

PROPOSED COOK INLET AREAWIDE OIL AND GAS LEASE SALE

Alaska Coastal Management Program Consistency Analysis

Prepared by:
Alaska Department of Natural Resources
Division of Oil and Gas

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Introduction

The Alaska Department of Natural Resources (ADNR) is proposing to offer for lease all available state-owned acreage in Cook Inlet Areawide oil and gas lease sales from 2009-2018 (Figure 1). The proposed lease sale area consists of state-owned uplands located in the Matanuska and Susitna river valleys generally south and west of Houston and Wasilla, the Anchorage Bowl, the western and southern Kenai Peninsula from Point Possession to Anchor Point, and the western shore of Cook Inlet from the Beluga River to Harriet Point. The lease sale area also includes all state-owned tide and submerged lands in upper Cook Inlet from Knik Arm and Turnagain Arm south to Anchor Point and Tuxedni Bay. The area is bounded on the east by the Chugach and Kenai mountains and on the west by the Aleutian Range. The gross area is about 4.2 million acres and is divided into 815 tracts ranging from 640 to 5,760 acres.

The lands offered for lease in the proposed Cook Inlet Areawide lease sales contain lands in which the state owns both the land and mineral estate; and lands where the state owns just the mineral estate, while the land estate might be either privately owned or held by a borough or municipality. Only those state-owned lands and oil and gas mineral estates within the tracts that are free and unencumbered will be included in any lease issued.

The proposed Cook Inlet Areawide oil and gas lease sale area lies predominantly within Alaska's coastal zone within the Matanuska-Susitna Borough (MSB), the Municipality of Anchorage (MOA), and the Kenai Peninsula Borough (KPB). The ADNR has performed a forward-looking analysis of the potential effects of oil and gas related activities so that future proposals to perform work in the proposed lease area can be framed with coastal zone protection in mind. Consequently, any Cook Inlet Areawide lease sale must comply with the Alaska Coastal Management Program (ACMP), including the statewide standards and the enforceable policies of the affected coastal district, as identified in the Matanuska-Susitna Borough Coastal Management Program (MSBCMP), Municipality of Anchorage Coastal Management Program (MOACMP), and the Kenai Peninsula Borough Coastal Management Program (KPBCMP). Further, any future activities and field developments will undergo separate coastal zone consistency analyses if and when they are actually proposed.

This consistency determination is for phased uses and activities. AS 46.40.094 allows phasing of consistency reviews for a use or activity if at the time the proposed use or activity is initiated, there is insufficient information to evaluate and render a consistency determination of the entirety of the proposed use or activity; the proposed use or activity is capable of proceeding in discrete phases based upon developing information that was not available to the project applicant at the time of the previous phase; and each subsequent phase of the proposed use or activity is subject to discretion to implement alternative decisions based upon the developing information. Oil and gas activities may be separated into three distinct phases: license/lease issuance, exploration, and development/production. The beginning phase of oil and gas activities is license/lease issuance.

Under AS 46.40.094(b), when a use or activity is authorized or developed in discrete phases (such as oil and gas lease issuance, exploration, and development/production) and each phase will require decisions relating to a permit, lease, or authorization for that particular phase, the agency responsible for the consistency determination for the particular phase may, in its discretion, limit the consistency review to that particular phase if, but only if,

- A) the agency or another state agency must carry out a subsequent consistency review and make a consistency determination before a later phase may proceed; and

- B) the agency responsible conditions its consistency determination for that phase on a requirement that a use or activity authorized in a subsequent phase be consistent with the Alaska Coastal Management Program.

At the time of lease issuance, it is impossible to reasonably foresee specific exploration or development projects or the effects of those projects. Each phase of oil and gas activity builds on the previous phase. Depending on the information gathered at the exploration phase, development may or may not take place. Before development may occur, exploration must show and confirm, through drilling a well, not only the existence of oil and/or gas but that the oil/gas exists in economically producible quantities. Therefore, at the initial disposal stage, there is insufficient information to render a consistency determination for the future exploration and development/production phases. At each phase, proposed site specific and project specific activities will be analyzed for consistency based on developing information gathered at the previous phase. Further, each of these subsequent phases, exploration and development/production, is subject to alternative decisions on how, or when best to proceed with a project based upon this developing information.

During the exploration and development/production phases, lessees submit a proposed plan of operations for permit approval. During this time, agency staff reviews information developed from the previous phase along with new technological developments and other site-specific data, and implements any needed alternative mitigation measures when determining whether the permit request complies with the ACMP.

Each lessee who proposes to conduct activities related to exploration will be required to submit a plan of operations to ADNR for review and approval. Each plan of operations must be site-specific and tailored to the exploration activity for which the permit is requested. The plan of operations permit application must contain sufficient information based on data reasonably available at the time to determine the surface use requirements and impacts directly associated with the proposed operations (11 AAC 83.158(d)). All plans of operations for activities within the coastal zone will be reviewed by ADNR for consistency with the ACMP, including the enforceable coastal management policies of the MSBCMP, MOACMP, and KPBCMP. As a condition of consistency approval of the lease operations, ADNR will require such modifications as may be necessary to ensure consistency with the ACMP, MSBCMP, MOACMP, and KPBCMP. Alternative measures in addition to the mitigation measures imposed at lease issuance may be added to address site-specific resource values and activities directly associated with the proposed project. Any activities associated with development or production must also be submitted as a plan of operations permit application, and will go through an ACMP review.

Following review of comments on the preliminary Cook Inlet Areawide oil and gas lease sale best interest finding and any additional available information, the director will make a final determination if the proposed lease sale is in the state's best interests, and will issue a final finding and decision. A final finding and decision is expected to be issued in January 2009.

This consistency review for the proposed lease sale is based on: applicable statutes; regulations; facts that are known and material to this consistency review; and reasonably foreseeable significant effects of the lease sale. In analyzing this proposal against the standards of the ACMP, including the enforceable policies of the MSBCMP, MOACMP, and KPBCMP, ADNR has conditioned lease issuance with mitigation measures and lessee advisories to ensure that the lease issuance is consistent with the ACMP.

Cook Inlet Areawide

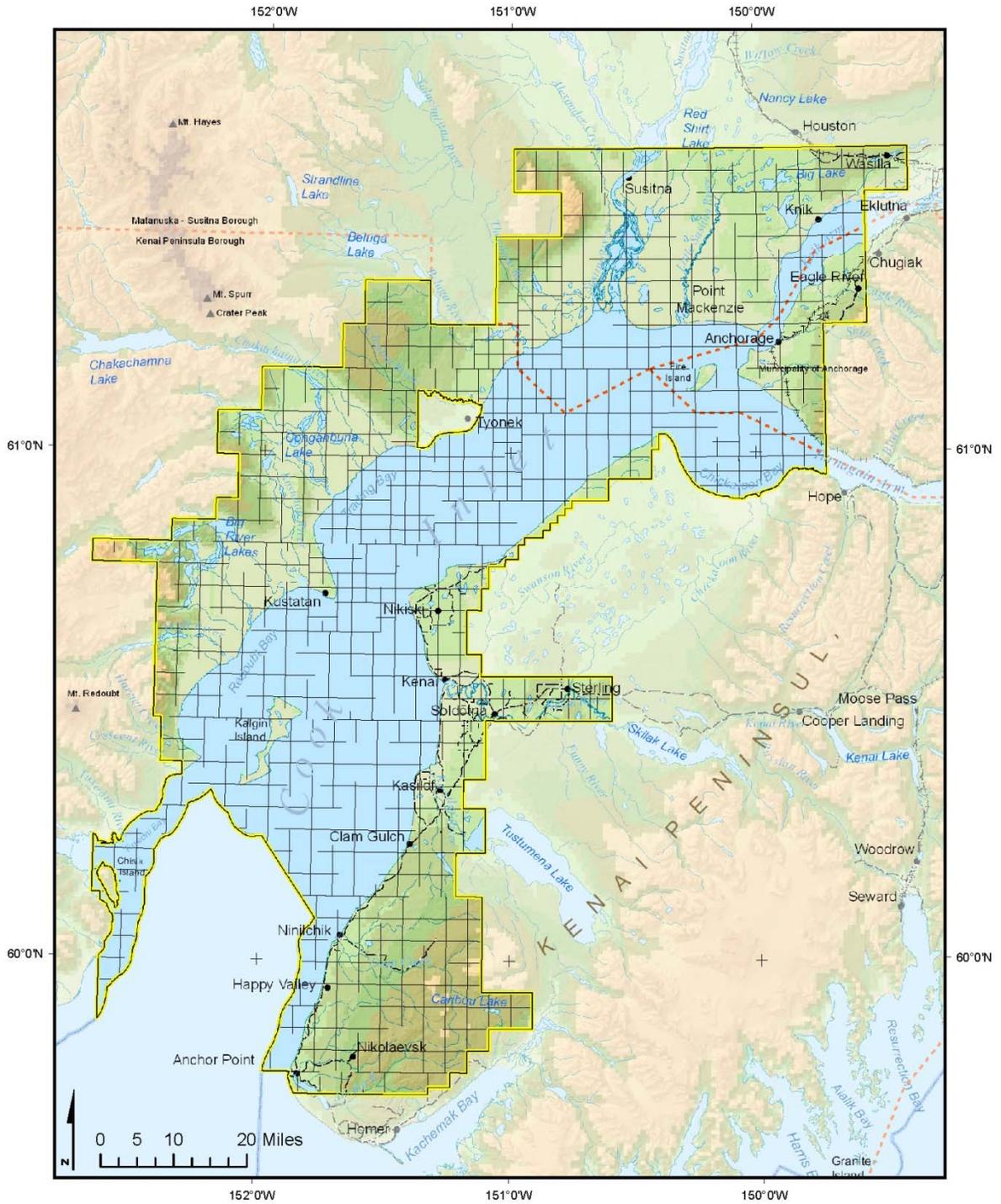


Figure 1. Map of the Proposed Cook Inlet Lease Sale Area.

Public Comment

This ACMP consistency analysis is subject to revision based on comments received by the ADNR Division of Oil and Gas (DO&G). Members of the public, government agencies, environmental organizations, industry, and other interested parties are invited to comment in writing on any part of this consistency analysis. Comments about inconsistency must identify the relevant enforceable policy and explain how the proposed Cook Inlet Areawide oil and gas lease sale is not consistent with that policy. (11 AAC 110.510(b).) Comments must be received by December 1, 2008 in order to be considered and must be sent to the following address:

Division of Oil and Gas
550 W. 7th Avenue, Suite 800
Anchorage, AK 99501-3510
ATTN: Greg Curney

Comments may also be submitted via courier to the address above, by FAX (907-269-8938), or by email (greg.curney@alaska.gov).

DO&G, after careful consideration of all comments received by the comment deadline, will issue a proposed consistency determination. Within five days after DO&G issues the proposed consistency determination, a resource agency, applicant, or affected coastal resource district that does not concur with the proposed consistency determination or consistency response may request an elevation to the commissioner of the proposed consistency determination under 11 AAC 110.600.

Following is a discussion, by standard or enforceable policy, of the proposed Cook Inlet Areawide oil and gas lease sale's consistency with the ACMP, MSBCMP, MOACMP, and KPBCMP, including the mitigation measures, lessee advisories, and applicable lease terms. A complete list of permitting terms (mitigation measures and lessee advisories) proposed for this phase of activity is found in Appendix A, and a sample lease form is found in Appendix B.

The KPBCMP includes enforceable policies for the Port Graham/Nanwalek Area Meriting Special Attention (AMSA). However, because that AMSA is outside the proposed lease sale area, it is not included in this analysis. The KPBCMP also includes guidance polices, but because they are not enforceable and cannot be used to require conditions or stipulations on projects during the project consistency review process, they are not included in this analysis.

A number of ACMP, MSBCMP, MOACMP, and KPBCMP policies are not applicable at the lease issuance phase. These standards and policies will be applied when specific activities are proposed for specific locations in the lessee's plan of operations. Lessees will be required to comply with all applicable ACMP standards and district coastal management policies before a plan of operations may be approved.

Each numbered and/or lettered standard or policy from the ACMP, MSBCMP, MOACMP, and KPBCMP is presented, followed by text in bold italics that explains how proposed mitigation measures ensure that proposed Cook Inlet oil and gas lease sales will be consistent with the standard or policy.

Alaska Coastal Management Program Standards

11 AAC 112.200 Coastal Development

- (a) In planning for and approving development in or adjacent to coastal waters, districts and state agencies shall manage coastal land and water uses in such a manner that those uses that are economically or physically dependent on a coastal location are given higher priority when compared to uses that do not economically or physically require a coastal location.
- (b) Districts and state agencies shall give, in the following order, priority to
 - (1) water-dependent uses and activities;
 - (2) water-related uses and activities; and
 - (3) uses and activities that are neither water-dependent nor water-related for which there is no practicable inland alternative to meet the public need for the use or activity.
- (c) The placement of structures and the discharge of dredged or fill material into coastal water must, at a minimum, comply with the standards contained in 33 C.F.R. Parts 320 - 323, revised as of July 1, 2003.

A lease does not authorize development and at the lease sale phase it cannot reasonably be foreseen whether developable resources will be discovered that would warrant coastal development. Until coastal development is proposed, there is no opportunity for planning or approving development in or adjacent to coastal waters under 11 AAC 112.200. However, if and when coastal development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP.

Mitigation Measure A.1.c prohibits the siting of facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities within one-half mile of the coast, barrier islands, reefs, lagoons; 500 feet of fish bearing streams and waterbodies; 1,500 feet of current surface drinking water sources; and one-half mile of the banks of the main channel of the Harriet, Alexander, Lake, Deep, and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Lewis, Theodore, Beluga, Susitna, Little Susitna, Kenai, Kasilof, Ninilchik, and Anchor rivers, unless it is not practicable or a location within the buffer is environmentally preferred.

Dredge and fill activities in wetlands require a permit from the U.S. Army Corps of Engineers. Such an activity will require a separate ACMP review, if proposed. See Lessee Advisory B.5.a. Approved placement of fill or structures into wetlands must also be consistent with Mitigation Measure A.1.d, which requires that impacts to identified wetlands be minimized and that facilities be sited in the least sensitive areas.

11 AAC 112.210 Natural Hazard Areas

- (a) In addition to those identified in 11 AAC 112.990, the department, or a district in a district plan, may designate other natural processes or adverse conditions that present a threat to life or property in the coastal area as natural hazards. Such designations must provide the scientific

basis for designating the natural process or adverse condition as a natural hazard in the coastal area, along with supporting scientific evidence for the designation.

- (b) Areas likely to be affected by the occurrence of a natural hazard may be designated as natural hazard areas by a state agency or, under 11 AAC 114.250(b), by a district.
- (c) Development in a natural hazard area may not be found consistent unless the applicant has taken appropriate measures in the siting, design, construction, and operation of the proposed activity to protect public safety, services, and the environment from potential damage caused by known natural hazards.
- (d) For purposes of (c) of this section, “appropriate measures in the siting, design, construction, and operation of the proposed activity” means those measures that, in the judgment of the coordinating agency, in consultation with the department’s division of geological and geophysical surveys, the Department of Commerce, Community, and Economic Development as state coordinating agency for the National Flood Insurance Program under 44 C.F.R. 60.25 and other local and state agencies with expertise,
 - (1) satisfy relevant codes and safety standards; or
 - (2) in the absence of such codes and standards;
 - (A) the project plans are approved by an engineer who is registered in the state and has engineering experience concerning the specific natural hazard; or
 - (B) the level of risk presented by the design of the project is low and appropriately addressed by the project plans.

Natural hazards that present a threat to life or property in the Cook Inlet area include: faults and earthquakes, volcanoes, tsunamis, tides, current, sediment, ice, flooding, and coastal erosion.

However, risks can be minimized by designing facilities to meet or exceed Uniform Building Code specifications for the appropriate seismic zone. Design parameters, including concrete armoring, berm construction, and coastal facility setbacks, mitigate the effects of ice push and are similar to those employed to resist sea ice and coastal erosion forces. Additional precautions can be taken to identify and accommodate such site-specific conditions as unstable ground, flooding, and other localized hazards. Proper siting, design, construction, and engineering will minimize the risks of these natural processes.

A lease does not authorize development and at the lease sale phase it cannot reasonably be foreseen whether developable resources will be discovered that would warrant designating natural hazard areas under 11 AAC 112.210.

11 AAC 112.220 Coastal Access

Districts and state agencies shall ensure that projects maintain and, where appropriate, increase public access to, from, and along coastal water.

A lease does not authorize development and at the lease sale phase it cannot reasonably be foreseen whether developable resources will be discovered that would warrant development. However, if and when development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP.

Mitigation Measures A.1.a (minimizing impacts on residential, commercial, and recreational areas, Native allotments and subsistence areas, and adjacent private lands), A.3.a (minimizing conflicts with subsistence, commercial, sport, personal use, and educational harvest activities), and A.5.a (public access) maintain and, where appropriate, increase public access to, from, and along coastal water.

11 AAC 112.230 Energy Facilities

- (a) The siting and approval of major energy facilities by districts and state agencies must be based, to the extent practicable, on the following standards:
- (1) site facilities so as to minimize adverse environmental and social effects while satisfying industrial requirements;
 - (2) site facilities so as to be compatible with existing and subsequent adjacent uses and projected community needs;
 - (3) consolidate facilities;
 - (4) consider the concurrent use of facilities for public or economic reasons;
 - (5) cooperate with landowners, developers, and federal agencies in the development of facilities;
 - (6) select sites with sufficient acreage to allow for reasonable expansion of facilities;
 - (7) site facilities where existing infrastructure, including roads, docks, and airstrips, is capable of satisfying industrial requirements;
 - (8) select harbors and shipping routes with least exposure to reefs, shoals, drift ice, and other obstructions;
 - (9) encourage the use of vessel traffic control and collision avoidance systems;
 - (10) select sites where development will require minimal site clearing, dredging, and construction;
 - (11) site facilities so as to minimize the probability, along shipping routes, of spills or other forms of contamination that would affect fishing grounds, spawning grounds, and other biologically productive or vulnerable habitats, including marine mammal rookeries and hauling out grounds and waterfowl nesting areas;
 - (12) site facilities so that design and construction of those facilities and support infrastructures in coastal areas will allow for the free passage and movement of fish and wildlife with due consideration for historic migratory patterns;
 - (13) site facilities so that areas of particular scenic, recreational, environmental, or cultural value, identified in district plans, will be protected;
 - (14) site facilities in areas of least biological productivity, diversity, and vulnerability and where effluents and spills can be controlled or contained;
 - (15) site facilities where winds and air currents disperse airborne emissions that cannot be captured before escape into the atmosphere;
 - (16) site facilities so that associated vessel operations or activities will not result in overcrowded harbors or interfere with fishing operations and equipment.

