



**Documentation of NEPA Adequacy (DNA)
for Right of Way Renewal/Application for Permit to Drill Extension**

DOI-BLM-LLAK010-2010-0004-DNA

Preparing Office: Arctic Field Office

Project Title/Type of Action: **Right of Way Renewal/Application for Permit to Drill Extension**

Serial/Lease/Case File Number: **Serial #AA081726, AA084141, FF095270**

Applicant: **Renaissance Umiat, LLC**

Address: **2500 Tanglewilde Avenue, Suite 340
Houston, Texas 77063**

Prepared By: **Donna L Wixon
Natural Resource Specialist**

Date: **February 9, 2010**

Lands Involved:

Proposed access routes inside the NPR-A totaling approximately 7 miles of Right-of-Way (ROW) to drill sites, storage sites, and the State-maintained Umiat Airport, plus another 10 miles of access to water supply lakes. Up to approximately 38 miles of access route on federal lands outside the NPR-A. Also proposed are eight new drill sites, with three wells co-located at one drill site, and temporary use of 13 new water supply lakes on federal land in the NPR-A and seven water supply lakes on federal land outside the NPR-A. Specific locations are identified in the project plans. The proposed drilling pad locations are:

- T1N, R1W, Sec. 34, Umiat Meridian (Well 12)
- T1S, R1W, Sec. 2, Umiat Meridian (Wells 13, 21, and 22)
- T1S, R1W, Sec. 10, Umiat Meridian (Well 14)
- T1N, R1W, Sec. 36, Umiat Meridian (Well 15)
- T1N, R1W, Sec. 31, Umiat Meridian (Well 16)
- T1S, R1W, Sec. 5, Umiat Meridian (Well 17)
- T1S, R1W, Sec. 3, Umiat Meridian (Well 18)
- T1S, R1W, Sec. 2, Umiat Meridian (Well 19)

DOI-BLM-LLAK010-2010-0004-DNA

Worksheet

Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA)

U.S. Department of the Interior
Bureau of Land Management (BLM)

A. BLM Office: Arctic Field Office

Case File Numbers: AA081726,
AA084141, FF095270

Proposed Action Title/Type: Right of Way Renewal/Application for Permit to Drill
Extension

Location of Proposed Action: Umiat, Alaska

Description of the Proposed Action:

The Arctic Field BLM Office in Fairbanks is proposing to authorize an application to renew a right of way grant and extend Applications for Permit To Drill (APD) on federal lands. Renaissance Umiat LLC received a ROW for access to and from their federal oil and gas leases from the Bureau of Land Management that expired December 31, 2009. They also had 4 APD's approved that the BLM State Office is proposing to extend.

The proposed project is the same as analyzed in EA AK-023-08-002 with a Finding of No Significant Impact dated December 22, 2007. The project includes delineation drilling at any of eight drill sites during a winter program in the National Petroleum Reserve-Alaska (NPR-A). Primary ground access to the drilling areas would be through a combination of packed snow trails and ice roads. Auxiliary facilities include camps to support drilling and ice construction, pump houses on lakes used as water sources, and light plants near pump houses and along ice roads.

Applicant:

Renaissance Umiat, LLC

B. Conformance with the Land Use Plan (LUP) and Consistency with Related Subordinate Implementation Plans

Northeast National Petroleum Reserve-Alaska Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) dated 10/07/1998

Northeast National Petroleum Reserve-Alaska Supplemental Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) 2008

Colville River Special Area Management Plan (CRSAMP) approved July 2008

Utility Corridor Resource Management Plan (RMP) approved 1/11/1991

Utility Corridor Final Environmental Impact Statement approved 9/27/1989

C. Identify the applicable NEPA document(s) and other related documents that cover the proposed action.

Environmental Assessment AK-023-08-002 (2008-002EA) and the associated FONSI adequately cover all environmental issues associated with the proposed project.

D. NEPA Adequacy Criteria

1. Is the new proposed action a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document(s)? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA document(s)? If there are differences, can you explain why they are not substantial?

Documentation of answer and explanation:

The proposed action is identical to the action analyzed in EA AK-023-08-002. The applicant has proposed to renew authorizations that were granted based on the information analyzed in the noted EA.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the current proposed action, given current environmental concerns, interests, resource values, and circumstances?

Documentation of answer and explanation:

The range of alternatives contained in AK-023-08-002 consisted of the proposed action and the no action. However, the environmental impacts of no action were not analyzed specifically in the EA. Air Quality, Cultural Resources, Flood Plains, Invasive/Non-Native Plants, Native American Religious Concerns, Waste, Hazardous or Solid, Water Quality, Wetlands/Riparian Zones, Environmental Justice, Wildlife, Fisheries, NPR-A Special Areas, LUEAs, and other sensitive areas, and Local Land Use and Subsistence were identified as having potential issues resulting from the proposed action. Under No Action, the Bureau of Land Management would not grant an authorization to Renaissance for a right of way or applications for permit to drill. The environmental situation and trends as described in the Affected Environment section of EA would continue as described. See Chapter III (Affected Environment) of 2008-002 EA for a more detailed profile of the current environmental situation for the issues that were considered to be potentially impacted by the proposed action. The no alternative would prevent the applicants from performing necessary exploration activity detailed in their oil and gas leases, but its analysis is required by NEPA

3. Is the existing analysis valid in light of any new information or circumstances (such as, Rangeland health standard assessment, recent endangered species listings, updated lists of BLM-sensitive species)? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new proposed action?

Documentation of answer and explanation:

The existing analysis is adequate for this proposal. The 2008-002 EA was completed December 22, 2007 since then the polar bear has been listed as a threatened species. However a BLM biologist has made a no effect determination for threatened and endangered species for this project, including eiders and polar bears. “This no effect determination was made on the basis of the eiders not being present in the operations area during the operations period and of the probability of a polar bear being present in the operations area being almost zero”.

4. Are the direct, indirect and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document?

Documentation of answer and explanation:

The direct, indirect and site-specific impacts identified in AK-023-08-002 are the same as would be anticipated for the proposed action because it is the same proposal that would be evaluated. The Interdisciplinary Team that reviewed the proposal for the EA also reviewed the current proposal. The direct, indirect and cumulative effects of the proposed action are similar to those evaluated in the 2008-002 EA.

5. Are the public involvement and interagency review associated with existing NEPA document(s) adequately for the current proposed action?

Documentation of answer and explanation:

The proposed action will be announced on the BLM Arctic Field Office website NEPA register, as was the 2008-002 EA. The complete AK-023-08-0002 document was posted on the BLM Arctic Field Office website from December 22, 2007, through February 29, 2008 and no comments were received.

E. Interdisciplinary Analysis: Identify those team members conducting or participating in the preparation of this worksheet.

<u>Name</u>	<u>Title</u>	<u>Resource Represented</u>
Donna Wixon	Natural Resource Specialist	Project Lead
Susan Flora	Environmental Scientist	Hazardous Material
Dave Yokel	Wildlife Biologist	Wildlife
Matthew Whitman	Fisheries Biologist	Fisheries
Richard Kemnitz	Hydrologist	Hydrology
Mike Kunz	Archeologist	Archeology
Stacie McIntosh	Anthropologist	Subsistence
Debbie Nigro	Wildlife Biologist	Wildlife
Roger Sayre	Planning & Environ Coord	NEPA

Note: Refer to the EA for a complete list of the team members participating in the preparation of the original

F. ANILCA Requirements

Section 810 Subsistence Evaluation

This proposed action will not significantly restrict subsistence uses. No reasonably foreseeable and significant decrease in the abundance of harvestable resources or in the distribution of harvestable resources, and no reasonably foreseeable eliminations on harvester access will result from the proposed action (see ANILCA section 810 Evaluation within this case file dated 1/29/2010).

G. Assessment of Archaeological & Historic Resources

Specific stipulations for permitted activities in the NPR-A address cultural resources that may be encountered by the permittee operating under the conditions of the permit. These stipulations are attached to the permit. Proposed action may proceed (See Assessment within this case file dated 2/1/2010).

H. Mitigation Measures:

Since EA AK-023-08-002 in 2007, the BLM Arctic Field Office completed a fisheries monitoring plan for the NPR-A (Noel et al. 2008) which is focused on oil and gas (O&G) activities. This plan included recommendations regarding additional data needs and monitoring that should be provided by industry to improve the BLM's ability to track resource use and contribute to determining the effectiveness of ROPs and stipulations. All O&G permit applicants since the completion of the NPR-A fisheries monitoring plan have been required to implement additional permit stipulations that are based on the plan. While this does not change the analysis of potential impacts on fish and fish habitat in EA AK-023-08-002, it is a change in policy that is now applicable to the proposed action in that EA. As such, the following permit stipulations are necessarily attached to DOI-BLM-LLAK010-2010-0004-DNA.

- 1.) At the time of ice road construction, take the following measurements at stream or river channel crossings *prior to* the addition of any snow or ice and provide data to the BLM within one week of collection. Measure the ice thickness and water depth under ice (if not grounded) at a minimum of three mid-channel locations (at approximately road centerline and road edges). Supply BLM with data within one week of making measurements.
- 2.) As-built routes of snow trails and ice roads and as-built corner locations for any airstrips and ice pads must be supplied to BLM by the time they are being fully utilized for operations. This should be in the format of GPS points or tracks.
- 3.) Post a sign on the access road to each lake being utilized as a water source, clearly

identifying the lake by its number.

- 4.) For each lake being utilized as a water source, a daily record of water removed in liquid form and in the form of ice chips must be kept. This daily tracking record must be supplied to BLM on a weekly basis. A formatted spreadsheet will be supplied and is required to be used for the reporting.
- 5.) Notify the BLM within 24 hours if water/ice removal exceeds the volume approved at any lake in the NPR-A and immediately cease water removal activities.
- 7.) Notify the BLM within 24 hours of any observation of dead or injured fish on intake screens or in the hole being used for pumping. Temporarily cease pumping from that hole until discussions with the BLM or ADF&G Division of Habitat result in the application of additional preventative measures to avoid further impacts to fish.
- 8.) Provide the BLM with photographs documenting breaching/slotting/removal of ice road channel crossings at the end of the winter season. Supply the BLM with these photographs within one week of being taken.

The following monitoring activities are required for the removal of ice chips and liquid water in excess of guidelines in BLM's ROP B-2. Based on results during the first year of water use, the BLM may add, delete, or modify mitigation measures for water use in future years of exploration covered by this DNA. Before conducting work in future years Renaissance must have written concurrence from BLM regarding water use. Renaissance shall:

- 1.) At the end of winter operations, conduct snow surveys adjacent to each of the following lakes if the combination of liquid water and ice chips utilized at a lake exceeds the calculated volume of 15% of water under 7 feet of ice: RTS07126, RTS07127, and RTS07129. Provide data to the BLM within one week of collection. The permittee will coordinate with BLM for methodology, timing, and selection of appropriate locations for these surveys.
- 2.) At each of the following lakes survey water levels and document conditions at the outlet with photographs immediately after spring breakup, at the end of June, and at the end of August if the combination of liquid water and ice chips utilized at a lake exceeds the calculated volume of 15% of water under 7 feet of ice: RTS07126, RTS07127, and RTS07129. Provide data to the BLM within one week of collection. The permittee will coordinate with BLM for acceptable photograph methodology.

