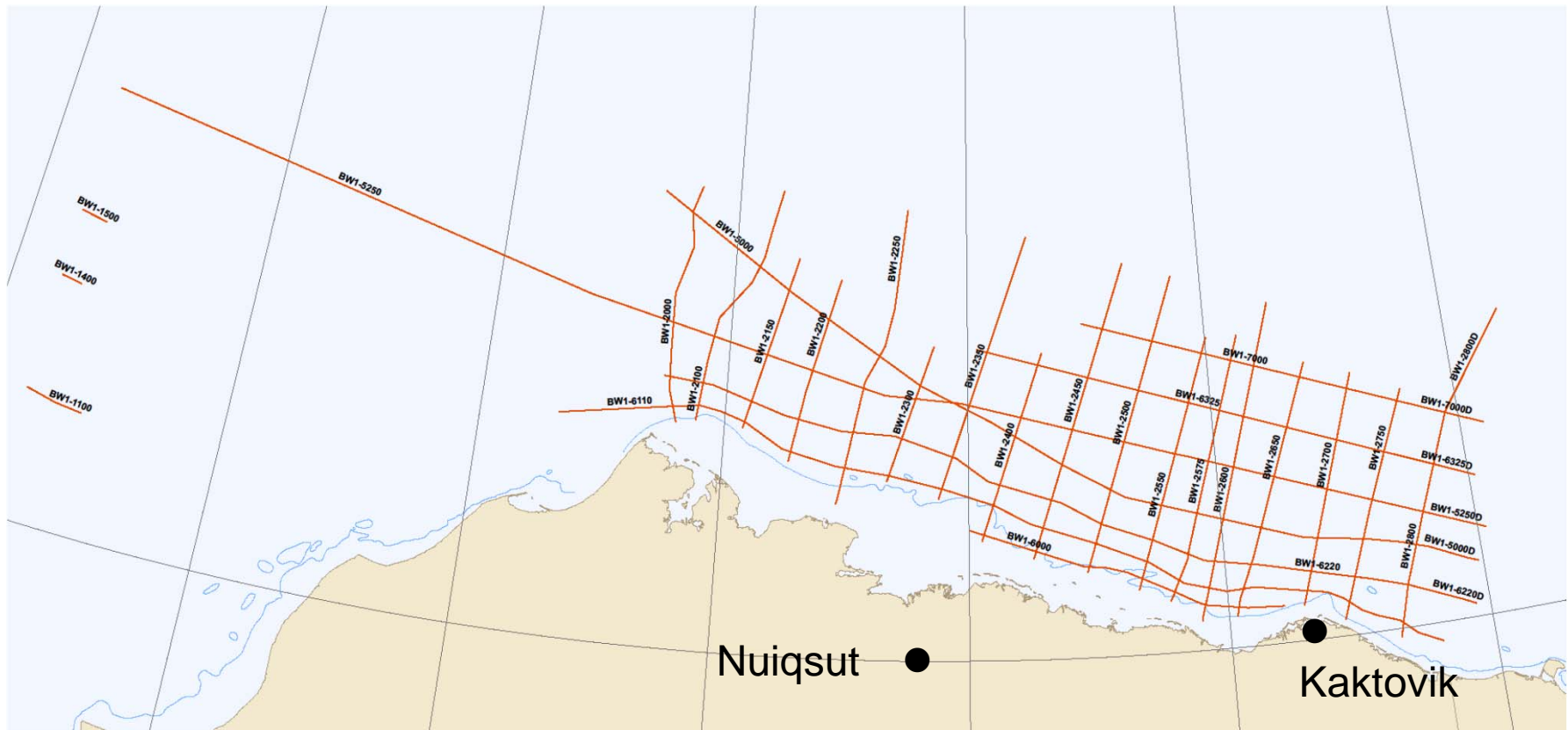
- Thank you for attending the community meeting. We are presenting ION's scope of operations for the 2012 BeaufortSPAN™ West Program.
- The ION Geophysical Team
 - Ed Nelson – ION Project Manager
 - Meghan Larson – ASRC Energy Services
 - Inuuteq Stotts – ASRC Energy Services
 - Heather Reider – LGL Alaska Research Associates, Inc.

Who is ION Geophysical Corporation?

- ION is a leading technology-focused seismic solutions company. Our family of companies provides advanced acquisition equipment, software and planning, and seismic processing services to the global oil and gas industry.
- ION is Arctic focused
 - Acquired seismic survey data in the Chukchi Sea in 2006
 - Acquired seismic survey data in Canadian Beaufort Sea in 2006, 2007, 2008, 2009 & 2010 and Northeast Greenland in 2009, 2010, & 2011.
 - Acquired seismic survey in Russian Arctic 2011
 - Planned marine seismic survey in the U.S. Beaufort Sea in 2012 (BeaufortSPAN™ West Program) – was originally scheduled for 2010 and 2011, but postponed to 2012.

Location

- Beaufort Sea OCS (Federal Waters)
- 4,500 mi of transect line; 7.5 to 155 miles offshore
- Water depth ranges from 65 ft to 11,500 ft deep



BeaufortSPAN West Project Description

- 2D Seismic Survey planned for October 1 to mid-December, 2012
- Icebreaker *Vladimir Ignatyuk* or similar will break ice
- Seismic vessel *Artemis Atlantic* (formerly *BOS Atlantic*) or similar will follow icebreaker and acquire seismic data
- Two active sources
 - Airgun array – 4450in³ array; 26 airguns ranging from 70in³ to 380in³
 - Echo sounder (measure water depth)
- Icebreaker *Polar Prince* will provide support services

Proposed Marine Mammal Mitigation

- Technology choice allows for timing of acquisition to avoid potential conflicts with marine mammals and subsistence hunters
- Start 1 October and end mid-December
 - Timing and location of activities will avoid most marine mammals and subsistence activities
 - Reduce impacts by completing work before ice is thick enough to support large numbers of seals and polar bears on the ice
- Work from east (Canadian/US border) to west (Barrow)
 - Kaktovik & Nuiqsut bowhead whale hunts are typically concluded by October 1st
 - Avoid October bowhead hunt in Barrow by beginning in eastern project areas
- ION intends not to work in an area until the whale hunt has been completed.

Proposed Marine Mammal Mitigation

- Sound source verification on airgun array to confirm or adjust safety radii
- Area around source vessel will be monitored by MMOs for 30 minutes prior to airgun start
- Ramp-up procedures will be used
- Power down and shut down procedures for marine mammals within safety radii will be followed

Proposed Marine Mammal Monitoring

- Vessel based Marine Mammal Observers
- Big-eye binoculars on both source and support vessels for use during daylight
- Use of large spotlights for monitoring at night when necessary
- Forward looking infrared (FLIR) camera on ice – breaker for testing and evaluation during darkness

Stakeholder Outreach

- 2010 Stakeholder Outreach
 - Met with the NSB Wildlife Department
 - Presented project to NSB Planning Commission
 - Attended AEWG 2010 Annual Captains Mini Convention
 - Presented project at the 2010 NMFS Open Water Meeting
 - Met with Barrow, Nuiqsut, and Kaktovik leadership
 - Held public meetings in Barrow, Nuiqsut, and Kaktovik
- 2011 Stakeholder Outreach
 - Attended AEWG 2010 4th Quarter Meeting (Dec 8 & 9)
 - Attended AEWG 2011 Annual Captains Mini Convention (Feb 18)
 - Held public meetings in Barrow, Nuiqsut, and Kaktovik (Feb & March)
 - Presented project to the NSB Planning Commission (Feb 24)
 - Notified AEWG that project was postponed at AEWG quarterly meeting
 - Held meetings in Aug 2011 notifying communities project was postponed

Stakeholder Outreach

- 2012 Planned Stakeholder
 - Met with AEWC Commissioners on December 12th to discuss planned 2012 CAA
 - Hold public meetings in Barrow, Nuiqsut, and Kaktovik January 23rd through 25th
 - Meet with Barrow Whaling Captains Association on January 25th
 - Meet with Wainwright Whaling Captains Association on January 26th
 - Attend 2012 AEWC CAA Meeting February 16th and 17th
 - Present project at the 2012 NMFS Open Water Meeting
 - Provide a status report on project to Barrow, Nuiqsut, and Kaktovik in August 2012

Communication

- ION will have a system to respond to community questions and concerns during the project's operational window.
- ION is developing an ERP to respond to emergencies during its operational window.

Seismic and Support Vessels



Artemis Atlantic- Seismic Vessel




Polar Prince – Support Vessel



Vladimir Ignatyuk – Icebreaker

ION GEOPHYSICAL





ion → Charged to innovate. Driven to solve.™

Appendix D
Comments and Responses to the
Draft Plans of Cooperation

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Comments
(no comments received for 2010 or 2012
Draft Plans of Cooperation)

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Larson, Meghan

From: Eugene Brower [eugenebrower@gci.net]
Sent: Saturday, May 14, 2011 8:14 AM
To: Turner, Michelle; andy.mack@north-slope.org; edward.itta@north-slope.org; taquulik.hepa@north-slope.org; robert.suydam@north-slope.org; ksopi@astacalaska.net; Thomas Olemaun; jsage@nvbarrow.net; harry.brower@north-slope.org; aewcd1r1@gci.net; cityofnuiqsut@gmail.com; native.village@astacalaska.net; inukapigak@kuukpik.com; NVKaktovik@starband.net; fenton rexford; annietikluk@hotmail.com
Cc: Ahmaogak, Maggie; Larson, Meghan; Ed Nelson; craig_perham@fws.gov; jana.lage@boemre.gov
Subject: Re: ION Draft POC

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Cc: [Ahmaogak, Maggie](#) ; [Larson, Meghan](#) ; [Ed Nelson](#) ; craig_perham@fws.gov ; jana.lage@boemre.gov
Sent: Friday, May 13, 2011 3:50 PM
Subject: ION Draft POC

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Attached, please find ION Geophysical, Corporation's Draft Plan of Cooperation for their BeaufortSPAN West activities proposed for October 1 through mid-December, 2011. As you know, this program was originally planned for fall of 2010, but was postponed due to technical complications with ION's source vessel, the *BOS Atlantic*.

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<http://office.asrc.com/file/default.aspx?did=33B55E3CB54C5A8A9CC71C1AB5B8D5EC>

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Please send any comments, suggestions, or questions to Michelle Turner at Michelle.Turner@asrcenergy.com or Meghan Larson at Meghan.Larson@asrcenergy.com . You may also mail any feedback you have to ASRC Energy Services – RTS, 2700 Gambell St. Ste. 200, Anchorage, Alaska 99503.

We ask that all feedback be received by May 30, 2011 so that we may include it in the Final Plan of Cooperation.