- (b) The uses authorized by the issuance of state and federal leases, easements, contracts, rights-of-way, or permits for mineral and petroleum resource extraction are uses of state concern.

A lease does not authorize energy facilities and at the lease sale phase it cannot reasonably be foreseen whether developable resources will be discovered that would warrant energy facilities. Until energy facilities are proposed, there is no opportunity for siting or approving energy facilities or authorizing uses under 11 AAC 112.230. However, if and when such a project is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP. The energy facilities standard includes 16 standards, which, to the extent practicable, the siting and approval of major energy facilities must be based

Mitigation Measures A.1.a-i, A.2.a-q, A.4.a-j and A.5.a address facilities, habitat, fish and wildlife, fuel, hazardous substances, waste, and access. Lessee Advisories B.1-3 and B.5 advise lessees of other regulatory requirements that address facilities.

11 AAC 112.240 Utility Routes and Facilities

- (a) Utility routes and facilities must be sited inland from beaches and shorelines unless
- (1) the route or facility is water-dependent or water related; or
 - (2) no practicable inland alternative exists to meet the public need for the route or facility.
- (b) Utility routes and facilities along the coast must avoid, minimize, or mitigate
- (1) alterations in surface and ground water drainage patterns;
 - (2) disruption in known or reasonably foreseeable wildlife transit;
 - (3) blockage of existing or traditional access

A lease does not authorize utility routes and facilities and at the lease sale phase it cannot be reasonably foreseen whether developable resources will be discovered that would warrant utility routes and facilities. Until utility routes and facilities are proposed, there is no opportunity for siting utility routes and facilities under 11 AAC 112.240. However, if and when such a project is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP.

Mitigation Measure A.1.c prohibits the siting of facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities within one-half mile of the coast, barrier islands, reefs, lagoons; 500 feet of fish bearing streams and waterbodies; 1,500 feet of current surface drinking water sources; and one-half mile of the banks of the main channel of the Harriet, Alexander, Lake, Deep, and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Lewis, Theodore, Beluga, Susitna, Little Susitna, Kenai, Kasilof, Ninilchik, and Anchor rivers, unless it is not practicable or a location within the buffer is environmentally preferred.

Mitigation Measures A.1.g, A.1.h, and A.5.a, address utility routes and facilities, specifically their location and construction.

11 AAC 112.250 Timber Harvesting and Processing

AS 41.17 (Forest Resources and Practices Act) and the regulations adopted under that chapter with respect to the harvest and processing of timber are incorporated into the program and constitute the components of the program with respect to those purposes.

A lease does not authorize timber harvesting and processing and at the lease sale phase it cannot be reasonably foreseen whether developable resources will be discovered that would warrant timber harvesting and processing. If and when a project is proposed, it will be measured against 11 AAC 112.250, as well as all other enforceable policies of the ACMP.

Lessee Advisory B.1.c states that forest clearing for seismic exploration must have prior approval by DO&G in consultation with the Division of Forestry and the Alaska Department of Fish and Game.

11 AAC 112.260 Sand and Gravel Extraction

Sand and gravel may be extracted from coastal waters, intertidal areas, barrier islands, and spits if there is no practicable alternative to coastal extraction that will meet the public need for the sand or gravel.

A lease does not authorize sand and gravel extraction and at the lease sale phase it cannot be reasonably foreseen whether developable resources will be discovered that would warrant sands and gravel extraction. If and when a project is proposed, it will be measured against 11 AAC 112.260, as well as all other enforceable policies of the ACMP. Mitigation Measures A.1.i and Lessee Advisories B.3.a and B.5.a address sand and gravel extraction.

11 AAC 112.270 Subsistence

- (a) A project within a subsistence use area designated by the department or under 11 AAC 114.250(g) must avoid or minimize impacts to subsistence uses of coastal resources.
- (b) For a project within a subsistence use area designated under 11 AAC 114.250(g), the applicant shall submit an analysis or evaluation of reasonably foreseeable adverse impacts of the project on subsistence use as part of
 - (1) a consistency review packet submitted under 11 AAC 110.215; and
 - (2) a consistency evaluation under 15 C.F.R. 930.39, 15 C.F.R. 930.58, or 15 C.F.R. 930.76.
- (c) Repealed 10/29/2004.
- (d) Except in nonsubsistence areas identified under AS 16.05.258, the department may, after consultation with the appropriate district, federally recognized Indian tribes, Native corporations, and other appropriate persons or groups, designate areas in which a subsistence use is an important use of coastal resources as demonstrated by local usage.
- (e) For purposes of this section, “federally recognized Indian tribe” “local usage,” and “Native corporation” have the meanings given in 11 AAC 114.990.

A lease does not authorize development and at the lease sale phase it cannot reasonably be foreseen whether developable resources will be discovered that would warrant development. However, if and when development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP

All mitigation measures support this standard. Mitigation Measures A.1.a, A.3.a, and A.5.a specifically avoid or minimize impacts to subsistence uses of coastal resources.

11 AAC 112.280 Transportation Routes and Facilities

Transportation routes and facilities must avoid, minimize, or mitigate

- (1) alterations in surface and ground water drainage patterns;
- (2) disruption in known or reasonably foreseeable wildlife transit; and
- (3) blockage of existing or traditional access.

A lease does not authorize transportation routes and facilities and at the lease sale phase it cannot be reasonably foreseen whether developable resources will be discovered that would warrant transportation routes and facilities. However, if and when transportation routes and facilities are proposed, it will be measured against 11 AAC 112.280, as well as all other enforceable policies of the ACMP.

Mitigation Measure A.1.c prohibits the siting of facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities within one-half mile of the coast, barrier islands, reefs, lagoons; 500 feet of fish bearing streams and waterbodies; 1,500 feet of current surface drinking water sources; and one-half mile of the banks of the main channel of the Harriet, Alexander, Lake, Deep, and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Lewis, Theodore, Beluga, Susitna, Little Susitna, Kenai, Kasilof, Ninilchik, and Anchor rivers, unless it is not practicable or a location within the buffer is environmentally preferred.

Transportation routes and facilities are addressed in Mitigation Measures A.1.g, A.1.h, and A.5.a.

11 AAC 112.300 Habitats

- (a) Habitats in the coastal area that are subject to the program are
 - (1) offshore areas;
 - (2) estuaries;
 - (3) wetlands;
 - (4) tideflats;
 - (5) rocky islands and sea cliffs;
 - (6) barrier islands and lagoons;
 - (7) exposed high-energy coasts;
 - (8) rivers, streams, and lakes and the active floodplains and riparian management areas of those rivers, streams, and lakes; and
 - (9) important habitat.
- (b) The following standards apply to the management of the habitats identified in (a) of this section:

- (1) offshore areas must be managed to avoid, minimize, or mitigate significant adverse impacts to competing uses such as commercial, recreational, or subsistence fishing, to the extent that those uses are determined to be in competition with the proposed use;
- (2) estuaries must be managed to avoid, minimize, or mitigate significant adverse impacts to
 - (A) adequate water flow and natural water circulation patterns; and
 - (B) competing uses such as commercial, recreational, or subsistence fishing, to the extent that those uses are determined to be in competition with the proposed use;
- (3) wetlands must be managed to avoid, minimize, or mitigate significant adverse impacts to water flow and natural drainage patterns;
- (4) tideflats must be managed to avoid, minimize, or mitigate significant adverse impacts to
 - (A) water flow and natural drainage patterns; and
 - (B) competing uses such as commercial, recreational, or subsistence uses, to the extent that those uses are determined to be in competition with the proposed use;
- (5) rocky islands and sea cliffs must be managed to
 - (A) avoid, minimize, or mitigate significant adverse impacts to habitat used by coastal species; and
 - (B) avoid the introduction of competing or destructive species and predators;
- (6) barrier islands and lagoons must be managed to avoid, minimize, or mitigate significant adverse impacts
 - (A) to flows of sediments and water;
 - (B) from the alteration or redirection of wave energy or marine currents that would lead to the filling in of lagoons or the erosion of barrier islands; and
 - (C) from activities that would decrease the use of barrier islands by coastal species, including polar bears and nesting birds;
- (7) exposed high-energy coasts must be managed to avoid, minimize, or mitigate significant adverse impacts
 - (A) to the mix and transport of sediments; and
 - (B) from redirection of transport processes and wave energy;
- (8) rivers, streams, and lakes must be managed to avoid, minimize, or mitigate significant adverse impacts to
 - (A) natural water flow;
 - (B) active floodplains; and
 - (C) natural vegetation within riparian management areas; and
- (9) important habitat
 - (A) designated under 11 AAC 114.250(h) must be managed for the special productivity of the habitat in accordance with district enforceable policies adopted under 11 AAC 114.270(g) ; or
 - (B) identified under (c)(1)(B) or (C) of this section must be managed to avoid, minimize, or mitigate significant adverse impacts to the special productivity of the habitat.

- (c) For purposes of this section,
- (1) “important habitat” means habitats listed in (a)(1) - (8) of this section and other habitats in the coastal area that are
 - (A) designated under 11 AAC 114.250(h) ;
 - (B) identified by the department as a habitat
 - (i) the use of which has a direct and significant impact on coastal water; and
 - (ii) that is shown by written scientific evidence to be biologically and significantly productive; or
 - (C) identified as state game refuges, state game sanctuaries, state range areas, or fish and game critical habitat areas under AS 16.20;
 - (2) “riparian management area” means the area along or around a waterbody within the following distances, measured from the outermost extent of the ordinary high water mark of the waterbody:
 - (A) for the braided portions of a river or stream, 500 feet on either side of the waterbody;
 - (B) for split channel portions of a river or stream, 200 feet on either side of the waterbody;
 - (C) for single channel portions of a river or stream, 100 feet on either side of the waterbody;
 - (D) for a lake, 100 feet of the waterbody.

Mitigation Measures found in A.1, A.2, and A.4, and Lessee Advisories B.1-3 and B.5, address habitat loss avoidance; protection of wetland, riparian, and aquatic habitats; prohibitions and restrictions on surface entry into designated state game refuges and critical habitat areas, as well as restrictions on other important habitat areas; disturbance avoidance; and free passage and movement of fish and wildlife. Specific mitigation measures also protect trumpeter swan nesting areas, bald eagles, and Steller’s eiders habitat. Sets of comprehensive measures protect brown bears and their habitat, the Kenai Lowlands caribou herd, and beluga whale habitat. Other measures and advisories protect drinking water, and address seismic activities, siting of facilities, pipelines, drilling waste, oil spill prevention and control, and rehabilitation.

11 AAC 112.310 Air, Land, and Water Quality

Notwithstanding any other provision of this chapter, the statutes and regulations of the Department of Environmental Conservation with respect to the protection of air, land, and water quality identified in AS 46.40.040 (b) are incorporated into the program and, as administered by that department, constitute the exclusive components of the program with respect to those purposes.

Mitigation Measures A.1.d, A.1.h, A.1.i, A.4.g-i, and Lessee Advisory B.2.a-d specifically address ADEC statutes and regulations with respect to the protection of air, land, and water quality.

11 AAC 112.320 Historic, Prehistoric, and Archaeological Resources

- (a) The department will designate areas of the coastal zone that are important to the study, understanding, or illustration of national, state, or local history or prehistory, including natural processes.
- (b) A project within an area designated under (a) of this section shall comply with the applicable requirements of AS 41.35.010 - 41.35.240 and 11 AAC 16.010 - 11 AAC 16.900.

More than 530 historic or prehistoric sites are reported within the proposed sale area and the potential for discovery of additional sites exists.

A lease does not authorize development and at the lease sale phase it cannot be reasonably foreseen whether developable resources will be discovered that would warrant development. However, if and when a project is proposed, it will be measured against 11 AAC 112.320, as well as all other enforceable policies of the ACMP.

Mitigation Measures A.6.a-c require an inventory of prehistoric, historic, and archaeological sites before development and coordination to avoid or minimize adverse effects to sites.

11 AAC 112.900 Sequencing Process to Avoid, Minimize, or Mitigate

- (a) As used in this chapter and for purposes of district enforceable policies developed under 11 AAC 114, “avoid, minimize, or mitigate” means a sequencing process of
 - (1) avoiding adverse impacts to the maximum extent practicable;
 - (2) where avoidance is not practicable, minimizing adverse impacts to the maximum extent practicable; or
 - (3) if neither avoidance nor minimization is practicable, conducting mitigation to the extent appropriate and practicable; for purposes of this paragraph, "mitigation" means
 - (A) on-site rehabilitation of project impacts to affected coastal resources during or at the end of the life of the project; or
 - (B) to the extent on-site rehabilitation of project impacts is not practicable, substituting, if practicable, rehabilitation of or an improvement to affected coastal resources within the district, either on-site or off-site, for a coastal resource that is unavoidably impacted.
- (b) For a project that requires a federal authorization identified under 11 AAC 110.400, the coordinating agency shall consult with the authorizing federal agency during that federal agency's authorization review process to determine whether the mitigation requirements proposed by the federal agency for that federal authorization would satisfy the mitigation requirements of (a)(3) of this section. If the coordinating agency determines that the mitigation requirements proposed by the federal agency would not satisfy the mitigation requirements of (a)(3) of this section, the coordinating agency shall require appropriate mitigation in accordance with (a)(3) of this section.
- (c) For purposes of (a)(3) of this section, a determination of practicability includes consideration of the following factors, as applicable:

- (1) the magnitude of the functional values lost by the impacted coastal resources;
 - (2) the likelihood that the mitigation measure or improvement will succeed in actually rehabilitating the impacted resource; and
 - (3) the correlation between the functional values lost by the coastal resources impacted and the proposed mitigation measure or improvement.
- (d) To the extent feasible and not otherwise addressed by state or federal law, any requirements imposed under (a)(3) of this section for mitigation through on-site or off-site rehabilitation of project impacts shall be established by the coordinating agency at the time of the project's consistency review under 11 AAC 110.
- (e) In applying the mitigation process described in (a)(3) of this section, unless required by a federal agency issuing an authorization identified under 11 AAC 110.400 for the project, the coordinating agency may not require
- (1) that no net loss of impacted coastal resources occur; or
 - (2) monetary compensation.

Mitigation measures A.1.c, A.2.a, A.2.b, A.2.d, A.2.e, A.2.f, A.2.n, A.2.o, A.4.b, A.4.e, A.5.a, and A.7.c specifically address avoiding adverse impacts. Mitigation measures A.1.a, A.1.b, A.1.d, and A.1.i specifically address minimizing adverse impacts. Mitigation measure A.1.i, and competitive oil and gas lease paragraph 9 and 21 specifically address rehabilitation.

11 AAC 112.990 Definitions

Unless the context indicates otherwise, in this chapter,

- (1) “active floodplain” means the low land and relatively flat areas adjoining rivers, lakes, and streams that are subject to regular inundation by floods;
- (2) “adjacent” means near but not necessarily touching;
- (3) “barrier islands and lagoons” means
 - (A) depositional coastal environments formed by deposits of sediment offshore; or
 - (B) coastal remnants that form a barrier of low-lying islands and bars protecting a salt-water lagoon with free exchange of water to the sea;
- (4) “beach” has the meaning given in 11 AAC 114.990;
- (5) “coastal area” has the meaning given “coastal zone” in AS 46.40.210 , except that “coastal area” includes federally owned land and water within the coastal zone;
- (6) “coastal water” means those waters, adjacent to the shorelines, that contain a measurable quantity or percentage of sea water, including sounds, bays, lagoons, ponds, estuaries, and tidally influenced waters;
- (7) “department” has the meaning given in AS 46.40.210 ;
- (8) “designate” means
 - (A) for a district, to identify in a district plan approved by the department; and
 - (B) for a state agency, to identify in a planning document or as part of a review under 11 AAC 110;
- (9) “district” means a coastal resource district as defined in AS 46.40.210 ;

- (10) “district plan” has the meaning given in 11 AAC 114.990;
- (11) “estuary” means a semiclosed coastal body of water that has a free connection with the sea and within which seawater is measurably diluted with freshwater derived from land drainage;
- (12) “exposed high-energy coasts” means open and unprotected sections of coastline with exposure to ocean generated wave impacts and usually characterized by coarse sand, gravel, boulder beaches, and well-mixed coastal water;
- (13) "freshwater wetlands" means those environments characterized by rooted vegetation that is partially submerged either continuously or periodically by surface freshwater with less than 0.5 parts per thousand salt content and not exceeding three meters in depth;
- (14) “major energy facility”
 - (A) means a development of more than local concern carried out in, or in close proximity to, the coastal area, that is:
 - (i) required to support energy operations for exploration or production purposes;
 - (ii) used to produce, convert, process, or store energy resources or marketable products;
 - (iii) used to transfer, transport, import, or export energy resources or marketable products;
 - (iv) used for in-state energy use; or
 - (v) used primarily for the manufacture, production, or assembly of equipment, machinery, products, or devices that are involved in an activity described in (i) - (iv) of this subparagraph;
 - (B) includes marine service bases and storage depots, pipelines and rights-of-way, drilling rigs and platforms, petroleum or coal separation, treatment, or storage facilities, liquid natural gas plants and terminals, oil terminals and other port development for the transfer of energy products, petrochemical plants, refineries and associated facilities, hydroelectric projects, other electric generating plants, transmission lines, uranium enrichment or nuclear fuel processing facilities, geothermal facilities, natural gas pipelines and rights-of-way, natural gas treatment and processing facilities, and infrastructure related to natural gas treatment and processing facilities;
- (15) “natural hazards”
 - (A) means the following natural processes or adverse conditions that present a threat to life or property in the coastal area: flooding, earthquakes, active faults, tsunamis, landslides, volcanoes, storm surges, ice formations, snow avalanches, erosion, and beach processes;
 - (B) includes other natural processes or adverse conditions designated by the department or by a district in a district plan;
- (16) “natural hazard area” means an area designated by a district under 11 AAC 114.250(b) or a state agency under 11 AAC 112.210(b) ;
- (17) “offshore areas” means submerged lands and waters seaward of the coastline as measured from mean low tide;
- (18) “practicable” means feasible in light of overall project purposes after considering cost, existing technology, and logistics of compliance with the standard;
- (19) “program” has the meaning given in 11 AAC 110.990;
- (20) “public need” has the meaning given in 11 AAC 114.990;

- (21) “reasonably foreseeable” has the meaning given in 11 AAC 110.990;
- (22) “resource agency” has the meaning given in AS 46.39.010 ;
- (23) “rivers, streams, and lakes” means those portions of water bodies that
 - (A) are catalogued under AS 41.14.870 as important for anadromous fish;
 - (B) are not catalogued under AS 41.14.870 as important for anadromous fish, but have been determined by the deputy commissioner of the department to contain or exhibit evidence of anadromous fish, in which event the anadromous portion of the stream or waterway extends up to the first point of physical blockage; or
 - (C) are delineated based on written scientific findings demonstrating to the satisfaction of the coordinating agency, in consultation with the state resource agency with expertise, that the project or activity would cause significant and adverse impact to
 - (i) water bodies identified in (A) or (B) of this paragraph; and
 - (ii) coastal waters;
- (24) “rocky islands and sea cliffs” means islands of volcanic or tectonic origin with rocky shores and steep faces, offshore rocks, capes, and steep rocky seafronts;
- (25) “saltwater wetlands” means those coastal areas along sheltered shorelines characterized by halophilic hydrophytes and macro algae extending from extreme low tide to an area above extreme high tide that is influenced by sea spray or tidally induced water table changes;
- (26) “scientific evidence” has the meaning given in 11 AAC 114.990;
- (27) “tideflats” means mostly unvegetated areas that are alternately exposed and inundated by the falling and rising of the tide;
- (28) “transportation routes and facilities” include natural transportation routes dictated by geography or oceanography, roads, highways, railways, air terminals, and facilities required to operate and maintain the route or facility;
- (29) “uses of state concern” has the meaning given in AS 46.40.210;
- (30) “utility routes and facilities” include power transmission lines, mineral slurry lines, oil and gas pipelines, natural transportation routes dictated by geography or oceanography, water and sewage transfer, and facilities required to operate and maintain the route or facility;
- (31) “water-dependent” means a use or activity that can be carried out only on, in, or adjacent to a water body because the use requires access to the water body;
- (32) “water-related” means a use or activity that is not directly dependent upon access to a water body, but which provides goods or services that are directly associated with water-dependence and which, if not located adjacent to a water body, would result in a public loss of quality in the goods or services offered;
- (33) “wetlands” means saltwater wetlands and those freshwater wetlands that have a direct drainage to coastal waters.
- (34) “avoid or minimize” means a process of avoiding adverse impacts to the maximum extent practicable and, if avoidance is not practicable, minimizing impacts where practicable;
- (35) “coordinating agency” has the meaning given in 11 AAC 110.990.
- (36) “direct and significant impact” has the meaning given in 11 AAC 114.990;
- (37) “subsistence fishing” has the meaning given in AS 16.05.940;

(38) “subsistence uses” has the meaning given in AS 16.05.940.