Also since the original EA was written, the Northeast NPR-A Supplemental IAP/EIS was written and signed in 2008. Attached are the mitigation measures from that document entitled "2008 NE IAP/EIS ROD." Also attached are the original stipulations, "Original Project Specific Stipulations developed in the Environmental Assessment (AK-023-08-002) prepared for Renaissance Umiat, LLC, 2007, 2-Year Winter Delineation Drilling Program", "Original General Stipulations (Activity on Federal Land Outside the NPR-A)", and "Original Renaissance Stipulations NE NPR-A."

CONCLUSION

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of NEPA.

Note: If one or more of the criteria are not met, a conclusion of conformance and/or NEPA adequacy cannot be made and this box cannot be checked

/s/Donna Wixon, Project Lead, Arctic Field Office

/s/Roger Sayre, NEPA Coordinator, Arctic Field Office

/s/Lon Kelly, Manager, Arctic Field Office

February 9, 2010
Date

Note: The signed Conclusion on this Worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision. However, the lease, permit, or other authorization based on this DNA is subject to protest or appeal under 43 CFR Part 4 and the program-specific regulations.

Attachment 1

**2008 NE IAP/EIS ROD
Stipulations and Required Operating Procedures**

Waste Prevention, Handling, Disposal, Spills, Air Quality, and Public Health and Safety:***A-1 Required Operating Procedure***

Objective: Protect the health and safety of oil field workers and the general public by disposing of solid waste and garbage in accordance with applicable Federal, state, and local law and regulations.

Requirement/Standard: Areas of operation shall be left clean of all debris.

A-2 Required Operating Procedure

Objective: Minimize impacts on the environment from non-hazardous and hazardous waste generation. Encourage continuous environmental improvement. Protect the health and safety of oil field workers and the general public. Avoid human-caused changes in predator populations.

Requirement/Standard: Lessees/permittees shall prepare and implement a comprehensive waste management plan for all phases of exploration and development, including seismic activities.

The plan shall be submitted to the AO for approval, in consultation with Federal, state, and NSB regulatory and resource agencies, as appropriate (based on agency legal authority and jurisdictional responsibility), as part of a plan of operations or other similar permit application. Management decisions affecting waste generation shall be addressed in the following order of priority: 1) Prevention and reduction, 2) recycling, 3) treatment, and 4) disposal. The plan shall consider and take into account the following requirements:

a. Methods to avoid attracting wildlife to food and garbage. All feasible precautions shall be taken to avoid attracting wildlife to food and garbage. (A list of approved precautions, specific to the type of permitted use, can be obtained from the AO.)

b. Disposal of putrescible waste. Requirements prohibit the burial of garbage. Lessees and permitted users shall have a written procedure to ensure that the handling and disposal of putrescible waste will be accomplished in a manner that prevents the attraction of wildlife. All putrescible waste shall be incinerated, backhauled, or composted in a manner approved by the AO. All solid waste, including incinerator ash, shall be disposed of in an approved waste-disposal facility in accordance with USEPA and ADEC regulations and procedures. The burial of human waste is prohibited except as authorized by the AO.

c. Disposal of pumpable waste products. Except as specifically provided, the BLM requires that all pumpable solid, liquid, and sludge waste be disposed of by injection in accordance with USEPA, ADEC, and the Alaska Oil and Gas Conservation Commission regulations and procedures. On-pad temporary muds and cuttings storage, as approved by ADEC, will be allowed as necessary to facilitate annular injection and/or backhaul operations.

d. Disposal of wastewater and domestic wastewater. The BLM prohibits wastewater discharges or disposal of domestic wastewater into bodies of fresh, estuarine, and marine water, including wetlands, unless authorized by a NPDES or state permit.

A-3 Required Operating Procedure

Objective: Minimize pollution through effective hazardous-materials contingency planning.

Requirement/Standard: For oil- and gas-related activities, a Hazardous Materials Emergency Contingency Plan shall be prepared and implemented before transportation, storage, or use of fuel or hazardous substances. The plan shall include a set of procedures to ensure prompt

response, notification, and cleanup in the event of a hazardous substance spill or threat of a release. Procedures applicable to fuel and hazardous substances handling (associated with transportation vehicles) shall consist of Best Management Practices (BMPs) if approved by the AO. The plan shall include a list of resources available for response (e.g., heavy-equipment operators, spill-cleanup materials or companies), and names and phone numbers of Federal, state, and NSB contacts. Other Federal and state regulations may apply and require additional planning requirements. All appropriate staff shall be instructed regarding these procedures. In addition contingency plans related to facilities **developed** for oil production shall include requirements to:

- a. provide refresher spill-response training to NSB and local community spill-response teams on a yearly basis,
- b. plan and conduct a major spill-response field-deployment drill annually,
- c. prior to production and as required by law, develop spill prevention and response contingency plans and participate in development and maintenance of the North Slope Subarea Contingency Plan for Oil and Hazardous Substances Discharges/Releases for the National Petroleum Reserve - Alaska operating area. Planning shall include development and funding of detailed (e.g., 1:26,000 scale) environmental sensitivity index maps for the lessee's operating area and areas outside the lessee's operating area that could be affected by their activities. (The specific area to be mapped shall be defined in the lease agreement and approved by the AO in consultation with appropriate resource agencies). Maps shall be completed in paper copy and geographic information system format in conformance with the latest version of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration's Environmental Sensitivity Index Guidelines. Draft and final products shall be peer reviewed and approved by the AO in consultation with appropriate Federal, state, and NSB resource and regulatory agencies.

A-4 Required Operating Procedure

Objective: Minimize the impact of contaminants on fish, wildlife, and the environment, including wetlands, marshes and marine waters, as a result of fuel, crude oil, and other liquid chemical spills. Protect subsistence resources and subsistence activities. Protect public health and safety.

Requirement/Standard: Before initiating any oil and gas or related activity or operation, including field research/surveys and/or seismic operations, lessees/permittees **shall develop a comprehensive spill prevention and response contingency plan** per 40 CFR § 112 (Oil Pollution Act). The plan shall consider and take into account the following requirements:

- a. On-site Clean-up Materials. Sufficient oil-spill-cleanup materials (absorbents, containment devices, etc...) shall be stored at all fueling points and vehicle-maintenance areas and shall be carried by field crews on all overland moves, seismic work trains, and similar overland moves by heavy equipment.
- b. Storage Containers. Fuel and other petroleum products and other liquid chemicals shall be stored in proper containers at approved locations. Except during overland moves and seismic operations, fuel, other petroleum products, and other liquid chemicals designated by the AO that in total exceed 1,320 gallons shall be stored within an impermeable lined and diked area or within approved alternate storage containers, such as over packs, capable of containing 110% of the stored volume. In areas within 500 feet of water bodies, fuel containers are to be stored within appropriate containment.

- c. Liner Materials. Liner material shall be compatible with the stored product and capable of remaining impermeable during typical weather extremes expected throughout the storage period.
- d. Permanent Fueling Stations. Permanent fueling stations shall be lined or have impermeable protection to prevent fuel migration to the environment from overfills and spills.
- e. Proper Identification of Containers. All fuel containers, including barrels and propane tanks, shall be marked with the responsible party's name, product type, and year filled or purchased.
- f. Notice of Reportable Spills. **Notice of any reportable spill (as required by 40 CFR § 300.125 and 18 AAC § 75.300) shall be given to the AO as soon as possible, but no later than 24 hours after occurrence.**
- g. Identification of Oil Pans (“*duck ponds*”). All oil pans shall be marked with the responsible party’s name.

A-5 Required Operating Procedure

Objective: Minimize the impact of contaminants from refueling operations on fish, wildlife and the environment.

Requirement/Standard: Refueling of equipment within 500 feet of the active floodplain of any water body is prohibited. Fuel storage stations shall be located at least 500 feet from any water body with the exception of small caches (up to 210 gallons) for motor boats, float planes, ski planes, and small equipment, e.g. portable generators and water pumps, will be permitted. The AO may allow storage and operations at areas closer than the stated distances if properly designed to account for local hydrologic conditions.

A-6 Required Operating Procedure

Objective: Minimize the impact on fish, wildlife, and the environment from contaminants associated with the exploratory drilling process.

Requirement/Standard: Surface discharge of reserve-pit fluids is prohibited.

A-7 Required Operating Procedure

Objective: Minimize the impacts to the environment of disposal of produced fluids recovered during the **development** phase on fish, wildlife, and the environment.

Requirement/Standard: Discharge of produced water in upland areas and marine waters is prohibited.

A-8 Required Operating Procedure

Objective: Minimize conflicts resulting from interaction between humans and bears during leasing and associated activities.

Requirement/Standard: Oil and gas lessees and their contractors and subcontractors will, as a part of preparation of lease operation planning, prepare and implement bear-interaction plans to minimize conflicts between bears and humans. **These plans shall include measures to:**

- a. Minimize attraction of bears to the drill sites.
- b. Organize layout of buildings and work areas to minimize human/bear interactions.
- c. Warn personnel of bears near or on drill sites and identify proper procedures to be followed.
- d. Establish procedures, if authorized, to discourage bears from approaching the drill site.
- e. Provide contingencies in the event bears do not leave the site or cannot be discouraged by authorized personnel.

- f. Discuss proper storage and disposal of materials that may be toxic to bears.
- g. Provide a systematic record of bears on the site and in the immediate area.
- h. Encourage lessee/permittee to participate and comply with the Incidental Take Program under the Marine Mammal Protection Act.

Water Use for Permitted Activities:

B-1 Required Operating Procedure

Objective: Maintain populations of, and adequate habitat for, fish and invertebrates.

Requirement/Standard: Water withdrawal from rivers and streams during winter is prohibited.

B-2 Required Operating Procedure

Objective: Maintain natural hydrologic regimes in soils surrounding lakes and ponds, and maintain populations of, and adequate habitat for, fish and invertebrates, and waterfowl.

Requirement/Standard: Water withdrawal from lakes may be authorized on a site-specific basis depending on water volume, and depth, and fish population and species diversification. Current water withdrawal requirements specify:

- a. Lakes that are ≥ 7 feet with sensitive fish (any fish except ninespine stickleback or Alaska blackfish), water available for withdrawal is limited to 15% of calculated volume deeper than 7 feet; lakes that are between 5 and 7 feet with sensitive fish, water available for withdrawal would be calculated on a case by case basis.
- b. Lakes that are ≥ 5 feet with only non-sensitive fish (i.e., ninespine stickleback or Alaska blackfish), water available for withdrawal is limited to 30% of calculated volume deeper than 5 feet.
- c. Any lake with no fish present, regardless of depth, water available for withdrawal is up to 35% as specified within the permit.
- d. A water-monitoring plan may be required to assess draw down and water quality changes before, during, and after pumping any fishbearing lake or lake of special concern.
- e. The removal of naturally grounded ice may be authorized from lakes and shallow rivers on a site-specific basis depending upon its size, water volume, and depth, and fish population and species diversification.
- f. Removed ice aggregate shall be included in the 15% or 30% withdrawal limits—whichever is the appropriate case—unless otherwise approved.
- g. Any water intake structures in fish bearing or non-fish bearing waters shall be designed, operated, and maintained to prevent fish entrapment, entrainment, or injury. Note: All water withdrawal equipment must be equipped and must utilize fish screening devices approved by the Alaska Department of Natural Resources (ADNR).
- h. Compaction of snow cover or snow removal from fish-bearing water bodies shall be prohibited except at approved ice road crossings, water pumping stations on lakes, or areas of grounded ice.