Thank you,
Michelle Turner

Michelle Turner

Associate Scientist | RTS
ASRC Energy Services, Inc.
2700 Gambell St, Suite 200
Anchorage, AK 99503
Desk: 907-339-5460 | Cell: 907-351-6342



Turner, Michelle

From: Isaac Nukapigak [inukapigak@kuukpik.com]
Sent: Monday, May 16, 2011 8:27 AM
To: Turner, Michelle
Subject: Re: ION Draft POC

kuukpik will support the whaling captain assc. of each community the the POC isn't acceptable and there fore no plan of cooperation will take plan in Nuiqsut until ION comes in a agreement with the terms of the CAA with AEWG and other whaling community.

-----Original Message-----

From: [Turner, Michelle](#)

Date: 5/13/2011 3:51:16 PM

To: andy.mack@north-slope.org; edward.itta@north-slope.org; taulik.hepa@north-slope.org; robert.suydam@north-slope.org; ksopi@astacalaska.net; Thomas.Olemaun; jsage@nvbarrow.net; eugenebrower@gci.net; harry.brower@north-slope.org; aewcdirl@gci.net; cityofnuiqsut@gmail.com; native.village@astacalaska.net; inukapigak@kuukpik.com; NVKaktovik@starband.net; fenton.rexford; annietikluk@hotmail.com

Cc: [Ahmaogak, Maggie](#); [Larson, Meghan](#); [Ed Nelson](#); craig.perham@fws.gov; jana.lage@boemre.gov

Subject: ION Draft POC

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Energy Services – RTS, 2700 Gambell St. Ste. 200, Anchorage, Alaska 99503.

We ask that all feedback be received by May 30, 2011 so that we may include it in the Final Plan of Cooperation.

Thank you,
Michelle Turner

Michelle Turner

Associate Scientist | RTS
ASRC Energy Services, Inc.
2700 Gambell St, Suite 200
Anchorage, AK 99503
Desk: 907-339-5460 | Cell: 907-351-6342



Responses

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Larson, Meghan

From: Ed Nelson [Edward.Nelson@iongeo.com]
Sent: Monday, May 16, 2011 10:12 AM
To: Eugene Brower; Turner, Michelle; andy.mack@north-slope.org; edward.itta@north-slope.org; taquulik.hepa@north-slope.org; robert.suydam@north-slope.org; ksopi@astacalaska.net; Thomas Olemaun; jsage@nvbarrow.net; harry.brower@north-slope.org; aewcdir1@gci.net; cityofnuiqsut@gmail.com; native.village@astacalaska.net; inukapigak@kuukpik.com; NVKaktovik@starband.net; fenton rexford; annietikluk@hotmail.com
Cc: Ahmaogak, Maggie; Larson, Meghan; craig_perham@fws.gov; jana.lage@boemre.gov; Joe Gagliardi
Subject: RE: ION Draft POC

May 16, 2011

Dear Mr. Brower:
Thank you for your comment.

ION understands and appreciates BWCA's and AEWC's concerns regarding potential impacts on whaling activities. Avoiding conflict between our survey program and any subsistence activities is extremely important to us. ION has committed to conduct our operations in such a manner as to avoid any potential conflict. ION will not begin our seismic operations in the eastern US Beaufort until early October. As Kaktovik and Nuiqsut have usually completed their fall whaling activities by this time, there should not be any conflict with these communities. Accordingly, ION's survey activities in the western Beaufort Sea will not begin until late October or early November. Historically, the Barrow community has completed their fall whaling activities by this time, and again we do not anticipate any conflict with the whalers.

In all cases, ION has committed to providing the communications center while our operations are ongoing, and will remain in close contact with the whalers during the project to ensure that any potential concerns are addressed.

ION does not consider the Draft POC to be a substitute for a CAA. The Draft POC was distributed for comment as required by federal law, specifically, 50 CFR 216.104(a)(12) and 50 CFR 18.124.

ION has considered the DRAFT CAA from the AEWC and appreciates the changes that were made to the initial draft. However, based upon the fact that ION's activities occur after the completion of fall whaling, ION believes that there is no possibility for conflict to occur. Therefore, ION is not prepared to sign the 2011 DRAFT CAA at this time. We look forward to further discussions with AEWC.

If you have any questions, please do not hesitate to contact me at 832-344-6852 or Edward.Nelson@iongeo.com or Joe Gagliardi at Joe.Gagliardi@iongeo.com.

Ed Nelson
Integrated Seismic Solutions



2105 CityWest Blvd., Suite 900
Houston, Texas 77042
Main: 713-789-7250
Mobile: 832-344-6852

From: Eugene Brower [mailto:eugenebrower@gci.net]
Sent: Saturday, May 14, 2011 11:14 AM
To: Turner, Michelle; andy.mack@north-slope.org; edward.itta@north-slope.org; taulik.hepa@north-slope.org; robert.suydam@north-slope.org; ksopi@astacalaska.net; Thomas Olemaun; jsage@nvbarrow.net; harry.brower@north-slope.org; aewcdir1@gci.net; cityofnuisut@gmail.com; native.village@astacalaska.net; inukapigak@kuukpik.com; NVKaktovik@starband.net; fenton rexford; annietikluk@hotmail.com
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Appendix E
Final Signed 2012 Conflict Avoidance Agreement

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**2012 OPEN WATER SEASON
PROGRAMMATIC CONFLICT AVOIDANCE AGREEMENT**

BETWEEN

**BP EXPLORATION (ALASKA), INC.
ENI US OPERATING COMPANY, INC.
EXXON MOBIL CORPORATION
GX TECHNOLOGY CORPORATION
PIONEER NATURAL RESOURCES ALASKA, INC.
SHELL OFFSHORE, INC**

AND

**THE ALASKA ESKIMO WHALING COMMISSION
THE BARROW WHALING CAPTAINS' ASSOCIATION
THE GAMBELL WHALING CAPTAINS' ASSOCIATION
THE KAKTOVIK WHALING CAPTAINS' ASSOCIATION
THE KIVALINA WHALING CAPTAINS' ASSOCIATION
THE LITTLE DIOMEDE WHALING CAPTAINS'
ASSOCIATION
THE NUIQSUT WHALING CAPTAINS' ASSOCIATION
THE PT. HOPE WHALING CAPTAINS' ASSOCIATION
THE PT. LAY WHALING CAPTAINS' ASSOCIATION
THE SAVOONGA WHALING CAPTAINS' ASSOCIATION
THE WAINWRIGHT WHALING CAPTAINS' ASSOCIATION
THE WALES WHALING CAPTAINS' ASSOCIATION**

**FINAL FOR SIGNATURE
MARCH 1, 2012**

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TITLE I – GENERAL PROVISIONS

SECTION 101. APPLICATION.

Title I applies to all Participants, except as provided in Title VI.

Title II applies to all Participants, except as provided in Titles III or VI.

Title III applies to those Participants who operate barge or transit vessels in the Beaufort Sea or Chukchi Sea.

Titles IV and V apply only to those Participants who engage in oil and gas operations.

Title VI applies to those Participants who engage exclusively in geophysical activities that are conducted at least 5 miles or more from the Alaska coast in the Beaufort Sea or Chukchi Sea and begin on or after October 1, 2012.

Provisions that apply to a specific activity or are designated as specific to either the Beaufort Sea or Chukchi Sea apply only to Participants that engage in that activity or operate in that area, and provisions applicable to activities a Participant does not engage in or areas in which a Participant does not operate do not apply to that Participant.

SECTION 102. PURPOSE.

The purpose of this Agreement is to provide:

- (1) Equipment and procedures for communications between Subsistence Participants and Industry Participants;
- (2) Avoidance guidelines and other mitigation measures to be followed by the Industry Participants working in or transiting the vicinity of active subsistence hunters, in areas where subsistence hunters anticipate hunting, or in areas that are in sufficient proximity to areas expected to be used for subsistence hunting that the planned activities could potentially adversely affect the subsistence bowhead whale hunt through effects on bowhead whales;
- (3) Measures to be taken in the event of an emergency occurring during the term of this Agreement; and
- (4) Dispute resolution procedures.

SECTION 103. DEFINITIONS.**(a) Defined Terms.**

For the purposes of this Agreement:

- (1) The term "Agreement" means this 2012 Open Water Season Programmatic Conflict Avoidance Agreement and any attachments to such agreement.
- (2) The term "at-sea oil and gas operations" does not include gravel islands or fixed platform developments located near shore (for example Northstar or Oooguruk) or Near Shore Operations Support Vessels.
- (3) The term "barge" means a non-powered vessel that is pushed or towed, and the accompanying pushing or towing vessel, which is used solely to transport materials through the Beaufort Sea or Chukchi Sea. Such term does not include any vessel used to provide supplies or support to at-sea oil and gas operations or Near Shore Operations Support Vessels.
- (4) The term "Com-Center" means a communications systems coordination center established under Section 203.
- (5) The term "geophysical activity" means any activity the purpose of which is to gather data for imaging the marine subsurface environment, including but not limited to use of air guns, sonar, and other geophysical equipment used for seismic exploration or shallow hazard identification. "Geophysical activity" does not include support vessels that are not actively employing geophysical equipment, or other supporting activities that do not generate sound waves for the purposes of imaging the subsurface marine environment.
- (6) The term "geophysical equipment" means equipment, such as air gun arrays over 300 cubic inches or sparker arrays over 20,000 kJ, employed on a vessel or a towed array, that generates sound waves for the purpose of imaging the subsurface marine environment for exploration and development purposes. The term does not include vessel engines, generators, or sources such as fathometers, fish finders, side-scan sonar, or other sources intended for engineering and /or transportation purposes.
- (7) The term "Industry Participants" means all parties to this Agreement who are not Subsistence Participants.

(8) The term “Marine Mammal Observer / Inupiat Communicator” or “MMO/IC” means an observer hired by an Industry Participant for the purpose of spotting and identifying marine mammals in the area of that Industry Participant’s operations during the Open Water Season. The MMO/IC also serves as the on-board Inupiat communicator who can communicate directly with whaling crews.

(9) The term “Near Shore Operations Support Vessels” means vessels (including aircraft) used to support related activities (such as supply, re-supply, crew movement, and facility maintenance) for near shore oil and gas operations by an Industry Participant.

(10) The terms “NSB” and “NSB DWM” mean the North Slope Borough and the North Slope Borough Department of Wildlife Management, respectively.

(11) The term “oil and gas operations” means all oil and gas exploration, development, or production activities (including, but not limited to, geophysical activity, exploratory drilling, development activities (such as dredging or construction), production drilling, or production, and related activities (such as supply, re-supply, crew movements, and facility maintenance) by or for any Industry Participant, including aircraft and vessels of whatever kind used in support of such activities, occurring in the Beaufort Sea or Chukchi Sea, whether occurring near shore or offshore, but does not include barge traffic, transit vessel traffic, cable laying vessel traffic, or research vessel traffic (i.e. traffic by a vessel which is only conducting research and is not conducting any geophysical activities) by or for any Participant.

