

COSMOPOLITAN UNIT AGREEMENT

FINDINGS AND DECISION OF THE DIRECTOR,  
DIVISION OF OIL AND GAS,  
UNDER DELEGATION OF AUTHORITY FROM THE COMMISSIONER  
STATE OF ALASKA  
DEPARTMENT OF NATURAL RESOURCES

November 14, 2001

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## **I. INTRODUCTION AND BACKGROUND**

On August 10, 2001, Phillips Alaska, Inc. (Phillips), as the designated Cosmopolitan Unit operator, filed the Cosmopolitan Unit application (Application) with the State of Alaska, Department of Natural Resources (DNR), and the U. S. Department of Interior, Minerals Management Service (MMS), on behalf of itself and the other majority working interest owner, Forest Oil Corporation (Forest). The proposed unit is located on the Kenai Peninsula, offshore, north of Anchor Point. The proposed unit area covers approximately 24,601 acres of which approximately 14,835 acres are State of Alaska lands within seven individual State of Alaska oil and gas leases. The remaining approximately 9,766 acres proposed for the Cosmopolitan Unit are federal Outer-Continental Shelf (OCS) lands within two MMS oil and gas leases. Approval of the proposed Cosmopolitan Unit Agreement (Agreement) would conform and modify the lease contracts to be consistent with the Agreement, and extend the term of leases for as long as they are subject to the Agreement.

A summary of the State of Alaska leases proposed for the Cosmopolitan Unit follows. Two of the leases were offered in State of Alaska Lease Sale 78, held on October 31, 1994. DNR issued oil and gas leases ADL 384403 (Tract 3) and ADL 384404 (Tract 4), effective January 1, 1995, on State of Alaska lease form number DOG 9208. The seven-year primary lease term of these leases expires on December 31, 2001.

One of the leases was offered in State of Alaska Lease Sale 78W, held on November 14, 1995. DNR issued oil and gas leases ADL 387102 (Tract 1), effective February 1, 1996, on State of Alaska lease form number DOG 9208. The seven-year primary lease term of this lease expires on January 31, 2003.

Another lease in the proposed unit area was offered in the Cook Inlet Areawide 1999 Oil and Gas Lease Sale, held on April 21, 1999. DNR issued oil and gas lease ADL 389230 (Tract 6), effective February 1, 2000, on State of Alaska lease form number DOG 9609 (rev. 9/99). The seven-year primary lease term of this lease expires on January 31, 2007.

Two of the leases were offered in the Cook Inlet Areawide 2000 Oil and Gas Lease Sale, held on August 16, 2000. DNR issued oil and gas leases ADL 389525 (Tract 8) and ADL 389526 (Tract 9), effective May 1, 2001, on State of Alaska lease form number DOG 200004. The seven-year primary lease term of these leases expire on April 30, 2008.

The remaining lease in the proposed unit area was offered in State of Alaska Lease Sale 9, held on July 11, 1962. DNR issued ADL 18790 (Tract 7), effective September 1, 1962, on State of Alaska lease form DL-1 (Rev. April, 1961). The Starichkof State #1 Well, a certified well capable of production in paying quantities, is located on ADL 18790.

All seven leases retain a 12.5 percent royalty to the State of Alaska.

The two MMS leases were offered in Cook Inlet OCS Oil and Gas Lease Sale 149, held on June 11, 1997. The leases were effective August 1, 1997, for a five-year primary lease term. The leases expire July 31, 2002, and reserve a 12.5% royalty to the federal government.

## **II. APPLICATION FOR THE FORMATION OF THE COSMOPOLITAN UNIT**

Phillips submitted the Application on August 10, 2001, and simultaneously paid the \$5,000.00 unit application filing fee, in accordance with 11 AAC 83.306 and 11 AAC 05.010(a)(10)(D), respectively. The Application includes: the Agreement; Exhibit A legally describing the proposed unit area, its leases, and ownership interests; Exhibit B, a map of the proposed unit; and the proposed initial Plan of Exploration (Initial POE). The Application also includes the Cosmopolitan Unit Operating Agreement; technical data in support of the Application; and an affidavit that all proper parties were invited to join the Agreement. The Agreement is based on the McCovey Unit Agreement, which was used as the State of Alaska's model form (Model Form). The McCovey Unit Agreement was recently approved by the DNR and MMS for a joint state-federal unit in the Beaufort Sea of Alaska. The Model Form was designed using the State of Alaska Multiple Royalty Owner model unit form dated September 1998, and changed extensively to meet the regulatory requirements of both the DNR and MMS. Minor modifications were proposed to the Model Form and these are detailed in Attachment 5 of the Application.

Only portions of four of the seven State of Alaska leases are committed to the Cosmopolitan Unit. The four leases are ADLs 387102 (Tract 1), 384404 (Tract 4), 389525 (Tract 8), and 389526 (Tract 9). Under 11 AAC 83.373 (a), these commitments constitute severances of the leases.

The Agreement requires the unit operator, Phillips, to file unit plans describing the activities planned for the proposed unit area. Phillips must consider how it can best develop the resource underlying the entire unit area, without regard to internal lease boundaries. Phillips filed a proposed three-year Initial POE. The Initial POE is discussed further in Section III. A. 2.