The following lease stipulations and ROPs apply to overland moves, seismic work, and any similar cross-country vehicle use of heavy equipment on nonroaded surfaces during the winter

season. These restrictions do not apply to the use of such equipment on ice roads after they are constructed.

Winter Overland Moves and Seismic Work:

C-1 Required Operating Procedure

Objective: Protect grizzly bear, polar bear, and marine mammal denning and/or birthing locations.

Requirement/Standard:

- a. Cross-country use of heavy equipment and seismic activities is prohibited within ½ mile of occupied grizzly bear dens identified by the ADFG unless alternative protective measures are approved by the AO in consultation with the ADFG.
- b. Cross-country use of heavy equipment and seismic activities is prohibited within 1 mile of known or observed polar bear dens or seal birthing lairs. Operators shall consult with the USFWS and/or NOAA Fisheries, as appropriate, before initiating activities in coastal habitat between October 30 and April 15.

C-2 Required Operating Procedure

Objective: Protect stream banks, minimize compaction of soils, and minimize the breakage, abrasion, compaction, or displacement of vegetation.

Requirement/Standard:

- a. Ground operations shall be allowed only when frost and snow cover are at sufficient depths to protect the tundra. Ground operations shall cease when the spring snowmelt begins (approximately May 5 in the foothills area where elevations reach or exceed 500 feet and approximately May 15 in the northern coastal areas). The exact dates will be determined by the AO.
- b. Only low-ground-pressure vehicles shall be used for on-the-ground activities off ice roads or pads. A list of approved vehicles can be obtained from the AO. Limited use of tractors equipped with wide tracks or “shoes” will be allowed to pull trailers, sleighs or other equipment with approved undercarriage. Note: This provision does not include the use of heavy equipment such as front-end loaders and similar equipment required during ice road construction.
- c. Bulldozing of tundra mat and vegetation, trails, or seismic lines is prohibited; however, on existing trails, seismic lines or camps, clearing of drifted snow is allowed to the extent that the tundra mat is not disturbed.
- d. To reduce the possibility of ruts, vehicles shall avoid using the same trails for multiple trips unless necessitated by serious safety or superseding environmental concern. This provision does not apply to hardened snow trails for use by low-ground-pressure vehicles such as Rolligons.
- e. The location of winter ice roads shall be designed and located to minimize compaction of soils and the breakage, abrasion, compaction, or displacement of vegetation. Offsets may be required to avoid using the same route or track in the subsequent year.
- f. Motorized ground-vehicle use within the CRSA associated with overland moves, seismic work, and any similar use of heavy equipment shall be minimized within the Colville River Raptor, Passerine, and Moose Area from April 15 through August 5, with the exception that use will be minimized in the vicinity of gyrfalcon nests beginning March 15. Such use will remain ½

mile away from known raptor nesting sites, unless authorized by the AO.

C-3 Required Operating Procedure

Objective: Maintain natural spring runoff patterns and fish passage, avoid flooding, prevent streambed sedimentation and scour, protect water quality and protect stream banks.

Requirement/Standard: Crossing of waterway courses shall be made using a low-angle approach. Snow and ice bridges shall be removed, breached, or slotted before spring breakup. Ramps and bridges shall be substantially free of soil and debris. Except at approved crossings, operators are encouraged to travel a minimum of 100 feet from known overwintering fish streams and lakes.

C-4 Required Operating Procedure

Objective: Avoid additional freeze-down of deep-water pools harboring over-wintering fish and invertebrates used by fish.

Requirement/Standard: Travel up and down streambeds is prohibited unless it can be demonstrated that there will be no additional impacts from such travel to over-wintering fish or the invertebrates they rely on. Rivers and streams shall be crossed at shallow riffles from point bar to point bar whenever possible.

Facility Design and Construction:

E-6 Required Operating Procedure

Objective: Reduce the potential for ice-jam flooding, impacts to wetlands and floodplains, erosion, alteration of natural drainage patterns, and restriction of fish passage.

Requirement/Standard: Stream and marsh crossings shall be designed and constructed to ensure free passage of fish, reduce erosion, maintain natural drainage, and minimize adverse effects to natural stream flow. Note: Bridges, rather than culverts, are the preferred method for crossing rivers. When necessary, culverts can be constructed on smaller streams, if they are large enough to avoid restricting fish passage or adversely affecting natural stream flow.

E-9 Required Operating Procedure

Objective: Avoidance of human-caused increases in populations of predators of ground nesting birds.

Requirement/Standard:

- a. Lessee shall utilize best available technology to prevent facilities from providing nesting, denning, or shelter sites for ravens, raptors, and foxes. The lessee shall provide the AO with an annual report on the use of oil and gas facilities by ravens, raptors and foxes as nesting, denning, and shelter sites.
- b. Feeding of wildlife is prohibited and will be subject to noncompliance regulations.

E-10 Required Operating Procedure

Objective: Prevention of migrating waterfowl, including species listed under the Endangered Species Act, from striking oil and gas and related facilities during low light conditions.

Requirement/Standard: Illumination of all structures between August 1 and October 31 shall be designed to direct artificial exterior lighting inward and downward, rather than upward and outward, unless otherwise required by the Federal Aviation Administration.

E-13 Required Operating Procedure

Objective: Protect cultural and paleontological resources.

Requirement/Standard: Lessees shall conduct a cultural and paleontological resources survey prior to any ground-disturbing activity. Upon finding any potential cultural or paleontological resource, the lessee or their designated representative shall notify the AO and suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the AO.

E-14 Required Operating Procedure

Objective: Ensure the passage of fish at stream crossings.

Requirement/Standard: To ensure that crossings provide for fish passage, all proposed crossing designs shall adhere to the best management practices (BMPs) outlined in "Stream Crossing Design Procedure for Fish Streams on the North Slope Coastal Plain" by McDonald et al. (1994), "Fundamentals of Culvert Design for Passage of Weak-Swimming Fish" by Behlke et al. (1991), and other generally accepted best management procedures prescribed by the AO. To adhere to these BMPs, at least three years of hydrologic and fish data shall be collected by the lessee for any proposed crossing of a stream whose structure is designed to occur, wholly or partially, below the stream's ordinary high water mark. These data shall include, but are not limited to, the range of water levels (highest and lowest) at the location of the planned crossing, and the seasonal distribution and composition of fish populations using the stream.

E-16 Required Operating Procedure

Objective: Prevent or minimize the loss of raptors due to electrocution by power lines.

Requirement/Standard: Comply with the most up to date industry accepted suggested practices for raptor protection on power lines. Current accepted standards were published in *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* in 2006 by the Avian Power Line Interaction Committee (APLIC) and are updated as needed.

E-17 Stipulation/ROP *(This measure is to be incorporated as a stipulation in new and renewed leases. It is a ROP for existing leases and will be required for any relevant permanent facilities.)*

Objective: Minimize impacts to important spectacled eider nesting habitat.

Requirement/Standard: With the exception of pipelines, no a.) permanent oil and gas facilities, b.) material sites, or c.) staging areas that would occupy land through more than one winter season would be permitted in spectacled eider nesting and breeding habitat identified by the USFWS as being "high" density (>1.06 eiders per square mile) using the best available long-term data from the Annual Eider Breeding Survey at the time development is proposed.

E-18 Required Operating Procedure

Objective: Avoid and reduce temporary impacts to productivity from disturbance near Steller's and/or spectacled eider nests.

Requirement/Standard: Ground-level activity (by vehicle or on foot) within 200 meters of occupied Steller's and/or spectacled eider nests, from June 1 through August 15, will be restricted to existing thoroughfares, such as pads and roads. Construction of permanent facilities,

placement of fill, alteration of habitat, and introduction of high noise levels within 200 meters of occupied Steller's and/or spectacled eider nests will be prohibited. In instances where summer (June 1 through August 15) support/construction activity must occur off existing thoroughfares, USFWS-approved nest surveys must be conducted during mid-June prior to the approval of the activity. Collected data would be used to evaluate whether the action could occur based on employment of a 200m buffer around nests or if the activity would be delayed until after mid-August once ducklings are mobile and have left the nest site. The BLM will also work with the USFWS to schedule oil spill response training in riverine, marine, and inter-tidal areas that occurs within 200 meters of shore outside sensitive nesting/brood-rearing periods or conduct nest surveys. The protocol and timing of nest surveys for Steller's and/or spectacled eiders will be determined in cooperation with the USFWS, and must be approved by the USFWS. Surveys should be supervised by biologists who have previous experience with Steller's and/or spectacled eider nest surveys.

Use of Aircraft for Permitted Activities:

F-1 Required Operating Procedure

Objective: Minimize the effects of low-flying aircraft on wildlife, traditional subsistence activities, and local communities.

Requirement/Standard: The lessee shall ensure that aircraft used for permitted activities maintain altitudes according to the following guidelines (Note: This ROP is not intended to restrict flights necessary to survey wildlife to gain information necessary to meet the stated objective of the stipulations and ROPs. **However, flights necessary to gain this information will be restricted to the minimum necessary to collect such data**):

a. Aircraft shall maintain an altitude of at least 1,500 feet above ground level (AGL) when within ½ mile of cliffs identified as raptor nesting sites from April 15 through August 15 and within ½ mile of known gyrfalcon nest sites from March 15 to August 15, unless doing so would endanger human life or violate safe flying practices. Permittees shall obtain information from the BLM necessary to plan flight routes when routes may go near falcon nests.

b. Aircraft shall maintain an altitude of at least 1,000 feet AGL (except for takeoffs and landings) over caribou winter ranges from December 1 through May 1, unless doing so would endanger human life or violate safe flying practices. Caribou wintering areas will be defined annually by the AO. The AO will consult directly with the Alaska Department of Fish and Game in annually defining caribou winter ranges.

c. Land user shall submit an aircraft use plan as part of an oil and gas exploration or development proposal. **The plan shall address strategies to minimize impacts to subsistence hunting and associated activities, including but not limited to the number of flights, type of aircraft, and flight altitudes and routes, and shall also include a plan to monitor flights.**

Proposed aircraft use plans should be reviewed by appropriate Federal, state, and Borough agencies. Consultations with these same agencies will be required if unacceptable disturbance is identified by subsistence users. Adjustments, including possible suspension of all flights, may be required by the AO if resulting disturbance is determined to be unacceptable. The number of takeoffs and landings to support oil and gas operations with necessary materials and supplies should be limited to the maximum extent possible. During the design of proposed oil and gas facilities, larger landing strips and storage areas should be considered so as to allow larger

aircraft to be employed, resulting in fewer flights to the facility.

d. Use of aircraft, especially rotary wing aircraft, near known subsistence camps and cabins or during sensitive subsistence hunting periods (spring goose hunting and fall caribou and moose hunting) should be kept to a minimum.

e. Aircraft used for permitted activities shall maintain an altitude of at least 2,000 feet AGL (except for takeoffs and landings) over the Teshekpuk Lake Caribou Habitat Area (Map 1) from May 20 through August 20, unless doing so would endanger human life or violate safe flying practices. Aircraft use (including fixed wing and helicopter) by oil and gas lessees in the Goose Molting Area (Map 2) should be minimized from May 20 through August 20, unless doing so would endanger human life or violate safe flying practices.