(12) The term “Open Water Season” means the period of the year when ice conditions permit navigation or oil and gas operations to occur in the Beaufort Sea or Chukchi Sea, as appropriate.

(13) The term “Participants” means all parties identified in this Agreement by name and whose representative(s) has signed the Agreement, and all contractors of such parties. When used alone the term includes both Industry Participants and Subsistence Participants.

(14) The term “Primary Sound Source Vessel” means a vessel owned or operated by or for an Industry Participant that (A) employs air gun arrays greater than 300 cubic inches or sparkers greater than 20,000 kJ, for imaging the subsurface environment, (B) is used to monitor any safety zone around a vessel described in subsection (A), (C) is engaged in ice-breaking, or (D) is the lead vessel in a group of barge or transit vessels.

(15) The term "sonar" means equipment, employed as hull mounted or towed array, intended for the active location of surface or underwater vessels. The term does not include vessel engines, generators, or sources such as fathometers, fish finders, side-scan sonar, or other sources intended for engineering, cable laying or routing, and/or transportation purposes.

(16) The term "Subsistence Participants" means the Alaska Eskimo Whaling Commission (AEWC) and its members, including the whaling captains' associations identified on the cover of this Agreement, as well as any individual members of those associations.

(17) The term "transit vessel" means a powered vessel that is used solely to transport materials through the Beaufort Sea or Chukchi Sea. Such term does not include a vessel used to provide supplies or other support to at-sea oil and gas operations or Near Shore Operations Support Vessels.

(b) Geographically Limited Terms.

For the purposes of this Agreement:

(1) The term "Beaufort Sea" means all waters off the northern coast of Alaska from Point Barrow to the Canadian border.

(2) The term "Chukchi Sea" means all waters off the western and northern coasts of Alaska from Cape Prince of Wales to Point Barrow.

SECTION 104. TERM, SCOPE, AND LIMITATIONS.

(a) Term.

The term of this Agreement shall commence with the signing of this document by the Participants and shall terminate upon completion of the Nuiqsut, Kaktovik, Barrow, Wainwright, Pt Lay, and Pt. Hope Fall Bowhead Hunts or the Beaufort Sea Post Season Meeting required under Section 108(a) and Chukchi Sea Post-Season Meetings in Barrow, Wainwright, Pt. Lay, and Pt. Hope required under Section 108(b), whichever is later.

(b) Scope.

The Participants agree that, unless otherwise specified:

- (1) The mitigation measures identified in this Agreement, which are intended to mitigate interference by oil and gas operations and barge and transit vessel traffic with the Alaskan Eskimo subsistence bowhead whale hunt, are designed to apply to all activities of each Participant during the 2012 Open Water Season, whether referenced specifically or by category, and to all vessels and locations covered by this Agreement, whether referenced specifically or by category.
- (2) This Agreement is intended to apply to all oil and gas operations and barge and transit vessel traffic during the 2012 Open Water Season in the Beaufort Sea or Chukchi Sea.
- (3) Vessels and locations covered by this Agreement include those identified in the Agreement, as well as any other vessels or locations that are employed by or for the Industry Participants in the Beaufort Sea or Chukchi Sea during the 2012 Open Water Season.

(c) Limitations of Obligations.

The following limitations apply to this Agreement.

- (1) No cooperation among the Participants, other than that required by this Agreement, is intended or otherwise implied by their adherence to this Agreement. In no event shall the signatures of any representative of the Alaska Eskimo Whaling Commission (AEWC), or of the Barrow, Nuiqsut, Kaktovik, Wainwright, Pt. Hope, or Pt. Lay Whaling Captains' Associations, or of any other Whaling Captains' Association be taken as an endorsement of any Arctic operations or Beaufort Sea or Chukchi Sea OCS operations by any oil and/or gas operator or contractor.
- (2) Adherence to the procedures and guidelines set forth in this Agreement does not in any way indicate that any Inupiat or Siberian Yupik whalers or the AEWC agree that industrial activities are not interfering with the bowhead whale migration or the bowhead whale subsistence hunt. Such adherence does not represent an admission on the part of the Industry Participants or their contractors that the activities covered by this Agreement will interfere with the bowhead whale migration or the bowhead whale subsistence hunt.

(3) No member of the oil and gas industry or any contractor has the authority to impose restrictions on the subsistence hunting of bowhead whales or associated activities of the AEWG, residents of the Villages of Nuiqsut, Kaktovik, Barrow, Wainwright, Pt. Lay, or Pt. Hope, or residents of any other village represented by the AEWG.

(4) In the event additional parties engage in oil and gas operations in the Beaufort Sea or Chukchi Sea during the summer or fall of 2012 the Participants shall exercise their good-faith efforts to encourage those parties to enter into this Agreement. Should additional parties enter into this Agreement at a date subsequent to the date of the signing of this document and before the termination of the 2012 bowhead whale subsistence hunting season, the AEWG will provide to all Participants a supplement to this document with the added signatures.

(5) No Participant is responsible for enlisting additional parties to adhere to the terms and conditions of the Agreement. Similarly, **THE AEWG IS NOT RESPONSIBLE FOR, OR A PARTY TO, ANY AGREEMENT AMONG THE INDUSTRY PARTICIPANTS** concerning the apportionment of expenses necessary for the implementation of this Agreement.

(6) In adhering to this Agreement, none of the Participants waives any rights existing at law. All Participants agree that the provisions of this document do not establish any precedent as between them or with any regulatory or permitting authority.

(7) **PARTICIPANTS' OBLIGATIONS SHALL BE SEPARABLE:** All Participants to this Agreement understand that each Participant represents a separate entity. The failure of any Participant to adhere to this Agreement or to abide by the terms and conditions of this Agreement shall not affect the obligation of other Participants to adhere to this Agreement and to proceed accordingly with all activities covered by this Agreement. Nor shall any Participant's adherence to this Agreement affect that Participant's duties, liabilities, or other obligations with respect to any other Participant beyond those stated in this Agreement. If an Industry Participant does not receive permit approvals from regulatory agencies to conduct its proposed activities, then that company may withdraw from this Agreement.

SECTION 105. REGULATORY COMPLIANCE.

(a) United States Coast Guard Requirements.

The Participants shall comply with all applicable United States Coast Guard requirements for safety, navigation, and notice.

(b) Environmental Regulations and Statutes.

The Participants shall comply with all applicable environmental regulations and statutes.

(c) Other Regulatory Requirements.

The Participants shall comply with all applicable federal, state, and local government requirements.

SECTION 106. DISPUTE RESOLUTION.

Subject to the terms of Section 104(c)(7) of this Agreement, all disputes arising between any Industry Participants and any Subsistence Participants shall be addressed as follows:

- (1) The dispute shall first be addressed between the affected Participant(s) in consultation with the affected village Whaling Captains' Association and the Industry Participant(s)' Local Representative.
- (2) If the dispute cannot be resolved to the satisfaction of all affected Participants, then the dispute shall be addressed with the affected Participants in consultation with the AEWC.
- (3) If the dispute cannot be satisfactorily resolved in accordance with paragraphs (1) and (2) above, then the dispute shall be addressed with the AEWC and the affected Participants in consultation with representatives of NOAA Fisheries.
- (4) All Participants shall seek to resolve any disputes in a timely manner, and shall work to ensure that requests for information or decisions are responded to promptly.

SECTION 107. EMERGENCY AND OTHER NECESSARY ASSISTANCE.**(a) Emergency Communications.**

ALL VESSELS SHOULD NOTIFY THE APPROPRIATE COM-CENTER IMMEDIATELY IN THE EVENT OF AN EMERGENCY. The appropriate Com-Center operator will notify the nearest vessels and appropriate search and rescue authorities of the problem and advise them regarding necessary assistance. (See attached listing of local search and rescue organizations in Attachment I.)

(b) Emergency Assistance for Subsistence Whale Hunters.

Section 403 of Public Law 107-372 (16 U.S.C. 916c note) provides that "Notwithstanding any provision of law, the use of a vessel to tow a whale, taken in a traditional subsistence whale hunt permitted by Federal law and conducted in waters off the coast of Alaska is authorized, if such towing is performed upon a request for emergency assistance made by a subsistence whale hunting organization formally recognized by an agency of the United States government, or made by a member of such an organization, to prevent the loss of a whale." Industry Participants will advise their vessel captains that, under the circumstances described above, assistance to tow a whale is permitted under law when requested by a Subsistence Participant. Under the circumstances described above, Industry Participants will provide such assistance upon a request for emergency assistance from a Subsistence Participant, if conditions permit the Industry Participant's vessel to safely do so.

SECTION 108. POST-SEASON REVIEW / PRESEASON INTRODUCTION.**(a) Beaufort Sea Post-Season Joint Meeting.**

Following the end of the fall 2012 bowhead whale subsistence hunt and prior to the 2013 Pre-Season Introduction Meetings, the Industry Participant that establishes the Deadhorse and Kaktovik Com Centers will offer to the AEWG Chairman to host a joint meeting with all whaling captains of the Villages of Nuiqsut, Kaktovik and Barrow, the Marine Mammal Observer / Inupiat Communicators stationed on the Industry Participants' vessels in the Beaufort Sea, and with the Chairman and Executive Director of the AEWG, at a mutually agreed upon time and place on the North Slope of Alaska, to review the results of the 2012 Beaufort Sea Open Water Season, unless it is agreed by all designated individuals or their representatives that such a meeting is not necessary.

(b) Chukchi Sea Post-Season Village Meetings.

Following the completion of the 2012 Chukchi Sea Open Water Season and prior to the 2013 Pre-Season Introduction Meetings, the Industry Participants involved, if requested by the AEWG or the Whaling Captain's Association of each village, will host a meeting in each of the following villages: Wainwright, Pt. Lay, Pt. Hope, Kivalina, Little Diomed, Wales, Savoonga, and Barrow (or a joint meeting of the whaling captains from all of these villages if the whaling captains agree to a joint meeting) to review the results of the 2012 operations and to discuss any concerns residents of those villages might have regarding the operations. The meetings will include the Marine Mammal Observer / Inupiat Communicators stationed on the Industry Participants' vessels in the Chukchi Sea. The Chairman and Executive Director of the AEWG will be invited to attend the meeting(s).

(c) Pre-season Introduction Meetings.

(1) Immediately following each of the above meetings, and at the same location, the Industry Participants will provide a brief introduction to their planned operations for the 2012 Open Water Season. Each Industry Participant should provide hand-outs explaining their planned activities that the whaling captains can review.

