

**Bureau of Offshore Energy Management, Regulation, and Enforcement
Alaska OCS Region**

FINDING OF NO SIGNIFICANT IMPACT

Shell Exploration and Production

**Ancillary Activity Notice
Marine Surveys in the Beaufort Sea, Alaska, 2010**

Introduction

In accordance with the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations at 40 CFR 1501.3(b) and 1508.9, Department of the Interior (DOI) regulations implementing NEPA at 43 CFR Part 46, and the Bureau of Offshore Energy Management, Regulation, and Enforcement (BOEMRE, formerly the Minerals Management Service, MMS) policy, BOEMRE prepared an environmental assessment (EA), OCS EIS/EA MMS 2010-022, of the potential effects of Shell Exploration and Production's (Shell) proposed 2010 ancillary activities on Beaufort Sea Alaska outer continental shelf (OCS) leases. The proposed ancillary activities, which include a shallow hazard and site clearance survey, ice gouge survey, strudel scour survey, marine baseline studies, and seafloor soil sampling, are authorized under the Outer Continental Shelf Lands Act (OCSLA) and are regulated under 30 CFR 250.207 through 30 CFR 250.210, Ancillary Activities.

The BOEMRE prepared the EA to determine whether the proposed action may result in significant effects (40 CFR 1508.27) that could trigger the need for an environmental impact statement (EIS) and to assist with BOEMRE planning and decision-making (40 CFR 1501.3(b)).

The BOEMRE conducted the environmental evaluation to ensure the proposed activities are conducted in a manner that conforms to the OCSLA; applicable implementing regulations, lease provisions and stipulations, and other Federal laws; is safe; does not unreasonably interfere with other uses of the OCS; and does not cause undue or serious harm to the human environment (30 CFR 250.209 and 30 CFR 250.202). The EA analyzes the potential for significant adverse effects from specific proposed activities on environmental resources.

Purpose of the Proposed Action

Shell submitted an Ancillary Activity Notice, "Marine Surveys in the Beaufort Sea, Alaska, during 2010," and supporting documents for a proposed open-water season survey program within the Federal outer continental shelf (OCS) and Alaska State waters of the Beaufort Sea. The ancillary activities are conducted by Shell on BOEMRE-issued leases for the purposes of obtaining data and information for an Exploration Plan (EP) or Development and Production Plan (DPP) (30 CFR 250.105 and 250.207).

Description of the Proposed Action

Shell's proposal is to conduct a number of marine surveys in the Beaufort Sea during the open-water period from July through October 2010, including a shallow hazard and site clearance survey, ice gouge survey, strudel scour survey, marine baseline studies, and seafloor soil sampling.

Shallow hard and site clearance surveys provide information on the characteristics of seafloor conditions of OCS lease areas. Shallow hazard surveys include deep and medium sub-surface profiling using a 40 in³ seismic airgun, multi-beam echo sounders, and dual frequency sub-bottom profilers for understanding bathymetry and mapping objects lying under the benthic surface (that is, permafrost layers and gas hydrates). Site clearance surveys include sonar surveys used for mapping objects on the benthic surface

(that is, pipelines, anchors, or shipwrecks). The focus of these activities is on the Shell OCS leases. Surveys will be conducted from 3 mi to 20 mi (5 to 32 km) offshore of Harrison Bay at Oliktok Dock, and continuing through Camden Bay and off Point Thomson, for a distance of 351 miles (565 km) and covering an area of approximately 216 mi² (560 km²). Aerial monitoring for bowhead whales and other marine mammals will occur during part of the survey.

Ice gouge surveys include sonar surveys, often deployed using autonomous underwater vehicles, which provide characteristics of density, severity, location, and bathymetry of ice gouges. These are carried out to provide baseline data for modeling future locations of ice gouges and better enable prospective deployment of pipelines for mitigation of potential damage that could be caused by moving ice. This survey is to be conducted in both state and OCS waters, from Pt Thomson at the east side of Camden Bay to the Sivulliq prospect area.