Subsistence Consultation for Permitted Activities:

H-1 Required Operating Procedure

Objective: Provide opportunities for participation in planning and decision making to prevent unreasonable conflicts between subsistence uses and oil and gas and related activities.

Requirement/Standard: Lessee/permittee shall consult directly with affected communities using the following guidelines:

a. Before submitting an application to the BLM, the applicant shall consult with directly affected subsistence communities, the NSB, and the National Petroleum Reserve - Alaska Subsistence Advisory Panel to discuss the siting, timing and methods of their proposed operations to help discover local traditional and scientific knowledge, resulting in measures that minimize impacts to subsistence uses. Through this consultation, the applicant shall make every reasonable effort, including such mechanisms as conflict avoidance agreements and mitigating measures, to ensure that proposed activities will not result in unreasonable interference with subsistence activities.

b. The applicant shall submit documentation of consultation efforts as part of its operations plan. Applicants should submit the proposed plan of operations to provide an adequate time for review and comment by the National Petroleum Reserve - Alaska Subsistence Advisory Panel and to allow time for formal Government-to- Government consultation with Native Tribal governments. The applicant shall submit documentation of its consultation efforts and a written plan that shows how its activities, in combination with other activities in the area, will be scheduled and located to prevent unreasonable conflicts with subsistence activities. Operations plans must include a discussion of the potential effects of the proposed operation, and the proposed operation in combination with other existing or reasonably foreseeable operations.

c. A subsistence plan addressing the following items must be submitted:

1. A detailed description of the activity(ies) to take place (including the use of aircraft).
2. A description of how the lessee/permittee will minimize and/or deal with any potential impacts identified by the AO during the consultation process.
3. A detailed description of the monitoring effort to take place, including process, procedures, personnel involved and points of contact both at the work site and in the local community.
4. Communication elements to provide information on how the applicant will keep potentially affected individuals and communities up-to-date on the progress of the activities and locations of possible, short-term conflicts (if any) with subsistence activities. Communication methods could include holding community meetings, open house meetings, workshops, newsletters, radio and television announcements, etc.

5. Procedures necessary to facilitate access by subsistence users to conduct their activities. In the event that no agreement is reached between the parties, the AO shall consult with the directly involved parties and determine which activities will occur, including the timeframes. During development, monitoring plans must be established for new permanent facilities, including pipelines, to assess an appropriate range of potential effects on resources and subsistence as determined on a case-by-case basis given the nature and location of the facilities. The scope, intensity, and duration of such plans will be established in consultation with the AO and Subsistence Advisory Panel. Permittees that propose barging facilities, equipment, supplies, or other materials to NPR-A in support of oil and gas activities in the planning area shall notify, confer, and coordinate with the Alaska Eskimo Whaling Commission, the appropriate local community whaling captains' associations, and the NSB to minimize impacts from the proposed barging on subsistence whaling activities.

H-2 Required Operating Procedure

Objective: Prevent unreasonable conflicts between subsistence activities and geophysical (seismic) exploration.

Requirement/Standard: In addition to the consultation process described in ROP H-1 for permitted activities, before applying for permits to conduct geophysical (seismic) exploration, the applicant shall 1) consult with local communities and residents and 2) notify the local Search and Rescue organizations of current and recent seismic surveys. For the purpose of this standard, a potentially affected cabin/campsite is defined as any camp or campsite within the boundary of the area subject to proposed geophysical exploration and/or within 1 mile of actual or planned travel routes used to supply the seismic operations while it is in operation.

- a. Because of the large land area covered by typical geophysical operations and the potential to impact a large number of subsistence users during the exploration season, the permittee/operator will **notify in writing** all potentially affected long-term cabin and camp users.
- b. The official recognized list of cabin and campsite users is the NSB's 2001 (or most current) inventory of cabins and campsites.
- c. A copy of the notification letter and a list of potentially affected users shall also be provided to the office of the appropriate Native Tribal government.
- d. The AO will prohibit seismic work within 1 mile of any known, long-term, cabin or campsite unless an alternate agreement between the cabin/campsite owner/user is reached through the consultation process and presented to the AO. (Regardless of the consultation outcome, the AO will prohibit wintertime seismic work within 300 feet of a known long-term cabin or campsite.)
- e. The permittee shall notify the appropriate local Search and Rescue (e.g., Nuiqsut Search and Rescue, Atqasuk Search and Rescue) of their current operational location within the NPR-A on a weekly basis. This notification should include a map indicating the current extent of surface use and occupation, as well as areas previously used/occupied during the course of the operation in progress. The purpose of this notification is to allow hunters up-to-date information regarding where seismic exploration is occurring, and has occurred, so that they can plan their hunting trips and access routes accordingly. Identification of the appropriate Search and Rescue offices to be contacted can be obtained from the NPR-A Subsistence Advisory Panel.

Orientation Programs Associated with Permitted Activities:

I-1 Required Operating Procedure

Objective: Minimize cultural and resource conflicts.

Requirement/Standard: All personnel involved in oil and gas and related activities shall be provided information concerning applicable stipulations, ROPs, standards, and specific types of environmental, social, traditional, and cultural concerns that relate to the region. The lessee/permittee shall ensure that all personnel involved in permitted activities shall attend an orientation program at least once a year. **The proposed orientation program shall be submitted to the AO for review and approval and should:**

- a. provide sufficient detail to notify personnel of applicable stipulations and ROPs as well as inform individuals working on the project of specific types of environmental, social, traditional and cultural concerns that relate to the region.
- b. Address the importance of not disturbing archaeological and biological resources and habitats, including endangered species, fisheries, bird colonies, and marine mammals, and provide guidance on how to avoid disturbance.
- c. Include guidance on the preparation, production, and distribution of information cards on endangered and/or threatened species.
- d. Be designed to increase sensitivity and understanding of personnel to community values, customs, and lifestyles in areas in which personnel will be operating.
- e. Include information concerning avoidance of conflicts with subsistence, commercial fishing activities, and pertinent mitigation.
- f. Include information for aircraft personnel concerning subsistence activities and areas/seasons that are particularly sensitive to disturbance by low-flying aircraft. Of special concern is aircraft use near traditional subsistence cabins and campsites, flights during spring goose hunting and fall caribou and moose hunting seasons, and flights near North Slope communities.
- g. Provide that individual training is transferable from one facility to another except for elements of the training specific to a particular site.
- h. Include on-site records of all personnel who attend the program for so long as the site is active, though not to exceed the 5 most recent years of operations. This record shall include the name and dates(s) of attendance of each attendee.
- i. Include a module discussing bear interaction plans to minimize conflicts between bears and humans.
- j. Provide a copy of 43 CFR 3163 regarding Non-Compliance Assessment and Penalties to on-site personnel.
- k. Include training designed to ensure strict compliance with local and corporate drug and alcohol policies. This training should be offered to the NSB Health Department for review and comment.
- l. Include training developed to train employees on how to prevent transmission of communicable diseases, including sexually transmitted diseases, to the local communities. This training should be offered to the NSB Health Department for review and comment.

Endangered Species Act—Section 7 Consultation Process:

J. The lease areas may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or to have some other special status. The BLM may recommend modifications to exploration and development proposals to further its conservation and

management objective to avoid BLM-approved activities that will contribute to the need to list such a species or their habitat. The BLM may require modifications to or disapprove a proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. The BLM will not approve any activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 USC § 1531 et seq., including completion of any required procedure for conference or consultation.

Attachment 2

Original Project Specific Stipulations developed in the Environmental Assessment (AK-023-08-002) prepared for Renaissance Umiat, LLC, 2007, 2-Year Winter Delineation Drilling Program

1. Avoid disturbing PCB-contaminated surface soils at and down-gradient of Legacy Well 9. To guard against any accidental tundra disturbance during ice road construction or overland transport, the BLM will restrict all activity within a 200-foot radius around the old wellhead (Legacy Well 9)
2. Avoid disturbing contaminated surface soils around the old burn area shown in Appendix C and around Legacy Well 8.
3. Develop a plan for managing soils excavated during well cellar construction to avoid cross contamination. Submit plan for approval by the BLM Authorized Officer (AO) prior to soil disturbing activity.
4. Confer with the BLM to develop a plan to reduce ice thickness of ice drill pads left in place where underlying vegetation is likely to remain covered during the growing season.
5. Cover well heads left in place to prevent use by ravens, raptors, and foxes (adopted from the 2005 NE Amended IAP/EIS, ROP E-9).
6. Secure wellhead covering to maintain function and prevent littering.
7. Use contrast-reducing tools and methods to manage wellheads left on site that may be visible from the Colville River.
8. Coordinate with other overland transportation programs to avoid impacting willows in the Anaktuvuk River valley.
9. Monitor condition of the ice roads and terminate use if environmental degradation is observed, and immediately report degradation to the BLM AO.
10. Slot, breach, or weaken ice road crossings of definable streams prior to spring breakup to minimize potential adverse impacts to stream banks.
11. Remove snow/ice used as fill for ramps from stream banks in a manner that does not disturb the natural stream bank.

12. Confer with the BLM AO prior to initiating water removal from Umiat Lake to develop a monitoring program acceptable to the BLM, with the objective of avoiding disturbance and uptake of bottom sediments. At a minimum, this plan will include analysis of background water quality (under ice) and analysis of water quality (under ice) upon completion of water withdrawal, and a quality assurance plan to ensure that lake sediments are not disturbed and that state when additional associated sampling should occur. In addition to turbidity and other parameters, samples will be analyzed for DRO by Alaska Method 102, and for polynuclear aromatic hydrocarbons (PAH) or for BETX (benzene, ethylbenzene, toluene, and xylene by EPA Method 624) to quantify concentrations of lighter petroleum fractions.
13. Maintain a daily record of where water from Umiat Lake was used, and submit to the BLM AO at the end of the drilling season.
14. Provide the BLM AO with copies of the lake recharge monitoring reports required by ADNDR and BLM. Future use of the lake water depends on the results of the recharge studies.

