

# FINDING OF NO SIGNIFICANT IMPACT

Shell Gulf of Mexico Inc. Geophysical Survey  
2013 Ancillary Activities  
Ice Gouge and Shallow Hazards Survey  
Chukchi Sea, Alaska

## Introduction

The Bureau of Ocean Energy Management (BOEM) has prepared an environmental assessment (EA) of the potential effects of ancillary activities that Shell Gulf of Mexico (Shell) plans to conduct in 2013 in the Chukchi Sea Planning Area of the Alaska outer continental shelf (OCS).

The ancillary activities are detailed in a notice (Notice) submitted by Shell to BOEM on April 19, 2013, and titled "Ancillary Activity Notice of Intent for Marine Surveys in the Chukchi Sea, Alaska, During 2013". The Notice describes "ancillary activities," which are defined in 30 CFR 550.105 and 550.207, authorized under the OCS Lands Act, 43 USC 1331, *et seq.*, and regulated under 30 CFR 550.207-550.210. The Notice also describes survey activities to occur off-lease; together with the ancillary activities, these are referred to as the Noticed Activities.

On May 22, 2013, a notice of preparation of an EA for Shell's Noticed Activities was published on Regulations.gov as docket BOEM-2013-0032, sent to potentially affected stakeholders, and posted on the BOEM Alaska OCS Region website. The notice of preparation 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 June 05, 2013. Only one comment was received, from a private individual, stating the hope that ancillary activities would not proceed.

BOEM prepared an EA to assist with BOEM planning and decision making, specifically, whether the ancillary activities comply with the standards set forth in 30 CFR 550.202(a), (b), (d) and (e), as required by 30 CFR 550.209. Particularly relevant for purposes of environmental analysis is 30 CFR 550.202(e), which requires that ancillary activities "not cause undue or serious harm or damage to the human, marine, or coastal environment."

## Purpose of the Noticed Activities

The purpose of the Noticed Activities is to support future exploration activities by generating data necessary to evaluate the physical environment on and in the vicinity of Shell's leases to inform future decisions about the location of potential exploration facilities. The ancillary activities would also further the purpose of the OCS Lands Act to make the OCS available "for expeditious and orderly development, subject to environmental safeguards" (43 USC 1332(4)).

## Description of the Noticed Activities

A detailed description of the Noticed Activities is set forth in the Notice. In short, Shell plans to conduct ice gouge, site clearance, and shallow hazard surveys during the 2013 open water season. The ice gouge surveys will cover approximately 621 mi (1,000 km). They will use acoustic methods to investigate the depth, width, orientation, frequency and distribution of ice gouges, profile the seafloor topography, and characterize the upper 34 ft (10 m) of the seabed (seafloor and sub-seafloor). The site clearance and shallow hazards surveys will cover approximately 1,988 mi (3,200 km) of track lines; they will use acoustic methods to characterize the upper 3,128 ft. (1,000 meters) of the seabed and sub-seafloor at potential exploratory drilling locations. The surveys will gather data on bathymetry, seabed topography and other characteristics (such as ice gouges), potential shallow geohazards (such as shallow faults and gas zones), and the presence of possible archeological features. The surveys will be conducted using the conventional survey method where acoustic instrumentation will be towed behind the survey vessel. The

timeframe for the Noticed Activities is mid-July to mid-October, depending on ice and weather conditions.

## **Environmental Assessment**

BOEM evaluated and compared the Noticed Activities and a No Action alternative in its EA.

### **Alternative 1. No Action.**

Under Alternative 1, Shell's Noticed Activities would not occur. This alternative would delay or preclude Shell from obtaining data to inform future decisions about potential exploration and development of Chukchi Sea 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. Noticed Activities.**

Shell would conduct the Noticed Activities in the Chukchi Sea during 2013. Data about the bathymetry, seabed topography, potential shallow geohazards and other characteristics of the seabed and sub-seafloor would be obtained, which would help inform future decisions about potential exploration and development in the Chukchi Sea. Adverse effects to the environment would occur; the level of these impacts would range from negligible to minor, depending on environmental resource. Anticipated impacts of the Noticed Activities on the environment are summarized below.