(2) Subsistence Participants understand that any planned operations discussed at these Pre-Season Introduction Meetings, and the corresponding maps, will represent the Industry Participant's best estimate at that time of its planned operations for the coming year, but that these planned operations are preliminary, and are subject to change prior to the 2012 Open Water Season Meeting.

(d) Map of Planned Industry Participant Activities.

As practicable, Industry Participants shall jointly prepare and provide the AEWG with a large-scale map of the Beaufort and Chukchi Seas showing the locations and types of oil and gas and barge and transit activities planned by each Industry Participant. This map will be for use by the AEWG and Industry Participants during the 2012 CAA Meeting.

SECTION 109. INDIVIDUAL NOTIFICATION.

In the event that any Industry Participant does not become a signatory to this Agreement, the local Whaling Captains' Associations shall be notified by the AEWG, no later than March 31, 2012, so that the local Whaling Captains' Associations can prepare to talk with the non-signatories to avoid conflict during that association's fall subsistence bowhead whaling season.

TITLE II -- OPEN WATER SEASON COMMUNICATIONS**SECTION 201. MARINE MAMMAL OBSERVERS / INUPIAT COMMUNICATORS.****(a) Marine Mammal Observer / Inupiat Communicator Required.**

(1) In General. Each Industry Participant agrees to employ a Marine Mammal Observer / Inupiat Communicator (MMO/IC) on board each Primary Sound Source Vessel owned or operated by such Industry Participant in the Beaufort Sea or Chukchi Sea. Native residents of the eleven villages represented by the Alaska Eskimo Whaling Commission shall be given preference in hiring for MMO/IC positions.

(2) Special Rule for Inside Beaufort Sea Barrier Islands. Industry Participants whose seismic acquisition operations are limited to an area exclusively within the barrier islands need employ an MMO/IC on one Primary Sound Source Vessel only.

(3) Near Shore Operations Support Vessels. Industry Participants are not required to employ an MMO/IC on Near Shore Operations Support Vessels.

(4) Sealift Operations. For Industry Participants conducting sealift operations in which two tugs towing barges are accompanied within ½ mile by a third light tug at all times, a MMO/IC is required to be employed on the light tug only.

(b) Duties of Marine Mammal Observer / Inupiat Communicator.

(1) Each MMO/IC is to be employed as an observer and Inupiat communicator for the duration of the 2012 Open Water Season on the vessel on which he or she is stationed.

- (2) As a member of the crew, the MMO/IC will be subject to the regular code of employee conduct on board the vessel and will be subject to discipline, termination, suspension, layoff, or firing under the same conditions as other employees of the vessel operator or appropriate contractor.
- (3) Once the source vessel on which the MMO/IC is employed is in the vicinity of a whaling area and the whalers have launched their boats, the MMO/IC's primary duty will be to carry out the communications responsibilities set out in this Title.
- (4) At all other times, the MMO/IC will be responsible for keeping a lookout for bowhead whales and/or other marine mammals in the vicinity of the vessel to assist the vessel captain in avoiding harm to the whales and other marine mammals.
- (5) It is the MMO/IC's responsibility to call the appropriate Com-Center as set out in Sections 202 and 203.
- (6) The MMO/IC will be responsible for all radio contacts between vessels owned or operated by each of the Industry Participants and whaling boats covered under Section 207 of this Agreement and shall interpret communications as needed to allow the vessel operator to take such action as may be necessary pursuant to this Agreement.
- (7) The MMO/IC shall contact directly subsistence whaling boats that may be in the vicinity to ensure that conflicts are avoided to the greatest possible extent.
- (8) The MMO/IC will maintain a record of his or her communications with each Com-Center and the subsistence whaling boats, as well as any marine mammal sightings by the MMO/IC.

SECTION 202. COM-CENTER GENERAL COMMUNICATIONS SCHEME.

(a) Reporting Positions for Vessels Owned or Operated by the Industry Participants.

- (1) All vessels (other than vessels covered under sections 302 and 602) shall report to the appropriate Com-Center at least once every six hours commencing with a call at approximately 06:00 hours. Each call shall report the following information:
 - (A) Vessel name, operator of vessel, charter or owner of vessel, and the project the vessel is working on.

(B) Vessel location, speed, and direction.

C) Plans for vessel movement between the time of the call and the time of the next call. The final call of the day shall include a statement of the vessel's general area of expected operations for the following day, if known at that time.

EXAMPLE: This is the Arctic Endeavor, operated by _____ for _____ at Chukchi Sea prospect. We are currently at ___'___ north ___'___ west, proceeding SE at ___ knots. We will proceed on this course for ___ hours and will report location and direction at that time.

(2) The appropriate Com-Center shall be notified if there is any significant change in plans, such as an unannounced start-up of operations or significant deviations from announced course, and such Com-Center shall notify all whalers of such changes. A call to the appropriate Com-Center shall be made regarding any unsafe or unanticipated ice conditions.

(3) In the event that the Industry Participant's operation includes seismic data acquisition, the operator reserves the right to restrict exact vessel location information and provide more general location information.

(b) Reporting Positions for Subsistence Whale Hunting Crews.

(1) All subsistence whaling captains shall report to the appropriate Com-Center at the time they launch their boats from shore and again when they return to shore.

(2) All subsistence whaling captains shall report to such Com-Center the initial GPS coordinates of their whaling camps.

(3) Additional communications shall be made on an as needed basis.

(4) Each call shall report the following information:

(A) The crew's location and general direction of travel.

EXAMPLE: This is _____. We are just starting out. We will be traveling north-east from _____ to scout for whales. I will call if our plans change.

(B) The presence of any vessels or aircraft owned or operated by any of the Industry Participants, or their contractors, that are not observing the specified guidelines set forth in Title V on Avoiding Conflicts.

(C) The final call of the day shall include a statement of the whaling captain's general area of expected operations for the following day, if known at the time.

(5) Any subsistence whale hunter preparing to tow a caught whale shall report to the appropriate Com-Center before starting to tow.

EXAMPLE: This is Archie Ahkiviana. I am ___'___ north, ___'___ west. I have a whale and am towing it into _____.

(6) Each time a subsistence whaling camp is moved, it shall be reported promptly to the appropriate Com-Center, including the new GPS coordinates.

(7) Subsistence whale hunters shall notify the appropriate Com-Center promptly if, due to weather or any other unforeseen event, whaling is not going to take place that day.

(8) Subsistence whaling captains shall contact the appropriate Com-Center promptly and report any unexpected movements of their vessel.

(c) Responsibilities of Participants.

(1) Monitoring VHF Channel 16.

All vessels covered by Sections 207, 301, and 401 of this Agreement shall monitor marine VHF Channel 16 at all times.

(2) Avoidance of Whale Hunting Crews and Areas

It is the responsibility of each vessel owned or operated by any of the Industry Participants and covered by Sections 301 or 401 of this Agreement to determine the positions of all of their vessels and to exercise due care in avoiding any areas where subsistence whale hunting is active.

(3) Vessel-to-Vessel Communication

After any vessel owned or operated by any of the Industry Participants and covered by Sections 301 or 401 of this Agreement has been informed of or has determined the location of subsistence whale hunting boats in its vicinity, the MMO/IC shall contact those boats in order to coordinate movement and take necessary avoidance precautions.

SECTION 203. THE COMMUNICATIONS SYSTEM COORDINATION CENTERS (COM-CENTERS).

(a) Chukchi Lead System Included in Com-Center Coverage.

In addition to the Beaufort Sea and Chukchi Sea, the communications scheme shall apply in the Chukchi Sea lead system, as identified and excluded from leasing in the current MMS Five-Year Leasing Program, 2007-2012.

(b) Set Up and Operation.

(1) Subject to the terms of Section 104(c) and Section 601 of this Agreement, the Industry Participants conducting operations during the Com-Center operational window specified in Section 203(c) in:

(A) the Beaufort Sea jointly will arrange for the funding of Com-Centers in Deadhorse and Kaktovik; and

(B) the Chukchi Sea jointly will arrange for the funding of Com-Centers in Barrow, Wainwright, Pt. Lay, Pt. Hope, Kivalina, Wales, and St. Lawrence Island.

(2) All nine Com-Centers will be staffed by Inupiat operators. **GROUND TRANSPORTATION MUST BE PROVIDED FOR COM-CENTER OPERATIONS IN KAKTOVIK FOR POLAR BEAR AND BROWN BEAR SAFETY.** The Com-Centers will be operated 24 hours per day during the 2012 subsistence bowhead whale hunt. One Industry Participant in the Beaufort Sea and one Industry Participant in the Chukchi Sea, or their respective contractor, will be designated as the operator of the Com-Centers for that Sea, in consultation with the AEWC.

(3) Each Industry Participant shall contribute to the funding of the Com-Centers covering the areas in which it conducts oil and gas operations. The level of funding for the Com-Centers provided by each of the Industry Participants is intended to be in proportion to the scale of their respective activities, and shall be mutually agreed by the Industry Participants.

(4) The procedures to be followed by the Com-Center operators are set forth in subsection (d) below.

(c) Staffing.

(1) Each Com-Center shall have an Inupiat operator ("Com-Center operator") on duty 24 hours per day from August 15, or one week before the start of the fall bowhead whale hunt in each respective village, until the end of the bowhead whale subsistence hunt in villages listed in subparagraphs (A) through (G) and until the completion of all Industry Participant vessel transits (other than a vessel covered under Title V) in villages listed in subparagraphs (G) through (I):

- (A) Kaktovik for the Kaktovik Com-Center;
- (B) Nuiqsut for the Deadhorse Com-Center;
- (C) Barrow for the Barrow Com-Center;
- (D) Wainwright for the Wainwright Com-Center.
- (E) Pt. Lay for the Pt. Lay Com-Center, which will be located in the Pt. Lay Whaling Captains' Association building; and
- (F) Pt. Hope for the Pt. Hope Com-Center, which will be located in the Pt. Hope Whaling Captains' Association building.
- (G) Kivalina for the Kivalina Com-Center.
- (H) Wales for the Wales Com-Center.
- (I) Gambell or Savoonga for the St. Lawrence Island Com-Center.

(2) All Com-Center staff shall be local hire.

(d) Duties of the Com-Center Operators.

(1) The Com-Center operators shall be available to receive radio and telephone calls and to call vessels as described below. A record shall be made of all calls from every vessel covered by Sections 207, 301, and 401 of this Agreement. Information reported regarding whales struck, lost, landed, or the location of whales struck, lost, or landed, or the number of strikes remaining, shall be confidential and shall not be disclosed to anyone other than the AEWC or the local Whaling Captains' Association. The record of all reporting calls should contain the following information:

(A) Industry Participant Vessel:

- (i) Name of caller and vessel.
- (ii) Vessel location, speed, and direction.
- (iii) Time of call.
- (iv) Anticipated movements between this call and the next report.
- (v) Reports of any industry or subsistence activities.