Strudel scour surveys include sonar surveys from a vessel to map seafloor locations of strudel scour located by previous helicopter survey. These surveys provide characteristics of density, severity, locations, and bathymetry of strudel scour erosion to better understand prospective deployment of pipelines. Strudel scour surveys will occur from Pt. Thomson to Camden Bay.

The marine baseline studies provide supplementation of existing data sets, and is meant to evaluate environmental conditions of the ocean within OCS leases. Metocean buoys and acoustic wave and current (AWAC) buoys will be deployed in Camden and Harrison Bays. Metocean buoys provide meteorological data while AWAC buoys monitor ocean waves and currents, both streaming data by way of satellite uploads. Benthic sampling is to be carried out to identify biological components of the seafloor at lease sites. Opportunistic biological sampling will also occur where ice gouge and strudel scour surveys indicate more data are needed.

The seafloor sampling analyzes the stability and the chemical and biological structure of sea floor sediments within the lease area and potential pipeline corridor. Vibracore samples will be collected and cone penetration tests will be used to provide sediment composition and density information to supplement shallow hazard surveys for understanding the sub-seafloor environments. Samples will be collected along the potential pipeline route at approximately 0.75 mile (1.2 km) intervals. Additional samples will be collected when unusual or unexpected conditions are encountered.

Related Environmental Documents

The site-specific EA tiers and incorporates information by reference from previous NEPA documents prepared by BOEMRE and the National Marine Fisheries Service (NMFS). These documents address issues and analyze potential effects of seismic surveys, including shallow hazards surveys, in the Arctic OCS. The tiering-process is detailed in NEPA's implementing regulations (40 CFR 1502.20 and 1508.28) and is intended to eliminate repetitive discussions of issues and concentrate on specific issues related to specific activities.

The EA tiers from or incorporates information by reference from the following BOEMRE NEPA documents:

- Final Environmental Impact Assessment, Beaufort Sea Planning Area Oil and gas Lease Sales 186, 195 and 202 (OCSEIS/EA MMS 2003-001) February 2003.
- Environmental Assessment, Proposed Lease Sale 195 Beaufort Sea Planning Area (OCS EIS/EA MMS 2004-028) July 2004
- Environmental Assessment, Proposed Lease Sale 202 Beaufort Sea Planning Area (OCS EIS/EA MMS 2006-001) August 2006
- Final Programmatic Environmental Assessment, Arctic Ocean Outer Continental Shelf, Seismic Surveys (OCS EIS/EA MMS 2006-038) June 2006.

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- Draft Environmental Impact Statement, Beaufort Sea and Chukchi Sea Planning Areas Oil and Gas Lease Sales 209, 212, 217, and 221 (OCS EIS/EA MMS 2008-0055) November 2008.

The proposed surveys are within the scope of the actions addressed in the following Endangered Species Act (ESA) consultation documents. The EA incorporates by reference information from these Biological Opinions:

- NMFS Biological Opinion for Oil and Gas Leasing and Exploration Activities in the U.S. Beaufort and Chukchi Seas, Alaska and Authorization of Small Takes Under the Marine Mammal Protection Act (USDOC, NOAA, NMFS, 7/17/08) (NMFS 2008 BiOp)
- FWS Biological Opinion for Beaufort and Chukchi Sea Program Area Lease Sales and Associated Seismic Surveys and Exploratory Drilling (USDOI, FWS, 9/3/09) (FWS 2009 BiOp)

Environmental Evaluation

The issues and concerns were identified by the technical analysts for consideration during this environmental review include the effects from seismic survey sound, vessel presence, and bottom disturbing activities to water quality, bowhead whale migration; marine fish and essential fish habitat; marine wildlife including marine mammals, marine birds, and threatened and endangered species; subsistence activities; sociocultural resources; and archaeological resources.

The environmental assessment concluded the effects to air quality, terrestrial mammals and vegetation and wetlands from open-water survey operations in the Beaufort Sea would be negligible and are not further analyzed in the EA.

