

## FINDING OF NO SIGNIFICANT IMPACT

HAK G&G Seismic Survey EA  
Cook Inlet, Alaska

### Introduction

In accordance with the National Environmental Policy Act (NEPA), 42 USC 4261, *et seq.*, the Council on Environmental Quality regulations at 40 CFR 1501, *et seq.*, Department of the Interior (DOI) regulations implementing NEPA at 43 CFR Part 46, and Bureau of Ocean Energy Management (BOEM) policy, BOEM prepared an environmental assessment (EA) of the potential effects of a three-dimensional (3D) seismic survey proposed by Hilcorp Alaska, LLC (HAK). The project would occur in the Cook Inlet Planning Area of the Alaska outer continental shelf (OCS) for approximately 45 to 60 days during late summer / early fall of 2019.

The seismic survey (Proposed Action) is described in HAK's permit application to conduct geological and geophysical exploration (G&G permit) submitted to BOEM on October 18, 2018, pursuant to BOEM regulations at 30 CFR Part 551. Since the proposed survey area includes OCS tracts currently leased by Hilcorp, the permit application also constitutes a notice of ancillary activities per 30 CFR 550.208.

A notice of preparation of an EA to evaluate the environmental impacts of the Proposed Action was published on January 28, 2019, on <https://www.regulations.gov> (docket BOEM-2019-0002), and posted on the Alaska OCS Region website. The notice stated that BOEM was seeking public involvement for preparing an EA of a G&G three dimensional (3D) seismic survey in the Cook Inlet. Comments were accepted through February 7, 2019. No comments were received from the general public. The U.S. Fish and Wildlife Service agreed to be a cooperating agency, and provided comments on the ESA consultation section of the EA.

BOEM prepared the EA to determine whether the Proposed Action may result in significant effects (40 CFR §1508.27) such that an environmental impact statement is required. The EA analyzes the potential for significant effects from the Proposed Action on the human environment, which is interpreted comprehensively to include 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 §1501.3(b)), namely, to help inform a determination as to whether the Proposed Action would comply with applicable statutory and regulatory standards (*see* 43 USC §1340, 30 CFR Parts 550 and 551).

### Proposed Action

The purpose of the Proposed Action is to gather geophysical data that helps identify and map potential hydrocarbon-bearing formations and the geologic structures that may surround them. This information would provide critical insight into the depositional and structural history of the petroleum system and viability of possible oil and gas prospects. A 3D G&G survey provides unique data that are necessary for future planning and subsequent exploration and development of OCS leases in Cook Inlet. The need for this action is to further the orderly development of OCS resources in accordance with Outer Continental Shelf Lands Act (OCSLA) (43 United States Code (USC) § 1331 *et seq.*). OCSLA requires the OCS to be made available for expeditious and orderly development, subject to environmental safeguards, in a manner consistent with the maintenance of competition and other national needs (43 USC § 1332 (3)).

HAK submitted a G&G Exploration Permit Application to the U.S. Department of the Interior, Bureau of Ocean Energy Management (BOEM) on October 18, 2018, to conduct a 3D seismic survey in the lower Cook Inlet in Alaska. HAK's proposed seismic survey would acquire data on approximately 375 square

miles of Outer Continental Shelf (OCS) waters. The survey area is comprised of 42 OCS blocks in lower Cook Inlet, 8 of which are leased by HAK (6357, 6405, 6406, 6407, 6455, 6456, 6457, and 6458).

The survey program includes vessel mobilization / demobilization, deployment of gear, and the survey itself. Active data collection would take approximately 30 days, but the survey program would last for approximately 45 to 60 days, depending on delays due to weather, equipment, or marine mammal presence. The survey would occur between June 1 and October 31.

## **Environmental Assessment**

BOEM evaluated the Proposed Action and a No Action alternative. No additional alternatives that met the purpose and need for the project identified by BOEM or suggested during the public involvement period.

### ***No Action Alternative***

Under this alternative, BOEM would not issue HAK a permit to conduct the proposed 2019 seismic survey, meaning the Proposed Action would not occur. HAK would not be able to identify and map potential hydrocarbon-bearing formations and the geologic structures that surround them, which could slow or prevent future development of these formations. This alternative could thereby result in delayed or lost opportunities to develop OCS resources. This alternative would also delay or avoid potential impacts to the environment identified in the EA.