- **Physical Resources**

The level of effects on air quality would be negligible because no pollutants would exceed recognized thresholds defining a de minimis, or negligible effect. Effects from potential vessel discharges on water quality would be temporary and could result in a minor level of effect.

- **Biological Resources**

Shell's Noticed Activities are expected to have negligible to minor, short-term effects on biological resources. Effects on marine mammals due to disturbance would be negligible with the implementation of typical monitoring and operation procedures as identified in the IHA and LOA. Walrus is an exception, and could be encountered more frequently during a brief migration during the open water season; the potential adverse effects on walrus could rise to minor. Effects on fish could be short-term disturbances of a small number individuals; the level of effects would be negligible. The level of effects on marine and coastal birds could be minor, primarily due to the potential for collisions with vessels. There may be disruption of life cycles for some lower trophic organisms, but these effects are expected to be negligible due to the temporary nature of the activities.

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

Subsistence Activities - The Noticed Activities could cause negligible to minor impacts to marine subsistence hunts. Negligible to minor effects on harvesting of bowhead whales, spotted, ringed and bearded seals, fish species and land based animals are anticipated. Effects should not be long-term but limited to the season in which the activities are conducted: July – October, 2013.

Economy/Employment - The activities that would be conducted under the Noticed Activities are short term and temporary, involving low levels of new employment and associated income and no generation of property tax revenues accruing to the North Slope Borough (NSB) or State of Alaska. Therefore, the activities are expected to have a negligible effect on employment, income, and revenue levels of the NSB.

Public Health and Environmental Justice - The Noticed Activities do not have the potential to have more than negligible to minor effects on public health. The Noticed Activities will have no long-term

consequences to public health and well-being in NSB communities. The Noticed Activities will have a negligible level of effect on Environmental Justice.

Archaeological Resources – There will be no bottom-disturbing activities on any other activities with the potential to affect historic resources as defined under the National Historic Preservation Act.

### **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 setting. For site-specific activities, such as this one, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short-term and long-term effects are relevant. For the Noticed Activities, the context is one of a short-term action in an offshore environment. Particularly relevant for purposes of environmental analysis is 30 CFR 550.202(e), which requires that ancillary activities “not cause undue or serious harm or damage to the human, marine, or coastal environment.”

It is within this context that the intensity of potential effects of the Noticed Activities is considered. Intensity refers to the severity of effect. Consistent with 40 CFR 1508.27(b), the following ten factors have been considered based on the detailed analysis in the EA of the impacts of the Noticed Activities on specific environmental and other resources:

- 1. Impacts that may be both beneficial and adverse.** Potential adverse effects of the Noticed Activities to the physical environment, biological resources, and subsistence activities, with consideration of certain mitigation measures already incorporated into the Noticed Activities (i.e., design features), are expected to be below thresholds that define significant effects in Appendix B of the EA. Overall, adverse impacts are expected to be negligible to minor. The potential beneficial impacts for local residents employed in support of these activities are expected to be temporary and negligible, although beneficial. Therefore, the level of adverse and beneficial effects of the Noticed Activities does not render the potential impacts significant.
- 2. The degree to which the Noticed Activities affects public health or safety.** Within its environmental impact analysis, BOEM considered the distance of the Noticed Activities from local communities; potential effects of expected allowable discharges and emissions; and the potential for the Noticed Activities to interfere with subsistence activities. The Noticed Activities are not expected to adversely affect public health or safety. Therefore, the degree to which the Noticed Activities 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 Noticed Activities 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 Noticed Activities 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 Inupiat 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 Noticed Activities. Concerns have included the potential effects of noise on other marine mammals, fish, and birds; the biological significance of bowhead whales' responses to anthropogenic marine noise; and potential interference with subsistence activities. However, no substantial questions exist as to whether the Noticed Activities may cause significant effects to these or any resource. Therefore,

the degree to which the potential effects of the Noticed Activities 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 Chukchi Sea since the 1960's. BOEM environmental analyses (to include Environmental Assessments, Environmental Impact Statements, and Biological Evaluations) have consistently found that even large-scale seismic survey activities have not caused any 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. Independent analyses by NMFS and USFWS have verified these conclusions.