Matanuska-Susitna Borough Coastal Management Plan Enforceable Policies

All of the lands and waters within the existing MSB coastal zone are included in the Designated Recreational Use Area. Federal lands within the coastal zone, and the Point Mackenzie AMSA are excluded from the designation.

The state standards for coastal development and coastal access are, by definition, limited to marine coastal water, consequently, neither standard is applicable to rivers, streams, and lakes in the MSB coastal zone. Recreation, Development and Access (RDA) policies derive their authority from the recreational use designation and are therefore applicable throughout the MSB coastal zone (including rivers, lakes and streams).

Shoreline Development Requirements

RDA-1

Within the designated recreational use area, as described in section 6.3, projects that involve dredging or filling in shall be located, designed, constructed, operated, and maintained to:

- (1) avoid significant adverse impacts to the physical, biological, and cultural features, described in section 5.9, upon which the recreation resource depends; and
- (2) limit the extent of direct disturbance to the minimum area necessary to accommodate the proposed purpose or use.

Enforceable policy RDA-1 requires that significant adverse impacts and disturbances related to dredging or filling be avoided. Dredge and fill activities in wetlands require a permit from the U.S. Army Corps of Engineers. Such an activity will require a separate ACMP review, if proposed. See Lessee Advisory B.5.a. Approved placement of fill or structures into wetlands must also be consistent with Mitigation Measure A.1.d., which requires that impacts to identified wetlands be minimized and that facilities be sited in the least sensitive areas.

Waterbody Setback Requirements

RDA-2

Within the designated recreational use area, as described in section 6.3, proposed uses and activities within 75 feet of the ordinary high water (OHW) line of rivers, streams, and lakes within shall protect the physical, biological, and cultural features upon which the recreation resource depends.

RDA-3

Within the designated recreational use area, water-dependent structures such as docks, piers, marinas, floatplane hangars, or boathouses, and access to such structures, are allowable within 75 feet of OHW, provided they are constructed and used in a way that minimizes adverse impacts to the recreational uses.

RDA-4

Within the designated recreational use area, other uses and activities within 75 feet of OHW are also allowable if the proposed development will have no significant adverse impact to recreational uses.

RDA-5

Within the designated recreational use area, as described in section 6.3, natural or vegetative buffers shall be required for commercial and industrial developments within the 75-foot setback from OHW to protect the recreational character of the waterbody. Requirements for the size and extent of buffers shall be determined on a case-by-case basis and shall be commensurate with the reasonably foreseeable impacts of the development on recreational uses and activities.

Enforceable policies RDA-2-5 require 75-foot setbacks from rivers, streams, and lakes to protect the physical, biological, and cultural features. Mitigation Measure A.1.c is more restrictive than these policies, which ensures consistency with this standard. Mitigation Measure A.1.c prohibits the siting of facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities within one-half mile of the coast, barrier islands, reefs, lagoons; 500 feet of fish bearing streams and waterbodies; 1,500 feet of current surface drinking water sources; and one-half mile of the banks of the main channel of the Harriet, Alexander, and Lake creeks, and the Lewis, Theodore, Susitna, and Little Susitna rivers, unless it is not practicable or a location within the buffer is environmentally preferred.

In-water Development Requirements

RDA-6

Uses and activities on rivers, streams, lakes, and coastal waters within the designated recreational use area, as described in section 6.3, shall meet the following requirements:

- A. In-water structures and buoys shall be visibly marked and placed in a manner to minimize navigation hazards or obstructions to other uses; and
- B. To the extent practicable, all developments, structures, and facilities in waterbodies shall be sited, constructed, operated, and maintained in a manner that does not create a hazard or obstruction to other uses.

Enforceable policy RDA-6 requires that navigation hazards or obstructions to other uses be minimized. Mitigation Measure A.1.g requires that offshore pipelines be located and constructed to prevent obstruction to marine navigation and fishing operations.

Access Requirements

RDA-7

Within the designated recreational use area, new subdivisions shall increase public access to and from the shoreline.

RDA-8

Within the designated recreational use area, capital improvements on non-federal publicly owned waterfront property shall incorporate walkways, shelters, viewing platforms, and landscaping

whenever practicable to increase public access and to facilitate public enjoyment of recreational waters.

Specific Waterfront Development Requirements

RDA-9

Within the designated recreational use area, proposed uses or activities shall avoid, minimize, or mitigate direct and significant impacts upon the existing activities and the physical, biological, visual, or cultural features upon which the recreation resource depends.

Enforceable policies RDA-7-9 require that access be increased and that significant impacts on existing activities and features upon which recreational resources depend be avoided, minimized, or mitigated. Mitigation Measure A.1.b requires that facilities be designed and operated to minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. Mitigation Measure A.5.a requires that public access to, or use of, the lease area not be restricted and prohibits lease facilities and operations from blocking access to or along navigable or public waters.

Sequencing of Sand and Gravel Extraction and Practicable Alternatives

RDA-10

Within the designated recreational use area, in order to minimize impacts on recreational uses and to the extent practicable, sources of sand and gravel shall be approved in the following sequence:

- A. Existing approved gravel pits or quarries operated in compliance with state and federal authorizations;
- B. Reuse of material from abandoned development area;
- C. New upland sites; and
- D. Streams that do not provide fish habitat.

Enforceable policy RDA-10 requires that to minimize impacts to recreational uses, sources of sand and gravel be approved in sequence from existing sites to streams. A lease does not authorize sand and gravel extraction. If and when sand and gravel extraction is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and MSBCMP. Mitigation Measure A.1.i restricts gravel mining sites required for exploration and development to the minimum necessary to develop the field efficiently and with minimal environmental damage.

Point MacKenzie AMSA Enforceable Policies

The lands of waters within the existing AMSA are included in a Designated Major Energy Facility Area. The AMSA/Energy Designation provides the MSB with a tool for addressing uses and activities that may have a direct and significant impact on the physical, biological, and cultural

features. The Point MacKenzie AMSA is designated as a Major Energy Facility Area, and as such, is deemed suitable for energy facilities and supporting infrastructure in accordance with 11 AAC 112.230 and 11 AAC 114.150(e).

PMCD1

To the extent practicable, the placement of structures in coastal water to accommodate ports, piers, docks, terminals, cargo handling, storage, parking, and other coastal facilities shall be designed and utilized to minimize the need for duplicate facilities. The evaluation of subsequent use of facilities for other than their original intent shall be required in the siting and design of such facilities.

A lease does not authorize coastal facilities. If and when coastal facilities are proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and MSBCMP. Mitigation Measures A.1.e requires exploration activities to be supported by air service, an existing road system or port facility, ice roads, or by off-road vehicles that do not cause significant damage to the vegetation or ground surface. Mitigation Measure A.1.f requires exploration facilities to be consolidated.

PMCD2

The placement of structures and the discharge of dredged or fill material into coastal water including estuaries and tidelands, shall be located, designed, constructed, operated, and maintained to minimize adverse impacts to littoral processes of sediment erosion, deposition and transport.

Dredge and fill activities in wetlands require a permit from the U.S. Army Corps of Engineers. Such an activity would require a separate ACMP review, if proposed. See Lessee Advisory B.5.a. Approved placement of fill or structures into wetlands must also be consistent with Mitigation Measure A.1.d, which requires that impacts to identified wetlands be minimized and that facilities be sited in the least sensitive areas.

PMSG1

To the extent practicable, sources of sand and gravel shall be authorized for extraction from the following coastal sites in the following order of priority:

1. Existing approved gravel pits or quarries operated in compliance with state and federal authorizations;
2. Reuse of material from abandoned development, unless reuse could cause more environmental damage than non-use; and
3. New upland sites.

A lease does not authorize sand and gravel extraction. If and when sand and gravel extraction is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and MSBCMP. Mitigation Measure A.1.i restricts gravel mining sites required for exploration and development to the minimum necessary to develop the field efficiently and with minimal environmental damage.

PMSG2

When conducting coastal sand and gravel extraction, to the extent practicable, overburden shall be saved and placed so as to conform to the natural topography as part of the rehabilitation process.

Overburden shall not be disposed of in wetlands, or below the limit of MHW in intertidal areas and estuaries.

A lease does not authorize sand and gravel extraction. If and when sand and gravel extraction is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and MSBCMP. Mitigation Measure A.1.i restricts gravel mining sites required for exploration and development to the minimum necessary to develop the field efficiently and with minimal environmental damage. It also requires that sites not be located in an active floodplain unless the ADNR Division of Mining, Land and Water determines that there is no practicable alternative or that it would be compatible with fish and wildlife habitat.

Dredge and fill activities in wetlands require a permit from the U.S. Army Corps of Engineers. Such an activity would require a separate ACMP review, if proposed. See Lessee Advisory B.5.a. Approved placement of fill or structures into wetlands must also be consistent with Mitigation Measure A.1.d, which requires that impacts to identified wetlands be minimized and that facilities be sited in the least sensitive areas.

Municipality of Anchorage Coastal Management Plan Enforceable Policies

The designation of a specific portion of the MOA coastal zone boundary (Kincaid Park, the Tony Knowles Coastal Trail, Chester Creek Trail) as Recreation Use Areas provides the MOA with the legal authority to address the prioritization of uses and activities within these areas. The Recreation Use Designation has been developed in accord with the state requirements described in 11 AAC 114.250 (c). A designation for the purposes of coastal management does not imply that all areas within the Designation are in public ownership, or used for public recreational purposes. Rather, the Designation relates to, and encompasses actively used areas, those areas that have the potential to be used, and those areas that are setbacks or buffers needed to protect the adjacent recreational resource. A Designation is not a zoning district.

Pursuant to the regulations for designating for recreation, the trail systems lands defined as the Designated Recreation Use area, are currently used, and have the potential to be used, for recreational purposes. There are physical, biological, and cultural features upon which recreational use depends. Recreation uses in the area designated includes existing and planned features for trails, organized sports, and for passive activities such as tourism and wildlife viewing.

All land and water uses and activities are considered proper as long as they comply with the enforceable policies of the MOACMP, ACMP standards, and applicable federal and state regulations, and municipal regulations. A land or water use or activity will be considered improper if it is inconsistent with ACMP standards or the policies of the MOACMP, or it does not comply with or cannot be made to comply with the applicable federal and state regulations.

EP-1. Uses, Activities, and Setbacks

The following uses are allowed and considered appropriate in the Recreation Use Area: primary and secondary structures, utilities and transportation features, direct access to streams or waterbodies or to accommodate water-dependent and/or water-related uses, habitat enhancement or restoration projects, land clearing for approved developments, impervious surfaces, clearing of native or other vegetation, removal of dead or decaying trees that threaten public or private property or health and

safety. These uses are permitted provided they meet the following required conditions (and relevant Municipal regulations):

- (a) A 50-foot setback from the Ordinary High Water (OH) of streams and/or waterbodies, unless there is no practicable alternative location for the use or activity.
- (b) For streams or waterbodies with contiguous wetlands, setback distances shall follow those defined in Table 2 of the Anchorage Wetlands Management Plan, which vary from 25' to 200'.

Enforceable policy EP-1 requires 25-200-foot setbacks from streams or waterbodies. Mitigation Measure A.1.c is more restrictive than this policy, which ensures consistency with this standard. Mitigation Measure A.1.c prohibits the siting of facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities within one-half mile of the coast, barrier islands, reefs, lagoons; 500 feet of fish bearing streams and waterbodies; and 1,500 feet of current surface drinking water sources, unless it is not practicable or a location within the buffer is environmentally preferred.

EP-2. Buffering and Screening

- (a) For commercial, industrial, or institutional projects and associated activities within 200 feet of streams or waterbodies within the Recreation Use Area Designation, natural or landscaped vegetative buffers (with non-invasive species) or other screening measures shall be required specifically where the project site parallels or abuts, but lies outside, the stream or waterbody setbacks cited in EP-1.
- (b) Requirements for the size and extent of buffers or screening measures: At a minimum, these site-specific buffers or screens shall be 10' wide if composed of vegetation.

This policy is intended to protect the unique, location-specific biological and recreation features of the Designation within the Anchorage Coastal Boundary. Screening and buffering are effective standards that can be added to development reviews and project designs to further minimize a project's primary and cumulative impacts to wildlife, native vegetation, public uses and access. Because each site includes a unique variety of existing features and/or site constraints, the width and type of buffer and screening measures necessarily requires a case-by-case determination, which should occur during a consistency review, or in pre-application consultations.

Enforceable policy EP-2 requires commercial, industrial, or institutional projects within 200 feet of streams or waterbodies be screened. A lease does not authorize development. If and when development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and the MOACMP. Mitigation Measure A.1.a requires that plans of operations, which must be submitted and approved before conducting exploration, development or production activities, must describe the lessee's efforts to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas, and adjacent private lands. Mitigation Measure A.1.b requires that facilities be designed and operated to minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. Methods may include providing natural buffers and screening to conceal facilities, sound insulation of facilities, or by using alternative means approved by the director, in consultation with the Alaska Department of Fish and Game.

EP-3. Waterfront Development

In accordance with 11 AAC 112.200:

- (a) Water-dependent Uses and Activities within the Municipality of Anchorage include: docks; boat ramps and launches; marinas, including wet-boat storage and boathouses, haul-out facilities, permanent or transient docking spaces and dry-storage; boat fueling facilities, piers, wharfs, and mooring pilings; fish processing facilities and hatcheries; water-based tourism facilities and accessory attached housing; and transportation-related structures dependent on water access.
- (b) Water-related Uses and Activities within the Municipality of Anchorage include: retail stores and commercial activities such as hotels, restaurants, pedestrian-oriented access, and other similar uses that provide access to and/or views of the shoreline.

Enforceable Policy EP-3 provides definitions of water-dependent and water-related uses and activities. These definitions expand on those found in 11 AAC 112.990 and are not inconsistent with mitigation measures and lessee advisories found in the Cook Inlet Areawide Preliminary Best Interest Finding.

EP-4. Coastal Access

- (a) Development shall not interfere with existing legal public access to, or use of, the waterfront where such access or use has been established through acquisition, donation, dedication, or prescriptive easement.
- (b) New subdivisions shall be designed to maintain or enhance public access to, from, and along coastal waters within the coastal zone where practicable.

Enforceable Policy EP-4 addresses maintaining public access to the waterfront and coastal waters. Mitigation Measure A.1.a requires that plans of operations, which must be submitted and approved before conducting exploration, development or production activities, must describe the lessee's efforts to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas, and adjacent private lands. Mitigation Measure A.3.a restricts lease-related use when necessary to prevent unreasonable conflicts between lease-related activities and subsistence, and commercial, sport, personal use, and educational harvest activities. Mitigation Measure A.5.a requires that public access to, or use of, the lease area not be restricted and prohibits lease facilities and operations from blocking access to or along navigable or public waters.

EP-5 Capital Improvements

- (a) Capital improvements on non-federal, publicly owned property shall incorporate walkways, shelters, viewing platforms, and landscaping whenever practicable to enhance public access to coastal waters.

A lease does not authorize development. If and when development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and the MOACMP.

Kenai Peninsula Borough Coastal Management Plan Enforceable Policies

The enforceable policies are the rules of the Coastal Management Program. All uses and activities (i.e., permits and approvals) subject to a consistency determination must comply with the enforceable coastal management policies in order to be determined consistent with the coastal management program.

All parties participating in a consistency determination – the applicant, the borough, and state agencies – will use the enforceable, approved policies as the means for deciding consistency. These policies supplement the existing Alaska Coastal Management Program policies.

Additional state, federal ,or local laws may also apply to certain activities described in this document. Potential developers are advised to contact the city planning departments (if a project is within a city) as well as appropriate state and federal agencies to identify any additional regulations which could apply.