The Agreement defines the relationship between the unit operator, the working interest owners (WIOs), and the royalty owners. It describes the rights and responsibilities, in addition to those imposed by state law and the leases, of the unit operator, WIOs, and royalty owners for exploration and development of the unit area. DNR may approve the Agreement if the available data suggests that the unit area covers one or more geologic formations that should be developed under a DNR approved plan, and the proposed unit meets the other statutory and regulatory criteria.

The Division of Oil and Gas (Division) determined that the Application was complete and published a public notice in the "*Anchorage Daily News*" on Sunday, August 19, 2001, and in the "*Peninsula Clarion*" on Monday, August 20, 2001, under 11 AAC 83.311. The Division provided copies of the public notice to the Kenai Peninsula Borough, City of Homer, Ninilchik Native Assn., Salamatoff Native Assn., Cook Inlet Region Corporation, and other interested parties under 11 AAC 83.311. The Division also provided public notice to the Alaska Department of Environmental Conservation (DEC), Alaska Department of Fish and Game (ADF&G), and the Alaska Oil and Gas Conservation

Commission (AOGCC). The public notice invited interested parties and members of the public to submit comments by September 19, 2001. The Division received no comments in response to the public notice.

### **III. DISCUSSION OF DECISION CRITERIA**

AS 38.05.180(p) gives DNR the authority to form an oil and gas unit. The Commissioner of DNR (Commissioner) reviews unit applications under AS 38.05.180(p) and 11 AAC 83.301 – 11 AAC 83.395. By memorandum dated September 30, 1999, the Commissioner approved a revision of Department Order 003 that delegated this authority to the Director of the Division (Director).

The Director will approve the Agreement upon a written finding that it will: 1) promote the conservation of all natural resources; 2) promote the prevention of economic and physical waste; and 3) provide for the protection of all parties of interest, including the state. 11 AAC 83.303(a).

The Director will consider the following six criteria in making the written finding required in subsection (a): 1) the environmental costs and benefits of unitized exploration or development; 2) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir proposed for unitization; 3) prior exploration activities in the proposed unit area; 4) the applicant's plans for exploration or development of the unit area; 5) the economic costs and benefits to the state; and 6) any other relevant factors, including measures to mitigate impacts identified above, the Director determines necessary or advisable to protect the public interest. 11 AAC 83.303(b). A discussion of the subsection (b) criteria, as they apply to the Agreement, is set out directly below, followed by a discussion of the subsection (a) criteria.

#### **A. Decision Criteria considered under 11 AAC 83.303(b)**

##### **1. The Environmental Costs and Benefits of Unitized Exploration or Development**

DNR considered environmental issues in the lease sale process, this unitization process, and will review them again during the unit plan of operations approval process. Unitized exploration, development, and production minimize surface impacts by consolidating facilities and reducing activity in the field. The Initial POE requires the drilling of one new exploratory well, and either a 3D seismic survey or a second new exploratory well within the unit area. The unit operator must obtain DNR's approval of a unit plan of operations and permits from various state and federal agencies before beginning operations, including exploratory wells, within the unit area. A unit plan of operations provides a more detailed plan for surface activities incident to exploration of the unit area than does a POE.

When the unit operator begins the permitting process to commence operations under a POE in a coastal area, it must submit a Coastal Project Questionnaire, permit applications, and supporting information to the Alaska Division of Governmental Coordination (DGC). Consistency with the Alaska Coastal Management Program (ACMP) is determined by the DGC, state resource agencies (DNR, DEC, ADF&G) and affected local governments (Kenai Peninsula Borough). The DGC conditions the

proposed activity to ensure consistency with the ACMP and Kenai Peninsula Borough Coastal Management Program (KPBCMP). Submittal of these documents to the state initiates an intensive public and agency review process. DGC organizes an inter-agency review, determines which permits are required, and publishes a public notice soliciting comments from federal, state and local agencies, and the public. DGC designates a 50-day review schedule starting with the public notice. State and federal agencies are asked to review the application, request any additional information and submit comments. After reviewing the comments, DGC crafts additional mitigation measures, as necessary, to ensure the project is consistent with the ACMP and KPBCMP. DGC then issues a Proposed Consistency Determination for public comment. After the public comment period, additional stipulations may be imposed and a Final Consistency Determination may be issued for a project in the unit area.

When reviewing a proposed unit plan of operations, the Division considers the unit operator's ability to compensate the surface owner for damage sustained to the surface estate and plans for restoration and rehabilitation of the unit area. In addition, DNR, DEC, and AOGCC have bonding and financial responsibility requirements to ensure performance by the operator and reclamation of the area. 11 AAC 96.060; 18 AAC 75; 20 AAC 25.025.

Any new exploration activity that may occur following unitization, unless categorically approved under the ACMP ABC (General Concurrence) list, is subject to an ACMP consistency determination, and must comply with both the state and KPBCMP plans.

The proposed Cosmopolitan Unit area is habitat for a variety of land and marine mammals, waterfowl and fish. Area residents may use this area for subsistence hunting and fishing. Oil and gas activity in the proposed unit area may affect some wildlife habitat and some subsistence activity. Mitigation measures, including seasonal restrictions on specific activities, reduce the impact on fish, wildlife, and human populations. Mitigation measures specifically address potential impacts to subsistence access and harvesting (See Attachment 3).

