

FINDING OF NO SIGNIFICANT IMPACT
BPXA Seismic Survey
Geological & Geophysical Permit Application #14-03
Beaufort Sea, Alaska

Introduction

The Bureau of Ocean Energy Management (BOEM) has prepared an environmental assessment (EA) of the potential effects of an open water Ocean Bottom Node seismic survey proposed by BPXA in the Beaufort Sea Planning Area of the Alaska outer continental shelf (OCS), to be conducted in 2014.

The proposed seismic surveys (Proposed Action) are detailed in a document submitted by BP Exploration (Alaska), Inc. (BPXA) on December 23, 2013, titled *Plan of Operations: North Prudhoe Bay 2014 OBS Seismic Survey*. The plan of operations was submitted by BPXA in support of its December 27 application for a "Permit to Conduct Geological or Geophysical Exploration". The Proposed Action, which is summarized in Chapter 2 of the EA, is authorized under the OCS Lands Act, 43 USC 1331, *et seq.*, and the regulations for Geological and Geophysical Explorations of the OCS at 30 CFR 551.

On March 3, 2014, a notice of preparation of an EA analyzing the Proposed Action was published on Regulations.gov, (docket BOEM-2014-0005), sent to potentially affected stakeholders, and posted on the Alaska OCS Region website. The notice stated that BOEM is inviting the public to comment on issues that should be considered by BOEM in preparing the EA. Comments were accepted through March 21, 2014. No comments were received.

BOEM prepared the EA to determine whether the Proposed Action may result in significant effects (40 CFR 1508.27), which would trigger the need to prepare an environmental impact statement. The EA analyzes the potential for significant adverse effects from the Proposed Action on the human environment, which includes the natural and physical environment, and the relationship of people with that environment (40 CFR 1508.13 and 1508.14). The EA was also prepared to assist with BOEM planning and decision-making (40 CFR 1501.3b). Specifically, the EA will help inform a determination as to whether the Proposed Action can be conducted "in a safe and environmentally sound manner so as to prevent harm or damage to, or waste of, any natural resources... any life (including fish and other aquatic life), property, or the marine, coastal, or human environment" (30 CFR 551.2). The decision to be made is whether to issue a "Permit to Conduct Geological or Geophysical Exploration."

Purpose of the Proposed Action

The purpose of the Proposed Action is to gather geophysical data that will be used to identify and map potential hydrocarbon-bearing formations and the geologic structures that surround them. This information will provide insight into the geologic evolution, basin architecture, and depositional and structural history of the petroleum system, which will help inform future decisions about potential exploration and development of the Beaufort Sea OCS.

Description of the Proposed Action

BPXA plans to conduct open water, ocean bottom node seismic surveys over an approximately 190 square mile area, including approximately 171 square miles of State of Alaska lands and waters and approximately 19 square miles of federal waters of the U.S. Beaufort Sea. The project area comprises approximately 129 square miles of water depths greater than 3 feet (ft), 28 square miles of water less than 3 ft, and 33 square miles of land. Activity outside the 190 square mile area may include source vessels turning while using mitigation guns, vessel transit, and project support and logistics.

Seismic operations will be conducted in three transition zones: offshore, surf zone, and onshore. Operations will be conducted using 10 vessels, and one helicopter.

Preliminary scouting activities and camp setup may begin as early as April 2014. Seismic survey activity is anticipated to start approximately July 1, 2014, depending on conditions.

Environmental Assessment

BOEM evaluated the Proposed Action and a No Action alternative. Other alternatives were not identified through internal or external scoping (public comment period).

Alternative 1. No Action.

Under this alternative, BOEM would not issue BPXA a permit for the Proposed Action. This alternative would delay or preclude BPXA from obtaining geophysical data to inform future decisions about potential exploration and development of Beaufort Sea OCS leases and could thereby result in delayed or lost opportunities to develop the OCS resources. This alternative would also delay or avoid potential impacts to the environment identified in the EA.

Alternative 2. Proposed Action.

Under this alternative, BOEM would issue BPXA a permit for the Proposed Action. Geophysical data would be obtained to identify and map potential hydrocarbon-bearing formations and the geologic structures that surround them, which would help inform future decisions about potential exploration and development of the Beaufort Sea OCS. Adverse effects to the environment would occur; the level of these impacts would range from negligible to moderate, as defined in Appendix A of the EA, depending on the specific environmental resource. Anticipated impacts of the Proposed Action on these resources are summarized below:

- **Physical Resources**

The Proposed Action would have a negligible effect on air quality because no pollutants would exceed recognized thresholds defining a de minimis or negligible effect. The level of effects on water quality would be negligible, including temporary localized effects such as individual seafloor diggings and dislodging of nodes or non-point source runoff from construction and maintenance onshore.