1.0 Coastal Development

11 AAC 112.200. Coastal development

- (a) In planning for and approving development in or adjacent to coastal waters, districts and state agencies shall manage coastal land and water uses in such a manner that those uses that are economically or physically dependent on a coastal location are given higher priority when compared to uses that do not economically or physically require a coastal location.
- (b) Districts and state agencies shall give, in the following order, priority to
 - (1) water-dependent uses and activities;
 - (2) water-related uses and activities; and
 - (3) uses and activities that are neither water-dependent nor water-related for which there is no practicable inland alternative to meet the public need for the use or activity.
- (c) The placement of structures and the discharge of dredged or fill material into coastal water must, at a minimum, comply with the standards contained in 33 C.F.R. Parts 320 - 323, revised as of July 1, 2003 (Eff. 7/1/2004, Register 170).

A lease does not authorize development. If and when development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and the KPBCMP. Mitigation Measure A.1.c prohibits the siting of facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities within one-half mile of the coast, barrier islands, reefs, lagoons; 500 feet of fish bearing streams and waterbodies; 1,500 feet of current surface drinking water sources; and one-half mile of the banks of the main channel of the Deep and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Beluga, Kenai, Kasilof, Niniichik, and Anchor rivers, unless it is not practicable or a location within the buffer is environmentally preferred.

Dredge and fill activities in wetlands require a permit from the U.S. Army Corps of Engineers. Such an activity will require a separate ACMP review, if proposed. See Lessee Advisory B5. Approved placement of fill or structures into

wetlands must also be consistent with Mitigation Measure A.1.d which requires that impacts to identified wetlands be minimized and that facilities be sited in the least sensitive areas.

1.2. Floating Facilities

In determining whether to allow or prohibit any floating facility at a specific site, the following priorities shall be considered:

- (a) Higher priority shall be given to those uses and activities that cater to seasonal or short term uses over long-term use.
- (b) Lower priority consideration shall be given to:
 - (1) uses and activities that benefit only an individual or limited group,
 - (2) uses and activities that take up a large area, or have broader or more pronounced impacts,
 - (3) uses and activities located in sites that are inappropriate to accommodate a floating facility because of physical characteristics, including, but not limited to: tidal flushing, anchorage, proximity to other floating facilities or uplands users, site specificity (the need for the facility to be located at a specific site)and
- (c) The following requirements shall apply to any floating facility allowed in a specific location within the District:
 - (1) Grounding: To the extent practicable, floating facilities shall be moored in a minimum of 12 feet of water present during mean lower low water or 0.0 tide stage, and avoid shallow areas where they could settle on or abrade the substrate during low tides.
 - (2) Proper Anchoring: Floating facilities shall use anchoring methods similar to a marine vessel and shall not use shore ties or other means that restrict passage around their location. Anchors shall be of sufficient weight and holding capability to keep the facility in its proper location without drifting into an unacceptable location or onto the beach.
 - (3) Removal: An owner or operator shall be responsible for promptly removing and disposing of floats, docks, rafts, boats, and float houses or other related materials when the lease or permit has expired. Facilities shall be removed within the time period specified by the permitting agencies. Abandonment, casting loose, or disposal on a beach are prohibited as disposal methods.

A lease does not authorize floating facilities. If and when floating facilities are proposed, they will be measured against this standard, as well as all other enforceable policies of the ACMP and KPBCMP.

1.5. Ports and Harbors

- (a) Ports, harbors and docks placed in coastal waters shall avoid adverse impacts to erosion, deposition and related littoral processes.
- (b) To the extent practicable, piers, docks, boat ramps and other waterfront facilities shall be designed and operated for cooperative or public use to avoid duplication of facilities.

A lease does not authorize ports, harbors, docks, or waterfront facilities. If and when ports, harbors, docks, or waterfront facilities are proposed, they will be measured against this standard, as well as all other enforceable policies of the ACMP and KPBCMP. Mitigation Measure A.1.e requires exploration activities to be supported by air service, an existing road system or port facility, ice roads, or by off-road vehicles that do not cause significant damage to the vegetation

or ground surface. Mitigation Measure A.1.f requires exploration facilities to be consolidated.

2.0 Natural Hazard Areas

2.2. Erosion

Developers shall retain existing vegetative cover in designated erosion-prone areas to the greatest extent practicable. In cases where development or other activities lead to removal of vegetation, erosion shall be prevented or, if it occurs, shall be remedied through revegetation (with native species if available) or by other suitable measures.

A lease does not authorize development. If and when development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and KPBCMP. Mitigation Measure A.1.c prohibits the siting of facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities within one-half mile of the coast, barrier islands, reefs, lagoons; 500 feet of fish bearing streams and waterbodies; 1,500 feet of current surface drinking water sources; and one-half mile of the banks of the main channel of the Deep and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Beluga, Kenai, Kasilof, Ninilchik, and Anchor rivers, unless it is not practicable or a location within the buffer is environmentally preferred. Mitigation Measure A.1.d, which requires that impacts to identified wetlands be minimized and that facilities be sited in the least sensitive areas. Mitigation Measure A.1.i restricts gravel mining sites required for exploration and development to the minimum necessary to develop the field efficiently and with minimal environmental damage Lessee Advisory B.3.a addresses sand and gravel extraction.

3.0 Recreation and Coastal Access

Lakeshore and Riverfront Development Requirements

3.1. Priority Use

Uses and activities within designated recreational use areas that are economically or physically dependent on a lakeshore or riverfront location are given higher priority when compared to uses and activities that do not economically or physically require a lakeshore or riverfront location. Priority shall be given, in the following order, to:

- (a) water-dependent uses and activities;
- (b) water-related uses and activities; and
- (c) uses and activities that are neither water-dependent nor water-related for which there is no practicable inland alternative to meet the public need for the use or activity.
 - (1) Water-dependent uses include: fish hatcheries; float plane ramps, boat launches, docks; sport fishing and wildlife viewing facilities; and accessory attached housing; and remote recreational cabins dependent on water access.
 - (2) Water-related activities include: retail stores and commercial activities such as lodges, hotels, restaurants, and other similar uses that provide views and access to the lakefront or riverfront.

- (3) Exceptions: Non-water-dependent and non-water-related uses and activities shall be permitted when it is not practicable to develop a site with a water-dependent or water-related use or activity due to shallow bathymetry or unusual lot characteristics such as substandard size, frontage, or steep topography, or when such uses would be inconsistent with zoning.

Mitigation Measure A.1.a requires that plans of operations, which must be submitted and approved before conducting exploration, development or production activities, must describe the lessee's efforts to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas, and adjacent private lands. Mitigation Measure A.1.b requires that facilities be designed and operated to minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. Methods may include providing natural buffers and screening to conceal facilities, sound insulation of facilities, or by using alternative means approved by the director, in consultation with the Alaska Department of Fish and Game. Mitigation Measure A.1.c prohibits the siting of facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities within one-half mile of the coast, barrier islands, reefs, lagoons; 500 feet of fish bearing streams and waterbodies; 1,500 feet of current surface drinking water sources; and one-half mile of the banks of the main channel of the Deep and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Beluga, Kenai, Kasilof, Ninilchik, and Anchor rivers, unless it is not practicable or a location within the buffer is environmentally preferred. Mitigation Measure A.3.a addresses conflicts between lease-related activities and subsistence, and commercial, sport, personal use, and educational harvest activities. Mitigation Measure A.5.a requires that public access and use of the lease area not be restricted except within the immediate vicinity of drill sites, buildings, and other related facilities.

Dredge and fill activities in wetlands require a permit from the U.S. Army Corps of Engineers. Such an activity would require a separate ACMP review, if proposed. See Lessee Advisory B.5.a.

In-water Development Requirements

3.2. Activities in Recreational Waters

Uses and activities in recreational waters shall meet the following requirements:

- (a) Structures and buoys placed on the surface of navigable waters shall be visibly marked to minimize navigation hazards.
- (b) Developments, structures, facilities and buoys in navigable coastal waters shall be placed to avoid, minimize or mitigate navigation hazards or obstruction.

A lease does not authorize development. If and when development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and KPBCMP. Mitigation Measure A.5.a requires that public access to, or use of, the lease area not be restricted and prohibits lease facilities and operations from blocking access to or along navigable or public waters.

Public Access Requirements

3.3. Public Access

An access management plan detailing how the access route will be protected from adverse physical impacts as a result of public use, shall be required for all public access routes to coastal water bodies, lakeshores and riverfronts within designated recreational use areas when municipal and state lands are leased, disposed of, or subdivided.

A lease does not authorize development. If and when development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and KPBCMP. Mitigation Measure A.1.a requires that plans of operations, which must be submitted and approved before conducting exploration, development or production activities, must describe the lessee's efforts to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas, and adjacent private lands. Mitigation Measure A.1.b requires that facilities be designed and operated to minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. Methods may include providing natural buffers and screening to conceal facilities, sound insulation of facilities, or by using alternative means approved by the director, in consultation with the Alaska Department of Fish and Game. Mitigation Measure A.3.a addresses conflicts between lease-related activities and subsistence, and commercial, sport, personal use, and educational harvest activities. Mitigation Measure A.5.a requires that public access and use of the lease area not be restricted except within the immediate vicinity of drill sites, buildings, and other related facilities.

3.4. Capital Improvements

Capital improvements on municipal and state-owned coastal waterfront, lakefront and riverfront property shall incorporate walkways, shelters, viewing platforms and landscaping whenever practicable to increase and control public access and to facilitate public enjoyment in designated recreational use areas as described in Chapter V of the Kenai Peninsula Borough Coastal Management Plan,¹ while protecting the resources upon which the recreation depends (as shown in the "Recreational Features" table).

A lease does not authorize capital improvements. If and when capital improvements are proposed, they will be measured against this standard, as well as all other enforceable policies of the ACMP and KPBCMP. Mitigation Measures A.1.c, A.1.d, A.1.i and Lessee Advisory B.3.a support this policy.

Conflicts with Recreational Uses and Activities

3.5. Recreational Features

Proposed uses or activities in designated recreational areas as described in Chapter V of the Kenai Peninsula Borough Coastal Management Plan shall avoid, minimize or mitigate direct and significant impacts upon the existing uses and activities and the protected features on which the recreation depends (as shown in Table).

¹ Kenai Peninsula Borough coastal management program, final plan amendment. April 2007.
<http://www.borough.kenai.ak.us/KenaiRiverCenter/Agencies/Coastal/07CoastalPlan/CZM2007.pdf>

Enforceable Policy 3.5 requires proposed uses or activities to avoid, minimize, or mitigate direct and significant impacts upon the existing uses and activities. Mitigation Measure A.1.a requires that plans of operations, which must be submitted and approved before conducting exploration, development or production activities, must describe the lessee's efforts to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas, and adjacent private lands. Mitigation Measure A.3.a restricts lease-related use when necessary to prevent unreasonable conflicts between lease-related activities and subsistence, and commercial, sport, personal use, and educational harvest activities. Mitigation Measure A.5.a requires that public access to, or use of, the lease area not be restricted and prohibits lease facilities and operations from blocking access to or along navigable or public waters.

3.6. Ports, Harbors and Docks in Rivers within Designated Recreational Use Areas

- (a) Ports, harbors and docks placed in rivers shall avoid adverse impacts to recreational activities (as shown in Table).
- (b) The area immediately surrounding small boat harbors shall, to the extent practicable, be reserved for harbor-related and water-dependent uses.
- (c) To the extent practicable, piers, docks, boat ramps and other waterfront facilities shall be designed and operated for cooperative or public use to avoid duplication of facilities.

A lease does not authorize ports, harbors, docks, or waterfront facilities. If and when ports, harbors, docks, or waterfront facilities are proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and KPBCMP. Mitigation Measure A.1.a requires that plans of operations, which must be submitted and approved before conducting exploration, development or production activities, must describe the lessee's efforts to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas, and adjacent private lands. Mitigation Measure A.1.b requires that facilities be designed and operated to minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. Methods may include providing natural buffers and screening to conceal facilities, sound insulation of facilities, or by using alternative means approved by the director, in consultation with the Alaska Department of Fish and Game. Mitigation Measure A.3.a restricts lease-related use when necessary to prevent unreasonable conflicts between lease-related activities and subsistence, and commercial, sport, personal use, and educational harvest activities. Mitigation Measure A.5.a requires that public access to, or use of, the lease area not be restricted and prohibits lease facilities and operations from blocking access to or along navigable or public waters.

6.0 Commercial Fishing and Seafood Processing Facilities

6.1. Suitable Areas

Uses and activities within the areas designated as suitable for the location of facilities related to commercial fishing and seafood processing as shown on Map Figures N1-N8 (see KPB 2007) shall

be sited to avoid or minimize adverse impacts to commercial fishing and seafood processing facilities.

6.2. Water-dependent Uses

Within the areas designated as suitable for the location of facilities related to commercial fishing and seafood processing as shown on Map Figures N1-N8 (see KPB 2007), fish and seafood processing and support facilities shall be considered water-dependent uses.

Enforceable policies 6.1 and 6.2 address avoiding or minimizing adverse impacts to commercial fishing and seafood processing facilities. A lease does not authorize development. If and when development is proposed, it will be measured against this standard, as well as all other enforceable policies of the ACMP and KPBCMP. Mitigation Measures A1a and A1b address minimizing effects on commercial fishing and related uses and activities.

9.0 Sand and Gravel Extraction

9.1. Sand and Gravel Priority Areas

To the extent practicable, sources of sand and gravel from coastal water shall be authorized in a descending order of priority as follows:

- (a) reuse of sand and gravel from abandoned development areas;
- (b) rivers, streams, and lakes that do not support fish.

A lease does not authorize sources of sand and gravel. If and when sources of sand and gravel are proposed, they will be measured against this standard, as well as all other enforceable policies of the ACMP and KPBCMP. Mitigation Measure A.1.i restricts gravel mining sites required for exploration and development to the minimum necessary to develop the field efficiently and with minimal environmental damage.

Conclusion

DO&G has reviewed proposed Cook Inlet Areawide oil and gas lease sale for consistency with the standards of the ACMP contained in 11 AAC 112 and the enforceable policies of the MSBCMP, MOACMP, and KPBCMP.

The exact nature of exploration and development activities on the proposed lease sale area cannot be known at this time; no two sale areas are alike. New understanding of the area's resources with the use of new technologies may change the way exploration, development, and production occurs. The leasing of this area is a prudent use of public lands considering the public need for oil and gas and the limited range of alternatives available to meet state and national energy needs. Additionally, DO&G possesses statutory and regulatory authority governing other activities associated with oil and gas exploration and development in the coastal area.

In consultation with the other resource agencies and local authorities, DO&G has adopted a broad assortment of proposed mitigation measures to preserve values of public concern in the coastal zone, to minimize any adverse effects on the coastal zone and other coastal zone activities, and to ensure compliance with the ACMP, MSBCMP, MOACMP, and KPBCMP. These mitigation measures are legally binding permit terms.

ADNR has independently determined that proposed Cook Inlet Areawide oil and gas lease sale, accompanied by the mitigation measures discussed in this analysis and by other statutory and regulatory authorities, is consistent with the standards of the ACMP, MSBCMP, MOACMP, and the KPBCMP.

Table 1. Recreational features as defined by Kenai Peninsula Borough Coastal Management Program.

Region #	1	2	3	4	5	6	7	8	9	10	11	12
Location	Hope, Pt. Possession, Ingram Ck.	Hope "Y", Kenai Lake	Seward & Resurrection Bay	Cooper Landing	Coastal Plain, Pt. Possession - Kenai R.	Kasilof River	Homer, Ninilchik & Anchor R. & Deep Ck.	Upper Kachemak Bay & Fox River Flats	S. Kachemak Bay & Chugach Is.	Outer Coast of Kenai Peninsula	W. Cook Inlet – N. of Redoubt Bay	W. Cook Inlet – S. of Redoubt Bay
Protected Features	Trails	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Scenic Values		✓	✓	✓		✓		✓	✓		
	Game Habitat	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Fish Habitat	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Marine Mammal Hab.	✓		✓					✓	✓	✓	✓
	Shorebird Hab.	✓		✓			✓		✓	✓		✓
	Seabird Hab.								✓	✓		✓
	Waterfowl Hab.							✓	✓		✓	✓
	Shellfish Hab.						✓	✓		✓		
	Eelgrass									✓	✓	
	Beach			✓	✓		✓	✓			✓	
	Dunes						✓					
Cultural or Historic Features	✓	✓	✓	✓				✓		✓		
Uses & Activities	Hunting	✓	✓				✓	✓	✓	✓		✓
	Fishing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Dip/set-netting						✓		✓		✓	✓
	Clam Digging						✓		✓			
	Sightseeing		✓	✓			✓		✓	✓		✓
	Bird & wildlife viewing	✓	✓	✓					✓	✓		✓
	Photography		✓						✓	✓		✓
	Coastal Education			✓				✓	✓			✓
	Beachcombing			✓			✓		✓			
	Picnicking	✓					✓	✓				
Camping	✓	✓	✓	✓		✓	✓			✓		

-continued-

Table 1. Page 2 of 2.

	Region #	1	2	3	4	5	6	7	8	9	10	11	12
	Location	Hope, Pt. Possession, Ingram Ck.	Hope "Y", Kenai Lake	Seward & Resurrection Bay	Cooper Landing	Coastal Plain, Pt. Possession - Kenai R.	Kasilof River	Homer, Ninilchik & Anchor R. & Deep Ck.	Upper Kachemak Bay & Fox River Flats	S. Kachemak Bay & Chugach Is.	Outer Coast of Kenai Peninsula	W. Cook Inlet – N. of Redoubt Bay	W. Cook Inlet – S. of Redoubt Bay
Uses & Activities (continued)	Floatplanes				✓			✓	✓	✓	✓	✓	✓
	Whitewater boating	✓	✓									✓	
	Float boating				✓	✓							
	Power boating				✓	✓			✓	✓	✓	✓	
	Mooring			✓			✓	✓		✓	✓		
	Boat Launch				✓	✓	✓	✓	✓				
	Cruiseships			✓							✓		
	Tour Boats			✓							✓		
	Sailing			✓							✓		
	Kayaking			✓						✓	✓		
	Scuba Diving									✓			
	Biking	✓	✓										
	Hiking	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
	Skiing	✓	✓					✓					
	Dog Sledding	✓	✓					✓					
	Snowmachine	✓	✓					✓	✓			✓	
Commercial recreation & tourism	1	✓	2								2		✓

Appendix A: Proposed Mitigation Measures and Other Regulatory Requirements (Lessee Advisories)

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Appendix A: Proposed Mitigation Measures and Other Regulatory Requirements (Lessee Advisories)

AS 38.05.035(e) and the departmental delegation of authority provide the director of the Division of Oil and Gas (“director”), with the authority to impose conditions or limitations, in addition to those imposed by statute, to ensure that a resource disposal is in the state’s best interests. Consequently, to mitigate the potential adverse social and environmental effects of specific lease related activities, DO&G has developed mitigation measures and will condition plans of operation, exploration, or development and other permits based on these mitigation measures.