(B) Subsistence Whale Hunting Boat:

- (i) Name of caller.
- (ii) Location of boat or camp.
- (iii) Time of call.
- (iv) Plans for travel.
- (v) Any special information such as caught whale, whale to be towed, or industry vessel conflicts with whale or whaler. Any report of the number of whales struck, lost, or landed, or of the number of strikes remaining, shall be kept confidential and shall not be disclosed by the Com-Center or any Com-Center operator to anyone other than the AEWC or the local Whaling Captains' Association. The location of whales struck, lost, or landed shall be kept confidential and shall not be disclosed except to the extent needed to avoid an Industry/Subsistence Whale Hunter conflict.

(2) Report of Industry/Subsistence Whale Hunter Conflict. In the event an industry/subsistence whale hunter conflict is reported, the appropriate Com-Center operator shall record:

- (A) Name of industry vessel.
- (B) Name of subsistence whaling captain.
- (C) Location of vessels.
- (D) Nature of conflict, data, and time.

(3) If all vessels and boats covered by Sections 207, 301, and 401 of this Agreement have not reported to the appropriate Com-Center within one hour of the recommended time, that Com-Center operator shall attempt to call all non-reporting vessels to determine the information set out above under the Duties of the Com-Center operator.

(4) As soon as location information is provided by a vessel covered by Sections 207, 301, or 401 of this Agreement, the appropriate Com-Center operator shall plot the location and area of probable operations on the large map provided at the Com-Center.

(5) If, in receiving information or plotting it, a Com-Center operator observes that operations by Industry Participants might conflict with subsistence whaling activities, such Com-Center operator shall contact the industry vessel involved and advise the Industry Participant's Local Representative(s) and the vessel operators of the potential conflict.

SECTION 204. STANDARDIZED LOG BOOKS.

The Industry Participants will provide the Com-Centers and Marine Mammal Observer / Inupiat Communicators with identical log books to assist in the standardization of record keeping associated with communications procedures required pursuant to this Agreement.

SECTION 205. COMMUNICATIONS EQUIPMENT.**(a) Communications Equipment to be Provided to Subsistence Whale Hunting Crews.**

(1) In General. The Industry Participants will provide (or participate in the provision of) the communications equipment described in paragraphs (4) and (6) of this subsection and subsection (b) of this section.

(2) Beaufort Sea. The Industry Participants funding Com-Centers in Deadhorse and Kaktovik will fund the provision of communications equipment for the whaling captains of Kaktovik and Nuiqsut in the same proportion as they fund those Com-Centers.

(3) Chukchi Sea. The Industry participants conducting operations in the Chukchi Sea will coordinate with each other to participate in funding the provision of communications equipment for the whaling captains of Barrow, Wainwright, Pt. Hope, and Pt. Lay.

(4) All-Channel, Water-Resistant VHF Radios.

These VHF radios are specifically designed for marine use and allow monitoring of Channel 16 while using or listening to another channel.

- (A) Kaktovik Subsistence Whaling Boats: 8
- (B) Kaktovik Base and Search and Rescue: 2
- (C) Nuiqsut Subsistence Whaling Boats: 12
- (D) Nuiqsut Base and Search and Rescue: 3
- (E) Barrow Base and Search and Rescue: 2
- (F) Wainwright Base and Search and Rescue: 2
- (G) Wainwright Subsistence Whaling Boats: 4
- (H) Pt. Hope Base and Search and Rescue: 2
- (I) Pt. Hope Subsistence Whaling Boats: 10

- (J) Pt. Lay Base and Search and Rescue: 2
- (K) Pt. Lay Subsistence Whaling Boats: 4

(5) Specific VHF Channels For Each Village.

The whaling boats from each of the villages have been assigned individual VHF channels for vessel-to-vessel and vessel-to-Com-Center communications as follows:

- (A) Nuiqsut whaling crews will use Channel 68.
- (B) Kaktovik whaling crews will use Channel 69.
- (C) Barrow whaling crews will use Channel 72.
- (D) Wainwright Whaling Crews will use Channel 12.
- (E) Pt. Lay Whaling Crews will use Channel 72.
- (F) Pt. Hope Whaling Crews will use Channel 68.

(6) Satellite Telephones.

The satellite telephones are to be used as backup for the VHF radios. The satellite telephones for use on subsistence whaling boats are for emergency use only and should be programmed for direct dial to the nearest Com-Center.

- A. Kaktovik Base Phones: 2
- B. Kaktovik Subsistence Whaling Boats: 8
- C. Nuiqsut Base Phones: 2
- D. Nuiqsut Subsistence Whaling Boats: 12
- E. Barrow Subsistence Whaling Boats: 2
- F. Wainwright Subsistence Whaling Boats: 4
- G. Pt. Lay Subsistence Whaling Boats: 2

(7) Distribution and Return of Equipment.

The distribution of the VHF radios and satellite telephone equipment to whaling captains for use during the 2012 fall bowhead subsistence whale hunting season shall be completed no later than August 15, 2012. All such units and telephone equipment provided under this Agreement, whether in this section or otherwise, will be returned promptly by the Subsistence Participants to the Industry Participant or the person providing such units and equipment at the end of each Village's 2012 fall bowhead whale subsistence hunt.

(b) Communications Equipment on Vessels Owned or Operated by the Industry Participants and/or their Contractors.

The Marine Mammal Observer / Inupiat Communicators onboard source vessels owned or operated by the Industry Participants and/or their contractors will also be supplied with all-channel VHF radios. The MMO/ICs have been assigned Channel 7 for their exclusive use in communicating with the Com-Center. Such radios shall be returned upon the completion or termination of the MMO/IC's assignment.

(c) Radio Installation and User Training.

The Whaling Captains of Nuiqsut, Kaktovik, Wainwright, Pt. Lay, and Pt. Hope, with assistance from the Industry Participants, will be responsible for the installation of the VHF radio equipment. The Industry participants will provide (or participate in the provision of) on-site user training for the VHF and satellite telephone equipment on or before August 15, 2012, if requested and as scheduled by the Whaling Captains' Associations of Nuiqsut, Kaktovik, Barrow, Wainwright, Pt. Lay, and Pt. Hope, and the Industry Participant operating the Beaufort Sea Com-Centers or Chukchi Sea Com-Centers, as appropriate.

SECTION 206. INDIVIDUALS TO CONTACT.

Listed below are the primary contact names and phone numbers for each of the Participants.

(1) BP Exploration (Alaska), Inc.'s (BP) Local Representative

LOWRY BROTT will be BP's local representative on the North Slope during the Term of this Agreement and will be stationed at Northstar Island and will be available by telephone at (907) 670-3520 and when Mr. Brott is not available, his alternate, Jim Croak, will be stationed at Northstar Island and will be available by telephone at the above number.

(3) ENI's Local Representative

Hans Neidig (907) 865-3314

(4) Exxon Mobil's Local Representative

TBD

(5) GX Technology's Local Representative

Ed Nelson (832) 344-6852

(6) Pioneer Natural Resources' (Pioneer) Local Representative

PAT FOLEY will be Pioneer's local representative during the Term of this Agreement and will be stationed in Anchorage and will be available by telephone at (907) 343-2110.

(7) Shell Offshore Inc.'s (Shell) Local Representatives

JOHN MAKETA and HOWARD HILL will be Shell's local representatives on the North Slope during the Term of this Agreement and will be stationed at Barrow during Chukchi Sea operations and at Deadhorse during Beaufort Sea operations and will be available by telephone at (907) 770-3700.

(8) STATOIL's Local Representative

TBD

(9) The Village of Kaktovik

For purposes of this Agreement, the individuals to contact for the Village of Kaktovik will be: JOSEPH KALEAK at (907) 640-6213 or 640-6515, and CHARLIE M. BROWER at (907) 640-4163 (home), (907) 640-2092 (work), or (907) 640-0052 (cell).

(10) The Village of Nuiqsut

For purposes of this Agreement, the individuals to contact for the Village of Nuiqsut will be: ISAAC NUKAPIGAK at (907) 480-6220 (Work); (907) 480-2400 (Home).

(11) The Village of Barrow

For purposes of this Agreement, the individuals to contact for the Village of Barrow will be: HARRY BROWER, JR. at (907) 852-0350 (Work), and EUGENE BROWER at (907) 852-3601.

(12) The Village of Wainwright

For purposes of this Agreement, the individuals to contact for the Village of Wainwright will be: ROSSMAN PEETOOK at (907) 763-4774, and WALTER NAYAKIK at (907)763-2915 (Work).

(13) The Village of Pt. Hope

For purposes of this Agreement, the individuals to contact for the Village of Pt. Hope will be: CHESTER FRANKSON, SR. at (907) 368-2054 (Home).

(14) The Village of Pt. Lay

For purposes of this Agreement, the individuals to contact for the Village of Pt. Lay will be: JULIUS REXFORD (907) 833-4592 (Home), (907) 833-2214 (Work), (907) 833-2320 (Fax), THOMAS NUKAPIAK (907) 833-6467 (Home), (907) 833-3838.

(15) The Village of Kivilina

For the purposes of this Agreement, the individuals to contact for the Village of Kivilina will be: _____.

(16) The Village of Little Diomed

For the purposes of this Agreement, the individuals to contact for the Village of Little Diomed will be: _____.

(17) The Village of Wales

For the purposes of this Agreement, the individuals to contact for the Village of Wales will be: _____.

(18) The Village of Savoonga

For the purposes of this Agreement, the individuals to contact for the Village of Savoonga will be: _____.

(19) The Village of Gambell

For the purposes of this Agreement, the individuals to contact for the Village of Gambell will be: _____.

(20) The AEW

For purposes of this Agreement, the individuals to contact for the AEW shall be: JOHNNY AIKEN at (907) 852-2392.

SECTION 207. SUBSISTENCE WHALE HUNTING BOATS.

The following is a list of the number of boats each of the Subsistence Participants plan to use:

(1) Boats Owned/Used by Whaling Captains of Nuiqsut (NWCA)

The subsistence whaling crews of the Village of Nuiqsut plan to use (12) twelve boats for subsistence whale hunting during the late summer and fall of 2012.

(2) Boats Owned/Used by Whaling Captains of Kaktovik (KWCA)

The subsistence whaling crews of the Village of Kaktovik plan to use (8) eight boats for subsistence whale hunting during the late summer and fall of 2012.