Attachment 3

Original General Stipulations (Activity on Federal Land Outside the NPR-A)

1. All operations will be conducted in such a manner as not to cause damage or disturbance to any fish or wildlife and subsistence resources.
2. No chasing by vehicles or buzzing by aircraft of any wildlife. Particular attention will be given to not disturbing caribou.
3. Holder shall prohibit the feeding of wildlife. Garbage or other potentially edible items which would attract wildlife shall be kept in covered containers while awaiting incineration.
4. Aircraft shall maintain 1,000 foot above ground level (AGL) (except for take off and landings) over designated caribou concentration areas (i.e., winter and summer ranges, insect relief areas, etc.) during the specific time period designated (winter – October 1st through May 15th, summer – May 15th through September 30th) unless doing so would endanger human life or safe flying practices.
5. All operations shall be conducted with due regard for good resource management and in such a manner as not to block any stream, or drainage system, or change the character or course of a stream, or cause the pollution or siltation of any stream or lake.
6. All activities shall be conducted so as to avoid or minimize disturbance to vegetation.
7. Cultural and Paleontological Resources. Any cultural or Paleontological resource (historic or prehistoric site or object) discovered by the Holder, or any person working on his/her behalf, on public or Federal lands shall be immediately reported to the Authorized Officer. Holder shall

suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the AO. An evaluation of the discovery will be made by the AO to determine appropriate action to prevent the loss of significant cultural or scientific values. The Holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the AO after consulting with the Holder.

8. Crossing of waterway courses shall be made using a low angle approach in order not to disrupt the naturally occurring stream or lake banks.
9. Camps will be situated on gravel bars, sand, or other durable lands. Where leveling of trailers or modules is required and the surface has a vegetative mate, leveling will be accomplished with blocking rather than leveling with a bulldozer.
10. Black water shall be kept separate from grey wash and kitchen wastewater. Grey wash water and kitchen wastewater may be filtered to remove the solids and the liquid discharged to the land surface. All solids and slugs shall be incinerated.
11. All solid waste shall be removed from the public lands to Alaska State DEC approved solid waste disposal facilities. Solid waste combustibles may be incinerated. All non-combustible solid waste, including ash from incineration and fuel drums, shall be removed for approved disposal. There will be no burial of garbage or human waste.
12. All fuel spills will be cleaned up immediately, taking precedence over all other matters, except the health and safety of personnel. Spills will be cleaned up utilizing absorbent pads or other Alaska State DEC approved methods.
13. As soon as possible, but not later than 24 hours, notice of any such discharge of oil or hazardous substance as defined in AS 46.03.755, 18 AAC 75.300-.307, will be given to the Authorized Officer and any other Federal and State officials as are required by law.
14. DEC approved oil spill clean up materials (absorbents) will be carried by each field crew and stored at all fueling points and vehicle maintenance areas.
15. State and Federal safety standards for fuel handling will be following.
16. No fuel storage or refueling of equipment will be allowed within the flood plain of a river or lake.
17. Drip basins or absorbent diapers will be placed under all non-disconnect-type fuel line couplings and valves.
18. Fuel and other petroleum products storage of 55 gallons or greater must have secondary containment with 110% of the capacity of the primary storage. The secondary containment, such as lined and bermed systems, must meet local, State and Federal codes and regulations. Above ground storage of fuels or other petroleum products in excess of 660 gallons, or an aggregate above ground storage capacity of greater than 1320 gallons; or any facility which, due to

location, could reasonably expect spilled fuel to reach waters of the United States or adjoining shorelines must prepare and maintain a Spill Prevention Control and Countermeasure (SPCC) Plan in accordance with 40 CFR 112 regulations.

19. All equipment, fuel containers, including barrels, and propane tanks, shall be marked with Permittee/Grantee name, product type, and year filled or purchased (e.g., Company Name, Hydraulic Fluid, 2003).

Attachment 4

Original Renaissance Stipulations NE NPR-A

The following definitions apply to the stipulations below:

Active Floodplain: The lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum that area subject to a 1 percent or greater chance of flooding in any given years (also referred to as the 100-year or base floodplain).

Body of Water or Waterbody: A lake, river, stream, creek, or pond that holds water throughout the summer and supports a minimum of aquatic life.

Permanent Oil and Gas Facilities: Production facilities, pipelines, roads, airstrips, production pads, docks, and other bottom-founded structures, seawater-treatment plants, and any other structures associated with an oil and gas operation that occupies land for more than one winter season. It does not include material sites or seasonal facilities such as ice roads and ice pads.

The following stipulations are based on existing policies and laws, and knowledge of the resources present in the planning area and current industry practices. All stipulations will attach to all activities, including oil and gas leases issued in the planning area. All oil and gas activity permits issued subsequent to leasing shall comply with the appropriate lease stipulations specific to the activity under review. All permits issued in conjunction with other authorized activities (e.g., seismic operation, commercial guiding) within the planning area shall comply with the appropriate stipulations specific to the activity under review.

Additional site-specific stipulations may be added by the Authorized Officer (AO) as determined necessary by further NEPA analysis and as developed through consultation with other Federal, State, and NSB regulatory and resource agencies. Other Federal, State, and NSB permits (e.g. NPDES, Clean Water Act [CWA] Section 404) also may be required by law or regulation for an oil and gas project to proceed. A list of permits/approvals commonly required in conjunction with an oil and gas exploration and development project is provided in Table II.f.1 of the Final IAP/EIS. (all references to tables and figures in these stipulations are to the tables and figures in the Final IAP/EIS. Also see the Final IAP/EIS for maps of Land Use Emphasis areas (LUEAs)

referred to in these stipulations.) Additional permits not listed in Table II.F.1 may be required. Specific State permits are required when the State has primary authority, under Federal or State law or regulations, for enforcement of the provision in question. Specific permits issued by Federal agencies other than BLM could include permits conditions that are more stringent than those presented below.

Exception Clause: In the event that an exception to a lease or permit stipulation is requested and before an exception may be granted, the AO shall find that implementation of the stipulation is:

1. a) technically not feasible or
b) economically prohibitive or
c) an environmentally preferable alternative is available, and
2. the alternative means proposed by the lessee fully satisfies the objective(s) of the stipulation.

In addition, prior to the consideration or granting of an exception to a lease or permit stipulation, all conditions and/or consultation requirements specific to a stipulation must be met. The AO shall consult with appropriate Federal, State, and NSB regulatory and resource agencies before an exception may be granted, except in the case of an emergency. The AO's power to grant stipulation exception is limited to those subjects, uses, and permits over which the BLM has authority. Exceptions may be granted in emergency involving human health and safety.

Waste Prevention, Handling, and Disposal and Spills:

1. To prevent and minimize present and future pollution, management decisions affecting waste generation shall be addressed in the following order of priority:

- Prevention and Reduction
- Recycling
- Treatment
- Disposal

- a. Lessees shall prepare a waste-management plan approved by the AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, to achieve specific waste-reduction and prevention goals for all phases of exploration and development (including activities conducted by contractors). The plan shall identify all waste streams that will be produced during each operation by type, volume, and toxicity and the method of disposal. For each waste stream, the lessee/operator shall describe what actions will be taken to minimize the volume. The plan should include activities that will integrate pollution prevention concepts into purchasing, inventory, shipping/receiving, operations maintenance, training, accounting, and design. The goal of the plan shall be continuous environmental improvement and achievement of reduction goals developed through the planning process. Lessees shall develop schedules

for implementation and review to meet reduction and prevention goals, designate accountable personnel to carry out action items, and specify budget line items for plan elements. Lessees shall provide the AO with an annual waste-management report.

- b. Lessees shall implement a hazardous-materials trucking system to ensure proper use, storage, and management of materials being used within industrial processes. The use of chlorinated solvents is prohibited.
 - c. Lessees shall conduct annual environmental compliance audits.
2. Attracting wildlife to food and garbage is prohibited. All feasible precautions shall be taken to avoid attracting wildlife to food and garbage. A current list of approved precautions, specific to type of permitted use, can be obtained from the AO. Lessees and permitted users shall have a written procedure to ensure that the handling and disposal of putrescible waste will be accomplished in a manner to prevent the attraction of wildlife.
3. Burial of garbage is prohibited. All putrescible waste shall be incinerated or composted through an AO-approved system, unless otherwise authorized by the AO. All solid waste, including incinerator ash, shall be removed from BLM lands and disposed of in an approved waste-disposal facility in accordance with U.S. Environmental Protection Agency (USEPA) and State of Alaska, Dept. of Environmental Conservation (ADEC) regulations and procedures. Burial of human waste is prohibited except as authorized by the AO.
4. Except as specifically provided, all pumpable solid, liquid, and sludge waste shall be disposed of by injection in accordance with USEPS, ADEC, and the Alaska Oil and Gas Conservation Commission regulations and procedures. On-pad temporary muds and cuttings storage will be allowed as necessary to facilitate annulus injection and/or backhaul operations.
5. **Wastewater disposal:**
 - a. Unless authorized by the National Pollution Discharge Elimination System (NPDES) or State permit, disposal of domestic wastewater into bodies of freshwater, including wetlands, is prohibited.
 - b. Surface discharge of reserve-pit fluids is prohibited unless authorized by applicable NPDES, ADEC, and NSB permits and approved by the AO.
 - c. Disposal of produced waters in upland areas, including wetlands, will be by subsurface-disposal techniques. The AO, in consultation with the ADEC and USEPA, may permit alternate disposal methods, if the lessee demonstrates that subsurface disposal is not feasible or prudent.
 - d. Discharge of produced waters into open or ice-covered marine waters less than 33 feet (10 meters) in depth is prohibited. The AO in consultation with ADEC and USEPA may approve discharges into waters greater than 33 feet (10 meters) in depth based on a case-by-case review of environmental factors and consistency with the conditions of a NPDES permit.

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- e. Alternate disposal methods will require an NPDES permit certified by the State.
 6. Areas of operation shall be left clean of all debris.
 7. All spills shall be cleaned up immediately and to the satisfaction of the AO and all agencies with regulatory authority over spills, including the USEPA, ADEC, and the U.S. Coast Guard.
 8. Notice of any spill shall be given to the AO as soon as possible. Other Federal, State, and NSB entities shall be notified as required by law.
 9. For oil-and gas-related activities, a Hazardous-Materials Emergency-Contingency Plan shall be prepared and implemented prior to transportation, storage, or use of fuel. The plan shall include a set of procedures to ensure prompt response, notification, and cleanup in the event of a hazardous substance spill or threat of a release. Procedures applicable to fuel handling (associated with transportation vehicles) may consist of Best Management Practices approved by the AO. The plan shall include a list of resources available for response (e.g., heavy-equipment operators, spill-cleanup materials or companies), and names and phone numbers of Federal, state, and NSB contacts. Other Federal and State regulations may apply and require additional planning requirements. All staff shall be instructed regarding these procedures.
 10. Oil-spill-cleanup materials (absorbents, containment devices, etc.) shall be stored at all fueling points and vehicle-maintenance areas and be carried by field crews on all overland moves, seismic work trains, and similar overland moves by heavy equipment.
 11. Lessees shall provide refresher spill-response training to NSB and local community spill-response teams on a yearly basis.
 12. Lessees shall plan and conduct major spill-response field-deployment drill annually.
 13. Prior to production and as required by law, lessees shall develop spill prevention and response contingency plans and participate in development and maintenance of the North Slope Subarea Contingency Plan for Oil and Hazardous Substances Discharges/Releases for the NPR-A operating area. Planning shall include development and funding of detailed (e.g., 1:26,000 scale) environmental sensitivity index maps for the lessee's operating area and areas outside the lessee's operating area that could be affected by their activities. (The specific area to be mapped shall be defined in the lease agreement and approved by the AO in consultation with appropriate resource agencies). Maps shall be completed in paper copy and geographic information system format in conformance with the latest version of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration's Environmental Sensitivity Index Guidelines. Draft and final products shall be peer reviewed and approved by the AO in consultation with appropriate Federal, State, and NSB resource and regulatory agencies.