Lessees must obtain approval of a detailed plan of operations from the director before conducting exploration, development, or production activities. A plan of operations must identify the sites for planned activities and the specific measures, design criteria, construction methods and operational standards to be employed to comply with the restrictions listed below. It must also address any potential geologic hazards that may exist at the site.

These measures were developed after considering terms imposed in earlier competitive lease sales and comments and information submitted by the public, local governments, environmental organizations, and other federal, state, and local agencies. Additional measures will likely be imposed when lessees submit a proposed plan of operations.

Lessees must comply with all applicable local, state and federal codes, statutes and regulations, as amended, as well as all current or future ADNR area plans and recreation rivers plans; and ADF&G game refuge plans, critical habitat area plans, and sanctuary area plans within which a lease area is located. Lease activities must be consistent with the enforceable policies of the Alaska Coastal Management Program, including statewide standards and the enforceable policies of an affected coastal district, as amended.

The director may grant exceptions to these mitigation measures. Exceptions will only be granted upon a showing by the lessee that compliance with the mitigation measure is not practicable or that the lessee will undertake an equal or better alternative to satisfy the intent of the mitigation measure. Requests and justifications for exceptions must be included in the plan of operations. The decision whether to grant an exception will be made during the public review of the plan of operations.

Except as indicated, the mitigation measures do not apply to geophysical exploration on state lands; geophysical exploration activities are governed by 11 AAC 96.

Agency abbreviations are:

Abbreviation	Agency Name
ADF&G	Alaska Department of Fish and Game
ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
DMLW	Division of Mining, Land, and Water (ADNR)
DO&G	Division of Oil and Gas (ADNR)
NMFS	National Marine Fisheries Service
SHPO	State Historic Preservation Office (ADNR)
USFWS	U.S. Fish and Wildlife Service

A. Proposed Mitigation Measures

1. Facilities and Operations

- a) A plan of operations must be submitted and approved before conducting exploration, development or production activities, and must describe the lessee's efforts to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas, and adjacent private lands. At the time of application, lessee must submit a copy of the proposed plan of operations to all surface owners whose property will be entered.
- b) Facilities must be designed and operated to minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. Methods may include providing natural buffers and screening to conceal facilities, sound insulation of facilities, or by using alternative means approved by the director, in consultation with ADF&G.
- c) The siting of onshore facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities will be prohibited within ½ mile of the coast, barrier islands, reefs, and lagoons; 500 feet of all fish bearing streams and waterbodies; and 1,500 feet from all current surface drinking water sources. Additionally, to the extent practicable, the siting of facilities will be prohibited within one-half mile of the banks of the Harriet, Alexander, Lake, Deep, and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Lewis, Theodore, Beluga, Susitna, Little Susitna, Kenai, Kasilof, Ninilchik, and Anchor rivers. Facilities may be sited within these buffers if the lessee demonstrates to the satisfaction of the director, in consultation with ADF&G, that site locations outside these buffers are not practicable or that a location inside the buffer is environmentally preferred. Road, utility, and pipeline crossings must be consolidated and aligned perpendicular or near perpendicular to watercourses.
- d) Impacts to identified wetlands must be minimized to the satisfaction of the director, in consultation with ADF&G and ADEC. The director will consider whether facilities are sited in the least sensitive areas. Further, all activities within wetlands require permission from the U.S. Army Corps of Engineers (see Lessee Advisories).
- e) Exploration activities must be supported by air service, an existing road system or port facility, ice roads, or by off-road vehicles that do not cause significant damage to the vegetation or ground surface. Unrestricted surface travel may be permitted by the director and DMLW, if an emergency condition exists. Construction of temporary roads may be allowed. Construction of permanent roads may be allowed upon approval by the director.
- f) With the exception of drill pads, airstrips, and roads permitted under A1e, exploration facilities must be consolidated, temporary, and must not be constructed of gravel. Use of abandoned gravel structures may be permitted on an individual basis.
- g) Pipelines must utilize existing transportation corridors and be buried where conditions permit. Pipelines and gravel pads must be designed to facilitate the containment and cleanup of spilled fluids. Pipelines, flowlines, and gathering lines must be designed and constructed to assure integrity against climatic conditions and geologic hazards.

Offshore pipelines must be located and constructed to prevent obstruction to marine navigation and fishing operations. In areas with above ground placement, pipelines must be designed, sited, and constructed to allow for the free movement of wildlife. Where practicable, pipelines must be located on the upslope side of roadways and construction pads, unless DMLW, determines that an alternative site is environmentally acceptable.

- h) Pipelines that must cross marine waters will be constructed beneath the marine waters using directional drilling techniques, unless the director, in consultation with ADF&G and the local borough and Coastal Resource Service Areas, approves an alternative method based on technical, environmental, and economic justification.
- i) Gravel mining sites required for exploration and development activities will be restricted to the minimum necessary to develop the field efficiently and to minimize environmental damage. Gravel mine sites required for exploration activities must not be located within an active floodplain of a watercourse unless DMLW, after consultation with ADF&G, determines that there is no practicable alternative, or that a floodplain site would be compatible with fish and wildlife habitat after mining operations are completed and the site is closed.

2. Habitat, Fish, and Wildlife

- a) Detonation of explosives will be prohibited in open water areas of fish bearing streams and lakes. Explosives must not be detonated beneath, or in close proximity to fish-bearing streams and lakes if the detonation of the explosive produces a pressure rise in the water body of greater than 2.7 pounds per-square-inch, or unless the water body, including its substrate, is solidly frozen. Detonation of explosives within or in close proximity to a fish spawning bed during the early stages of egg incubation must not produce a peak particle velocity greater than 0.5 inches per second. Blasting criteria have been developed by ADF&G and are available from ADF&G upon request. The location of known fish bearing waters within the project area can be obtained from ADF&G.
- b) Compaction or removal of snow cover overlying fish bearing water bodies is prohibited except for approved crossings. If ice thickness is not sufficient to facilitate a crossing, ice and/or snow bridges may be required.
- c) Removal of water from fishbearing rivers, streams and natural lakes shall be subject to prior written approval by DMLW and ADF&G. Water intake pipes used to remove water from fish bearing waterbodies must be surrounded by a screened enclosure to prevent fish entrainment and impingement. Screen mesh size shall be no greater than 1 mm (0.04 inches), unless another size has been approved by ADF&G. The maximum water velocity at the surface of the screen enclosure may be no greater than 0.4 feet per second, unless an alternative velocity has been approved by ADF&G. Screen material must be corrosion resistant, and must be adequately supported to prevent excessive sagging which could result in unusable intake surface. The intake structure must be designed and installed to avoid excessive fouling from floating debris, and a minimum of eight square feet of effective wetted screen surface must be provided for each multiple of a 450-gallon per minute (one cubic foot per second) pumping rate. The pump intake opening must be placed equidistant from all effective wetted screen surfaces.
- d) Surface entry will be prohibited in parcels that are within the Kenai River Special Management Area.

Surface entry will be prohibited on state lands within the Kenai National Wildlife refuge. This term does not limit surface entry on other private lands within the refuge.

Lessees are prohibited from placing drilling rigs and lease-related facilities and structures within an area near the Kenai River composed of: all land within Section 36 in T6N, R11W that is located south of a line drawn from the protracted NE corner to the protracted SW corner of the section; all land within the western half of Section 31 in T6N, R10W and Section 6 in T5N, R10W; and all land within Section 1 in T5N, R11W.

- e) Surface entry into the critical waterfowl habitat along the Kasilof River is prohibited. Directional drilling from adjacent sites may be allowed.

- f) Surface entry will be prohibited within one-quarter mile of trumpeter swan nesting sites between April 1 and August 31. The siting of permanent facilities, including roads, material sites, storage areas, powerlines, and above ground pipelines will be prohibited within one-quarter mile of known nesting sites. Trumpeter swan nesting sites will be identified by ADF&G at the request of the lessee.
- g) The director, in consultation with ADF&G, shall restrict or modify lease related activities if scientific evidence documents the presence of Steller's eiders from the Alaska breeding population in the lease area and it is determined that oil and gas exploration and development will impact them or their over-wintering habitat in the near-shore waters of Cook Inlet.
- h) The director, in consultation with ADF&G, may impose seasonal restrictions on activities located in and adjacent to important waterfowl and shorebird habitat during the plan of operations approval stage.

Bears

- i) For projects in proximity to areas frequented by bears, lessees are required to prepare and implement a human-bear interaction plan designed to minimize conflicts between bears and humans. The plan should include measures to:
 - i. minimize attraction of bears to facility sites;
 - ii. organize layout of buildings and work areas to minimize interactions between humans and bears;
 - iii. warn personnel of bears near or on facilities and the proper actions to take;
 - iv. if authorized, deter bears from the drill site;
 - v. provide contingencies in the event bears do not leave the site;
 - vi. discuss proper storage and disposal of materials that may be toxic to bears; and
 - vii. provide a systematic record of bears on the site and in the immediate area.
- j) Before commencement of any activities, lessees shall consult with ADF&G to identify the locations of known bear den sites that are occupied in the season of proposed activities. Exploration and development activities started between November 15 and March 31 may not be conducted within one-half mile of known occupied brown bear dens, unless alternative mitigation measures are approved by the ADF&G. A lessee who encounters an occupied den not previously identified by ADF&G must report it to the Division of Wildlife Conservation, ADF&G, within 24 hours. Mobile activities shall avoid such discovered occupied dens by one-half mile unless alternative mitigation measures are approved by DO&G with concurrence from ADF&G. Non-mobile facilities will not be required to be relocated.
- k) To avoid possible adverse impacts to Kenai Peninsula brown bears, exploration activities will be allowed only between November 15 and March 31 within the brown bear movement corridors around Skilak Lake, Tustumena Lake, along the upper Anchor River drainage, and at the head of Kachemak Bay.
- l) To ensure sufficient vegetative cover in Kenai Peninsula brown bear feeding concentration areas, the director, in consultation with ADF&G, may require lessees to locate exploration and development facilities beyond the 500 foot buffer along anadromous streams during the plan of operations approval stage.
- m) If data indicate that brown bear movement will be hindered by development and production activities, the director, in consultation with ADF&G, may require lessees to locate facilities outside of the Kenai Peninsula brown bear movement corridors around Skilak Lke, Tustumena Lake, along the upper Anchor River drainage, and at the head of Kachemak Bay during the plan of operations approval stage.

Caribou

- n) Surface entry within the core calving area of the Kenai Lowlands Caribou Herd is prohibited, except that surface entry for seismic exploration will be allowed from October 16 to March 31.
- o) Exploration and development activities will be restricted or prohibited between April 1 and October 15 within the core summer habitat of the Kenai Lowlands Caribou Herd, except that maintenance and operation of production wells will be allowed year-round. Permanent roads, or facilities other than production wells, will also be restricted or prohibited within this area. Facilities within the core summer habitat of the Kenai Lowlands Caribou Herd that require year-round access must be located in forested areas, where practical.
- p) Pipelines must be buried within the core summer habitat of the Kenai Lowlands Caribou Herd.
- q) The director, in consultation with ADF&G, may impose seasonal restrictions on activities located in, or requiring travel through or overflight of, important moose or caribou calving and wintering areas during the plan of operations approval stage.

Beluga Whales

- r) No permanent or temporary oil and gas exploration or development may occur within High Value/High Sensitivity (Type 1) beluga whale habitat areas, unless it occurs on upland areas (above Mean Higher Water datum). Type 1 habitat areas include the following tracts: 320-334, 391-409, 410, 462, 464-475, 476-481, 483, 484, 485, 486, 493, 494, 497, 498, 522, 524-537, 538, 539, 540, 541, 542, 543, 544, 547-552, 559, 575-577, 579, 581, 582, 585, 586, 590, 593, 594, 598, 616-618, 620-623, 627, 655-658, and 662.
- s) The director will assess oil and gas-related activities within all High Value (Type 2) beluga whale habitat areas on a case-by-case basis. No permanent surface entry or structures are allowed, and temporary activities and structures, for example exploration drilling, will only be allowed between November 1 and April 1 of each year, unless it occurs on upland areas, within the following tracts: 021, 022, 126, 127, 129-132, 161, 162, 175, 177, 211, 218, 257, 301, 302, 373, 376, 377, and 384.
- t) The director will assess oil and gas-related activities within the remaining tracts (Type 3 habitat areas) on a case-by-case basis.

3. Subsistence, and Other Fish and Wildlife Uses

- a) Lease-related use will be restricted when DO&G determines it is necessary to prevent unreasonable conflicts between lease-related activities and subsistence, and commercial, sport, personal use, and educational harvest activities. In enforcing this term DO&G, during review of plans of operation, will consult with other agencies, the affected local borough(s) and the public to identify and avoid potential conflicts. In order to avoid conflicts with subsistence, commercial, sport and educational harvest activities, restrictions may include alternative site selection, requiring directional drilling, seasonal drilling restrictions, and other technologies deemed appropriate by DO&G.

4. Fuel, Hazardous Substances, and Waste

- a) Secondary containment (see definitions) shall be provided for the storage of fuel or hazardous substances.
- b) Containers with an aggregate storage capacity of greater than 55 gallons which contain fuel or hazardous substances shall not be stored within 100 feet of a waterbody, or within 1,500 feet of a current surface drinking water source.

- c) During equipment storage or maintenance, the site shall be protected from leaking or dripping fuel and hazardous substances by the placement of drip pans or other surface liners designed to catch and hold fluids under the equipment, or by creating an area for storage or maintenance using an impermeable liner or other suitable containment mechanism.
- d) During fuel or hazardous substance transfer, secondary containment or a surface liner must be placed under all container or vehicle fuel tank inlet and outlet points, hose connections, and hose ends. Appropriate spill response equipment, sufficient to respond to a spill of up to five gallons, must be on hand during any transfer or handling of fuel or hazardous substances. Trained personnel shall attend transfer operations at all times.
- e) Vehicle refueling shall not occur within the annual floodplain, except as addressed and approved in the plan of operations. This measure does not apply to water-borne vessels.
- f) All independent fuel and hazardous substance containers shall be marked with the contents and the lessee's or contractor's name using paint or a permanent label.
- g) A freshwater aquifer monitoring well, and quarterly water quality monitoring, is required down gradient of a permanent above-ground liquid hydrocarbon storage facility, unless alternative acceptable technology is approved by ADEC.
- h) Waste from operations must be reduced, reused, or recycled to the maximum extent practicable. Garbage and domestic combustibles must be incinerated whenever possible or disposed of at an approved site in accordance with 18 AAC 60. (See Lessee Advisories, ADEC.)
- i) New solid waste disposal sites will not be approved or located on state property during the exploratory phase. Exceptions may be provided for drilling waste if the facility will comply with the applicable provisions of 18 AAC 60.
- j) The preferred method for disposal of muds and cuttings from oil and gas activities is by underground injection. Drilling mud and cuttings cannot be discharged into lakes, streams, rivers, or important wetlands. Impermeable lining and diking, or equivalent measures, will be required for reserve pits. Surface discharge of drilling muds and cuttings into reserve pits shall be allowed only when the director, in consultation with ADEC and ADF&G, determines that alternative disposal methods are not practicable. Injection of non-hazardous oilfield wastes is regulated by EPA and AOGCC through its Underground Injection Control (UIC) Program for oil and gas wells.

5. Access

- a) Public access to, or use of, the lease area may not be restricted except within the immediate vicinity of drill sites, buildings, and other related facilities. Areas of restricted access must be identified in the plan of operations. Lease facilities and operations shall not be located so as to block access to or along navigable or public waters as defined in AS 38.05.965.

6. Prehistoric, Historic, and Archeological Sites

- a) Before the construction or placement of any gravel, or other structure, road, or facility resulting from exploration, development, or production activities, the lessee must conduct an inventory of prehistoric, historic, and archeological sites within the area affected by an activity. The inventory must include consideration of literature provided by the affected borough and local residents; documentation of oral history regarding prehistoric and historic uses of such sites; evidence of consultation with the Alaska Heritage Resources Survey and the National Register of Historic Places; and site surveys. The inventory must also include a detailed analysis of the effects that might result from the activity.

- b) The inventory of prehistoric, historic, and archeological sites must be submitted to the director, and to DPOR Office of History and Archaeology, who will coordinate with the affected borough for review and comment. If a prehistoric, historic, or archeological site or area could be adversely affected by a lease activity, the director, after consultation with DPOR Office of History and Archaeology and the affected borough, will direct the lessee as to the course of action to take to avoid or minimize adverse effects.
- c) If a site, structure, or object of prehistoric, historic, or archaeological significance is discovered during lease operations, the lessee must report the discovery to the director as soon as possible. The lessee must make reasonable efforts to preserve and protect the discovered site, structure, or object from damage until the director, after consultation with DPOR Office of History and Archaeology and the affected borough, has directed the lessee as to the course of action to take for its preservation.

7. Local Hire, Communication, and Training

- a) Lessees are encouraged to employ local and Alaska residents and contractors, to the extent they are available and qualified, for work performed in the lease area. Lessees shall submit, as part of the plan of operations, a proposal detailing the means by which the lessee will comply with the measure. The proposal must include a description of the operator's plans for partnering with local communities to recruit, hire, and train local and Alaska residents and contractors. The lessee is encouraged, in formulating this proposal, to coordinate with employment and training services offered by the State of Alaska and local communities to train and recruit employees from local communities.
- b) A plan of operations application must describe the lessee's past and prospective efforts to communicate with local communities and interested local community groups.
- c) A plan of operations application must include a training program for all personnel including contractors and subcontractors. The program must be designed to inform each person working on the project of environmental, social, and cultural concerns that relate to that person's job. The program must use methods to ensure that personnel understand and use techniques necessary to preserve geological, archeological, and biological resources. In addition, the program must be designed to help personnel increase their sensitivity and understanding of community values, customs, and lifestyles in areas where they will be operating.

8. Definitions

Facilities means any structure, equipment, or improvement to the surface, whether temporary or permanent, including, but not limited to, roads, pads, pits, pipelines, power lines, generators, utilities, airstrips, wells, compressors, drill rigs, camps and buildings;

Minimize means to reduce adverse impacts to the smallest amount, extent, duration, size, or degree reasonable in light of the environmental, social, or economic costs of further reduction;

Plan of operations means a lease Plan of operations under 11 AAC 83.158 and a unit Plan of operations under 11 AAC 83.346;

Practicable means feasible in light of overall project purposes after considering cost, existing technology, and logistics of compliance with the standard;

Secondary containment means an impermeable diked area or portable impermeable containment structure capable of containing 110 percent of the volume of the largest independent container plus 12 inches of freeboard. Double walled tanks do not qualify as Secondary Containment unless an exception is granted for a particular tank.