### ***Proposed Action***

Under this alternative, BOEM would issue HAK a permit for the Proposed Action, and the Proposed Action would occur. 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 Cook Inlet OCS.

Adverse effects to the environment would occur; the level of these impacts would range from negligible to minor, depending on the specific environmental resource and the mitigation measures employed.

Anticipated impacts of the Proposed Action are summarized below:

- ***Physical Resources***  
Projected emissions from the Proposed Action would have a negligible level of effect on coastal air quality. This is due to the mobile nature of the vessels combined with the duration of the survey (30-45 days), which would prevent/minimize transport of emissions to a single onshore location. The quality of onshore air would remain better than required by Federal standards.

For water quality, the effects of the Proposed Action would be associated with vessel discharges. Vessel discharges would be localized, brief (e.g., vessel discharges and deck runoff), and result in a negligible level of effect to water quality.

- ***Biological Resources***  
The Proposed Action is expected to have environmental effects ranging from negligible to minor on biological resources.

Effects of the Proposed Action on fish and invertebrates would be limited to the areas surrounding the vessels and would likely not be detectable once the vessels have left the area. Fish may be temporarily displaced from the area where vessels are operating and airguns are in use. The effects are limited to discrete locations and times, would not persist, and are not additive. The Proposed Action is also unlikely to affect the timing or success of fish runs, or to have population level impacts. The seismic activity would occur away from spawning streams and

would be in areas where fish could divert around the source of disturbance. Therefore, the level of effects for the Proposed Action with respect to fish and invertebrate species is negligible.

Primary sources of potential impacts of the Proposed Action on birds are underwater seismic survey noise, vessel traffic, and light attraction/collision hazards. Seismic survey noise could injure a few individual birds over the course of the survey. Vessel presence and activity could disturb birds, but flocks of migrating or molting birds generally move away from vessel activity. Attraction to and/or collisions with the vessels associated with the Proposed Action could result in injury and death to individual birds or migrating flocks of birds. However, exposure of most birds to hazards associated with the Proposed Action would be brief and would not affect enough individuals to have measurable population level impacts. Overall, Cook Inlet bird populations are expected to experience no more than minor impacts.

The Proposed Action has the potential to affect all of the marine mammal species found in Cook Inlet. Although some individuals could be injured, the most likely effects on marine mammals would primarily be behavioral responses that are short-term and non-injurious. Such behavioral responses would include avoidance of areas near vessels and operating airgun arrays by some species. No critical habitat (as designated under the Endangered Species Act (ESA)) areas are within the survey area itself, nor will such areas be affected by the Proposed Action. However, there are nearshore feeding areas used by beluga whales near the survey area, and transmission of noise into these feeding areas could result in behavioral impacts. To minimize these effects, the survey vessel would not acquire seismic data from blocks adjacent to the nearshore feeding areas and would only use those blocks as vessel turn-around areas. Overall, effects from the Proposed Action on marine mammals would range from negligible to minor.

- *Sport and Commercial Fishing*

BOEM anticipates negligible impacts to nearshore sport fishing and clamming because there would be no space use conflicts with the Proposed Action. For sport fishing, there could be short-term and localized displacement of boats and fishers during survey operations, potentially resulting in minor adverse impacts from the Proposed Action.

Similarly, impacts to commercial fishing could occur through space use conflicts with seismic survey vessel/activities. If the Proposed Action overlaps portions of the salmon fishing season and commercial halibut season, BOEM anticipates that the increase in vessel activity could result in localized and short-term, and thus minor, adverse impacts to commercial fishing.

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

For nearshore subsistence fishing and harvest of seals and marine invertebrates near communities, BOEM estimates little to no adverse impacts from the Proposed Action because there would be no space use conflicts. However, there is potential for space use conflicts between offshore subsistence fishing vessels and vessels used in the Proposed Action. The impacts would be temporary, but such interference could delay subsistence users and they could miss some potential harvest. Subsistence harvesters would most likely have time to fish at other locations during any single trip, or at other times and places during the season. Overall, BOEM estimates negligible to minor impacts to subsistence activities from the Proposed Action. Environmental Justice / Public Health impacts from the Proposed Action are expected to range from negligible to minor based on the analyses described for air and water quality, and subsistence and sociocultural activities.

The Proposed Action would have negligible effects on the Kenai Peninsula Borough (KPB) economy. While there may be some employment opportunities and some increased revenues accruing from lodging, food, and sales taxes, the proposed activities are short-term, temporary,

and localized. Overall, there would be little to no positive or adverse effects on employment, income, revenues, population, infrastructure, or other economic drivers of the KPB and its communities.