14. Except during overland moves and seismic operations (see stipulation 24m), fuel, other petroleum products, and other liquid chemicals designated by the AO, whether in excess of 660 gallons in a single tank or in excess of 1,320 gallons in multiple containers, shall be stored within an impermeable lined and diked area capable of containing 110 percent of the stored volume. The liner material shall be compatible with the stored product and capable of remaining impermeable during typical weather extremes expected throughout the storage period. Permanent fueling stations shall be lined or have impermeable protection to prevent fuel migration to the environment due to overfills and spills. The storage area shall be located at least 500 feet from any waterbody with the exception of small caches (up to 210 gallons) for motor boats, float planes, and ski planes.
15. Fuels shall not be stored on the active floodplain of any waterbody. Although fuels may be off-loaded from aircraft on ice, fuels shall not be stored on lake or river ice.
16. Refueling of equipment within 500 feet of the highest high water mark of any waterbody is prohibited with the exception of refueling motor boats, float planes, and ski planes. (see stipulation 24n for restrictions related to overland moves and seismic operations).
17. All fuel containers, including barrels and propane tanks, shall be marked with the responsible party's name, product type, and year filled or purchased.

Ice Roads and Water Use:

18. The location of winter ice roads shall be offset from year to year to minimize vegetation impacts. The offset shall be greater than or equal to the width of the road.
19. Compaction of snow cover or snow removal from fish-bearing waterbodies shall be prohibited except at approved ice-road crossings.
20. Water withdrawal from rivers and streams during winter is prohibited. Water withdrawal is prohibited during winter from lakes less than 7 feet (2.1 m) deep if they are interconnected with or subject to seasonal flooding by a fish-bearing stream. Water may be withdrawn from isolated lakes that are less than 7 feet (2.1 m) deep that lack connection to or are not subject to seasonal flooding by a fish-bearing stream. After consultation with the appropriate Federal, State, and NSB regulatory and resource agencies, the AO may authorize withdrawals from any lake less than 7 feet (2.1 m) deep, if the proponent demonstrates that no fish exist in the lake.

Generally, water withdrawal drawdown during winter from lakes 7 feet (2.1 m) deep or deeper shall be limited to 15 percent of the estimated free-water volume (i.e., excluding the ice). After consultation with the appropriate Federal, State, and NSB regulatory and resource agencies, the AO may authorize drawdown exceeding 15 percent from a lake greater than 7 feet (2.1 m) deep, if the proponent of the additional drawdown demonstrates that no fish exist in the lake. Operators are encouraged to use new ice-road and ice-pad construction methods, such as using aggregate "chips" shaved from frozen lakes, to decrease water demands, construction time, and impact on fisheries.

21. The AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, may allow water extraction from any lake used by molting geese, if it is determined that the withdrawal is consistent with stipulation 20 and will not adversely affect identified goose-feeding habitat along lakeshore margins. An analysis/demonstration of the hydrological functions of the Lake(s) under review may be required of the lessee by the AO prior to approval of the withdrawal.
22. Except for approved crossing, alteration of the banks of a waterway is prohibited. Waterways include natural features with sufficient water to create riparian (willow) habitat such as rivers, deep and shallow lakes, tundra ponds, and shallow water tracks. Clearing of willows along the riparian zone is prohibited. Movement of equipment through willow stands shall be avoided whenever possible.

Overland Moves and Seismic Work:

23. Seismic work is prohibited within 1,200 feet of any known, long-term cabin or campsite, identified by the AO, without the written permission of the AO.
24. The following restrictions apply to overland moves, seismic work, and any similar use of heavy equipment (other than actual excavation as part of construction) on unroaded surfaces during the winter season:
 - a. Because polar bears are known to den predominantly within 25 miles of the coast, operators shall consult with the Fish and Wildlife Service (FWS) prior to initiating activities in such habitat between October 30 and April 15. Activities are prohibited within 1 mile of known or observed polar bear dens; obtain locations from the FWS, (907) 786-3800. Operators are encouraged to apply for a letter of authorization from the FWS to conduct activities in polar bear denning areas.
 - b. Motorized ground-vehicle use will be minimized within the Colville River Raptor, Passerine, and Moose Area LUEA from April 15 through August 5, with the exception that use will be minimized in the vicinity of gyrfalcon nests beginning March 15. Such use will remain ½ mile away from known raptor-nesting sites, unless authorized by the AO. The BLM shall consult with FWS to plan travel routes to minimize disturbance to raptors.
 - c. Crossing of waterway courses shall be made using a low-angle approach to avoid disruption of the natural stream or lake bank. Except at approved crossing, operators are encouraged to travel a minimum of 100 feet from overwintering fish streams and lakes.
 - d. If snow ramps or snow bridges are used at water crossings for bank protection, the ramps and bridges shall be substantially free of soil and/or debris. Snow bridges shall be removed or breached immediately after use or before spring breakup.
 - e. To avoid additional freeze down of deep-water pools harboring overwintering fish, waterways shall be crossed at shallow riffles from point bar to point bar

- whenever possible.
- f. On-the-ground activities shall use low-ground-pressure vehicles such as Rolligons, ARDCO, Trackmaster, Nodwell, or similar types of vehicles. A current list of approved vehicles can be obtained from the AO. Limited use of tractors equipped with wide tracks or “shoes” will be allowed to pull trailers.
 - g. Bulldozing of tundra, trails, or seismic lines is prohibited. This stipulation, however, does not prohibit the clearing of drifted snow along a trail, seismic line, or in a camp, to the extent that the tundra mat is not disturbed. Snow may be cleared from a waterbody ice surface to prepare an aircraft runway, if approved by the AO in consultation with appropriate Federal, State, and NSB regulatory and resource agencies.
 - h. To reduce the possibility of ruts, vehicles shall avoid using the same trails for multiple trips unless necessitated by serious safety or superseding environmental concern. This provision does not apply to ice roads (see stipulation 18 above).
 - i. Ground operations are to begin only after the seasonal frost in the tundra and underlying mineral soils has reached a depth of 12 inches, and the average snow cover is 6 inches deep. The exact date shall be determined by the AO.
 - j. Ground operations shall cease when the spring melt of snow begins; approximately May 5 in the foothills area where elevations exceed 300 feet, and approximately May 15 in the northern coastal areas. The exact date will be determined by the AO.
 - k. Seismic activities and overland moves within the Goose Molting LUEA and the Teshekpuk Lake Caribou Habitat LUEA from May 1 through September 30 are prohibited. (Note that this overrides language in stipulations 24j.)
 - l. To prevent surface disturbance to tundra and other vegetation, tracked vehicles will not execute tight turns by locking one track.
 - m. Operators shall use best available technology (e.g., self-contained containment systems) or other appropriate spill containment measures, approved by the AO, to prevent fuel migration from fuel or chemical storage areas to the environment due to overfills and spills.
 - n. Refueling of equipment is prohibited within the active floodplain of any waterbody.

Oil and Gas Exploratory Drilling:

- 25. From May 1 through September 30, exploratory drilling other than from production pads is prohibited in the Special Caribou Stipulations Area (Fig. II.C.1-1).
- 26. Exploratory drilling is prohibited within 1,200 feet of any known, long-term cabin or campsite, identified by the AO, without written permission of the AO. The AO’s decision will be informed by the consultation process described in stipulation 61.
- 27. Permanent or gravel oil and gas facilities including roads shall not be constructed during the exploration phase of oil and gas development.

28. Exploratory drilling in river, stream, and lake beds, as determined by the highest high water mark, is prohibited. Exceptions to this stipulation may be authorized by the AO in cases of shallow lakes which freeze to the bottom, do not support significant fish or bird populations, and are hydrologically isolated. Further, such an exception may be granted only if it is environmentally preferable to maintaining the restriction.

Facility Design and Construction:

29. At least 3 years prior to approval of any development plan for leases with the Special Caribou Stipulations Area (Fig. II.C.1-1), the lessee shall design and implement a study of caribou movement, including historical information regarding the distribution and range use of the Teshekpuk Lake Caribou Herd, as well as maps of caribou trails within the area. Study data may be gathered concurrent with approved seismic and exploration activity. The study design shall be approved by the AO in consultation with the Research and Monitoring Team. The study will include a minimum of 3 years of data to assist in providing the information necessary to determine facility design and location, including pipelines, that will be part of the development plan. Lessees may submit individual plans or they may combine with other lessees in the area to do a joint study. Total study funding by all lessees will not exceed \$500,000.
30. Causeways and docks are prohibited in river mouths or deltas. Artificial gravel islands and bottom-founded structures are prohibited in river mouths or active stream channels on river deltas, except as provided in the paragraphs below.

The BLM discourages the use of continuous-fill causeways. Environmentally preferred alternatives for field development include the use of onshore directional drilling, elevated structures, or buried pipelines. Approved causeways shall be designed, sited, and constructed to prevent significant changes to near shore oceanographic circulation patterns and water-quality characteristics (e.g. salinity, temperature, suspended sediments) that result in exceedences of water-quality criteria, and must maintain free passage of marine and anadromous fish.

Causeways, docks, artificial gravel islands, and bottom-founded structures may be permitted if the AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, determines that a causeway or other structures is necessary for the field development, and that no feasible and prudent alternative exists. A monitoring program may be required to address the objectives of water quality and free passage of fish. Additional mitigation shall be required where significant deviation from these objectives occurs.

31. Permanent oil and gas surface occupancy, including but not limited to permanent oil and gas facilities, pads, rigs, platforms, gravel roads, airstrips, pipelines, gravel or other material extraction sites, and exploration and delineation drilling facilities are prohibited in the Teshekpuk Lake Surface Protection area (specifically, T. 13 N., Rs. 3-7 W., UM; Secs. 1-6, 8-16, 21-25, 36, T. 13 N., R 8 W., UM; T. 14 N., Rs. 1-2 E. and Rs. 1-8 W.,

UM; Secs. 1-2, 11-14, T. 14 N., R. 9 W., UM; T. 15 N., Rs. 2-8 W., UM; Secs 1-3, 7-30, 35-36, T. 15 N., R. 9 W., UM; T. 16 N., Rs. 2-8 W., UM; Secs. 1-6, 8-17, 21-27,34-36, T. 16 N., R. 9 W., UM; T. 17 N., Rs. 1-9 W., UM; and T. 18 N., Rs. 2-8 W., UM). No exceptions will be granted to this stipulation.