Unitization and approval of a POE does not authorize any physical activity. It is simply one necessary step before DNR can accept an application for approval of a unit plan of operations or development. The Director's approval of a unit agreement is an administrative action, which by itself does not convey any authority to conduct any operations on leases within the unit. Unitization does not waive or reduce the effectiveness of the mitigating measures that condition the lessee's right to conduct operations on these leases.

With regard to the specific surface activities proposed for the Cosmopolitan Unit, Phillips applied for permits and authorizations for the Cosmopolitan Oil and Gas Exploration Project from the various state, and local agencies. Phillips has received the permits and authorizations necessary for the project. These permits and authorizations include the approval of a Plan of Operations from DNR, and a final consistency determination from DGC that the Plan of Operations is consistent with the ACMP. A copy of the Phillips' Cosmopolitan Oil and Gas Exploration Project, the Final ACMP Consistency Determination for the Project, and the DNR approval of the Cosmopolitan Project Plan of Operations are available at the Division's Anchorage office.

## **2. The Geological and Engineering Characteristics of the Reservoir, Prior Exploration Activities in the Unit Area, and Plans for Exploration and Development of the Proposed Unit Area**

The Cosmopolitan Unit is located in state and federal waters of southern Cook Inlet approximately 2 to 4 miles west of Cape Starichkof. The prospect was originally identified in the 1960s and was subsequently tested with two wells. The discovery well, Pennzoil Starichkof State #1, was drilled in January of 1967 from an offshore location and penetrated a hydrocarbon bearing section. A second well, Pennzoil Starichkof St. Unit #1, was spud in August of 1967 approximately 2.5 miles north of Starichkof State #1. The reservoir interval of Starichkof St. Unit #1 proved wet and the offshore project was abandoned when the Starichkof St. Unit #1 well was abandoned and the Starichkof State #1 well was suspended. The Starichkof State #1 well was subsequently certified as capable of production in paying quantities.

As part of the Initial POE, Phillips must drill the Hansen No. 1 Well to depths sufficient to penetrate the Lower Tyonek sand prone interval, which is correlative to the section seen in the Starichkof State #1 well between 6,740 feet to 7,005 feet MD, or 6,500 feet subsea TVD, whichever is the lesser depth ("Target Depth"). The drilling operations for the Hansen No.1 Well must commence on or before December 31, 2001 and reach the Target Depth on or before September 1, 2002.

The Initial POE further requires the WIOs to commit in writing to acquire a minimum of a 30 square mile 3D seismic survey by the first anniversary of the Agreement, and acquire the survey by the third anniversary of the Agreement. In lieu of the seismic survey, the WIOs may commit to a second well by the first anniversary of the Agreement, and drill the second well within the unit area to the Target Depth by the third anniversary of the Agreement. A sidetrack of the Hansen No. 1 Well to the Target Depth, with a bottomhole location of more than 500 feet from the bottomhole location of the Hansen No. 1 Well, will satisfy this condition of the Initial POE.

State regulation requires that a unit must encompass the minimum area required to include all or part of one or more oil or gas reservoirs, or potential hydrocarbon accumulations. 11 AAC 83.356(a). Division technical staff evaluated all data provided by the unit applicant to determine if the proposed unit area met those criteria. Phillips provided sufficient geological and geophysical data for the Division to justify the formation of the Cosmopolitan Unit. The data provided included structure maps, cross sections, interpreted seismic data and other geologic displays. The data are confidential and therefore are not discussed in detail here.

The State's evaluation of the subsurface geology supports the configuration of the unit area proposed. DNR's review of the geologic information supports the inclusion of all leases identified in the Application within the proposed unit area.

Phillips has justified the size of the Cosmopolitan Unit based on the technical data and the accompanying proposed work plan that outlines how it plans to explore within the Tyonek Formation.

The Initial POE sets out a timely sequence of reservoir(s) exploration activities that will facilitate the ultimate development and production of the reservoir(s), if oil or gas is discovered in commercial quantities. Furthermore, completion of the proposed exploration activities as scheduled will satisfy the performance standards and diligence requirements that the state and the WIOs have agreed to as a condition for approval of the Agreement for the three year initial term. The Division and the majority WIOs, Phillips and Forest, have agreed that a failure to timely perform the various components set out in the Initial POE is a default under the Agreement and will result in termination of the Cosmopolitan Unit.

Because two wells have already been drilled within the proposed Cosmopolitan Unit and one of the wells, Starichkof State #1, is certified capable of production in paying quantities, the Division had concerns about continuing the Agreement if no additional delineation, appraisal, or development activities were proposed beyond those in the Initial POE. Before the Application was submitted, the Division told the WIOs that the Agreement would only continue past the initial term, the third anniversary of the effective date of the Agreement, if further appraisal, delineation, or development/production activities satisfactory to the Division were proposed beyond the Initial POE, as the Division expected activity beyond the Initial POE in order to continue the Cosmopolitan Unit. Consequently, an understanding was reached with the WIOs that they will address the further appraisal, delineation or development/production of the unit area in their second POE or first Plan of Development (POD), whichever immediately follows the Initial POE.