- **Biological Resources**

The Proposed Action would have negligible to moderate, short-term effects on biological resources. The Proposed Action takes place on land and in open water; effects on fish, their habitat, and prey would be negligible because the effects would be localized or dispersed. The level of effects on lower trophic organisms is expected to be negligible due to number of nodes to be deployed and recovered. The level of effects on marine and coastal birds from land-based operations would be moderate; although the population-level effect of bird strikes during offshore operations would be minor, field crews would be conducting land-based operations during the nesting season and field crew activity could cause nest loss or abandonment. The level of effects on marine mammals would be minor because of potential habitat disturbance including the presence of people, staging equipment, vessel traffic, and seismic disturbance. The level of effects on terrestrial mammals would be negligible because vehicle and aircraft traffic would be localized and temporary. It is anticipated that these effects would be minimized with implementation of typical monitoring and operational procedures as identified in BPXA's incidental harassment authorization (IHA) and letter of authorization (LOA) applications.

- **Subsistence Activities, Economy, Public Health, Environmental Justice, and Archaeological Resources**

Subsistence Activities - The Proposed Action would have negligible to minor effects on subsistence harvests for the communities of Nuiqsut and Kaktovik. Potential impacts may come from aircraft, on-ice vehicles, equipment, and personnel operating in the project area. These impacts may be minimized through plans of cooperation and use of local subsistence resource representatives.

Economy/Employment - The Proposed Action would have a negligible effect on employment, income, and revenue levels of the North Slope Borough (NSB). These activities are short term and temporary, involve low levels of new employment and associated income, and would generate no property tax revenues accruing to the NSB or State of Alaska.

Public Health and Environmental Justice - The Proposed Action is short-term and temporary and would have a negligible level of effect on and Environmental Justice in the NSB communities.

Archaeological Resources – The Alaska State Historic Preservation Officer has been contacted and concurs with BOEM’s finding that no historic properties will be affected by the Proposed Action, therefore no consultation is necessary.

Significance Review (40 CFR 1508.27)

Consistent with 40 CFR 1508.27, significance is evaluated by considering both context and intensity. The potential significance of an action must be analyzed in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the Proposed Action. For short-term, site-specific actions such as this one, significance usually depends upon the effects in the specific location rather than in the world as a whole. Both short-term and long-term effects are relevant.

For this Proposed Action, the context is the open water and terrestrial environment and the communities of Nuiqsut and Kaktovik. It is within this context that the intensity of potential effects of the Proposed Action is considered. Intensity refers to the severity of effect. Consistent with 40 CFR 1508.27(b), the following ten factors have been considered in evaluating the intensity of the Proposed Action:

- 1. Impacts that may be both beneficial and adverse.** Potential adverse effects of the Proposed Action to the physical environment, biological resources, and subsistence activities, in consideration of mitigation measures already incorporated into the Proposed Action and required by the LOA and IHA are expected to be negligible to moderate. Potential beneficial impacts for local residents employed in support of these activities are expected to be temporary and negligible. Therefore, the level of adverse and beneficial effects of the Proposed Action does not render the potential impacts significant.
- 2. The degree to which the Proposed Action affects public health or safety.** Within its environmental analysis, BOEM considered the distance of the Proposed Action from the local communities, potential effects of expected allowable discharges and emissions, and the potential for the Proposed Action to interfere with subsistence activities. Due to the limited duration and location of the Proposed Action, the Proposed Action is expected to have no effects on public health or safety. Therefore, the degree to which the Proposed Action may affect public health or safety does not render the potential impacts significant.
- 3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.** The Proposed Action would not take place in, or otherwise adversely affect, any historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. Consideration of potential site specific effects of the Proposed Action on unique geographical areas does not render the potential impacts significant.
- 4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.** Whaling is a culturally self-defining practice of the Iñupiat people. Past stakeholder concerns related to anthropogenic noise in the Arctic marine environment have focused on the potential effects to marine species, particularly the bowhead whale, from impulse sounds associated with high-energy seismic surveys such as the Proposed Action. Based on the timing and spatial location of the Proposed Action, there will be no impacts to bowhead whale migration. Other concerns have included the potential effects of noise on other marine mammals,

fish, and birds; and potential interference with subsistence activities. However, no significant effects to these resources are anticipated. Therefore, the degree to which the potential effects of the Proposed Action may be highly controversial does not render the potential impacts significant.

- 5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.** There has been considerable public discourse regarding the effects of seismic activities on biological resources and subsistence hunting activities. There is scientific evidence suggesting that specific levels of sound may injure, disturb, or displace marine mammals. Further, traditional knowledge has also suggested that seismic surveys can disturb and displace marine mammals and reduce their availability for subsistence harvest.

However, seismic surveys have been conducted in the Federal waters of the Beaufort Sea since the 1960's. BOEM environmental analyses (to include Environmental Assessments, Environmental Impact Statements, and Biological Evaluations) have consistently found that, if appropriate avoidance and mitigation measures are required, even large-scale seismic survey activities have not caused significant impacts to the environment or to subsistence activities, and these analyses have not been contradicted by monitoring results or existing scientific literature. Moreover, the seismic arrays to be used here are much smaller and less intensive than the majority of those previously analyzed activities.