Temporary means no more than 12 months.

B. Other Regulatory Requirements (Lessee Advisories)

Lessees must comply with all applicable local, state and federal codes, statutes and regulations, as amended. Lessee advisories alert lessees to additional restrictions that may be imposed at the permitting stage of a proposed project or activity where entities other than DO&G have regulatory, permitting, or management authority.

1. Alaska Department of Natural Resources,

- a) Pursuant to AS 46.40, projects are required to comply with all policies and enforceable standards of the Alaska Coastal Management Program, including the District Coastal Management Plans.
- b) Lessees must include in their seismic permit applications a plan for notifying the public of their activities (11 AAC 96).
- c) Forest clearing for seismic exploration must have prior approval by DO&G in consultation with the Division of Forestry and ADF&G.
- d) Removal of gravel from state land must have prior approval from DMLW. Lessees must submit a material sale application (AS 38.05.110-120, AS 38.05.810, 11 AAC 71.045) as well as a development plan, environmental risk questionnaire, and Alaska Coastal Management Plan questionnaire. Applicants are required on state, federal, municipal, and private land to submit a reclamation plan or letter of intent per AS 27.19.030-050.

2. Alaska Department of Environmental Conservation

- a) Pursuant to AS 46.04.030, lessees are required to have an approved oil discharge prevention and contingency plan (C-Plan) before commencing operations. The plan must include a response action plan to describe how a spill response would occur, a prevention plan to describe the spill prevention measures taken at the facility, and supplemental information to provide background and verification information.
- b) Pursuant to state regulations administered by ADEC and the Clean Air Act administered by EPA, lessees are required to obtain air quality permits before construction and operation. The permits will include air quality monitoring, modeling, and emission control obligations.
- c) Unless authorized by an ADEC permit, surface discharge of reserve pit fluids and produced waters is prohibited.
- d) Unless authorized by National Pollutant Discharge Elimination System or state permits, disposal of wastewater into freshwater bodies is prohibited.

3. Alaska Department of Fish and Game

- a) Under the provisions of Title 16 of the Alaska Statutes, the measures listed below may be imposed by ADF&G below the ordinary high water mark to protect designated anadromous waterbodies and to ensure the free and efficient passage of fish in all fish-bearing waterbodies. Specific information on the location of anadromous water bodies in and near the area may be obtained from ADF&G.
 - i) Alteration of riverbanks may be prohibited.
 - ii) The operation of equipment, excluding boats, in open water areas of rivers and streams may be prohibited.
 - iii) Bridges or non-bottom founded structures may be required for crossing fish spawning and important rearing habitats.

- iv) Culverts or other stream crossing structures must be designed, installed, and maintained to provide free and efficient passage of fish.
- b) Removal of water from fish-bearing water bodies is subject to the provisions of Regulations for Appropriation and Use of Water (11 AAC 93.035 - 11 AAC 93.147).
- c) The use of explosives for seismic activities with a velocity of greater than 3000 feet-per-second in marine waters is prohibited.

Game Refuges and Critical Habitat Areas

- d) Management of legislatively designated state game refuges and critical habitat areas is the co-responsibility of ADF&G, per AS 16.20.050-060 and AS 16.20.500-530, and ADNR, per AS 38.05.027. For activities occurring within a refuge or critical habitat area, the lessee will be required to obtain permits from both ADNR and ADF&G. The following requirements are established by, and exceptions may only be granted by, ADF&G.
- e) Five state game refuges (SGR) and five critical habitat areas (CHA) are located within or partially within the proposed Cook Inlet lease sale area: Goose Bay SGR, Palmer Hay Flats SGR, Anchorage Coastal Wildlife Refuge, Susitna Flats SGR, Trading Bay SGR, Redoubt Bay CHA, Kalgin Island CHA, Clam Gulch CHA, and Anchor River and Fritz Creek CHA.

Operations within these refuges and critical habitat areas must comply with the terms and conditions of the lease sale, the regulations contained within 5 AAC 95, and the measures listed below.

- i. Surface entry for drilling and above ground lease-related facilities and structures will be prohibited within the Palmer Hay Flats SGR, Anchorage Coastal Wildlife Refuge, Clam Gulch CHA, Anchor River and Fritz Creek CHA, within the core Tule goose and trumpeter swan nesting and molting corridors along the Big, Kustatan, and McArthur rivers in the Trading Bay SGR and Redoubt Bay CHA, on tidelands and wetlands in the Goose Bay SGR and Kalgin Island CHA and within the primary shorebird area in Susitna Flats SGR, Trading Bay SGR, and Redoubt Bay CHA.

Surface entry may be allowed on uplands within the Goose Bay SGR and Kalgin Island CHA; and surface entry for seismic surveys and similar temporary activities may be allowed in all of these areas, consistent with the Special Area regulations and applicable Special Area management plans. Directional drilling from adjacent sites may be allowed. Similar provisions will be imposed by the DO&G to protect primary shorebird habitat in Redoubt Bay south of the CHA.

- ii) Exploration, development, and major maintenance within important Tule goose and trumpeter swan habitat in Trading Bay SGR, Redoubt Bay CHA, and Susitna Flats SGR, and the primary waterfowl area above mean high tide within the Susitna Flats SGR and Trading Bay SGR will be allowed only between November 1 and March 31, unless an extension is approved by ADF&G and DO&G.

Routine maintenance and emergency repairs will be permitted on a year-round basis during the production phase. A detailed plan describing routine maintenance activities to be conducted between April 1 and October 31 must be submitted to ADF&G and DO&G for review and approval.

- iii) Gravel pads and wellheads are the only above ground structures that will be allowed within the primary waterfowl area above mean high tide in the Susitna Flats SGR and the Trading Bay SGR and important Tule goose and trumpeter swan habitat in the Trading Bay SGR, Redoubt Bay CHA and Susitna Flats SGR. Gravel roads will not be allowed in a SGR or CHA during exploration.

- iv) (a) aircraft flying over the primary shorebird habitat within Susitna Flats SGR, Trading Bay SGR and Redoubt Bay CHA should maintain a minimum altitude of 1,500 feet above ground level or a horizontal distance of one mile.

(b) Aircraft flying over Goose Bay SGR and Palmer Hay Flats SGR, the primary waterfowl habitat above mean high tide within Susitna Flats and Trading Bay SGR, and the core Tule goose and trumpeter swan molting and nesting corridors in Trading Bay SGR and Redoubt Bay CHA should maintain a minimum altitude of 1,500 feet above ground level or a horizontal distance of one mile from April 1 to October 31. Human safety will take precedence over this provision.
- v) Construction, operation, and maintenance activities shall minimize the visual, biological, and physical impacts to the SGR or CHA.
- vi) Surface discharge of produced waters will be prohibited.
- vii) Disposal of drilling mud and cuttings will be allowed only at upland sites approved by the DO&G and ADF&G, after consultation with DMLW and ADEC.
- viii) Facilities must be designed to minimize the risk of spills or fires resulting from vandalism or accidents.

4. Alaska Department of Labor and Workforce Development

- a) The lessee shall facilitate Alaska resident hire monitoring by reporting project wages on a quarterly basis for each individual employed by the lessee in the lease area, through electronic unemployment insurance reporting, and by requiring the same of the lessee’s contractors and subcontractors

5. U.S. Army Corps of Engineers

- a) A U.S. Army Corp of Engineers permit is required when work is anticipated on, in, or affects navigable waters or involves wetland-related dredge or fill activities. A Section 10 Permit is required for construction, excavation, or deposition of materials in, over, or under navigable waters, or for any work which would affect the course, location, condition, or capacity of navigable waters (U.S.C. 403). Oil and gas activities requiring this type of permit include, but are not limited to, exploration drilling from a jackup drill rig and installation of a production platform. A Section 404 Permit is required for the discharge of dredged and fill material into waters and wetlands of the United States (33 U.S.C. 1344). The process and concerns are similar for both permits and, at times, both may be required.

6. U.S. Fish and Wildlife Service and National Marine Fisheries Service

- a) The lessee is advised that the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.) protects the following endangered or threatened species and candidate species for listing that may occur in the lease sale area:

Common Name	Status
Fin whale	Endangered
Steller sea lion (western stock)	Endangered
Humpback whale	Endangered
Beluga whale (Cook Inlet stock)	Candidate
Steller’s eider (Alaska breeding population)	Threatened

Migratory birds, sea otters, polar bears, and Pacific walrus are managed by the U.S. Fish and Wildlife Service. The National Oceanic and Atmospheric Administration, National Marine Fisheries Service is responsible for management of all other marine mammals.

- b) NMFS, USFWS, and ADF&G will continue annual monitoring efforts to further delineate the presence and distribution of species administered under the ESA and Marine Mammal Protection Act (MMPA). The lessee is advised to annually acquire updated information from these agencies.
- c) The USFWS has determined that oil and gas exploration and development activities within three miles of the eastern shore of Cook Inlet, from Clam Gulch to the southern bounds of the lease sale area, is likely to adversely affect (take) Steller's eiders. Each operator is advised to consult with the USFWS well in advance of any activities in this area.
- d) The lessee is advised that off-shore activity (particularly seismic geophysical surveys) may result in the taking of beluga whales and other marine mammals. Such taking is prohibited by the federal MMPA unless otherwise authorized. The incidental taking of marine mammals may be authorized under the MMPA, and each operator should be advised to discuss this matter with NMFS well in advance of any geophysical survey activity.
- e) The lessee is advised that the Cook Inlet beluga whale is listed as a depleted stock under the MMPA. In April 2007, NMFS proposed to list the whale population as endangered under the ESA; a final decision is pending. The lessee is advised to review the Federal Register to monitor the listing status, and any ramifications there from.
- f) The lessee is advised that the Magnuson-Stevens Fishery Conservation and Management Act requires identification of Essential Fish Habitat (EFH) for all species managed under a federal Fisheries Management Plan. Subsequent exploration and/or development activities associated with the proposed lease sale may be subject to consultation under EFH. EFH information, consultation, guidance, and species life history information are available on the NMFS website at <http://www.fakr.noaa.gov/habitat>.
- g) The lessee is advised that the description of the techniques used to drill and conduct seismic operations should be thorough and assess potential effects of fish and their spawning substrate, migratory corridors, and over-wintering areas.
- h) The lessee is advised that the response technologies and geographic response strategies have been prepared for Cook Inlet by state and federal planning teams in which NMFS has participated. However, the application of these plans in fast-moving Cook Inlet waters, especially during ice-laden times, could prove difficult. Further, mechanical recovery in estuaries, anadromous streams, and adjacent continuous wetlands can potentially disrupt these habitats and degrade water quality conditions. Thus, recovery and containment plans will need to address habitat effects within the site and areas where tidal currents may deposit or entrain spilled product. These assessments are needed before development.
- i) Lessees are advised of the need to comply with the Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703) which is administered by the USFWS. Under the MBTA, it is illegal to "take" migratory birds, their eggs, feathers or nests. "Take" is defined (50 CFR 10.12) to include "pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting." The MBTA does not distinguish between "intentional" and "unintentional" take. Migratory birds include songbirds, waterfowl, shorebirds, and raptors. In Alaska, all native birds except grouse and ptarmigan (which are protected by the State of Alaska) are protected under the MBTA.

- j) In order to ensure compliance with the MBTA, it is recommended that the lessees survey the project area before construction, vegetation clearing, excavation, discharging fill, or other activities which create disturbance, and confirm there are no active migratory bird nests. It is recommended that lessees contact the USFWS for assistance and guidance on survey needs, and other compliance issues under the MBTA. While the Service can recommend methods (such as surveys and timing windows) to avoid unintentional take, responsibility for compliance with the MBTA rests with lessees. In the proposed lease area, the USFWS normally recommends that to prevent impacts to nesting migratory birds, no vegetation clearing, fill placement, excavation, or other construction activities be conducted between May 1 and July 15.
- k) Bald eagles are protected under the Bald Eagle Protection Act (16 U.S.C. 668-668c) and the MBTA. Lessees are responsible to ensure their actions do not take bald eagles. The Bald Eagle Protection Act defines “take” to include disturbing birds. A survey for bald eagle nests is necessary before beginning exploration or development activities during the nesting period (March 1 through August 31). Any nests located within ½-mile of the project site must be mapped, and destruction of nest trees or locations is prohibited. If any nests are located within ½-mile of a project site, lessees shall meet with the USFWS before construction to review any site-specific concerns regarding the subject nest. USFWS generally recommends no clearing of vegetation within 330 feet of any nest. No activity should occur within 660 feet of any nests between March 1 and June 1. Between June 1 and August 31, no activity should occur within 660 feet of active eagle nests until after juvenile birds have fledged, unless specifically authorized by the USFWS. While the USFWS can recommend ways to avoid the take of eagles, final accountability lies with the party responsible for the action.

7. Matanuska-Susitna Borough

- a) The lessee is advised that all development in the Point MacKenzie Port Special Use District must comply with Matanuska-Susitna Borough Code Chapter 17.23: Point MacKenzie Port Special Use District.
- b) The lessee is advised that any exploration work on borough-owned tidelands or uplands in the area will require a land use permit from the borough’s land management division.

Appendix B: Sample Competitive Oil and Gas Lease

Competitive Oil and Gas Lease
Form #DOG 200604

STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES

Competitive Oil and Gas Lease **ADL No.**

THIS LEASE is entered into _____, between the State of Alaska, "the state," and _____

"the lessee," whether one or more, whose sole address for purposes of notification is under Paragraph 25.

In consideration of the cash payment made by the lessee to the state, which payment includes the first year's rental and any required cash bonus, and subject to the provisions of this lease, including applicable stipulation(s) and mitigating measures attached to this lease and by this reference incorporated in this lease, the state and the lessee agree as follows:

1. GRANT. (a) Subject to the provisions in this lease, the state grants and leases to the lessee, without warranty, the exclusive right to drill for, extract, remove, clean, process, and dispose of oil, gas, and associated substances in or under the following described tract of land:

containing approximately _____ acres, more or less (referred to in this lease as the "leased area"); the nonexclusive right to conduct within the leased area geological and geophysical exploration for oil, gas, and associated substances; and the nonexclusive right to install pipelines and build structures on the leased area to find, produce, save, store, treat, process, transport, take care of, and market all oil, gas, and associated substances and to house and board employees in its operations on the leased area. The rights granted by this lease are to be exercised in a manner which will not unreasonably interfere with the rights of any permittee, lessee or grantee of the state consistent with the principle of reasonable concurrent uses as set out in Article VIII, Section 8 of the Alaska Constitution.

(b) For the purposes of this lease, the leased area contains the legal subdivisions as shown on the attached plat marked Exhibit A.

(c) If the leased area is described by protracted legal subdivisions and, after the effective date of this lease, the leased area is surveyed under the public land rectangular system, the boundaries of the leased area are those established by that survey, when approved, subject, however, to the provisions of applicable regulations relating to those surveys. If for any reason the leased area includes more acreage than the maximum permitted under applicable law (including the "rule of approximation" authorized in AS 38.05.145 and defined in AS 38.05.965 (18)), this lease is not void and the acreage included in the leased area must be reduced to the permitted maximum. If the state determines that the leased area exceeds the permitted acreage and notifies the lessee in writing of the amount of acreage that must be eliminated, the lessee has 60 days after that notice to surrender one or more legal subdivisions included in the leased area comprising at least the

amount of acreage that must be eliminated. Any subdivision surrendered must be located on the perimeter of the leased area as originally described. If a surrender is not filed within 60 days, the state may terminate this lease as to the acreage that must be eliminated by mailing notice of the termination to the lessee describing the subdivision eliminated.

(d) If the State of Alaska's ownership interest in the oil, gas, and associated substances in the leased area is less than an entire and undivided interest, the grant under this lease is effective only as to the state's interest in that oil, gas, and associated substances, and the royalties and rentals provided in this lease must be paid to the state in the proportion that the state's interest bears to the entire undivided fee.

(e) The state makes no representations or warranties, express or implied, as to title, or access to, or quiet enjoyment of, the leased area. The state is not liable to the lessee for any deficiency in title to the leased area, nor is the lessee or any successor in interest to the lessee entitled to any refund due to deficiency in title for any rentals, bonuses, or royalties paid under this lease.

2. RESERVED RIGHTS. (a) The state, for itself and others, reserves all rights not expressly granted to the lessee by this lease. These reserved rights include, but are not limited to:

(1) the right to explore for oil, gas, and associated substances by geological and geophysical means;

(2) the right to explore for, develop, and remove natural resources other than oil, gas, and associated substances on or from the leased area;

(3) the right to establish or grant easements and rights-of-way for any lawful purpose, including without limitation for shafts and tunnels necessary or appropriate for the working of the leased area or other lands for natural resources other than oil, gas, and associated substances;

(4) the right to dispose of land within the leased area for well sites and well bores of wells drilled from or through the leased area to explore for or produce oil, gas, and associated substances in and from lands not within the leased area; and

(5) the right otherwise to manage and dispose of the surface of the leased area or interests in that land by grant, lease, permit, or otherwise to third parties.

(b) The rights reserved may be exercised by the state, or by any other person or entity acting under authority of the state, in any manner that does not unreasonably interfere with or endanger the lessee's operations under this lease.

3. TERM. This lease is issued for an initial primary term of 7 years from the effective date of this lease. The term may be extended as provided in Paragraph 4 below.

4. EXTENSION. (a) This lease will be extended automatically if and for so long as oil or gas is produced in paying quantities from the leased area.

(b) This lease will be extended automatically if it is committed to a unit agreement approved or prescribed by the state, and will remain in effect for so long as it remains committed to that unit agreement.

(c) (1) If the drilling of a well whose bottom hole location is in the leased area has commenced as of the date on which the lease otherwise would expire and is continued with reasonable diligence, this lease will continue in effect until 90 days after cessation of that drilling and for so long as oil or gas is produced in paying quantities from the leased area.

(2) If oil or gas in paying quantities is produced from the leased area, and if that production ceases at any time, this lease will not terminate if drilling or reworking operations are commenced on the leased area within six months after cessation of production and are prosecuted with reasonable diligence; if those drilling or reworking operations result in the production of oil or gas, this lease will remain in effect for so long as oil or gas is produced in paying quantities from the leased area.