The WIOs acknowledge that as part of the second POE or first POD, the Division intends to require additional drilling, further exploration activities, sustained commercial production, or a demonstration of prompt efforts to proceed to further development and production within the unit area. The WIOs further acknowledge that if additional drilling, further exploration activities, sustained commercial production, or efforts to put the unit into production, satisfactory to the Division, are not proposed for the unit area in the second POE or first POD, the Cosmopolitan Unit will immediately and automatically terminate on the expiration date of the Initial POE. The expression of Division's intent in this paragraph is not meant to limit the powers the Division otherwise has to review an application for approval of a POE or POD. Furthermore, the Starichkof State #1 will not be considered capable of producing in paying quantities for purposes of determining default under the Agreement. See 11 AAC 83.374(d).

As will be addressed in more detail in Section III. A.3, the Division further requires that at the time the WIOs apply for approval of a second POE or first POD, they must demonstrate to the Division's satisfaction that the WIOs endorsing the proposed plan hold sufficient interest in the unit area to give effective control of the operations, either to further explore or develop and produce the unit. Failure to do so will result in the immediate and automatic termination of the unit on the expiration date of the Initial POE.

Failure to timely apply for and obtain approval of a second POE or first POD will result in immediate and automatic termination of the Cosmopolitan Unit. If the Cosmopolitan Unit terminates for failure to fulfill any of the commitments in the Initial POE, or to timely apply for and obtain approval of a second POE or first POD, the WIOs will automatically surrender all leases within the Cosmopolitan Unit whose



primary terms have expired and are not otherwise continued under the leases, effective the day the Cosmopolitan Unit terminates. The WIOs have agreed to waive the extension provisions of 11 AAC 83.140 and Article 15.2 of the Agreement applicable to default and termination of the Cosmopolitan Unit. The WIOs have also agreed to waive the notice and hearing provisions of 11 AAC 83.374, except with respect to the commencement of drilling operations and reaching the Target Depth of the Hansen #1 Well, applicable to default and termination of the Cosmopolitan Unit. Finally, nothing in the Initial POE is intended as a waiver of the WIOs' force majeure rights under their respective leases and under the unitization regulations.

The Initial POE with the agreed-to terms and conditions ensures that the lease extensions resulting from unitization under 11 AAC 83.336 continue only so long as the applicants proceed diligently with exploration and development.

### **3. The Economic Costs and Benefits to the State and Other Relevant Factors**

Approval of the Agreement in combination with the Initial POE will result in both short-term and long-term economic benefits to the state. The assessment of the hydrocarbon potential of the leases will create jobs in the short-term. If the WIOs make a commercial discovery and begin development/production from the Cosmopolitan Unit, the state will earn royalty and tax revenues over the long-term life of the field.

The primary term of two of the state leases in the proposed unit area will expire December 31, 2001, unless extended by unitization. If the leases expire, the leasehold interests will return to the state. The earliest that DNR could reoffer the land, under the current Five-Year Oil and Gas Lease Sale Schedule, is May 2002. If DNR leased the expired lands in 2002, the state could receive bonus payments and rentals for the primary term of the new leases. However, it could be years before the new lessees would propose exploration of the area and even longer before the state receives royalties and taxes on any commercial production. The potential long-term economic benefit of exploration and earlier development of the Cosmopolitan Unit area outweighs the short-term loss of potential bonus payments.

The seven State of Alaska leases proposed for the Cosmopolitan Unit are written on a variety of forms, containing a variety of provisions. Including the leases in the unit would conform and modify the lease contracts to be consistent with the Agreement. Consistent lease provisions allow the WIOs and the state to reduce the administrative burdens of operating and regulating this unit. Conforming the terms of the older leases to the Agreement allows the state to avoid costly and time-consuming re-litigation of some problematic lease provisions in the older forms.

Phillips and Forest control 90.52% of the unit area. Four separate parties own the remaining 9.48% of the unit area. Under the Cosmopolitan Unit Joint Operating Agreement, any two or more parties with at least 61% working interest can propose and cause the drilling of exploratory wells, and any two or more parties owning at least 80% of the working interest must approve development and production operations. Despite the fact that less than 100% of the lessees are committed to the unit, Phillips has demonstrated that a reasonable effort was made to obtain joinder of all proper parties (record owners

of oil and gas interests) within the proposed unit. 11 AAC 83.306(3); 11 AAC 83.328. Furthermore, Phillips and Forest, representing 90.52% of the working interest ownership in the unit, hold sufficient interest in the unit area to give reasonable effective control of unit operations during the term of the Initial POE when exploration operations will be undertaken. 11 AAC 83.316(c).

As a further condition of approval of the Agreement, the WIOs must demonstrate to the Division's satisfaction that the WIOs endorsing the unit plan subsequent to the Initial POE hold sufficient continuing interest in the unit area to give effective control of the operations, either to further explore, or develop and produce the unit. The WIOs have agreed that failure to do so will result in the immediate and automatic termination of the Unit on the expiration date of the Initial POE.

The majority WIOs provided technical data sufficient to define the prospect under consideration, committed their diverse lease interests to the proposed unit and agreed to a POE that ensures a timely sequence of exploration activities in order to evaluate all the acreage within the proposed unit area. The Initial POE with the agreed-to terms and conditions advances exploration and evaluation of the prospects in the unit area sooner than would occur under any individual lease exploration effort.