The BOEMRE evaluated the Proposed Action and a No Action alternative. No additional alternatives that met the purpose and need for the proposal were identified by BOEMRE. Other alternatives were considered but not analyzed.

No Action.

Under this alternative, BOEMRE would not approve the proposed activities. This alternative would delay or eliminate any potential adverse effects to the physical environment, biological resources, or subsistence activities from the acquisition of seismic survey and marine survey data in the vicinity of Shell's leases during the 2010 open-water season. Potential economic benefits to the communities and residents of the North Slope residents would be delayed or would not be realized. Although the number of local residents employed for the proposed activities is expected to be relatively small and the effect to be negligible at the community level, BOEMRE disapproval of the proposed activities during the 2010 season would be a considerable adverse effect on individuals who lost potential employment.

Proposed Action.

Based on review of the proposed ancillary activities and the best available scientific information, the analysis in the attached EA concludes that negligible adverse effects are expected to occur from Shell's proposed ancillary activities during the 2010 open-water season, with cumulative effects ranging from negligible to minor. Mitigation measures incorporated into the proposed action were considered in the analysis. The overall conclusions of the proposed action analysis are summarized below:

Water Quality: Shell's proposed ancillary activities are expected to have negligible, localized and temporary effects from the proposed activities on water quality from discharges produced by the survey vessels.

Biological Resources: Shell's proposed ancillary activities are expected to have negligible or minor, short-term effects on biological resources. Effects on marine mammals, marine birds, and most marine fish or their habitats would be restricted to disturbance and temporary avoidance or displacement.

Threatened and endangered species expected to occur in the proposed survey area are bowhead whales, polar bear, and Steller's and spectacled eiders. Effects on bowhead whales and polar bear from Shell's proposed activities are expected to be minor and limited to disturbance and potentially some avoidance of the area being surveyed by some individual animals. No population level effects are anticipated. Eiders could be disturbed or displaced by vessel traffic associated with Shell's activities, but the effects are expected to be negligible and temporary.

The proposed activities are expected to have a negligible effect on designated critical habitat for threatened spectacled eiders, proposed critical habitat for polar bears, and essential fish habitat.

Subsistence Activities, Employment, Community Health, Sociocultural and Archaeological Resources: Effects on subsistence activities undertaken by Barrow, Kaktovik, and Nuiqsut are expected to be negligible, with minor cumulative effect. The effect of employment of local residents in support of proposed activities is expected to be negligible at the community level. The proposed activities would be supported from existing infrastructure located in Prudhoe Bay and goods and services would be obtained from that community. These business interactions are expected to have a negligible beneficial effect on the economies of the community and are not expected to adversely affect community health. The proposed activities are expected to have no adverse effect on the health of the residents of the North Slope Borough or the communities of Barrow, Kaktovik and Nuiqsut. Sociocultural systems would not be altered by the proposed activities. No disturbance of archeological resources during the placement of buoy anchors or seafloor sampling is anticipated.

Significance Review (40 CFR 1508.27)

Pursuant to 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 site-specific actions like 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 this proposed action, the context is one of an offshore environment distant from the closest rural, subsistence-based village. Given the nature of the proposed shallow hazards seismic survey activities, essentially all notable effects are expected to be short-term, occurring only while the activities are taking place. It is with this context in mind that the intensity of potential effects is considered.