32. Lessees shall use maximum economically feasible extended-reach drilling for production drilling to minimize the number of pads and the network of roads between pads. New developments shall share facilities with existing development when prudent and technically feasible. All oil and gas facilities, except airstrips, docks, and seawater treatment plants, will be collocated with drill pads. If possible, airstrips will be integrated with roads. Given the paucity of gravel sites in the planning area and the cost of transporting gravel from outside the planning area, lessees are encouraged to implement gravel-reduction technologies e.g., insulated or pile-supported pads.
33. Within the Special Caribou Stipulations area (see Fig. II.C.1-1), lessees shall orient linear corridors when laying out oil field developments to address migration and corralling effects and to avoid loops of road and/or pipeline that connect facilities.
34. Lessees shall separate elevated pipeline from roads by a minimum of 500 feet, if feasible. Separating roads from pipelines may not be feasible within narrow land corridors between lakes and where pipe and road converge on a drill pad.
35. To minimize delay or deflection of caribou movements, lessees shall place pipeline on the appropriate side of the road as determined by the AO (depending on general caribou movements in the area).
36. In the Special Caribou Stipulations Area (see Fig. II.C.1-1) and where facilities or terrain may funnel caribou movement, ramps over pipelines, buried pipe, or pipe buried under the road may be required by the AO after consultation with appropriate Federal, State, and NSB regulatory and resource agencies.
37. Aboveground pipelines shall be elevated at least 5 feet, as measured from the ground to the bottom of the pipe, except where the pipeline intersects a road, pad, or a ramp installed to facilitate wildlife passage and subsistence passage and access. The AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, may make an exception if no feasible and prudent means exists to meet the requirement.
38. All crude oil, produced water, seawater, and natural gas pipelines shall be constructed to accommodate the best available technology for detecting corrosion or mechanical defects during routine structural integrity inspections.
39. Permanent oil and gas facilities, including roads, airstrips, and pipelines, are prohibited within and adjacent to the waterbodies listed below at the distances identified to protect fish and raptor habitat, cultural and paleontological resources, and subsistence and other resource values. Setbacks include the bed of the waterbody and are measured from the

bank's highest high water mark.

- a. Ikpikpuk River: a ½-mile setback from the bank of the Ikpikpuk River within the planning area (fish, raptors, subsistence, cultural, and paleontological resources).
- b. Miguakiak River: a ½-mile setback from each bank of the Miguakiak River (fish and subsistence resources).
- c. Teshekpuk Lake: a ½-mile setback from the bank and around the perimeter of Teshekpuk Lake (fish and subsistence resources).
- d. Fish Creek: (1) a 3-mile setback from each bank of Fish Creek downstream from Section 31, T11N, R1E; (2) a ½-mile setback from each bank of Fish Creek in and upstream from Section 31, T11N, R1E (fish and subsistence resources).
- e. Judy Creek: a ½-mile setback from each bank of Judy Creek extending from the mouth to the confluence of an unnamed tributary in Section 8, T8N, R2W, Umiat Meridian (fish and subsistence resources).
- f. Colville River: a 1-mile setback from the western bluff (or bank if there is no bluff) of the Colville River extending the length of the river as described in the Colville River Raptor, Passerine, and Moose LUEA. This restriction does not apply within 1 1/2 mile of the Umiat airstrip (fish, raptor, passerine, moose, paleontological, subsistence, scenic, and recreational resources).
- g. Deep Water Lakes: a ¼-mile setback around the perimeter of any fish-bearing lake within or partially within the deep lake zone (see Fig.II.B.5)(fish resources). (If the fish-bearing status of the waterbody is unknown, the burden is on the lessee to demonstrate whether fish are present).
- h. Kikiakrorak River: a 1-mile setback from each bluff (or bank if there is no bluff) of the Kikiakrorak River downstream from T.2N, R.4W, Umiat Meridian (raptor, passerine, and moose resources).
- i. Kogosukruk River: a 1-mile setback from each bluff (or bank if there is no bluff) of the Kogosukruk River (including the four tributaries off the southern bank) downstream from T2N, R3W, Umiat Meridian (raptor, passerine, and moose resources).

On a case-by-case basis, essential pipeline and road crossings will be permitted, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, through setback areas in those instances where no other suitable sites are available. Stream crossings will be sited perpendicular to the main channel flow; lake crossing will be at the narrowest point. Pipeline and road crossings are prohibited in the setback around Teshekpuk Lake, with no exceptions. Road crossings are prohibited in the setback adjacent to the Colville River with no exceptions.

40. Gravel mining sites required for development activities will be restricted to the minimum necessary to develop the field efficiently and with minimal environmental damage. Where feasible and prudent, gravel sites shall be designed and constructed to function as water reservoirs for future use. Gravel mine sites are prohibited within the active floodplain of a river, stream, or lake unless the AO, in consultation with appropriate

Federal, State, and NSB regulatory and resource agencies, determines that there is no feasible and prudent alternative or that a floodplain site would enhance fish and wildlife habitat after mining operations are completed and the site is closed.

Mine site development and rehabilitation within a floodplain shall follow the procedures outlined in McLean (1993), North Slope Gravel Pit Performance Guidelines; State of Alaska, Dept. of Fish & Game (ADF&G) Habitat and Restoration Division Technical Report 93-9.

41. For those waterbodies not listed in stipulation 39, permanent oil and gas facilities, including roads, airstrips, and pipelines, are prohibited upon or within 500 feet as measured from the highest high water mark of the active floodplain. Essential pipeline and road crossings will be permitted on a case-by-case basis.
42. Bridges, rather than culverts, shall be used for any allowed road crossings on all major rivers, including those waterbodies listed in stipulation 39 or identified by the AO in consultation with appropriate Federal, State, and NSB regulatory and resource agencies, to reduce the potential of ice-jam flooding and erosion. When necessary on smaller streams, culverts shall be large enough to avoid restriction of fish passage or adversely affecting natural stream flow.
43. The natural drainage pattern will be identified prior to and maintained during and after construction. All permanent structures constructed adjacent to a body of water, such as approved road and pipeline crossings, shall be sited and designed to limit erosion from flooding and wave action (e.g., through use of slope-protection measures). Cross-drainage structures will be sited, maintained, and properly abandoned to prevent impoundments or alteration of local or areawide hydrology. Gravel structures shall be designed and sited to minimize the length that is perpendicular to sheet flow.
44. Dewatering during construction shall be conducted using Best Management Practices (BMP's). A current list of BMP's will be available from the AO. Examples include the use of splash plates, dewatering points, natural filtration through vegetation, and dewatering during low-water period.
45. No surface structures, except essential transportation crossings, are allowed within the Pik Dunes LUEA.
46. Lessees shall minimize the impact of industrial development on key wetlands. Key wetlands are those wetlands that are important to fish, waterfowl, and shorebirds because of their high value or scarcity in the region. Lessees shall identify on a map or aerial photograph the largest surface area, including future expansion areas, within which a facility is to be sites or an activity is to occur. The AO will consult with Federal, State, and NSB regulatory and resource agencies to identify key wetlands and work with lessees during the development of operating plans. To minimize impact, the lessee shall avoid siting facilities in the identified wetlands, unless no feasible and prudent alternative

exists. Key wetland types include but are not limited to fish-bearing lakes and streams, riparian shrub, and the following classes described by Bergman et al. (1977): shallow and deep-Arctophila ponds, deep-open lakes, basin-complex wetlands, and coastal wetlands.

47. Permanent oil and gas facilities are prohibited within 1 mile of known long-term cabins or long-term campsites, identified by the AO, except that pipelines and roads are allowed up to ¼ mile from such cabins or campsites. The AO's decision will be informed by the consultation process described in stipulation 61.
48. Permanent roads (i.e. gravel, sand) connecting to a road system or docks outside the planning area are prohibited, and no exceptions may be granted. Permanent roads necessary to connect pads within independent, remote oil fields are allowed but they must be designed and constructed to create minimal environmental impacts. Roads connecting production sites between separate oil fields may be considered if road-connected operations are environmentally preferable to independent, consolidated operations that each include airstrip, housing, production, and support facilities. This exception will only be granted following consultations with appropriate Federal, State, and NSB regulatory and resource agencies, and the appropriate level of NEPA review.

Ground Transportation:

49. The following ground-traffic restrictions apply to permanent roads (as authorized in stipulation 48 above) in the Special Caribou Stipulation Area (FIG.II.C.1-1):
 - a. From May 20 through June 20:
 - (1) Traffic speed will not exceed 15 miles per hour.
 - (2) Traffic will be minimized (a reasonable target would be four convoy round-trips per day between facilities). Nonessential operations requiring vehicles shall be suspended during this time period.
 - b. From May 20 through August 1:
 - (1) Caribou movement will be monitored.
 - (2) Based on this monitoring, traffic will cease when a crossing by 10 or more caribou appears to be imminent.
 - c. From May 20 through August 20:
 - (1) Convoying will be used to minimize the number of disturbances due to road traffic.
 - (2) Personnel will be bussed between work sites and other facilities to minimize the number of vehicles on the road.
50. Major stockpiling of equipment, materials, and supplies for oil and gas activities in the Special Caribou Stipulations Area (Fig.II.C.1-1) shall occur prior to or after the period May 20 through June 20 to minimize road traffic during that period.

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51. Chasing wildlife with ground vehicles is prohibited.

Air Traffic:

(Note: The BLM's authority to restrict air traffic is limited to those activities associated with use authorization on BLM-administered lands.)

52. Use of aircraft larger than a Twin Otter for authorized activities in the planning area, including oil and gas activities, from May 20 through August 20 within the Teshekpuk Lake Caribou LUEA (see Fig. II.B.4) is prohibited, except in cases of emergency.
53. Helicopter overflights for BLM-permitted activities shall be suspended in the Goose Molting LUEA (see Fig. II.B.2) from June 15 through August 20.
54. Fixed-wing aircraft traffic takeoffs and landing for BLM-permitted activities in the planning area shall be limited to an average of one round-trip flight a day from May 20 through June 20 at aircraft facilities in the Teshekpuk Lake Caribou Habitat LUEA (see Fig. II.B.4). Within the Goose Molting LUEA (Fig. II.B.2), fixed-wing aircraft use for such activities shall be restricted from June 15 to August 20 to flight corridors, and frequencies established by BLM in consultation with the appropriate Federal, State, and NSB regulatory and resource agencies.
55. Aircraft shall maintain an altitude of at least 1,000 feet above ground level (AGL) (except for takeoffs and landings) over caribou winter ranges from October 1 through May 15 and 2,000 feet AGL over Teshekpuk Lake Caribou Habitat LUEA (see Fig. II.B.4) from May 16 through July 31, unless doing so would endanger human life or violate safe flying practices.
56. Aircraft shall maintain an altitude of at least 1,500 above ground level (AGL) when within $\frac{1}{4}$ mile of cliffs identified as raptor nesting sites from April 15 through August 5, unless doing so would endanger human life or violate safe flying practices. Aircraft shall maintain an altitude of 1,500 feet AGL when within $\frac{1}{2}$ mile of known gyrfalcon nest sites from March 15 to April 15. Permittees shall obtain information from BLM necessary to plan flight routes near gyrfalcon nests.
57. Hazing of wildlife by aircraft is prohibited.