## **B. Decision Criteria considered under 11 AAC 83.303(a)**

### **1. The Conservation of All Natural Resources**

DNR recognizes unitization of the leases overlying a reservoir as a prudent conservation mechanism. Without unitization, the unregulated development of reservoirs can become a race for possession by competing operators. This race can result in: 1) unnecessarily dense drilling, especially along property lines; 2) rapid dissipation of reservoir pressure; and 3) irregular advance of displaced fluids, all of which contribute to the loss of ultimate recovery or economic waste. The proliferation of surface activity, duplication of production, gathering, and processing facilities, and haste to get oil to the surface also increase the potential for environmental damage. Lessee compliance with conservation orders and field pool rules issued by the AOGCC would mitigate some of these impacts without an agreement to unitize operations. Still, unitization is the most efficient method for maximizing oil and gas recovery, while minimizing negative impacts on other resources. Formation of the unit will provide the state with a comprehensive plan for exploring and developing the entire unit area. Formation of the Cosmopolitan Unit and implementation of the Initial POE will ensure that WIOs prudently explore the acreage included in the unit.

The Agreement will promote the conservation of both surface and subsurface resources through unitized (rather than lease-by-lease) development. Unitization allows the unit operator to explore the area as if it were one lease. Without the Agreement the lessee would be compelled to seek permits to drill wells on each individual lease in order to extend the leases beyond their primary terms. Unitization reduces both the number of facilities required to develop reserves that may be discovered and the aerial extent of land required to accommodate those facilities. Review and approval of exploration and development permits under a unit agreement will also ensure that rational surface-use decisions are made without consideration of individual lease ownership or expense. After unitization, facilities can be designed and

located to maximize recovery and to minimize environmental impact, without regard to lease ownership. Although the applicant has not determined the extent of any oil and gas contained in the prospective reservoir, the Agreement will ensure that the acreage is explored and recovery from the leases is maximized if a commercial hydrocarbon accumulation is discovered.

## **2. The Prevention of Economic and Physical Waste**

The unit will prevent economic and physical waste because the unit operator must have a cost sharing agreement, a coordinated exploration plan, and if a commercial discovery is made, a comprehensive reservoir depletion model. A cost-sharing agreement promotes efficient development of common surface facilities and operating strategies. With a cost-sharing agreement and reservoir model in place, the WIOs in the unit can rationally decide well spacing requirements, injection plans, and the proper joint-use of surface facilities. Unitization prevents economic and physical waste by eliminating redundant expenditures for a given level of production, and by avoiding loss of ultimate recovery with the adoption of a unified reservoir management plan.

Unitized operations improve development of reservoirs beneath leases that may have variable or unknown productivity. Marginally economic reserves, which otherwise would not be produced on a lease-by-lease basis, can be produced through unitized operations in combination with more productive leases. Facility consolidation lowers capital costs and promotes optimal reservoir management for all WIOs. Pressure maintenance and secondary recovery procedures are easier to design and achieve through joint, unitized efforts than would otherwise be possible. In combination, these factors allow less profitable areas of a reservoir to be developed and produced in the interest of all parties, including the state.

The total cost of exploring and developing the Cosmopolitan Unit leases would be higher on a lease-by-lease basis than it would be under unitization terms. Drilling and facilities investment costs will be minimized as a consequence of eliminating a need for numerous sites within the unit area. Locations of individual wells and surface facilities will be selected to optimize ultimate oil and gas recovery, while minimizing or completely avoiding adverse impacts to the environment.

Reducing costs and environmental impacts through unitized operations will expedite development of any reserves discovered and will promote greater ultimate recovery of any oil and gas from the unit area. This will increase and extend the state's income stream from production taxes and royalties. The revenues to the lessees and unit operator may be reinvested in new exploration and development in the state. Unitization means reduced costs and increased benefits to all interested parties. It benefits the local and state economy, and provides revenues to the state's general, school, constitutional budget reserve, and permanent funds.

## **3. The Protection of All Parties in Interest, Including the State**

The Agreement in combination with the Initial POE with the agreed-to terms and conditions outlined in Section III.A.2 and 3 promotes the state's economic interests because exploration will likely occur

earlier than without unitization. Diligent exploration under a single approved unit plan without the complications of competing operators is in the state's best interest. It advances evaluation of the state's petroleum resources, while minimizing impacts to the region's cultural and environmental resources. A commercial discovery will stimulate the state's economy with production-based revenue, oil and gas related jobs, and service industry activity.

The Agreement provides for accurate reporting and record keeping, state approval of plans of exploration and development and operating procedures, royalty settlement, in-kind taking, and emergency storage of oil and gas, all of which will further the state's interest. The modifications to the varying provisions of some of the leases will economically benefit the state, and reduce the administrative burdens of operating and regulating this unit.

The formation of the Cosmopolitan Unit protects the economic interests of all WIOs and royalty owners of a common reservoir. Operating under a unit agreement and unit operating agreement assures each individual WIO an equitable allocation of costs and revenues commensurate with the value of their lease(s). The provisions of the Agreement and state law that provide for notice and an opportunity to be heard if they disagree with a unit management decision made by the state also protect the WIOs.