The effects of the Noticed Activities are not expected to be highly uncertain, nor do the Noticed Activities involve unique or unknown risks. Therefore, the degree to which the potential effects of the Noticed Activities 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.** Shell submitted the Ancillary Activities Notice in compliance with 30 CFR 550.208. Shell's proposed ancillary activities in the vicinity of the company's Chukchi Sea leases are consistent with the overall objectives of the OCS Lands Act. In compliance with the OCS Lands Act and DOI policy in 516 DM 15, BOEM has conducted a technical and environmental review on the Noticed Activities. Although the data and information obtained as a result of the Noticed Activities would inform any decision by Shell to proceed with submission of an Exploration Plan (EP), BOEM's response to this ancillary activity notice does not constrain agency decisions on any future EPs or responses to ancillary activity notices. This action will not establish a precedent for future actions nor represent a decision in principle about a future consideration. Therefore, the degree to which the Noticed Activities may establish a precedent for future actions or represents 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 Noticed Activities and other expected activities in 2013. The EA concludes that the Noticed Activities are not reasonably anticipated to produce significant impacts or to incrementally add to the effects of other activities to the extent of producing significant effects. The Noticed Activities are not directly or causally related to other actions with cumulatively significant impacts. Therefore, the degree to which the potential effects of the Noticed Activities 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 action may adversely 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 Noticed Activities do not include seafloor-disturbing activities (e.g., anchoring). Allowable

discharges and emissions are not expected to affect the coastal area. The Noticed Activities are not expected to adversely affect, or cause the loss of, any scientific, cultural, or historic resources. Therefore, the degree to which the Noticed Activities 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 Noticed Activities are within the scope of the activities covered in the current ESA consultations. These documents conclude that activities of the type contemplated in the Notice are not likely to jeopardize the continued existence of any listed species. Prior to conducting these ancillary activities, Shell must also receive incidental take authorization from NMFS and USFWS under the Marine Mammal Protection Act. For marine mammals, such authorizations are only available where the Service determines that the number of marine mammals taken would be small, the activities would have no more than a negligible impact on the stock, and there would be no unmitigable adverse effects to subsistence activities.

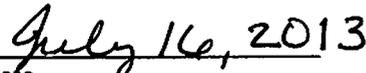
Consistent with those determinations, the EA concludes that any adverse effects from the Noticed Activities are expected to be short term and localized. No adverse modification of critical habitat is anticipated. Therefore, the degree to which the Noticed Activities may adversely affect endangered or threatened species or designated critical 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 Noticed Activities may violate Federal, State, or local law or requirements imposed for the protection of the environment, BOEM considered documentation in Shell's Notice and considered their commitment to obtain incidental take authorizations from both NMFS and USFWS. BOEM requires compliance with all applicable Federal, State, and local laws and requirements. There is no indication that the Noticed Activities threaten a violation of Federal, State, or local law or requirement imposed for the protection of the environment.

### **Finding of No Significant Impact and Compliance with 30 CFR 550.209**

I have considered the evaluation of the potential effects of the Noticed Activities and the review of the 40 CFR 1508.27 significance factors. It is my determination that the Noticed Activities would not cause any significant impacts and comply with the standards set forth in 30 CFR 550.202(a), (b), (d) and (e), as required by 30 CFR 550.209, and do 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.

  
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Lisa Toussaint  
Regional Supervisor, Office of Environment  
Alaska OCS Region

  
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Date

Attachment: Environmental Assessment, Shell Gulf of Mexico, 2013 Ancillary Activities, Chukchi Sea, Alaska. OCS EA BOEM 2013-01161.

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 [www.boem.gov](http://www.boem.gov).