Intensity refers to the severity of effect. Pursuant to 40 CFR 1508.27(b), the following ten factors have been considered in evaluating the intensity of Shell's proposed activities:

1. **Impacts that may be both beneficial and adverse.** A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial. Potential adverse effects of the proposed activities to the physical environment, biological resources, subsistence and sociocultural resources are expected to be negligible. The potential beneficial economic effects for local residents employed in support of the proposed activities are expected to be temporary and negligible at the community level. 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.** The communities closest to the project area are Kaktovik, about 50 miles east and Nuiqsut, about 30 miles southwest and 20 miles inland. Goods and services would be obtained from Prudhoe Bay and these business interactions are not expected to adversely affect community health. Water quality impacts are negligible. Shell's proposed activities will incorporate mitigation measures developed cooperatively with the Beaufort Sea communities to avoid interference with subsistence activities. These measures will be an integral part of the activities and will be required and enforced by BOEMRE if the proposed action is approved. 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.** Arctic sea ice has been proposed for designation as Critical Habitat for threatened polar bears (see also the discussion for criteria 9 below). Open-water marine surveys require essentially ice-free conditions to maneuver and are not expected to occur if sea ice that could serve as a platform for polar bears, walrus, and ice seals is in the vicinity. The proposed activities are expected to have negligible or minor, short-term effects on biological resources. Effects on marine mammals are expected to be limited to disturbance and temporary avoidance or displacement. The proposed action would not destroy or adversely modify critical habitat because it would not alter the Primary Constituent Elements to an extent that appreciably reduces the conservation value of critical habitat for polar bear populations in the United States.

The essential fish habitat (EFH) for five species of Pacific salmon and Arctic cod encompasses the entire Beaufort Sea Planning Area. The BOEMRE EFH consultation with NMFS concluded that ancillary activities would have negligible effects on EFH.

The likelihood of coastal areas or sea ice being contacted by fuel spilled from the proposed activities is extremely low. Refueling operations for vessels involved in the surveys are anticipated to occur at West Dock, although at-sea refueling is possible. At-sea refueling operations are conducted under U.S. Coast Guard (USCG) implementing regulations at 33 CFR 156 Subpart C—Special Requirements for Lightering of Oil and Hazardous Material Cargoes. Should the fuel transfer hose become disconnected or the fuel hose break, fuel valves are expected to be shut off quickly, limiting the volume of fuel spilled. For purposes of the analysis in the EA, a survey fuel-transfer spill is assumed to be 13 barrels or less of diesel fuel. Small fuel spills are expected to evaporate, dissipate, and dilute within several hundred yards. Previous analysis of such spills (2006 Final Seismic PEA) concluded that any effects would be localized, temporal, and negligible.

Discharges from the survey vessels must comply with regulations that are applicable to all vessels. Discharges from Shell's proposed activities would be regulated under the Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System Vessel General Permit for Discharges Incidental to the Normal Operation of Vessels, which became effective for Alaska on February 6, 2009. Current USCG regulations related to pollution prevention and discharges for vessels carrying oil, noxious liquid substances, garbage, municipal or commercial waste, and ballast water are found at 33 CFR 151. Allowable discharges and emissions are not expected to reach or affect the coastal area or sea ice.

Therefore, the degree to which the proposed action may affect unique geographic 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. From it comes nutritious food, the basis for self-worth, and other attributes that have implications to many facets of their life. Stakeholders have stated concerns related to anthropogenic noise in the Arctic marine environment based on the potential effects to marine species, particularly the bowhead whale, from impulse sounds associated with seismic surveys, including limited activities such as the proposed action. Stakeholders 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.

The anticipated effects of the proposed activities are based upon well-defined and established models for sound transmission. The proposed activities include specific and enforceable mitigation measures. The effects analyses in the EA are based on the best available scientific information. No unavailable information relevant to potential significant effects or essential to a reasoned decision on the proposal or alternatives was identified. There remain no substantial questions regarding whether the proposed action may cause significant effects. 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.** BOEMRE-permitted seismic surveys and ancillary activities have been conducted in the federal waters of the Beaufort and Chukchi Seas since the 1960's with a peak in the 1980's. No significant adverse effects were observed during open water surveys conducted during 2007 and 2008 in the area of the proposed action in the Beaufort Sea which incorporated both marine mammal observers and passive acoustic monitoring.