#### **IV. FINDINGS AND DECISION**

##### **A. The Conservation of All Natural Resources**

1. The Agreement will conserve all natural resources, including hydrocarbons, gravel, sand, water, wetlands, and valuable habitat.
2. The unitized development and operation of the leases in this proposed unit will reduce the amount of land, fish and wildlife habitat that would otherwise be disrupted by individual lease development. This reduction in environmental impacts and preservation of subsistence access is in the public interest.
3. If the exploration activities under the Initial POE result in the discovery of a commercially producible reservoir, there may be environmental impacts associated with reservoir development. All unit development must proceed according to an approved plan of development. Additionally, before undertaking any specific operations, the unit operator must submit a unit plan of operations to the Division and other appropriate state and local agencies for review and approval. The lessees may not commence any drilling or development operations until all agencies have granted the required permits. DNR may condition its approval of a unit plan of operations and other permits on performance of mitigation measures in addition to those in the modified leases and the Agreement, if necessary or appropriate. Compliance with mitigation measures will minimize, reduce or completely avoid adverse environmental impacts.

##### **B. The Prevention of Economic and Physical Waste**

1. Phillips submitted geological data to the Division in support of the Application. Division technical staff determined that the Cosmopolitan Unit area encompasses all or part of one or more potential hydrocarbon accumulations. The available geological data justify including the proposed lands, described in Exhibit A, in the Cosmopolitan Unit.
2. The Initial POE provides for the reasonable exploration of potential hydrocarbon accumulations in the unit area. If the WIOs discover oil or gas in commercial quantities, the Agreement will prevent the waste of oil and gas, and increase the probability of recovering more hydrocarbons from the unit area. The Division must approve a plan of development before the unit operator produces any hydrocarbons in commercial quantities.

**C. The Protection of All Parties in Interest, Including the State**

1. Phillips provided evidence of reasonable effort to obtain joinder of any proper party to the Agreement.
2. Phillips and Forest hold sufficient interest in the unit area to give reasonably effective control of operations, and seven State of Alaska leases are proposed for the Cosmopolitan Unit.
3. The Agreement, conditioned upon the performance of the Initial POE, adequately and equitably protects the public interest, and is in the state's best interest.
4. The Agreement meets the requirements of AS 38.05.180(p) and 11 AAC 83.303.
5. The Division complied with the public notice requirements of 11 AAC 83.311.
6. The Agreement will not diminish access to public and navigable waters beyond those limitations (if any) imposed by law or already contained in the oil and gas leases covered by this Agreement.
7. The Agreement provides for expansions and contractions of the unit area in the future, as warranted by data obtained by exploration or otherwise. The Agreement thereby protects the public interest, the rights of the parties, and the correlative rights of adjacent landowners.
8. The Agreement is approved for an initial period of three years, and must be extended by the Commissioner and Regional Supervisor.
9. The applicant's Initial POE, subject to the terms and conditions discussed in Section III.A.2 and A.3, meets the requirements of 11 AAC 83.303 and 11 AAC 83.341. The

Initial POE is approved until the third anniversary of the Effective Date of the Unit Agreement. The unit operator must conduct the proposed exploration activities in accordance with the timelines specified in the plan. The Initial POE describes the performance standards and diligence requirements that the state requires. If the WIOs fail to perform any of the exploration activities outlined in the Initial POE as scheduled, the plan will be in default and the unit will terminate.

10. The unit operator must submit an annual status report on the Initial POE to the Division. The annual status report must describe the status of projects undertaken and the work completed, as well as any proposed changes to the plan. In order to be approved by the state, changes to the Initial POE must comply with Article 8 of the Agreement and Section III.A.2 and 3 of this Decision. The unit operator must also submit an application for approval of a second POE 60 days before the Initial POE expires, or, if appropriate, an application for approval of a first POD 90 days before the Initial POE expires.
11. The Cosmopolitan Unit will expedite exploration and potential development of the unit area. With the formation of the Cosmopolitan Unit, economic benefits to the state outweigh the economic costs of extending the primary term of the state leases committed to the unit.

For the reasons discussed in this Findings and Decision, I hereby approve the Cosmopolitan Unit Agreement subject to the conditions specified herein. The Agreement shall become effective as of 12:01 a.m. on the day following approval by the Director and Regional Supervisor.

A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040(c) and (d) and may be mailed or delivered to Pat Pourchot, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918, or sent by electronic mail to [dnr\\_appeals@dnr.state.ak.us](mailto:dnr_appeals@dnr.state.ak.us). This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

Appeal Code:OGO111401COSMOAGREEMENTAPPRV

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Mark D. Myers, Director  
Division of Oil and Gas

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Date

- Attachments:
1. Exhibit A, Tract Description and Ownership Schedule
  2. Exhibit B, Map of the Unit Boundary
  3. Cook Inlet Areawide 2000 Mitigation Measures