(d) If there is a well capable of producing oil or gas in paying quantities on the leased area, this lease will not expire because the lessee fails to produce that oil or gas unless the state gives notice to the lessee, allowing a reasonable time, which will not be less than six months after notice, to place the well into production, and the lessee fails to do so. If production is established within the time allowed, this lease is extended only for so long as oil or gas is produced in paying quantities from the leased area.

(e) If the state directs or approves in writing a suspension of all operations on or production from the leased area (except for a suspension necessitated by the lessee's negligence), or if a suspension of all operations on or production from the leased area has been ordered under federal, state, or local law, the

lessee's obligation to comply with any express or implied provision of this lease requiring operations or production will be suspended, but not voided, and the lessee shall not be liable for damages for failure to comply with that provision. If the suspension occurs before the expiration of the primary term, the primary term will be extended at the end of the period of the suspension by adding the period of time lost under the primary term because of the suspension. If the suspension occurs during an extension of the primary term under this paragraph, upon removal of that suspension, the lessee will have a reasonable time, which will not be less than six months after notice that the suspension has been removed, to resume operations or production. For the purposes of this subparagraph, any suspension of operations or production specifically required or imposed as a term of sale or by any stipulation made a part of this lease will not be considered a suspension ordered by law.

(f) If the state determines that the lessee has been prevented by force majeure, after efforts made in good faith, from performing any act that would extend the lease beyond the primary term, this lease will not expire during the period of force majeure. If the force majeure occurs before the expiration of the primary term, the primary term will be extended at the end of the period of force majeure by adding the period of time lost under the primary term because of the force majeure. If the force majeure occurs during an extension of the primary term under this paragraph, this lease will not expire during the period of force majeure plus a reasonable time after that period, which will not be less than 60 days, for the lessee to resume operations or production.

(g) Nothing in subparagraphs (e) or (f) suspends the obligation to pay royalties or other production or profit-based payments to the state from operations on the leased area that are not affected by any suspension or force majeure, or suspends the obligation to pay rentals.

5. RENTALS. (a) The lessee shall pay annual rental to the state in accordance with the following rental schedule:

(1) For the first year, \$1.00 per acre or fraction of an acre;

(2) For the second year, \$1.50 per acre or fraction of an acre;

(3) For the third year, \$2.00 per acre or fraction of an acre;

(4) For the fourth year, \$2.50 per acre or fraction of an acre;

(5) For the fifth year and following years, \$3.00 per acre or fraction of an acre;

provided that the state may increase the annual rental rate as provided by law upon extension of this lease beyond the primary term.

(b) Annual rental paid in advance is a credit on the royalty or net profit share due under this lease for that year.

(c) The lessee shall pay the annual rental to the State of Alaska (or any depository designated by the state with at least 60 days notice to the lessee) in advance, on or before the annual anniversary date of this lease. The state is not required to give notice that rentals are due by billing the lessee. If the state's (or depository's) office is not open for business on the annual anniversary date of this lease, the time for payment is extended to include the next day on which that office is open for business. If the annual rental is not paid timely, this lease automatically terminates as to both parties at 11:59 p.m., Alaska Standard Time, on the date by which the rental payment was to have been made.

6. RECORDS. The lessee shall keep and have in its possession books and records showing the development and production (including records of development and production expenses) and disposition (including records of sale prices, volumes, and purchasers) of all oil, gas, and associated substances produced from the leased area. The lessee shall permit the State of Alaska or its agents to examine these books and records at all reasonable times. Upon request by the state, the lessee's books and records shall be made available to the state at the state office designated by the state. These books and records of development, production, and disposition must employ methods and techniques that will ensure the most accurate figures reasonably available without requiring the lessee to provide separate tankage or meters for each well. The lessee shall use generally accepted accounting procedures consistently applied.

7. APPORTIONMENT OF ROYALTY FROM APPROVED UNIT. The landowners' royalty share of the unit production allocated to each separately owned tract shall be regarded as royalty to be distributed to and among, or the proceeds of it paid to, the landowners, free and clear of all unit expense and free of any lien for it. Under this provision, the state's royalty share of any unit production allocated to the leased area will be

regarded as royalty to be distributed to, or the proceeds of it paid to, the state, free and clear of all unit expenses (and any portion of those expenses incurred away from the unit area), including, but not limited to, expenses for separating, cleaning, dehydration, gathering, saltwater disposal, and preparing oil, gas, or associated substances for transportation off the unit area, and free of any lien for them.

8. **PAYMENTS.** All payments to the State of Alaska under this lease must be made payable to the state in the manner directed by the state, and unless otherwise specified, must be tendered to the state at:

DEPARTMENT OF NATURAL RESOURCES
550 WEST 7TH AVENUE, SUITE 1410
ANCHORAGE, ALASKA 99501-3561
ATTENTION: FINANCIAL SERVICES SECTION

or in person at either of the Department's Public Information Centers located at

550 W. 7th Ave., Suite 1260
Anchorage, Alaska

3700 Airport Way
Fairbanks, Alaska

or to any depository designated by the state with at least 60 days notice to the lessee.

9. **PLAN OF OPERATIONS.** (a) Except as provided in (b) of this section, a plan of operations for all or part of the leased area must be approved by the commissioner before any operations may be undertaken on or in the leased area.

(b) A plan of operations is not required for:

- (1) activities that would not require a land use permit; or
- (2) operations undertaken under an approved unit plan of operations.

(c) Before undertaking operations on or in the leased area, the lessee shall provide for full payment of all damages sustained by the owner of the surface estate as well as by the surface owner's lessees and permittees, by reason of entering the land.

(d) An application for approval of a plan of operations must contain sufficient information, based on data reasonably available at the time the plan is submitted for approval, for the commissioner to determine the surface use requirements and impacts directly associated with the proposed operations. An application must include statements and maps or drawings setting out the following:

- (1) the sequence and schedule of the operations to be conducted on or in the leased area, including the date operations are proposed to begin and their proposed duration;
- (2) projected use requirements directly associated with the proposed operations, including the location and design of well sites, material sites, water supplies, solid waste sites, buildings, roads, utilities, airstrips, and all other facilities and equipment necessary to conduct the proposed operations;
- (3) plans for rehabilitation of the affected leased area after completion of operations or phases of those operations; and
- (4) a description of operating procedures designed to prevent or minimize adverse effects on other natural resources and other uses of the leased area and adjacent areas, including fish and wildlife habitats, historic and archeological sites, and public use areas.

(e) In approving a lease plan of operations or an amendment of a plan, the commissioner will require amendments that the commissioner determines necessary to protect the state's interest. The commissioner will not require an amendment that would be inconsistent with the terms of sale under which the lease was obtained, or with the terms of the lease itself, or which would deprive the lessee of reasonable use of the leasehold interest.

(f) The lessee may, with the approval of the commissioner, amend an approved plan of operations.

(g) Upon completion of operations, the lessee shall inspect the area of operations and submit a report indicating the completion date of operations and stating any noncompliance of which the lessee knows, or should reasonably know, with requirements imposed as a condition of approval of the plan.

(h) In submitting a proposed plan of operations for approval, the lessee shall provide ten copies of the plan if activities proposed are within the coastal zone, and five copies if activities proposed are not within the coastal zone.

10. PLAN OF DEVELOPMENT. (a) Except as provided in subparagraph (d) below, within 12 months after completion of a well capable of producing oil, gas, or associated substances in paying quantities, the lessee shall file two copies of an application for approval by the state of an initial plan of development that must describe the lessee's plans for developing the leased area. No development of the leased area may occur until a plan of development has been approved by the state.

(b) The plan of development must be revised, updated, and submitted to the state for approval annually before or on the anniversary date of the previously approved plan. If no changes from an approved plan are contemplated for the following year, a statement to that effect must be filed for approval in lieu of the required revision and update.

(c) The lessee may, with the approval of the state, subsequently modify an approved plan of development.

(d) If the leased area is included in an approved unit, the lessee will not be required to submit a separate lease plan of development for unit activities.

11. INFORMATION ACQUIRED FROM OPERATIONS. (a) The lessee shall submit to the state all geological, geophysical and engineering data and analyses obtained from the lease within 30 days following the completion of a well. The lessee shall submit to the state data and analyses acquired subsequent to well completion within 30 days following acquisition of that data. The state may waive receipt of operational data from some development, service or injection wells. The state will inform the operator of the waiver prior to well completion. The lessee shall submit the data and analyses to the Division of Oil and Gas, Department of Natural Resources, at the location specified in paragraph 25 of this lease. The data and analyses shall include the following:

(1) a copy of the completion report (AOGCC form 10-407) with an attached well summary, including daily drilling reports, formation tops encountered, a full synopsis of drillstem and formation testing data, an identification of zones of abnormal pressure, oil and gas shows and cored intervals;

(2) latitudinal and longitudinal coordinates for the completed surface and bottom hole locations;

(3) a copy of the permit to drill (AOGCC form 10-401 only, additional documentation not required) and the survey plat of the well location;

(4) a paper copy (no sepia copies) of all final 2-inch open hole and cased hole logs, including measured depth and true-vertical depth versions, specialty logs (such as Schlumberger's cyberlook, formation microscanners and dipmeter logs), composite mud or lithology log and report, measured-while-drilling (MWD) and logged-while-drilling (LWD) logs, velocity and directional surveys;

(5) a digital version of well logs in LAS, LIS or ASCII format on IBM format floppy disks, a digital version of velocity surveys in SEG Y format, a digital version of directional surveys in ASCII format (other formats may be acceptable upon agreement with the Division of Oil and Gas); and

(6) a paper copy of all available well analyses, including geochemical analyses, core analyses (porosity, permeability, capillary pressure, photos, and descriptions), paleontologic and palynologic analyses, thermal maturation analyses, pressure build up analyses, and fluid PVT analyses (an ASCII format digital version of the above information shall also be submitted, if available). The state may require the lessee to submit additional information in accordance with the applicable statutes and regulations in effect at the time of the completion date of the well.

(b) Any information submitted to the state by the lessee in connection with this lease will be available at all times for use by the state and its agents. The state will keep information confidential as provided in AS 38.05.035(a)(9) and its applicable regulations. In accordance with AS 38.05.035(a)(9)(C), in order for geological, geophysical and engineering information submitted under paragraph 11(a) of this lease to be held confidential, the lessee must request confidentiality at the time the information is submitted. The information must be marked **CONFIDENTIAL**.

12. DIRECTIONAL DRILLING. This lease may be maintained in effect by directional wells whose bottom hole location is on the leased area but that are drilled from locations on other lands not covered by this lease. In those circumstances, drilling will be considered to have commenced on the leased area when actual

drilling is commenced on those other lands for the purpose of directionally drilling into the leased area. Production of oil or gas from the leased area through any directional well surfaced on those other lands, or drilling or reworking of that directional well, will be considered production or drilling or reworking operations on the leased area for all purposes of this lease. Nothing contained in this paragraph is intended or will be construed as granting to the lessee any interest, license, easement, or other right in or with respect to those lands in addition to any interest, license, easement, or other right that the lessee may have lawfully acquired from the state or from others.

13. DILIGENCE AND PREVENTION OF WASTE. (a) The lessee shall exercise reasonable diligence in drilling, producing, and operating wells on the leased area unless consent to suspend operations temporarily is granted by the state.

(b) Upon discovery of oil or gas on the leased area in quantities that would appear to a reasonable and prudent operator to be sufficient to recover ordinary costs of drilling, completing, and producing an additional well in the same geologic structure at another location with a reasonable profit to the operator, the lessee must drill those wells as a reasonable and prudent operator would drill, having due regard for the interest of the state as well as the interest of the lessee.

(c) The lessee shall perform all operations under this lease in a good and workmanlike manner in accordance with the methods and practices set out in the approved plan of operations and plan of development, with due regard for the prevention of waste of oil, gas, and associated substances and the entrance of water to the oil and gas-bearing sands or strata to the destruction or injury of those sands or strata, and to the preservation and conservation of the property for future productive operations. The lessee shall carry out at the lessee's expense all orders and requirements of the State of Alaska relative to the prevention of waste and to the preservation of the leased area. If the lessee fails to carry out these orders, the state will have the right, together with any other available legal recourse, to enter the leased area to repair damage or prevent waste at the lessee's expense.

(d) The lessee shall securely plug in an approved manner any well before abandoning it.

14. OFFSET WELLS. The lessee shall drill such wells as a reasonable and prudent operator would drill to protect the state from loss by reason of drainage resulting from production on other land. Without limiting the generality of the foregoing sentence, if oil or gas is produced in a well on other land not owned by the State of Alaska or on which the State of Alaska receives a lower rate of royalty than under this lease, and that well is within 500 feet in the case of an oil well or 1,500 feet in the case of a gas well of lands then subject to this lease, and that well produces oil or gas for a period of 30 consecutive days in quantities that would appear to a reasonable and prudent operator to be sufficient to recover ordinary costs of drilling, completing, and producing an additional well in the same geological structure at an offset location with a reasonable profit to the operator, and if, after notice to the lessee and an opportunity to be heard, the state finds that production from that well is draining lands then subject to this lease, the lessee shall within 30 days after written demand by the state begin in good faith and diligently prosecute drilling operations for an offset well on the leased area. In lieu of drilling any well required by this paragraph, the lessee may, with the state's consent, compensate the state in full each month for the estimated loss of royalty through drainage in the amount determined by the state.

15. UNITIZATION. (a) The lessee may unite with others, jointly or separately, in collectively adopting and operating under a cooperative or unit agreement for the exploration, development, or operation of the pool, field, or like area or part of the pool, field, or like area that includes or underlies the leased area or any part of the leased area whenever the state determines and certifies that the cooperative or unit agreement is in the public interest.

(b) The lessee agrees, within six months after demand by the state, to subscribe to a reasonable cooperative or unit agreement that will adequately protect all parties in interest, including the state. The state reserves the right to prescribe such an agreement.

(c) With the consent of the lessee, and if the leased area is committed to a unit agreement approved by the state, the state may establish, alter, change, or revoke drilling, producing, and royalty requirements of this lease as the state determines necessary or proper to secure the proper protection of the public interest.

(d) Except as otherwise provided in this subparagraph, where only a portion of the leased area is committed to a unit agreement approved or prescribed by the state, that commitment constitutes a severance of this lease as to the unitized and nonunitized portions of the leased area. The portion of the leased area not committed to the unit will be treated as a separate and distinct lease having the same effective date

and term as this lease and may be maintained only in accordance with the terms and conditions of this lease, statutes, and regulations. Any portion of the leased area not committed to the unit agreement will not be affected by the unitization or pooling of any other portion of the leased area, by operations in the unit, or by suspension approved or ordered for the unit. If the leased area has a well certified, under 11 AAC 83.361, as capable of production in paying quantities as defined in 11 AAC 83.395(4) on it before commitment to a unit agreement, this lease will not be severed. If any portion of this lease is included in a participating area formed under a unit agreement, the entire leased area will remain committed to the unit and this lease will not be severed.

16. INSPECTION. The lessee shall keep open at all reasonable times, for inspection by any duly authorized representative of the State of Alaska, the leased area, all wells, improvements, machinery, and fixtures on the leased area, and all reports and records relative to operations and surveys or investigations on or with regard to the leased area or under this lease. Upon request, the lessee shall furnish the State of Alaska with copies of and extracts from any such reports and records.

17. SUSPENSION. The state may from time to time direct or approve in writing suspension of production or other operations under this lease.

18. ASSIGNMENT, PARTITION, AND CONVERSION. This lease, or an interest in this lease, may, with the approval of the state, be assigned, subleased, or otherwise transferred to any person or persons qualified to hold a lease. No assignment, sublease, or other transfer of an interest in this lease, including assignments of working or royalty interests and operating agreements and subleases, will be binding upon the state unless approved by the state. The lessee shall remain liable for all obligations under this lease accruing prior to the approval by the state of any assignment, sublease, or other transfer of an interest in this lease. All provisions of this lease will extend to and be binding upon the heirs, administrators, successors, and assigns of the state and the lessee. Applications for approval of an assignment, sublease, or other transfer must comply with all applicable regulations and must be filed within 90 days after the date of final execution of the instrument of transfer. The state will approve a transfer of an undivided interest in this lease unless the transfer would adversely affect the interests of Alaska or the application does not comply with applicable regulations. The state will disapprove a transfer of a divided interest in this lease if the transfer covers only a portion of the lease or a separate and distinct zone or geological horizon unless the lessee demonstrates that the proposed transfer of a divided interest is reasonably necessary to accomplish exploration or development of the lease, the lease is committed to an approved unit agreement, the lease is allocated production within an approved participating area, or the lease has a well capable of production in paying quantities. The state will make a written finding stating the reasons for disapproval of a transfer of a divided interest. Where an assignment, sublease, or other transfer is made of all or a part of the lessee's interest in a portion of the leased area, this lease may, at the option of the state or upon request of the transferee and with the approval of the state, be severed, and a separate and distinct lease will be issued to the transferee having the same effective date and terms as this lease.

19. SURRENDER. The lessee at any time may file with the state a written surrender of all rights under this lease or any portion of the leased area comprising one or more legal subdivisions or, with the consent of the state, any separate and distinct zone or geological horizon underlying the leased area or one or more legal subdivisions of the leased area. That surrender will be effective as of the date of filing, subject to the continued obligations of the lessee and its surety to make payment of all accrued royalties and to place all wells and surface facilities on the surrendered land or in the surrendered zones or horizons in condition satisfactory to the state for suspension or abandonment. After that, the lessee will be released from all obligations under this lease with respect to the surrendered lands, zones, or horizons.

20. DEFAULT AND TERMINATION; CANCELLATION. (a) The failure of the lessee to perform timely its obligations under this lease, or the failure of the lessee otherwise to abide by all express and implied provisions of this lease, is a default of the lessee's obligations under this lease. Whenever the lessee fails to comply with any of the provisions of this lease (other than a provision which, by its terms, provides for automatic termination), and fails within 60 days after written notice of that default to begin and diligently prosecute operations to remedy that default, the state may terminate this lease if at the time of termination there is no well on the leased area capable of producing oil or gas in paying quantities. If there is a well on the leased area capable of producing oil or gas in paying quantities, this lease may be terminated by an appropriate judicial proceeding. In the event of any termination under this subparagraph, the lessee shall have the right to retain under this lease any and all drilling or producing wells for which no default exists, together with a parcel of land surrounding each well or wells and rights-of-way through the leased area that are reasonably necessary to enable the lessee to drill, operate, and transport oil or gas from the retained well or wells.