Potential effects to bowhead whales, other marine mammals, and subsistence, were analyzed previously in the 2006 Final Seismic PEA and multiple EAs prepared by BOEMRE and NMFS for proposed seismic surveys in 2007 and 2008. Based on its NEPA analyses, BOEMRE found no significant effects to marine mammals and subsistence activities from survey activities. Based on its own NEPA analyses, NMFS also found negligible effects to marine mammals and no unmitigable adverse effects to the availability of subsistence resources from seismic survey activities. The NMFS July 17, 2008, BiOp concluded that OCS exploration activities, including seismic surveying, in the U.S. Arctic Ocean are not likely to jeopardize the continued existence of the fin, humpback, or bowhead whale. The FWS September 3, 2009, BiOp concluded that OCS exploration activities, including seismic surveying, in the Beaufort and Chukchi Seas are not likely to jeopardize the continued existence of the polar bear, the Steller's eider, or the spectacled eider, nor will they destroy or adversely modify critical habitat. These NEPA and ESA consultation findings were neither highly uncertain nor involved unique or unknown risks.

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.** Shell's ancillary activities notice was submitted pursuant to BOEMRE operating regulations at 30 CFR 250. The notice is limited to Shell's proposed activities in the Beaufort Sea Planning Area during the 2010 open-water season. The surveys are in the vicinity of the company's Beaufort Sea leases and are consistent with the overall objectives of the OCSLA to prepare plans for the orderly exploration and development of OCS resources. In compliance with NEPA, regulations at 30 CFR 250.209, and DOI policy in 516 DM 15, BOEMRE conducts technical and environmental review on each ancillary activities notice. No precedent for future actions or decision on principles for future considerations is made through decision on these specific proposed activities. Although the data and information obtained as a result of the proposed surveys is a prerequisite to any decision by Shell to proceed with exploration drilling, BOEMRE concurrence with the notice does not constrain the decision on any subsequent Exploration Plan (EP). 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 proposed action 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 pending decision on Shell's ancillary activity notice would be applicable solely to the proposed activities. Concurrence with the notice does not set a precedent for future approval of any other notice. Although the data and information obtained as a result of the proposed surveys would be a prerequisite to any decision by Shell to proceed with exploration drilling, BOEMRE concurrence with the notice does not constrain the decision on any subsequent EP. All ancillary activity notices and EPs are subject to BOEMRE proposal-specific technical and environmental review and separate decisionmaking process.

The EA considered the potential cumulative effects of the proposed activities and other expected activities in 2010 in the Beaufort Sea OCS. The EA concludes that the proposed 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 proposed action is not directly or causally related to other actions with 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 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.** BOEMRE determined that all bottom disturbing activities avoided lease block that have been identified as having a high potential for shipwrecks or cultural resource sites. Therefore, the activities are expected to have no adverse effects on historic properties. We requested National Historic Preservation Act Section 106 consultation with the State Historic Preservation Officer and received concurrence on June 23, 2010 that no historic properties would be affected by the proposed action. 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 ancillary activities are within the scope of the activities covered in the current ESA consultations. The NMFS July 17, 2008, BiOp concluded that OCS exploration activities, including seismic surveying, in the U.S. Arctic Ocean are not likely to jeopardize the continued existence of the fin, humpback, or bowhead whale. The FWS September 3, 2009, BiOp concluded that OCS exploration activities, including seismic surveying, in the Beaufort and Chukchi Seas are not likely to jeopardize the continued existence of the polar bear, the Steller's eider, or the spectacled eider, nor will they destroy or adversely modify critical habitat. The BiOp provided incidental take authorization for listed eiders, and required that incidental take of polar bears be authorized under the MMPA, at which time an ESA Incidental Take Statement (ITS) will be issued.