(3) Boats Owned/Used by Whaling Captains of Barrow (BWCA)

The subsistence whaling crews of the Village of Barrow plan to use (40) forty boats for subsistence whale hunting during the late summer and fall of 2012.

(4) Boats Owned/Used by Whaling Captains of Wainwright (WWCA)

The subsistence whaling crews of the Village of Wainwright plan to use (4) four boats for subsistence whale hunting during the fall of 2012.

(5) Boats Owned/Used by Whaling Captains of Pt. Hope (Pt. HWCA)

The subsistence whaling crews of the Village of Pt. Hope plan to use (10) ten boats for subsistence whale hunting during the late fall of 2012.

(6) Boats Owned/Used by Whaling Captains of Pt. Lay (Pt. LWCA)

The subsistence whaling crews of the Village of Pt. Lay plan to use (4) four boats for subsistence whale hunting during the fall of 2012.

If any additional boats are put in use by subsistence whaling crews, the Industry Participants will be notified promptly through the Com-Center.

TITLE III – BARGE, TRANSIT, AND CABLE LAYING VESSEL OPERATIONS

SECTION 301. IN GENERAL.

A Participant may employ barges, transit, or cable laying vessels to transport materials or lay cable through the Beaufort Sea or Chukchi Sea during the term of this Agreement. Any Industry Participant who employs a barge or transit vessel to transport materials through the Beaufort Sea or Chukchi Sea during the term of this Agreement shall require the barge or transit vessel operator to comply with Sections 201, 205(b) and 302 of this Agreement while providing services to that Industry Participant.

SECTION 302. BARGE AND TRANSIT VESSEL OPERATIONS.

(a) Reporting Positions for Barge, Transit or Cable Laying Vessels Owned or Operated by industry Participants.

(1) All barge, transit, or cable laying vessels shall report to the appropriate Com-Center at least once every six hours commencing with a call at approximately 06:00 hours. Each call shall report the following information:

(A) Barge, transit, or cable laying vessel name, operator of vessel, charterer or owner of vessel, and the project or entity the vessel is transporting materials for.

(B) Barge, transit, or cable laying vessel location, speed, and direction.

(C) Plans for barge, transit, or cable laying vessel movement between the time of the call and the time of the next call. The final call of the day shall include a statement of the barge or transit vessel's general area of expected operations for the following day, if known at that time.

EXAMPLE: This is the Arctic Endeavor, operated by _____ for _____ in the Chukchi Sea. We are currently at _____' _____ north _____' _____ west, proceeding SE at _____ knots. We will proceed on this course for _____ hours and will report location and direction at that time.

(2) The appropriate Com-Center also shall be notified if there is any significant change in plans, such as an unannounced start-up of operations or significant deviations from announced course, and such Com-Center shall notify all whalers of such changes. A call to the appropriate Com-Center shall be made regarding any unsafe or unanticipated ice conditions.

(b) Operator Duties.

All barge, transit, or cable laying vessel operators are responsible for the following requirements.

(1) Monitoring VHF Channel 16. All barge and transit vessel operators shall monitor marine VHF Channel 16 at all times.

(2) Avoidance of Whale Hunting Crews and Areas. It is the responsibility of each Industry Participant and barge or transit vessel operator to determine the positions of their barge or transit vessels and to exercise due care in avoiding any areas where subsistence whale hunting is active.

(3) Vessel-to-Vessel Communication. After any barge or transit vessel owned or operated by any Industry Participant has been informed of or has determined the location of subsistence whale hunting boats in its vicinity, the Marine Mammal Observer / Inupiat Communicator shall contact those boats in order to coordinate movement and take necessary avoidance precautions.

(c) Routing Barge, Transit, and Cable Laying Vessels.

(1) All barge, transit, and cable laying vessel routes shall be planned so as to minimize any potential conflict with bowhead whales or subsistence whaling activities. All barges and transit vessels shall avoid areas of active or anticipated whaling activity, as reported pursuant to Section 202.

(2) Beaufort Sea. Vessels transiting east of Bullen Point to the Canadian border should remain at least five (5) miles offshore during transit along the coast, provided ice and sea conditions allow.

(3) Chukchi Sea. Vessels should remain as far offshore as weather and ice conditions allow, and at all times at least five (5) miles offshore during transit.

(d) Vessel Speeds.

Barge, transit, and cable laying vessels shall be operated at speeds necessary to ensure no physical contact with whales occurs, and to make any other potential conflicts with bowhead whales or whalers unlikely. Vessel speeds shall be less than 10 knots in the proximity of feeding whales or whale aggregations.

(e) Vessels Operating in Proximity of Bowhead Whales.

If any barge or transit vessel inadvertently approaches within 1.6 kilometers (1 mile) of observed bowhead whales, except when providing emergency assistance to whalers or in other emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the bowhead whales by taking one or more of the following actions, as appropriate:

- (1) reducing vessel speed to less than 5 knots within 900 feet of the whale(s);
- (2) steering around the whale(s) if possible;
- (3) operating the vessel(s) in such a way as to avoid separating members of a group of whales from other members of the group;
- (4) operating the vessel(s) to avoid causing a whale to make multiple changes in direction; and
- (5) checking the waters immediately adjacent to the vessel(s) to ensure that no whales will be injured when the propellers are engaged.

(f) Marine Mammal Sighting Data.

Industry Participants whose operations are limited exclusively to barge or vessel traffic will submit to the AEWC and NSB DWM all marine mammal sighting data.

TITLE IV – VESSELS, TESTING, AND MONITORING

SECTION 401. INDUSTRY PARTICIPANT VESSELS AND EQUIPMENT.

(a) List of Vessels and Equipment Required.

Each Industry Participant engaged in oil and gas operations shall provide a list identifying all vessels or other equipment (including but not limited to boats, barges, aircraft, or similar craft) that are owned and/or operated by, or that are under contract to the Industry Participants, for use in the Beaufort Sea or Chukchi Sea for oil and gas operations or for implementation of such Industry Participant's monitoring plan. Vessels and equipment used for oil and gas operations shall be listed in Attachment II, and vessels and equipment used for monitoring plans shall be listed in Attachment III.

(b) Only Listed Vessels and Equipment (or Like Vessels and Like Equipment) May Be Used.

(1) NONE OF THE INDUSTRY PARTICIPANTS INTENDS TO OPERATE ANY VESSEL OR EQUIPMENT (EXCEPT FOR LIKE VESSELS OR LIKE EQUIPMENT) NOT IDENTIFIED IN THE LISTS REQUIRED UNDER SUBSECTION (a) DURING THE TERM OF THIS AGREEMENT.

(2) Notwithstanding paragraph 1, if any Industry Participant decides to use different vessels or equipment or additional vessels or equipment, such vessels and equipment shall be used only for purposes identified in Attachments II or III; and the AEWG and the whaling captains of Nuiqsut, Kaktovik, Barrow, Wainwright, Pt. Hope, and Pt. Lay shall be notified promptly through the appropriate Com-Center, as identified in Section 203 of this Agreement, and in writing, of their identity and their intended use, including location of use.

SECTION 402. SOUND SIGNATURE TESTS.**(a) Sound Source Verification Testing.**

(1) Geophysical Equipment. For purposes of obtaining a sound signature for Industry Participants' geophysical equipment, the Industry Participants shall have initiated a test of all geophysical equipment within 72 hours of initiating or having initiated operations in the Beaufort Sea or Chukchi Sea. Such tests shall be conducted as set forth in section 402(b).

(2) Vessels. For vessels engaged in geophysical activity, Industry Participants will conduct a sound source verification test for all geophysical equipment used for geophysical activity. Each Industry Participant shall establish a sound source verification range or Industry Participants may participate jointly in establishing a range for the Chukchi Sea and Beaufort Sea, or both. A separate range shall be used for the Chukchi Sea and Beaufort Sea, and vessels shall use the appropriate range for each sea in which they operate. For testing each vessel shall proceed through the range and record information on the date, time, vessel speed, vessel route, vessel load, weather conditions, and equipment operating on the vessel (all noise generating equipment on the vessel, other than geophysical equipment subject to separate testing under paragraph (1), shall be in operation while the vessel is proceeding through the range). The range should be established near a location where details on wind speed and direction are regularly monitored and archived.

(b) Mutual Agreement on Site for Testing; Advance Notice Required.

(1) In General. Each geophysical equipment sound signature test shall be conducted at a site mutually agreed upon by the Industry Participant conducting such test and the AEW. Each Industry Participant conducting such sound signature test(s) will make a good faith effort to provide three (3) weeks advance notice to the AEW and the NSB DWM of its intent to perform each test.

(2) Beaufort Sea Testing. For geophysical equipment sound signature tests conducted in the Beaufort Sea, the Industry Participant conducting such tests shall provide transportation for an appropriate number of representatives from: the AEW, the whaling captains of the Villages of Barrow, Nuiqsut, and Kaktovik, and the NSB DWM to observe the sound signature tests.

(3) Chukchi Sea Testing. For geophysical equipment sound signature tests conducted on vessels to be used in the Chukchi Sea, the Industry Participant(s) conducting such tests shall provide transportation for an appropriate number of representatives from: the AEWC, the whaling captains of the Villages of Barrow, Wainwright, Pt. Lay, and Pt. Hope, and the NSB DWM to observe the sound signature tests.

(c) Sound Signature Data to be Made Available.

(1) Within fourteen (14) days of completing the sound signature field tests for geophysical equipment and within thirty (30) days of the end of the operating season for sound source verification ranges, each Industry Participant and/or its contractor conducting such test(s) will make preliminary and final quality controlled results of the sound signature test(s) available upon request to the AEWC and the NSB DWM. The Industry Participant and/or its contractor will also provide the AEWC and the NSB DWM the preliminary analysis of that data, as well as any other applicable sound signature data that is available and that the AEWC, the NSB DWM, and the Industry Participant agree is relevant to understanding the potential noise impacts of the proposed operations to migrating bowhead whales or other affected marine mammals.

(2) Once completed the final data analysis will be provided to the AEWC and the NSB DWM upon request. The final data report for the sound source verification testing shall be provided to the NSB DWM and the AEWC no later than December 31, 2012.

(3) Any Industry Participant who prepares a model of the sound signature of its vessels and operations, whether before or after the sound signature test, will provide copies of those models and any related analysis to the AEWC and the NSB DWM upon request.

SECTION 403. MONITORING PLANS.**(a) Monitoring Plan Required.**

(1) Each Industry Participant agrees to prepare and implement a monitoring plan to collect data designed to determine the potential effects of its oil and gas operations on fall migrating bowhead whales.

(2) The monitoring plans shall be designed in cooperation with the AEWC, the NSB DWM, and NOAA Fisheries, together with the Bureau of Ocean Energy Management (BOEM) when operating in Federal waters. If additional outside review is requested by any of the above entities, the Industry Participant will evaluate the request on a case by case basis.