The effects of the Proposed Action are not expected to be highly uncertain, nor does the Proposed Action involve unique or unknown risks. Therefore, the degree to which the potential effects of the Proposed Action may be highly uncertain or involve unique or unknown risks does not render the potential impacts significant

- 6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.** BPXA's permit application for the Proposed Action was submitted in accordance with 30 CFR Part 551, and the proposed activities are consistent with the overall objectives of the OCSLA. In compliance with the OCSLA, the regulations at 30 CFR Part 551, and DOI policy in 516 DM 15, BOEM has conducted a technical and environmental review of the Proposed Action. All Geological and Geophysical permit applications are subject to a review and evaluation by BOEM based on the specific facts of each permit and the proposed activities at issue. Thus, the Proposed Action here will not serve as a precedent for future actions or represent a decision in principle about a future consideration. Accordingly, the degree to which the Proposed Action may establish a precedent for future actions or represent a decision in principle about a future consideration does not render the potential impacts significant.
- 7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.** The EA considered the potential cumulative effects of the Proposed Action and other expected activities in 2014. BOEM concludes that the Proposed Action is not reasonably anticipated to produce significant impacts or to incrementally add to the effects of other activities to the extent of producing significant effects. Therefore, the degree to which the potential effects of the Proposed Action may be related to other actions with individually insignificant but cumulatively significant impacts does not render the potential impacts significant.
- 8. The degree to which the Proposed Action may affect districts, sites, highways structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.** The Proposed Action does not include seafloor-disturbing activities (e.g., anchoring). Allowable

discharges and emissions are not expected to affect the coastal area. The Proposed Action is not expected to adversely affect, or cause the loss of, scientific, cultural, or historic resources. Therefore, the degree to which the Proposed Action may adversely affect historic resources does not render the potential impacts significant.

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.** The Proposed Action is within the scope of the activities covered by current ESA consultations. These documents conclude that activities of the type contemplated in the Proposed Action are not likely to jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat.

The EA concludes that any adverse effects from the Proposed Action are expected to be short-term and localized. No destruction or adverse modification of critical habitat is anticipated. Therefore, the degree to which the Proposed Action may adversely affect endangered or threatened species or its habitat does not render the potential impacts significant.

10. **Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.** In determining whether the Proposed Action may violate Federal, State, or local law or requirements imposed for the protection of the environment, BOEM considered the information in the permit application from BPXA, the Plan of Operations and other supporting documents, as well as BPXA's LOA and IHA. Approval of the permit would be a conditional approval. Under the conditional approval, BPXA may not commence survey activities prior to the receipt of all necessary permits and authorizations. BOEM contacted the Alaska State Historic Preservation Officer to confirm that no historic properties would be affected by the Proposed Action and no formal consultation is necessary.

There is no indication that the Proposed Action, if approved, would be a violation of Federal, State, or local law or requirement imposed for the protection of the environment.

As an additional condition of their permit approval, BPXA would be required to implement the following special conditions related to the USFWS 2012 BO to avoid or minimize adverse effects to ESA-listed birds (spectacled eiders, Steller's eiders, and yellow-billed loons):

- a. BPXA will minimize the use of high-intensity work lights on their vessels, especially within the 20-m (66 ft) bathymetric contour. Exterior lights will only be used as necessary to illuminate active, on-deck work areas during periods of darkness or inclement weather; otherwise they will be turned off. Interior and navigation lights should remain on as needed for safety.
- b. All bird encounters on BPXA vessels are to be reported within 3 days to BSEE-EED and BOEM-RE. Each report shall include the following items to be considered complete:
 - Date and Time the bird was first observed.
 - Location of vessel in decimal degrees (format: latitude XX.XXXX longitude - XXX.XXXX).
 - Species, identified to lowest possible taxonomic level using standardized AOU codes.
 - Weather (at time bird first observed): wind speed, fog, rain/snow.
 - General weather 24 hours prior to bird observation.
 - Photographs of each bird (if practicable). For dead birds clear images of wing spread, top and bottom, and head views should be provided.

- Vessel operational status: at anchor/adrift or underway/in transit.
- Any indications that lighting may have factored into attracting birds to the vessel (e.g., was extra lighting on because it was dark or a specific activity was ongoing?).
- Any additional comments on bird behavior, physical description, injury or fate.

Finding of No Significant Impact

I have considered the evaluation of the potential effects of the Proposed Action and the review of the 40 CFR 1508.27 significance factors. It is my determination that the Proposed Action would not cause any significant impacts and complies with the standards such that no potentially significant impacts are expected to occur as a result of the Proposed Action. It is my determination that implementing the Proposed Action does not constitute a major federal action significantly affecting the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969.



Lisa Toussaint
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Alaska OCS Region

5/8/14

Date

Attachment: Environmental Assessment, BP Exploration (Alaska) inc. North Prudhoe Bay 2014 OBS Geophysical Seismic Survey Beaufort Sea, Alaska. OCS EIS/EA BOEM 2014-054.

Copies of the EA can be obtained by request to Bureau of Ocean Energy Management, Alaska OCS Region, 3801 Centerpoint Drive, Suite 500, Anchorage, AK 99503-5823 or (800) 764-2627, or by accessing <http://www.boem.gov/ak-eis-ea/>.