Cosmopolitan\_Unit\_Decision

## EXHIBIT A

### Cosmopolitan Unit Agreement

TRACT NO	LEASE NO.	LEGAL DESCRIPTION	GROSS ACRES	BASE ROYALTY	OVERRIDING ROYALTIES OWNER(S)	OVERRIDING ROYALTY (IES)	WORKING INTEREST
1	ADL-387102	T3S-R15W, S.M., Secs. 15, 16 & 17: Protracted, All within the computed Alaska seaward boundary, listed as "State Acreage" on Alaska's seaward boundary diagram approved by the state on 2/4/93	1,109.14	12.50%	NA	0.00000	Phillips Alaska, Inc. 100%
2	OCS-Y-1664	That portion of Block 6113, OCS Official Protraction Diagram NO05-02, Seldovia, approved January 04, 1995, shown as Federal 8(g) Area B on Supplemental Official OCS Block Diagram dated January 03,1994, and that portion of Block 6114, OCS Official Protraction Diagram NO05-02, Seldovia, approved January 04, 1995, shown as Federal 8(g) Area B on Supplemental Official OCS Block Diagram dated January 03, 1994	5,304.11	12.50%	NA	0.00000	Phillips Alaska, Inc. 50% Anadarko Petroleum Company 50%*
3	ADL-384403	T3S-R15W, S. M., Sec. 20, 29 & 32: All within the computed Alaska seaward boundary, listed as "State Acreage" on Alaska's seaward boundary diagram approved by the state on 2/4/93; Protracted, All; Secs. 21 & 28: Protracted, All; Sec. 33, Protracted, W2	2,758.69	12.50%	Escopeta Oil & Gas Corporation Escopeta Production - Alaska, Inc. Blocker Interests, Ltd. Briggs V. Nesmith Robert C. Warthen Chase Morsey, Jr. SPC, L.L.C.	.58333%** .408333%** .99167%** .17500%** .33333%** .17500%** 1.33333%	Phillips Alaska, Inc. 66.6667% Forest Oil Corporation 33.3333%
4	ADL-384404	T3S-R15W, S. M., Secs. 22 & 23: Protracted, All; Sec. 26: Surveyed, Fractional, All; Sec. 26: Protracted, All tide & submerged lands; Sec. 27: Protracted, All	2,560.00	12.50%	Escopeta Oil & Gas Corporation Escopeta Production - Alaska, Inc. Blocker Interests, Ltd. Briggs V. Nesmith Robert C. Warthen Chase Morsey, Jr. SPC, L.L.C.	.58333%** .408333%** .99167%** .17500%** .33333%** .17500%** 1.33333%	Phillips Alaska, Inc. 66.6667% Forest Oil Corporation 33.3333%