The Proposed Action by its design would not make contact with the seafloor. For that reason, the Proposed Action would not have the potential to cause effects on historic properties. Thus, impacts to archaeological resources from the Proposed Action are expected to be negligible.

### **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 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.

The 10 subsections below report impact conclusions from the EA. BOEM applies a scale to categorize potential impacts and evaluate the significance of those impacts. The scale takes into account the context and intensity of the impact and includes the following as categories: negligible, minor, moderate, and major. Impacts that fall in the category of “major” are considered to be significant under NEPA.

For this Proposed Action, the context is the general area of lower Cook Inlet. It is within this context that the intensity of potential effects of the Proposed Action is considered. Intensity refers to the severity of effect. Pursuant to 40 CFR §1508.27(b), the following 10 factors have been considered in evaluating the significance of the Proposed Action:

1. **Impacts that may be both beneficial and adverse.** Potential adverse effects of the Proposed Action to physical, biological, and socio-cultural resources are expected to occur at negligible to minor levels, depending on the resource. Significant adverse effects are not anticipated for any resource. Any slight positive economic impacts would result from local residents employed in support of the Proposed Action. 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 anticipated discharges and emissions, and the potential for the Proposed Action to interfere with subsistence activities. Efforts to communicate with, and minimize effects to, local communities include publishing a Notice to Mariners of the pending seismic survey to minimize potential conflict with vessels. HAK has also developed a Stakeholder Engagement Program to notify interested parties about the proposed project, gather feedback about potential impacts, and work with stakeholders to mitigate impacts of the project. Due to the nature, location, and limited duration of the Proposed Action, it is expected to have little to no effect 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.** Several environmentally important areas surround greater Cook Inlet. Those in proximity to the Proposed Action include Lake Clark National Park, Alaska Maritime National Wildlife Refuge, Katmai National Park, Kachemak Bay State Critical Habitat Area, and McNeil River State Game Sanctuary. The Proposed Action would not take place in, or otherwise adversely affect, these areas. Additionally, BOEM analyzed potential effects on historic and cultural resources, subsistence

activities, and harvest patterns. 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.** BOEM evaluated the degree to which the potential effects of the proposed activities may be highly controversial. Per 43 CFR 46.30, controversial refers to circumstances where a substantial dispute exists as to the environmental consequences of the proposed action and does not refer to the existence of opposition to a proposed action, the effect of which is relatively undisputed. In developing the EA, BOEM reviewed relevant studies, scientific literature, past BOEM NEPA analyses, and National Marine Fisheries Service (NMFS)/U.S. Fish and Wildlife Service (USFWS) (collectively, the Services) analyses concerning seismic surveys in Cook Inlet. The potential effects of seismic surveys such as those proposed here have been thoroughly studied and are well understood. No substantial disputes about the environmental consequences of such surveys are evident from the scientific literature, past analyses of similar activities in Cook Inlet, or the present EA. The effects of the Proposed Action are therefore not highly controversial, and do 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.** In determining the significance of effects of the Proposed Action, BOEM evaluated the degree to which the potential effects may be highly uncertain or involve unique or unknown risks. BOEM evaluated the potential effects of seismic activities on biological resources and subsistence hunting activities, including the potential for seismic survey noise to injure, disturb, or displace marine mammals. Seismic surveys have been conducted in the Federal waters of the Cook Inlet since the 1960s. BOEM environmental analyses (Environmental Assessments, Environmental Impact Statements, and Biological Evaluations) have consistently found that with appropriate mitigation measures (such as those incorporated into HAK's proposed action here), even large-scale seismic survey activities would not cause significant impacts to the environment or to subsistence activities. To date, no marine mammal injuries attributable to seismic surveys in Cook Inlet or in Alaska have been reported. Furthermore, there have been no reported instances of reduced subsistence activities or inability to achieve a harvest quota due to seismic activity. 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 do 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.** The HAK G&G permit Application was submitted in accordance with 30 CFR Part 551. Per BOEM regulations, all G&G permit applications are subject to individual review and evaluation by BOEM based on the proposed survey parameters and specific activities described therein. BOEM approves or disapproves each G&G permit application on its own merits, irrespective of BOEM's prior decisions on other applications. Thus, the Proposed Action evaluated here will not serve as a precedent for future actions, nor will it represent a decision in concept or principle about future permit applications submitted for approval. 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 Proposed Action's potential contribution to cumulative effects when combined with other past, present, and reasonably foreseeable activities, including past, present, and reasonably foreseeable activities for the Cook Inlet