Appendix B: Sample Oil and Gas Lease

(b) The state may cancel this lease at any time if the state determines, after the lessee has been given notice and a reasonable opportunity to be heard, that:

(1) continued operations pursuant to this lease probably will cause serious harm or damage to biological resources, to property, to mineral resources, or to the environment (including the human environment);

(2) the threat of harm or damage will not disappear or decrease to an acceptable extent within a reasonable period of time; and

(3) the advantages of cancellation outweigh the advantages of continuing this lease in effect. Any cancellation under this subparagraph will not occur unless and until operations under this lease have been under suspension or temporary prohibition by the state, with due extension of the term of this lease, continuously for a period of five years or for a lesser period upon request of the lessee.

(c) Any cancellation under subparagraph (b) will entitle the lessee to receive compensation as the lessee demonstrates to the state is equal to the lesser of:

(1) the value of the cancelled rights as of the date of cancellation, with due consideration being given to both anticipated revenues from this lease and anticipated costs, including costs of compliance with all applicable regulations and stipulations, liability for clean-up costs or damages, or both, in the case of an oil spill, and all other costs reasonably anticipated under this lease; or

(2) the excess, if any, over the lessee's revenues from this lease (plus interest on the excess from the date of receipt to date of reimbursement) of all consideration paid for this lease and all direct expenditures made by the lessee after the effective date of this lease and in connection with exploration or development, or both, under this lease, plus interest on that consideration and those expenditures from the date of payment to the date of reimbursement.

21. **RIGHTS UPON TERMINATION.** Upon the expiration or earlier termination of this lease as to all or any portion of the leased area, the lessee will be directed in writing by the state and will have the right at any time within a period of one year after the termination, or any extension of that period as may be granted by the state, to remove from the leased area or portion of the leased area all machinery, equipment, tools, and materials. Upon the expiration of that period or extension of that period and at the option of the state, any machinery, equipment, tools, and materials that the lessee has not removed from the leased area or portion of the leased area become the property of the state or may be removed by the state at the lessee's expense. At the option of the state, all improvements such as roads, pads, and wells must either be abandoned and the sites rehabilitated by the lessee to the satisfaction of the state, or be left intact and the lessee absolved of all further responsibility as to their maintenance, repair, and eventual abandonment and rehabilitation. Subject to the above conditions, the lessee shall deliver up the leased area or those portions of the leased area in good condition.

22. **DAMAGES AND INDEMNIFICATION.** (a) No rights under the AS 38.05.125 reservation may be exercised by the lessee until the lessee has provided to pay the owner of the land, his lessees and permittees, upon which the AS 38.05.125 reserved rights are sought to be exercised, full payment for all damage sustained by the owner by reason of entering the land. If the owner for any reason does not settle the damages, the lessee may enter the land after posting a surety bond determined by the state, after notice and an opportunity to be heard, to be sufficient as to form, amount, and security to secure to the owner, his lessees and permittees, payment for damages, and may institute legal proceedings in a court of competent jurisdiction where the land is located to determine the damages which the owner of the land may suffer. The lessee agrees to pay for any damages that may become payable under AS 38.05.130 and to indemnify the state and hold it harmless from and against any claims, demands, liabilities, and expenses arising from or in connection with such damages. The furnishing of a bond in compliance with this paragraph will be regarded by the state as sufficient provision for the payment of all damages that may become payable under AS 38.05.130 by virtue of this lease.

(b) The lessee shall indemnify the state for, and hold it harmless from, any claim, including claims for loss or damage to property or injury to any person caused by or resulting from any act or omission committed under this lease by or on behalf of the lessee. The lessee is not responsible to the state under this subparagraph for any loss, damage, or injury caused by or resulting from the sole negligence of the state.

(c) The lessee expressly waives any defense to an action for breach of a provision of this lease or for damages resulting from an oil spill or other harm to the environment that is based on an act or

Appendix B: Sample Oil and Gas Lease

omission committed by an independent contractor in the lessee's employ. The lessee expressly agrees to assume responsibility for all actions of its independent contractors.

23. BONDS. (a) If required by the state, the lessee shall furnish a bond prior to the issuance of this lease in an amount equal to at least \$5 per acre or fraction of an acre contained in the leased area, but no less than \$10,000, and must maintain that bond as long as required by the state.

(b) The lessee may, in lieu of the bond required under (a) above, furnish and maintain a statewide bond in accordance with applicable regulations.

(c) The state may, after notice to the lessee and a reasonable opportunity to be heard, require a bond in a reasonable amount greater than the amount specified in (a) above where a greater amount is justified by the nature of the surface and its uses and the degree of risk involved in the types of operations being or to be carried out under this lease. A statewide bond will not satisfy any requirement of a bond imposed under this subparagraph, but will be considered by the state in determining the need for and the amount of any additional bond under this subparagraph.

(d) If the leased area is committed in whole or in part to a cooperative or unit agreement approved or prescribed by the state, and the unit operator furnishes a statewide bond, the lessee need not maintain any bond with respect to the portion of the leased area committed to the cooperative or unit agreement.

24. AUTHORIZED REPRESENTATIVES. The Director of the Division of Oil and Gas, Department of Natural Resources, State of Alaska, and the person executing this lease on behalf of the lessee shall be authorized representatives for their respective principals for the purposes of administering this lease. The state or the lessee may change the designation of its authorized representative or the address to which notices to that representative are to be sent by a notice given in accordance with Paragraph 25 below. Where activities pursuant to a plan of operations are underway, the lessee shall also designate, pursuant to a notice under Paragraph 25 below, by name, job title, and address, an agent who will be present in the state during all lease activities.

25. NOTICES; PROTEST. (a) Any notices required or permitted under this lease must be by electronic media producing a permanent record or in writing and must be given personally or by registered or certified mail, return receipt requested, addressed as follows:

TO THE STATE:

DIRECTOR, DIVISION OF OIL AND GAS
DEPARTMENT OF NATURAL RESOURCES
550 WEST 7TH AVENUE, SUITE 800
ANCHORAGE, ALASKA 99501-3560

TO THE LESSEE:

(b) Any notice given under this paragraph will be effective when delivered to the above authorized representative.

(c) A lessee who wishes to protest the amount of money due the state under the lease or any action of the state regarding a provision of this lease must file a written protest with the Division of Oil and Gas within 30 days after the mailing date of the state's notice or bill. A lessee who fails to file a protest within the required time waives any further right to protest. The state will establish the administrative appeal procedure to be followed and will inform the lessee of the procedure no later than 30 days after the filing of the written protest.

26. STATUTES AND REGULATIONS. This lease is subject to all applicable state and federal statutes and regulations in effect on the effective date of this lease, and insofar as is constitutionally permissible, to all statutes and regulations placed in effect after the effective date of this lease. A reference to a statute or regulation in this lease includes any change in that statute or regulation whether by amendment, repeal and

replacement, or other means. This lease does not limit the power of the State of Alaska or the United States of America to enact and enforce legislation or to promulgate and enforce regulations affecting, directly or indirectly, the activities of the lessee or its agents in connection with this lease or the value of the interest held under this lease. In case of conflicting provisions, statutes and regulations take precedence over this lease.

27. **INTERPRETATION.** This lease is to be interpreted in accordance with the rules applicable to the interpretation of contracts made in the State of Alaska. The paragraph headings are not part of this lease and are inserted only for convenience. The state and the lessee expressly agree that the law of the State of Alaska will apply in any judicial proceeding affecting this lease.

28. **INTEREST IN REAL PROPERTY.** It is the intention of the parties that the rights granted to the lessee by this lease constitute an interest in real property in the leased area.

29. **WAIVER OF CONDITIONS.** The state reserves the right to waive any breach of a provision of this lease, but any such waiver extends only to the particular breach so waived and does not limit the rights of the state with respect to any future breach; nor will the waiver of a particular breach prevent cancellation of this lease for any other cause or for the same cause occurring at another time. Notwithstanding the foregoing, the state will not be deemed to have waived a provision of this lease unless it does so in writing.

30. **SEVERABILITY.** If it is finally determined in any judicial proceeding that any provision of this lease is invalid, the state and the lessee may jointly agree by a written amendment to this lease that, in consideration of the provisions in that written amendment, the invalid portion will be treated as severed from this lease and that the remainder of this lease, as amended, will remain in effect.

31. **LOCAL HIRE.** The lessee is encouraged to hire and employ local and Alaska residents and companies, to the extent they are available and qualified, for work performed on the leased area. Lessees shall submit, with the plans of operations, a proposal detailing the means by which the lessee will comply with this measure. The lessee is encouraged, in formulating this proposal, to coordinate with employment services offered by the State of Alaska and local communities and to recruit employees from local communities.

32. **CONDITIONAL LEASE.** If all or a part of the leased area is land that has been selected by the state under laws of the United States granting lands to the state, but the land has not been patented to the state by the United States, then this lease is a conditional lease as provided by law until the patent becomes effective. If for any reason the selection is not finally approved, or the patent does not become effective, any rental, royalty, or other production or profit-based payments made to the state under this lease will not be refunded.

33. **NONDISCRIMINATION.** The lessee and the lessee's contractors and subcontractors may not discriminate against any employee or applicant because of race, religion, marital status, change in marital status, pregnancy, parenthood, physical handicap, color, sex, age, or national origin as set out in AS 18.80.220. The lessee and its contractors and subcontractors must, on beginning any operations under this lease, post in a conspicuous place notices setting out this nondiscrimination provision.

34. **DEFINITIONS.** All words and phrases used in this lease are to be interpreted where possible in the manner required in respect to the interpretation of statutes by AS 01.10.040. However, the following words have the following meanings unless the context unavoidably requires otherwise:

(1) "oil" means crude petroleum oil and other hydrocarbons, regardless of gravity, that are produced in liquid form by ordinary production methods, including liquid hydrocarbons known as distillate or condensate recovered by separation from gas other than at a gas processing plant;

(2) "gas" means all natural gas (except helium gas) and all other hydrocarbons produced that are not defined in this lease as oil;

(3) "associated substances" means all substances except helium produced as an incident of production of oil or gas by ordinary production methods and not defined in this lease as oil or gas;

(4) "drilling" means the act of boring a hole to reach a proposed bottom hole location through which oil or gas may be produced if encountered in paying quantities, and includes re-drilling, sidetracking, deepening, or other means necessary to reach the proposed bottom hole location, testing, logging, plugging, and other operations necessary and incidental to the actual boring of the hole;

(5) "reworking operations" means all operations designed to secure, restore, or improve production through some use of a hole previously drilled, including, but not limited to, mechanical or chemical treatment of any horizon, plugging back to test higher strata, etc.;

(6) "paying quantities" means production in quantities sufficient to yield a return in excess of operating costs, even though drilling and equipment costs may never be repaid and the undertaking considered as a whole may ultimately result in a loss; and

(7) "force majeure" means war, riots, acts of God, unusually severe weather, or any other cause beyond the lessee's reasonable ability to foresee or control and includes operational failure of existing transportation facilities and delays caused by judicial decisions or lack of them.

35. ROYALTY ON PRODUCTION. Except for oil, gas, and associated substances used on the leased area for development and production or unavoidably lost, the lessee shall pay to the state as a royalty 12.50 percent in amount or value of the oil, gas, and associated substances saved, removed, or sold from the leased area and of the gas from the leased area used on the leased area for extraction of natural gasoline or other products.

36. VALUE. (a) For the purposes of computing royalties due under this lease, the value of royalty oil, gas, or associated substances shall not be less than the highest of:

(1) the field price received by the lessee for the oil, gas, or associated substances;

(2) the volume-weighted average of the three highest field prices received by other producers in the same field or area for oil of like grade and gravity, gas of like kind and quality, or associated substances of like kind and quality at the time the oil, gas, or associated substances are sold or removed from the leased or unit area or the gas is delivered to an extraction plant if that plant is located on the leased or unit area; if there are less than three prices reported by other producers, the volume-weighted average will be calculated using the lesser number of prices received by other producers in the field or area;

(3) the lessee's posted price in the field or area for the oil, gas, or associated substances; or

(4) the volume-weighted average of the three highest posted prices in the same field or area of the other producers in the same field or area for oil of like grade and gravity, gas of like kind and quality, or associated substances of like kind and quality at the time the oil, gas, or associated substances are sold or removed from the leased or unit area or the gas is delivered to an extraction plant if that plant is located on the leased or unit area; if there are less than three prices posted by other producers, the volume-weighted average will be calculated using the lesser number of prices posted by other producers in the field or area.

(b) If oil, gas, or associated substances are sold away from the leased or unit area, the term "field price" in subparagraph (a) above will be the cash value of all consideration received by the lessee or other producer from the purchaser of the oil, gas, or associated substances, less the lessee's actual and reasonable costs of transportation away from the leased or unit area to the point of sale. The "actual and reasonable costs of transportation" for marine transportation are as defined in 11 AAC 83.229(a), (b)(2), and (c) - l.

(c) In the event the lessee does not sell in an arm's-length transaction the oil, gas, or associated substances, the term "field price" in subparagraphs (a) and (b) above will mean the price the lessee would expect to receive for the oil, gas, or associated substances if the lessee did sell the oil, gas, or associated substances in an arm's-length transaction, minus reasonable costs of transportation away from the leased or unit area to the point of sale or other disposition. The lessee must determine this price in a consistent and logical manner using information available to the lessee and report that price to the state.

(d) The state may establish minimum values for the purposes of computing royalties on oil, gas, or associated substances obtained from this lease, with consideration being given to the price actually received by the lessee, to the price or prices paid in the same field or area for production of like quality, to posted prices, to prices received by the lessee and/or other producers from sales occurring away from the leased area, and/or to other relevant matters. In establishing minimum values, the state may use, but is not limited to, the methodology for determining "prevailing value" as defined in 11 AAC 83.227. Each minimum value determination will be made only after the lessee has been given notice and a reasonable opportunity to be heard. Under this provision, it is expressly agreed that the minimum value of royalty oil, gas, or associated substances under this lease may not necessarily equal, and may exceed, the price of the oil, gas, or associated substances.

37. ROYALTY IN VALUE. Except to the extent that the state elects to receive all or a portion of its royalty in kind as provided in Paragraph 38 below, the lessee shall pay to the state that value of all royalty oil, gas, and associated substances as determined under Paragraph 36 above. Royalty paid in value will be free

Appendix B: Sample Oil and Gas Lease

and clear of all lease expenses (and any portion of those expenses that is incurred away from the leased area), including, but not limited to, expenses for separating, cleaning, dehydration, gathering, saltwater disposal, and preparing the oil, gas, or associated substances for transportation off the leased area. All royalty that may become payable in money to the State of Alaska must be paid on or before the last federal banking day of the calendar month following the month in which the oil, gas, or associated substances are produced. The amount of all royalty in value payments which are not paid when due under this lease or the amount which is subsequently determined to be due to the state or the lessee as the result of a redetermination will bear interest from the last federal banking day of the calendar month following the month in which the oil, gas, or associated substances were produced, until the obligation is paid in full. Interest shall accrue at the rate provided in AS 38.05.135(d) or as may later be amended. Royalty payments must be accompanied by such information relating to valuation of royalty as the state may require which may include, but is not limited to, run tickets, evidence of sales, shipments, and amounts of gross oil, gas, and associated substances produced.

38. ROYALTY IN KIND. (a) At the state's option, which may be exercised from time to time upon not less than 90 days' notice to the lessee, the lessee shall deliver all or a portion of the state's royalty oil, gas, or associated substances produced from the leased area in kind. Delivery will be on the leased area, unit area, or at a place mutually agreed to by the state and the lessee, and must be delivered to the State of Alaska or to any individual, firm, or corporation designated by the state.

(b) Royalty oil, gas, or associated substances delivered in kind must be delivered in good and merchantable condition, of pipeline quality, and free and clear of all lease expenses (and any portion of those expenses incurred away from the leased area), including, but not limited to, expenses for separating, cleaning, dehydration, gathering, saltwater disposal, and preparing the oil, gas, or associated substances for transportation off the leased area.

(c) After having given notice of its intention to take, or after having taken its royalty oil, gas, or associated substances in kind, the state, at its option and upon 90 days' notice to the lessee, may elect to receive a different portion or none of its royalty in kind. If, under federal regulations, the taking of royalty oil, gas, or associated substances in value by the state creates a supplier-purchaser relationship, the lessee hereby waives its right to continue to receive royalty oil, gas, or associated substances under that relationship, and further agrees that it will require any purchasers of the royalty oil, gas, or associated substances likewise to waive any supplier-purchaser rights.

(d) The lessee shall furnish storage for royalty oil, gas, and associated substances produced from the leased or unit area to the same extent that the lessee provides storage for the lessee's share of oil, gas, and associated substances. The lessee shall not be liable for the loss or destruction of stored royalty oil, gas and associated substances from causes beyond the lessee's ability to control.

(e) If a state royalty purchaser refuses or for any reason fails to take delivery of oil, gas, or associated substances, or in an emergency, and with as much notice to the lessee as is practical or reasonable under the circumstances, the state may elect without penalty to underlift for up to six months all or a portion of the state's royalty on oil, gas, or associated substances produced from the leased or unit area and taken in kind. The state's right to underlift is limited to the portion of royalty oil, gas, or associated substances that the royalty purchaser refused or failed to take delivery of, or the portion necessary to meet the emergency condition. Underlifted oil, gas, or associated substances may be recovered by the state at a daily rate not to exceed 10 percent of its royalty interest share of daily production at the time of the underlift recovery.

39. REDUCTION OF ROYALTY. Lessee may request a reduction of royalty in accordance with the applicable statutes and regulations in effect on the date of application for the reduction.

40. EFFECTIVE DATE. This lease takes effect on

BY SIGNING THIS LEASE, the state as lessor and the lessee agree to be bound by its provisions.

STATE OF ALASKA

By: _____

Kevin R. Banks

Acting Director, Division of Oil and Gas

Appendix B: Sample Oil and Gas Lease

STATE OF ALASKA)
) ss.
Third Judicial District)

On _____, before me appeared Kevin R. Banks of the Division of Oil and Gas of the State of Alaska, Department of Natural Resources, and who executed this lease and acknowledged voluntarily signing it on behalf of the State of Alaska as lessor.

Notary public in and for the State of Alaska
My commission expires _____

LESSEE: _____

Signature: _____

Printed Name/Title: _____

INSERT NOTARY ACKNOWLEDGMENT OF LESSEE'S SIGNATURE HERE.

LESSEE: _____

Signature: _____

Printed Name/Title: _____

INSERT NOTARY ACKNOWLEDGMENT OF LESSEE'S SIGNATURE HERE.

LESSEE: _____

Signature: _____

Printed Name/Title: _____

INSERT NOTARY ACKNOWLEDGMENT OF LESSEE'S SIGNATURE HERE.