Oil Field Abandonment:

58. Upon field abandonment or expiration of a lease or oil and gas related permit, all facilities shall be removed and sites rehabilitated to the satisfaction of the AO, in consultation with appropriate Federal, State, and NSB regulatory and resource agencies. The AO may determine that it is in the best interest of the public to retain some or all of the facilities. Lessees shall comply with all exploration and development bonding required by law and regulation (43 CFR 3154.1 and 3134.1). No exceptions shall by

granted to this provision.

Subsistence:

59. During exploration, development, and production, the lessee shall develop and implement a plan, approved by the AO in consultation with the Research and Monitoring Team and the Subsistence Advisory Panel, to monitor the effects of activities on subsistence. The lessee shall provide biannual reports to BLM, the Research and Monitoring Team, and the Subsistence Advisory Panel.
60. Lessees shall not unreasonably restrict access by subsistence users in oil field development areas.
- a. Lessees shall establish procedures for entrance to facilities, the use of roads, and firearms discharge. These procedures shall be developed in consultation with affected local communities, NSB, and the Subsistence Advisory Panel and be approved by the AO. In cases where the lessee and the Panel disagree, the AO will determine the appropriate procedure.
 - b. Lessees shall develop and distribute information about how to conduct subsistence activities in development areas safely (so equipment is not damaged and people are not endangered) to the communities through public meetings, newsletters, radio, and signs in both English and Inupiat.
61. Exploration and development and production operations shall be conducted in a manner that prevents unreasonable conflicts between the oil and gas industry and subsistence activities.

Prior to submitting an exploration plan or development and production plan (including associated oil-spill contingency plans) to the BLM, the lessee shall consult with potentially affected subsistence communities (e.g. Barrow, Nuiqsut, Atqasuk, or Anaktuvuk Pass), and the Subsistence Advisory Panel to discuss potential conflicts with the siting, timing, and methods of proposed operations and safeguards or mitigating measures that could be implemented by the operator to prevent unreasonable conflicts. Through this consultation, the lessee shall make every reasonable effort, including such mechanisms as a conflict avoidance agreement, to ensure that exploration, development, and production activities are compatible with subsistence hunting, fishing, and other subsistence activities and will not result in unreasonable interference with subsistence harvests.

A discussion of resolutions reached during this consultation process, specific conflict avoidance agreement(s), and plans for continued consultation shall be included in the permit application, exploration plan, or the development and production plan. In particular, the lessee shall show in the plan how its activities, in combination with other activities in the area, will be scheduled and located to prevent unreasonable conflicts with subsistence activities. Lessees also shall

include a discussion of multiple or simultaneous operations, such as exploration and delineation well drilling and seismic activities, that can be expected to occur during operations to more accurately assess the potential for any cumulative effects.

Communities, individuals, and other entities who were involved in the consultation shall be identified in the application or plan. The AO shall send a copy of the exploration plan or development and production plan (including associated oil-spill-contingency plans) to the potentially affected communities, the NSB, and the Subsistence Advisory Panel at the time they are submitted to the BLM to allow concurrent review and comment as part of the plan approval process.

In the event no agreement is reached between the parties, the AO shall consult with representatives from the subsistence communities, Subsistence Advisory Panel, NSB, and the lessee(s) to specifically address the conflict and attempt to resolve the issues before making a final determination on the adequacy of the measures taken to prevent unreasonable conflicts with subsistence harvests.

In enforcing this stipulation, the AO will work with other agencies and the public to assure that potential conflicts are identified and efforts are taken to avoid these conflicts, e.g., planning seismic operations to avoid traditional land use sites and allotments. These efforts may include seasonal drilling restrictions, seismic restrictions, and directional drilling requirements or use of other technologies deemed appropriate by the AO.

The consultation process described in this stipulation will also be required of applicants for geophysical (i.e. seismic) permits to address potential conflicts with the setback requirements for cabins and campsites described in stipulation 23. This consultation will help provide information to the AO on the advisability of modifying or waiving the restriction on seismic activity identified in stipulation 23.

62. The following subsistence, wildlife habitat, and traditional/cultural land use areas are of significant concern to local communities and will be given special consideration during the consultation process outlined in stipulation 61:
- a. Long-term cabins and campsites: a 2-mile zone around the cabins and campsites.
 - b. Ikpikpuk River: a 2-mile zone from the east bank of the river.
 - c. Miguakiak River: a 3-mile zone from each bank of the river.
 - d. Fish Creek: (1) a 3-mile zone from each bank downstream from Sec. 31, T 11 N, R 1 E; (2) a 2-mile zone from each bank in and upstream from Sec. 31, T 11 N, R 1 E, Umiat Meridian.
 - e. Judy Creek: a 2-mile zone from each bank of the creek.
 - f. Kogosukruk River: a 2-mile zone from each bluff (or bank if there is no bluff) of the river (including the four tributaries off the southern bank) downstream from T 2 N, R 3 W, Umiat Meridian.
 - g. Kikiakrorak River: a 2-mile zone from each bluff (or bank if there is no bluff) of the river downstream from T 2 N, R 4 W, Umiat Meridian.
 - h. Colville River: a 2-mile zone from the west bluff (or bank if there is no bluff)

extending the length of the river in the Colville River raptor, Passerine, and Moose LUEA.

In addition, a permittee or lessee engaged in oil and gas-related activity shall consult with the BLM, FWS, ADF&G, and the NSB regarding wildlife concerns prior to submitting a geophysical (i.e. seismic) permit, exploration plan, or development and production plan involving activity within the 2-mile zones around the Kogosukruk (and its tributaries), Kikiakrorak, and Colville Rivers described above. In the event that the permittee or lessee and the agencies are unable to reach agreement on steps necessary to address wildlife concerns, the AO will consult with the other agencies and the permittee or lessee before making a determination on the adequacy of the measures taken to prevent conflicts with wildlife.

Orientation Programs:

63. The lessee shall include in any application for permit to drill a proposed orientation program for all personnel involved in exploration or development and production activities (including personnel of lessee's agents, contractors, and subcontractors) for review and approval by the AO. The program shall be designed in sufficient detail to inform individuals working on the project of specific types of environmental, social, and cultural concerns that related to the planning area. The program shall address the importance of not disturbing archaeological and biological resources and habitats, including endangered species, fisheries, bird colonies, and marine mammals and provide guidance on how to avoid disturbance. Guidance shall include the production and distribution of information cards on endangered and/or threatened species in the planning area. The program shall be designed to increase sensitivity and understanding of personnel to community values, customs, and lifestyles in areas in which personnel will be operating. The orientation program shall also include information concerning avoidance of conflicts with subsistence, commercial fishing activities, and pertinent mitigation.

The program shall be attended at least once a year by all personnel involved in on-site exploration or development and production activities (including personnel of lessee's agents, contractors, and subcontractors) and all supervisory and managerial personnel involved in lease activities of the lessee and its agents, contractors and subcontractors.

Individual training is transferable from one facility to another except for elements of the training specific to a particular site.

Lessees shall maintain a record onsite of all personnel who attend the program for so long as the site is active, though not to exceed the 5 most recent years of operations. This record shall include name and date(s) of attendance of each attendee.

Traditional Land Use Sites:

64. Lessees shall conduct an inventory of known traditional land use sites prior to any field activity. This inventory will be compiled from sites listed in the most current Traditional Land Use Inventory available from the NSB's Inupiat History, Language, and Cultural Commission, and shall be approved by the AO. Based on this inventory, the lessee shall develop a plan to avoid these sites and mitigate any potential damage that could result from field activities. The plan shall indicate how access to the site by local subsistence users will be provided. Lessee shall submit copies of the plan to BLM and the Subsistence Advisory Panel with any application for permit to drill.

Other Activities:

65. It is the responsibility of the authorized user to ensure that all individuals brought to the planning area under its auspices adhere to these stipulations. Authorized users of the planning area shall provide all employees, contractors, subcontractors, and clients with a briefing regarding stipulations applicable to the lease and/or permit. A copy of applicable stipulations will be posted in a conspicuous place in each work site and campsite.
66. The authorized user shall protect all survey monuments and be responsible for survey costs if remonumentation is required as a result of the user's actions.
67. All activities shall be conducted to avoid or minimize disturbance to vegetation.
68. The BLM, through the AO, reserves the right to impose closure of any area to operators in periods when fire danger or other dangers to natural resources are severe.
69. The authorized user shall be financially responsible for any damage done by wildfire caused by its operations.
70. Construction camps are prohibited on frozen lakes and river ice. Siting of construction camps on river sand and gravel bars is allowed and, where feasible, encouraged. Where leveling of trailers or modules is required and the surface has a vegetation mat, leveling shall be accomplished through blocking rather than use of a bulldozer.
71. Use of pesticides without the specific authority of the AO is prohibited.
72. The feeding of wildlife by authorized users is prohibited.
73. Hunting and trapping by lessee's employees, agents, and contractors are prohibited when persons are on "work status." Work Status is defined as the period during which an individual is under the control and supervision of an employer. Work status is terminated when the individual's shift ends and he/she returns to a public airport (e.g., Fairbanks, Barrow, Nuiqsut, or Deadhorse). Use of lessee facilities, equipment, or transport for personnel access or aid in hunting and trapping is prohibited.

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74. Lessees shall conduct a cultural and paleontological resources survey prior to any ground-disturbing activity. Upon finding any potential cultural or paleontological resource, the lessee or their designated representative shall notify the AO and suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the AO.
 75. Petroleum exploration and production activities are prohibited within ½ mile of occupied grizzly bear dens, identified by the ADF&G, unless alternative mitigation measures are approved by the AO in consultation with appropriate Federal, State, and NSB regulatory and resource agencies.
 76. Oil and gas lessees and their contractors and subcontractors will prepare and implement bear-interaction plans to minimize conflicts between bears and humans. These plans shall include measures to: (a) minimize attraction of bears to the drill sites; (b) organize layout of buildings and work areas to minimize human/bear interactions; (c) warn personnel of bears near or on drill sites and identify proper procedures to be followed; (d) if authorized, deter bears from the drill site; (e) provide contingencies in the event bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The lessee's shall develop educational programs and camp layout and management plans as they prepare their lease operations plans. These plans shall be developed in consultation with appropriate Federal, State, and NSB regulatory and resource agencies and submitted to the AO.
 77. Operators are encouraged to apply for a letter of authorization from the FWS to conduct activities in polar bear denning areas.
 78. Permanent structures, other than oil and gas facilities, are prohibited within 100 feet of the highest high water mark of the nearest body of water.
 79. Lessees shall use smokeless flares for handling routine conditions and use auxiliary smokeless flares for planned events that exceed the capacity of routine flares. Lessees shall use flares that meet the Federal New Source Performance design standards listed in 40 CFR 60.18.