(b) Beaufort Sea Monitoring Plans.

In the Beaufort Sea, the monitoring plans should focus on the identify, timing, location, and numbers of marine mammals and their behavioral responses to the noise source. The monitoring plans will place emphasis on understanding potential impacts from industrial sounds on bowhead whales.

(c) Chukchi Sea Monitoring Plans.

In the Chukchi Sea, the monitoring plans should focus on the identity, timing, location, and numbers of marine mammals and their behavioral responses to the noise source. The monitoring plans will place emphasis on understanding potential impacts from industrial sounds on bowhead whales.

(d) Use of Prior Information and Peer Reviewed Data.

(1) Prior impact study results shall be incorporated into the monitoring plans prepared by each Industry Participant as applicable.

(2) Each monitoring plan for oil and gas operations shall be subject to peer review by stakeholders on a peer review panel identified by NOAA Fisheries at the 2012 Open Water Season Peer Review Meeting, convened by NOAA Fisheries. Draft plans will be submitted to the NSB DWM and AEWC no later than two weeks prior to the 2012 Open Water Peer Review Meeting.

(e) Raw Data, Communication, and Summary Required.

- (1) Each Industry Participant conducting site-specific monitoring will:
 - (A) after quality control reviews are completed, make electronic data, available to the NSB DWM at the end of the season.
 - (B) permit and encourage open communications among their contractors and the AEWC and NSB DWM.
- (2) Each Industry Participant will submit a summary of monitoring plan results and progress to the AEWC and NSB DWM every two weeks during the operating season.

SECTION 404. CUMULATIVE NOISE IMPACTS STUDY.

Each Industry Participant further agrees to provide its monitoring plan and sound signature data, for use in a cumulative effects analysis of the multiple sound sources and their possible relationship to any observed changes in marine mammal behavior, to be undertaken pursuant to a Cumulative Noise Impacts Study.

The study design for the Cumulative Impacts Study shall be developed through a Cumulative Impacts Workshop to be organized by the North Slope Borough in the winter of 2012/2013. The results of this workshop will be presented at the 2013 Open Water Meeting.

TITLE V – AVOIDING CONFLICTS DURING THE OPEN WATER SEASON

Industry Participants are reminded that Sections 101(a)(5)(A) and (D) of the Marine Mammal Protection Act provide, among other things, that the Secretary can authorize the incidental taking of small numbers of marine mammals of a species or population stock if the Secretary finds, among other things, that the total of such takings during the authorized period **will not have an unmitigable adverse impact on the availability of such species or stock for taking for subsistence uses.**

The following Operating Guidelines apply in the Beaufort Sea and Chukchi Sea, except as otherwise specified and in all cases with due regard to environmental conditions and operational safety. These Operating Guidelines are in addition to any permit restrictions or stipulations imposed by the applicable governmental agencies.

SECTION 501. GENERAL PROVISIONS FOR AVOIDING INTERFERENCE WITH BOWHEAD WHALES OR SUBSISTENCE WHALE HUNTING ACTIVITIES.

(a) Routing Vessels and Aircraft.

(1) All vessel and aircraft routes shall be planned so as to minimize any potential conflict with bowhead whales or bowhead subsistence whaling activities. All vessels shall avoid areas of active or anticipated whaling activity (as reported pursuant to Section 202).

(2) Beaufort Sea. Vessels transiting east of Bullen Point to the Canadian border should remain at least five (5) miles offshore during transit along the coast, provided ice and sea conditions allow.

(3) Chukchi Sea. Vessels should remain as far offshore as weather and ice conditions allow, and at least five (5) miles offshore during transit.

(b) Aircraft Altitude Floor and Flight Path.

(1) AIRCRAFT SHALL NOT OPERATE BELOW 1500 FEET unless the aircraft is engaged in marine mammal monitoring, approaching, landing or taking off, or unless engaged in providing assistance to a whaler or in poor weather (low ceilings) or any other emergency situations. Aircraft engaged in marine mammal monitoring shall not operate below 1500 feet in areas of active whaling; such areas to be identified through communications with the Com-Centers.

(2) Except for airplanes engaged in marine mammal monitoring, aircraft shall use a flight path that keeps the aircraft at least five (5) miles inland until the aircraft is directly south of its offshore destination, then at that point it shall fly directly north to its destination.

(c) Vessel Speeds.

Vessels shall be operated at speeds necessary to ensure no physical contact with whales occurs, and to make any other potential conflicts with bowhead whales or whalers unlikely. Vessel speeds shall be less than 10 knots in the proximity of feeding whales or whale aggregations.

(d) Vessels Operating in Proximity of Bowhead Whales.

If any vessel inadvertently approaches within 1.6 kilometers (1 mile) of observed bowhead whales, except when providing emergency assistance to whalers or in other emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the bowhead whales by taking one or more of the following actions, as appropriate:

- (1) reducing vessel speed to less than 5 knots within 900 feet of the whale(s);
- (2) steering around the whale(s) if possible;
- (3) operating the vessel(s) in such a way as to avoid separating members of a group of whales from other members of the group;
- (4) operating the vessel(s) to avoid causing a whale to make multiple changes in direction; and
- (5) checking the waters immediately adjacent to the vessel(s) to ensure that no whales will be injured when the propellers are engaged.

SECTION 502. GEOPHYSICAL ACTIVITY LIMITATIONS.

The following operating limitations are to be observed and the operations are to be accompanied by a monitoring plan as set forth in Section 403 and Attachment III of this Agreement. The Industry Participants conducting geophysical activity agree to coordinate the timing and location of such activity so as to reduce, by the greatest extent reasonably possible, the level of noise energy entering the water from such activity at any given time and at any given location.

(a) Limitations on Geophysical Activity in the Beaufort Sea.

All geophysical activity in the Beaufort Sea shall be conducted in accordance with the terms set forth below.

(1) Kaktovik: No geophysical activity from the Canadian Border to the Canning River (146 deg. 4 min. W) from 25 August to close of the fall bowhead whale hunt in Kaktovik and Nuiqsut.¹ From August 10 to August 25, Industry Participants will communicate and collaborate with AEWC on any planned vessel movement in and around Kaktovik and Cross Island to avoid impacts to whale hunt.

(2) Nuiqsut:

A. Pt. Storkerson (~148 deg. 42 min. W) to Thetis Island (~150 deg. 10.2 min. W).

(i) *Inside the Barrier Islands*: No geophysical activity prior to July 25. Geophysical activity is allowed from July 25 until completion of operations²

(ii). *Outside the Barrier Islands*: No geophysical activity from August 25 to close of fall bowhead whale hunting in Nuiqsut. Geophysical activity is allowed at all other times.

b. Canning River (~146 deg. 4 min. W) to Pt. Storkerson (~148 deg. 42 min. W): No geophysical activity from August 25 to the close of bowhead whale subsistence hunting in Nuiqsut.

(3) Barrow: No geophysical activity from Pitt Point on the east side of Smith Bay (~152 deg. 15 min. W) to a location about half way between Barrow and Peard Bay (~157 deg. 20 min. W) from September 15 to the close of the fall bowhead whale hunt in Barrow.

¹ The bowhead whale subsistence hunt will be considered closed for a particular village when the village Whaling Captains' Association declares the hunt ended or the village quota has been exhausted (as announced by the village Whaling Captains' Association or the AEWC), whichever occurs earlier.

² Geophysical activity allowed in this area after August 25 shall include a source array of no more than 12 air guns, a source layout no greater than 8 m x 6 m, and a single source volume no greater than 880 in³.

(b) Limitations on Geophysical Activity in the Chukchi Sea.

All geophysical activity in the Chukchi Sea shall be conducted in accordance with the terms set forth below.

(1) Beginning September 15, and ending with the close of the fall bowhead whale hunt,³ if Wainwright, Pt. Lay, or Pt. Hope intend to whale in the Chukchi Sea, no more than two geophysical activities employing geophysical equipment will occur at any one time in the Chukchi Sea. During the fall bowhead whale hunt, geophysical equipment will not be used by Participants within 30 miles of any point along the Chukchi Sea coastline. Industry Participants will contact the Whaling Captains' Associations of each of those villages to determine if a village is prepared to whale and will notify the AEWG of any response.

(2) Safe harbor will be at sites selected by the Industry Participants and the AEWG. Safe harbor sites will be agreed upon no later than the beginning of operations and shall be listed in Attachment IV. However, a vessel captain will seek safety for his assets (vessel and personnel) as is his duty under the Law of the Sea.

(3) Any vessel operating within 60 miles of the Chukchi Sea coast will follow the communications procedures set forth in Title II of this Agreement. All vessels will adhere to the conflict avoidance measures set forth in Section 501 of this Agreement.

(4) If a dispute should arise, the resolution process set forth in Section 106 of this Agreement shall apply.

³ The bowhead whale subsistence hunt will be considered closed when village Whaling Captains' Associations of Wainwright, Pt. Lay, and Pt. Hope have each declared that (A) they do not intend to hunt, (B) their village hunt has ended, or (C) the village quota has been exhausted (as announced by the village Whaling Captains' Association or the AEWG), whichever occurs earlier.

SECTION 503. DRILLING AND PRODUCTION.**(a) Camden Bay.**

For exploratory drilling and production between 144 deg. W and the Canning River (~146 deg. 4 min. W), zero discharge of:

- (1) drilling fluids;
- (2) cuttings after 20" casing;
- (3) treated sanitary and gray water; and
- (4) ballast and bilge water.

(b) Drilling Operations in the Beaufort Sea East of Cross Island.

No drilling equipment or related vessels used for at-sea oil and gas operations shall be onsite at any offshore drilling location east of Cross Island from 25 August until the close of the bowhead whale hunt in Nuiqsut and Kaktovik. However, such equipment may remain within the Beaufort Sea in the vicinity of 71 degrees 25 minutes N and 146 degrees 4 minutes W., or at the edge of the Arctic ice pack, whichever is closer to shore.

(c) Drilling Operations in the Beaufort Sea West of Cross Island.

In 2012, no drilling equipment or related vessels used for at-sea oil and gas operations shall be moved onsite at any location outside the barrier islands west of Cross Island until the close of the bowhead whale hunt in Barrow.

(d) Oil Spill Mitigation Agreement.

Industry Participants engaged in drilling operations agree to enter into a binding oil spill mitigation agreement with the Alaska Eskimo Whaling Commission, the North Slope Borough, and the Inupiat Community of the Arctic Slope to provide for hunter transport to alternate hunting locations in the event of an oil spill. The agreement shall be attached as Attachment V.

SECTION 504. SHORE-BASED SERVICE AND SUPPLY AREAS.