The effects of the proposed action on endangered or threatened marine mammals are expected to be minor and temporary, and limited to disturbance and potentially some avoidance of the survey operations by a small number of marine mammals. This level of effects would be consistent with findings that are prerequisite to the issuance of incidental take authorizations under the MMPA. To issue incidental take authorizations under MMPA, NMFS and FWS must

determine that the proposed action would have a negligible impact on marine mammals and no unmitigable impact on subsistence use. Shell has applied to NMFS for an Incidental Harassment Authorization under the MMPA (December 2009, revised April 2010). The Fish and Wildlife Service issued Letter of Authorization 10-11 (May 19, 2010) and Incidental Take Statement for polar bear and Pacific walrus. Any concurrence by BOEMRE with Shell's ancillary activity notice would be conditional, that is, Shell may not commence ancillary activities prior to the receipt of all necessary permits and authorizations, including MMPA authorizations from NMFS.

The best available information indicates that few threatened eiders would be present in the proposed survey area during the time of the proposed operations. Eiders could be disturbed or displaced by vessel traffic associated with the proposed activities, but the effects would be minor and temporary.

The entire coastal area of the U.S. Beaufort Sea (barrier islands and denning habitats) and Arctic sea ice have been proposed for designation as critical habitat for threatened polar bears. The sea-ice habitat considered under the proposed rule to be essential for polar bear conservation is located over the continental shelf where water depths are typically 984 feet or less. Ancillary activities are not expected to occur if sea ice that could serve as a platform for polar bears is in the vicinity. The proposed activities are planned for the Arctic summer open-water season in 2010. The start of surface activities would begin after mid-July, which is after the retreat of the ice in most years (early June to late July). The proposed survey area is located seaward of the typical extent of landfast ice during the time of operations. Grounded ridge ice is not anticipated in the survey area at the time of operations. Pack ice could move into the survey area during the time of operations due to wind or currents. If this occurs, survey operations would be shut down as marine shallow hazards seismic surveys require essentially ice-free conditions to effectively maneuver the source array(s) and receiver streamer(s).

Allowable discharges and emissions are not expected to reach or affect the coastal area or sea ice. At-sea refueling is not proposed but may occur. The likelihood of coastal areas or sea ice being contacted by fuel spilled from the proposed activities is extremely low.

Therefore, the degree to which the proposed action may adversely affect endangered or threatened species or designated critical habitat does not render the potential impacts significant.

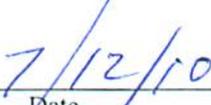
10. **Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.** In determining whether the proposed action may violate Federal, State, or local law or requirements imposed for the protection of the environment, BOEMRE considered documentation submitted with the ancillary activity notice and support documentation. The BOEMRE determined that the proposed activities comply with BOEMRE regulations at 30 CFR 250. The BOEMRE requires compliance with all applicable Federal, State, and local laws and requirements. Under BOEMRE concurrence, Shell may not commence ancillary activities prior to the receipt of all necessary permits and authorizations, including MMPA authorizations from NMFS and FWS that are part of the proposed action. Therefore, the proposed action does not threaten a violation of Federal, State, or local law or requirement imposed for the protection of the environment.

Finding of No Significant Impact

I have considered the evaluation of the potential effects of the proposed activities in the attached EA, the mitigation measures incorporated in the proposed activities to assure that potential adverse effects are mitigated to the extent possible and major disputes over the effects of the proposal are avoided, and the review of 40 CFR 1508.27 significance factors. It is my determination that no substantial questions

remain regarding potentially significant impacts and that no potentially significant impacts are expected to occur as a result of the proposed activities. 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.


Cleveland J. Cowles, Ph.D.
Regional Supervisor, Office of Leasing and Environment
Alaska OCS Region


Date

Attachment: Environmental Assessment, *Shell Exploration and Production, Ancillary Activities, Marine Survey, Beaufort Sea, Alaska*. OCS EIA/EA MMS 2010-022.

Copies of the EA can be obtained by request to Bureau of Offshore Energy Management, Regulation, and Enforcement, Alaska OCS Region, 3801 Centerpoint Drive, Suite 500, Anchorage, AK 99503-5823 or 1-800-764-2627. The EA can be viewed at BOEMRE' website <http://www.mms.gov/alaska>.