OCS in the general area of lower Cook Inlet. The EA effects analyses indicate that the Proposed Action is not reasonably anticipated to produce significant direct or indirect impacts, nor is it anticipated to combine with the effects of other activities such that the incremental effects of the action result in cumulatively significant impacts. 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, highway 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.** BOEM evaluated the potential impacts from the Proposed Action on National Register eligible sites, structures, or objects, and scientific, cultural, and historic resources. BOEM determined that impacts to cultural (archaeological) resources are expected to be negligible with adherence to the permit conditions outlined in the EA. The Proposed Action, implemented with these specific mitigation measures, is not expected to adversely affect or cause the loss or destruction of any scientific, cultural, or historic resources. Therefore, the degree to which the Proposed Action may adversely affect these 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 ESA-listed marine mammal species that may occur within or near the survey area are the Cook Inlet beluga whale, Steller sea lion, and northern sea otter. Critical habitat areas have been designated for each of these species in the Cook Inlet region. However, there are no critical habitat areas within or immediately adjacent to the survey area, and no areas will be affected by the Proposed Action. The EA determined that impacts from the proposed survey would be limited to temporary disturbances to small numbers of listed marine mammals, and would not exceed a negligible to minor level of effect to each species. The EA did not identify any adverse impacts to any designated critical habitat for listed species. The fact that HAK must obtain MMPA incidental take authorizations prior to conducting its proposed survey provides further assurance against significant impacts to ESA-listed marine mammals. MMPA authorizations are only available where the Services determine, among other things, that the number of marine mammals taken incidentally would be small, and that the activities would have no more than negligible impact on the stock.

In regard to ESA-listed birds (i.e., Steller's eiders), the EA determined that the proposed survey could result in short-term disturbance to a low number of individual birds in Cook Inlet, among them the listed eiders. The survey could also result in possible fatalities from bird strikes. No Steller's eider critical habitat would be affected. The EA concluded that Cook Inlet birds, which include Steller's eiders, could be briefly displaced due to vessel noise/disturbance. Additionally, while collision hazards could be lethal, the short project duration would be brief, likely affecting few individuals.

The EA's conclusions are consistent with the conclusions of BOEM's recent Section 7 consultations with USFWS and NMFS. Both the USFWS 2017 BO and the NMFS 2017 BO analyzed G&G surveys of the type proposed here, and concluded that such activities are not likely to jeopardize the continued existence of any listed species, or destroy, or adversely modify critical habitat. In consideration of the above, 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 information submitted in the permit application from HAK including the Plan of Operations, MMPA authorizations from NMFS and USFWS, and other supporting documents.

BOEM's permit will be issued once all appropriate Federal, State, and other permits are received. There is no indication that the Proposed Action, if approved, would threaten a violation of Federal, State, or local law or requirement imposed for the protection of the environment. Therefore, consideration of whether the Proposed Action threatens to violate Federal, State, or local law or requirements imposed for the protection of the environment does not render the potential impacts significant.

***Finding of No Significant Impact***

BOEM has considered the evaluation of the potential effects of the Proposed Action and reviewed the 40 CFR §1508.27 significance factors. BOEM has determined that the Proposed Action would not cause any significant impacts and 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.

*acting for*  
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7-12-19  
Date

**Attachments:**

Environmental Assessment, 2019 HAK Seismic EA, Cook Inlet, Alaska. OCS EIS/EA BOEM 2019-035.

NMFS Final Biological Opinion on the Effects of Oil and Gas Leasing and Exploration Activities, Cook Inlet, Lease Sale 244. September 13, 2017.

USFWS Final Biological Opinion on the Effects of Oil and Gas Leasing and Exploration Activities, Cook Inlet, +Lease Sale 244. August 25, 2017.

USFWS Revised Reasonable and Prudent Measures and Terms and Conditions for Biological Opinion on Lease Sale 244, received May 22, 2019.

BOEM Final Environmental Impact Statement, Outer Continental Shelf, Cook Inlet Planning Area, Oil and Gas Lease Sale 244 in the Cook Inlet, Alaska. <https://www.boem.gov/Cook-Inlet-Lease-Sale-244-Final-EIS-Volume-1/>

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