Shore-based service and supply areas used by Industry Participants shall be located and operated so as to ensure compliance with the terms of this Agreement.

SECTION 505. TERMINATION OF OPERATIONS AND TRANSIT THROUGH THE BERING STRAIT.

Except as provided in Title VI, all Industry Participant vessels shall complete operations in time to allow such vessels to complete transit through the Bering Strait to a point south of 59 degrees North latitude no later than November 15, 2012. Any Industry Participant vessel that encounters weather or ice that will prevent compliance with the date in the preceding sentence shall coordinate its transit through the Bering Strait to a point south of 59 degrees North latitude with the appropriate Com-Centers listed in Section 203. All Industry Participant vessels shall, weather and ice permitting, transit east of St. Lawrence Island and no closer than 10 miles from the shore of St. Lawrence Island.

TITLE VI – LATE SEASON SEISMIC OPERATIONS**SECTION 601. IN GENERAL.**

Notwithstanding any other provision of this Agreement, any Industry Participant who engages exclusively in geophysical activities that are conducted at least 5 miles or more from the Alaska coast in the Beaufort Sea or Chukchi Sea and begin on or after October 1, 2012 shall only be responsible to comply with Title I, excluding Sections 104(c)(4) and 108(a) and (b), and Sections 201, 205(b), 206, 502(a), and 602 of this Agreement. For the avoidance of doubt, an Industry Participant described in this Section 601 shall not be subject to the requirements of Section 203 including but not limited to funding of Com-Centers, providing certain equipment, training and providing representatives as designated operators of Com-Centers.

SECTION 602. VESSEL OPERATIONS.**(a) Reporting Positions When Vessels Come Within 40 Miles of the Coast.**

(1) A vessel subject to this section operating within 40 miles of the Alaska coast shall report to the appropriate Com-Center, if open, at least once every six hours commencing with a call at approximately 06:00 hours. Each call shall report the following information:

(A) Vessel name, operator of vessel, charter or owner of vessel, and the project or entity the vessel is conducting operations for.

(B) Vessel location, speed, and direction.

(C) Plans for vessel movement between the time of the call and the time of the next call. The final call of the day shall include a statement of the vessel's general area of expected operations for the following day, if known at that time.

EXAMPLE: This is the Arctic Endeavor, operated by _____ for _____ in the Chukchi Sea. We are currently at _____ north _____ west, proceeding SE at _____ knots. We will proceed on this course for _____ hours and will report location and direction at that time.

(2) The appropriate Com-Center, if open, also shall be notified if there is any significant change in plans, such as an unannounced start-up of operations or significant deviations from announced course, and such Com-Center shall notify all whalers of such changes. A call to the appropriate Com-Center shall be made regarding any unsafe or unanticipated ice conditions.

(b) Operator Duties.

All vessel operators subject to this title are responsible for the following requirements.

(1) Monitoring VHF Channel 16. All vessel operators shall monitor marine VHF Channel 16 at all times.

(2) Avoidance of Whale Hunting Crews and Areas. It is the responsibility of each Industry Participant and vessel operator to determine the positions of their vessels and to exercise due care in avoiding any areas where subsistence whale hunting is active.

(3) Vessel-to-Vessel Communication. After any vessel owned or operated by any Industry Participant has been informed of or has determined the location of subsistence whale hunting boats in its vicinity, the Marine Mammal Observer / Inupiat Communicator shall contact those boats in order to coordinate movement and take necessary avoidance precautions.

(c) Routing Vessels.

(1) All vessel routes within 40 miles of the Alaska coast shall be planned so as to minimize any potential conflict with bowhead whales or subsistence whaling activities. All vessels shall avoid areas of active or anticipated whaling activity, as reported pursuant to Section 202.

(2) Beaufort Sea. Vessels transiting east of Bullen Point to the Canadian border should remain at least five (5) miles offshore during transit along the coast, provided ice and sea conditions allow.

(3) Chukchi Sea. Vessels should remain as far offshore as weather and ice conditions allow, and at all times at least five (5) miles offshore during transit.

(d) Vessel Speeds.

Vessels shall be operated at speeds necessary to ensure no physical contact with whales occurs, and to make any other potential conflicts with bowhead whales or whalers unlikely. Vessel speeds shall be less than 10 knots in the proximity of feeding whales or whale aggregations.

(e) Vessels Operating in Proximity of Bowhead Whales.

If any vessel inadvertently approaches within 1.6 kilometers (1 mile) of observed bowhead whales, except when providing emergency assistance to whalers or in other emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the bowhead whales by taking one or more of the following actions, as appropriate:

- (1) reducing vessel speed to less than 5 knots within 900 feet of the whale(s);
- (2) steering around the whale(s) if possible;
- (3) operating the vessel(s) in such a way as to avoid separating members of a group of whales from other members of the group;

(4) operating the vessel(s) to avoid causing a whale to make multiple changes in direction; and

(5) checking the waters immediately adjacent to the vessel(s) to ensure that no whales will be injured when the propellers are engaged.

(f) Marine Mammal Sighting Data.

Industry Participants whose operations are subject to this title will submit to the AEWC and NSB DWM all marine mammal sighting data.

TITLE VII – PARTICIPANTS

This Agreement shall be binding and effective when signed by the duly authorized representatives of the Participants. Signatures may be by facsimile on separate pages.

George Noongwook

AEWC Chairman

Dated: _____

Harry Brower, Jr.

Harry Brower, Jr.

AEWC Commissioner for Barrow

Dated: 3/6/2012

Merlin Koonooka

AEWC Commissioner for Gambell

Dated: _____

Joseph Kaleak

AEWC Commissioner for Kaktovik

Dated: _____

Raymond Hawley

AEWC Commissioner for Kivalina

Dated: _____

Ronald Ozenna, Jr.

AEWC Commissioner for Little Diomedede

Dated: _____

Isaac Nukapigak
AEWC Commissioner for Nuiqsut
Dated: _____

Rex A. Rock, Sr.
AEWC Commissioner for Pt. Hope
Dated: _____

Julius Rexford
AEWC Commissioner for Pt. Lay
Dated: _____

George Noongwook
AEWC Commissioner for Savoonga
Dated: _____


John Hopson, Jr.
AEWC Commissioner for Wainwright
Dated: _____

Luther Komonaseak
AEWC Commissioner for Wales
Dated: _____

Name:
BP Exploration (Alaska) Inc.
Dated: _____

Name:
ENI US Operating Company
Dated: _____

Name:
Exxon Mobil Corporation
Dated: _____



Name:
GX Technology Corporation
Dated: 3/6/2012

Name:
Pioneer Natural Resources Alaska
Dated: _____

Name:
Shell Offshore, Inc.
Dated: _____

ATTACHMENT I -- LOCAL SAR CONTACTS

LOCAL SEARCH AND RESCUE ORGANIZATIONS -

CONTACT PERSONS

(IN EMERGENCIES, ALWAYS DIAL 911)

North Slope Borough Search and Rescue (Pilots)

Director Hugh Patkotak
852-2822 WK
852-4844 Home

Barrow Volunteer Search and Rescue Station

852-2808 OFS

President Oliver Leavitt
852-7032 WK
852-7032 Home

Vice-Pres. Price Brower
852-8633 WK
852-7848 Home

Secretary Lucille Adams
852-0250 Wk
852-7200 Home

Treasurer Eli Solomon
852-2808 Wk
852-6261 Home

Coordinator Arnold Brower, Jr. 852-0290 WK
852-5060 Home

Director Jimmy Nayakik
852-0200 WK
852-JENS Home

Director	Johnny Adams	852-0250 WK 852-7724 Home
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Nuiqsut Volunteer

Search and Rescue Station 480-6613 (Fire Hall)

Kaktovik Volunteer

Search and Rescue Station 640-6212 (Fire Hall)

President	Lee Kayotuk	640-5893 Wk 640-6213 Home
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Vice-Pres.	Tom Gordon	640-
------------	------------	------

Secretary	Nathan Gordon	640-6925
-----------	---------------	----------

Treasurer	Don Kayotuk	640-2947
-----------	-------------	----------

Fire Chief	George T. Tagarook	640-6212 WK 640-6728 Home
------------	--------------------	------------------------------

Wainwright Volunteer Search and Rescue

President Joe Ahmaogak Jr. 763-2826 Home

Vice President John Hopson, Jr. 763-3464 Home

Secretary Raymond Negovanna 763-2102 Home

Treasurer Ben Ahmaogak, Jr. 763-3030 Home

Director Artic Kittick 763-2534 Home

Director John Akpik Unlisted

Pt. Hope Volunteer Search and Rescue

Coordinator Willard Hunnicutt, Jr. 368-2774 Work

Fire Chief Willard Hunnicutt, Jr. 368-2774 Work
(Note: Only contact for Pt. Hope)

North Slope Borough Disaster Relief Coordinator

Frederick Brower 852-0284 OFS

ATTACHMENT II -- OPERATIONS VESSELS

**VESSELS TO BE USED FOR AND IN SUPPORT OF
INDUSTRY PARTICIPANTS' OPERATIONS
AS IDENTIFIED IN SECTION 401(b)(1)(B)**

[ALL VESSELS TO BE IDENTIFIED BY COMPANY]

NOTE:

**COPY OF PRESENTATION OF THE INDUSTRY PARTICIPANT
ATTACHED**

**IDENTIFYING VESSELS TO BE USED FOR AND IN SUPPORT OF THE
INDUSTRY PARTICIPANTS' OPERATIONS.**

ATTACHMENT III -- MONITORING VESSELS

VESSELS TO BE USED FOR AND IN SUPPORT OF THE INDUSTRY PARTICIPANTS MONITORING PLANS AS IDENTIFIED IN SECTION 401(b)(1)(B)

[ALL VESSELS TO BE IDENTIFIED BY COMPANY]

NOTE:

**COPY OF PRESENTATION OF THE INDUSTRY PARTICIPANT
ATTACHED**

**IDENTIFYING VESSELS TO BE USED FOR AND IN SUPPORT OF THE
INDUSTRY PARTICIPANTS' MONITORING PLAN.**

FINAL FOR SIGNATURE
1, 2012

March

ATTACHMENT IV -- SAFE HARBOR

FINAL FOR SIGNATURE
1, 2012

March

ATTACHMENT V -- OIL SPILL MITIGATION

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Link/password to download document e-mailed to:

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Kuukpikmiut Subsistence Oversight Panel, Inc.
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ksopi@astacalaska.net

Herbert Ipalook, President
Nuiqsut Whaling Captains Association
P.O. Box 89183
Nuiqsut, AK 99789
cityofnuiqsut@gmail.com

Craig Perham, Incidental Take Coordinator
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