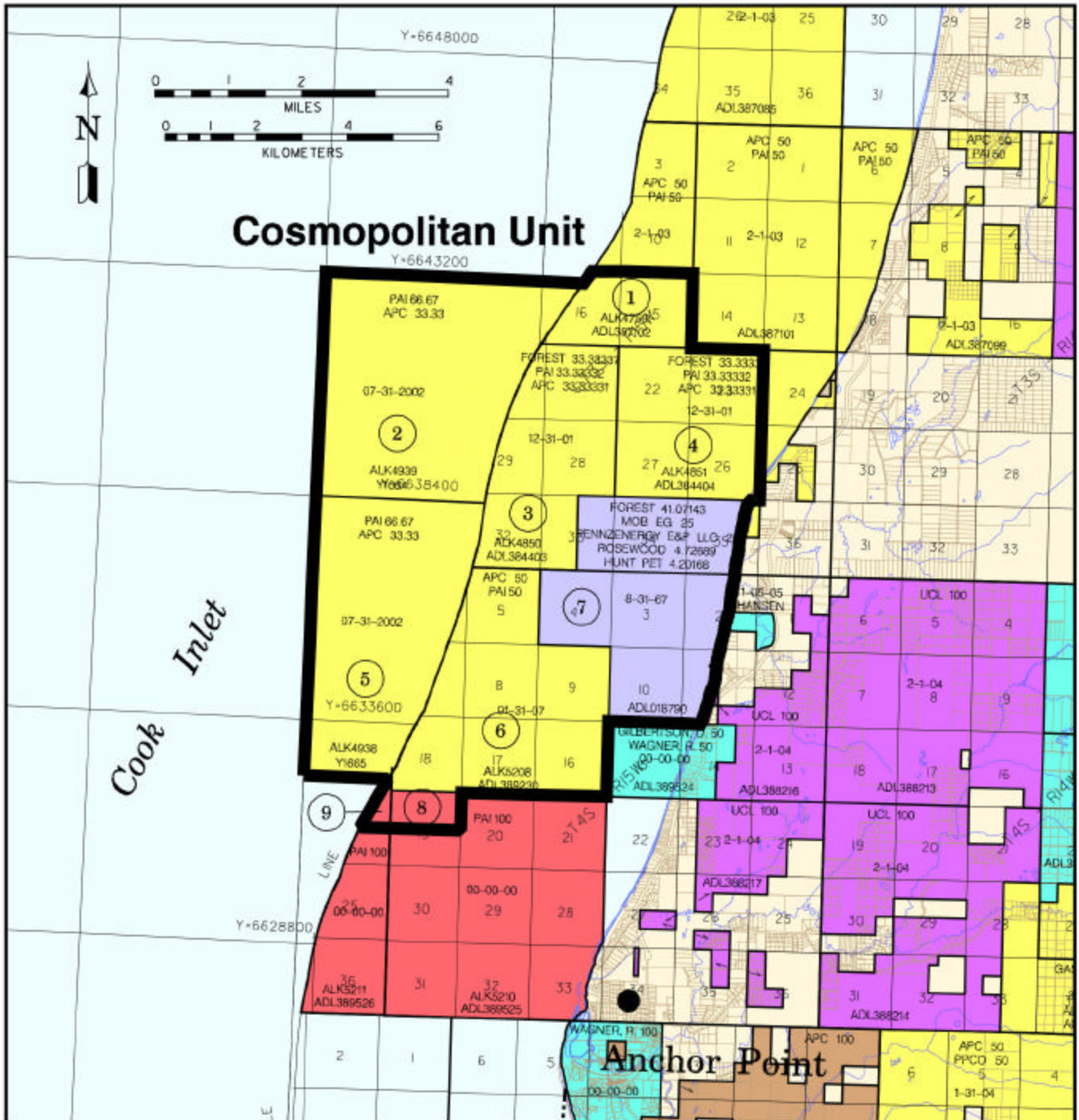





## EXHIBIT A

5	OCS-Y-1665	That portion of Block 6163, OCS Official Protraction Diagram NO05-02, Seldovia, approved January 04,1995, shown as Federal 8(g) Area B on Supplemental Official OCS Block Diagram dated January 03,1994, and that portion of Block 6213, OCS Official Protraction Diagram NO05-02, Seldovia, approved January 04,1995, shown as Federal 8(g) Area C on Supplemental Official OCS Block Diagram dated February 03, 1997	4,461.71	12.50%	NA	0.00000	Phillips Alaska, Inc. 50% Anadarko Petroleum Company 50%*																																												
6	ADL-389230	T4S-R15W, S.M., Secs. 5-7 & 18, Protracted, All tide and submerged land within the computed seaward boundary listed as "State Acreage" on Alaska's seaward boundary diagram approved February 09, 1993; Secs. 8-9 & 16-17: Protracted, All	4,035.72	12.50%	NA	0.00000	Phillips Alaska, Inc. 100%																																												
7	ADL-018790	T3S-R15W, S.M., Sec. 33, E2; Sec. 34, All; Sec. 35, Fraction (all shorelands(if any), tidelands, and submerged lands, including such shorelands (if any) and tidelands as may underlie the portion of Stariski Creek that runs through this section); T4S-R15W, S.M., Secs. 2 & 11, Fraction (all tidelands and submerged lands); Secs. 3-4 & 10, All	3,959.36	12.50%	<table border="0" style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td style="padding-left: 20px;">Olser C. Hutson</td><td style="text-align: right;">.18750%</td></tr> <tr><td style="padding-left: 20px;">Robert E. Best</td><td style="text-align: right;">.18750%</td></tr> <tr><td style="padding-left: 20px;">Metro National Bank</td><td style="text-align: right;">.37500%</td></tr> <tr><td style="padding-left: 20px;">Nugent T. Brasher, Jr.</td><td style="text-align: right;">.09375%</td></tr> <tr><td style="padding-left: 20px;">Jerry F. Brasher</td><td style="text-align: right;">.09375%</td></tr> <tr><td style="padding-left: 20px;">Edith E. Brasher</td><td style="text-align: right;">.18750%</td></tr> <tr><td style="padding-left: 20px;">Bill Mathis</td><td style="text-align: right;">.37500%</td></tr> <tr><td style="padding-left: 20px;">Louisiana Land &amp; Exploration Co.</td><td style="text-align: right;">.16667%</td></tr> <tr><td style="padding-left: 20px;">Devon Energy Corporation</td><td style="text-align: right;">.33333%</td></tr> <tr><td style="padding-left: 20px;">Machelle Mathis Knight</td><td style="text-align: right;">Remainder</td></tr> <tr><td style="padding-left: 20px;">Melissa Mathis Carroll</td><td style="text-align: right;">Remainder</td></tr> <tr><td style="padding-left: 20px;">Melanie Mathis</td><td style="text-align: right;">Remainder</td></tr> <tr><td style="padding-left: 20px;">Marilyn F. Mathias</td><td style="text-align: right;">Remainder</td></tr> </tbody> </table>	Olser C. Hutson	.18750%	Robert E. Best	.18750%	Metro National Bank	.37500%	Nugent T. Brasher, Jr.	.09375%	Jerry F. Brasher	.09375%	Edith E. Brasher	.18750%	Bill Mathis	.37500%	Louisiana Land & Exploration Co.	.16667%	Devon Energy Corporation	.33333%	Machelle Mathis Knight	Remainder	Melissa Mathis Carroll	Remainder	Melanie Mathis	Remainder	Marilyn F. Mathias	Remainder	<table border="0" style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td style="padding-left: 20px;">.18750%</td><td style="padding-left: 20px;">.18750%</td><td style="padding-left: 20px;">41.07143%</td></tr> <tr><td style="padding-left: 20px;">.37500%</td><td style="padding-left: 20px;">Energy Corporation</td><td style="padding-left: 20px;">25.00000%</td></tr> <tr><td style="padding-left: 20px;">.09375%</td><td style="padding-left: 20px;">Exxon</td><td style="padding-left: 20px;">25.00000%</td></tr> <tr><td style="padding-left: 20px;">.09375%</td><td style="padding-left: 20px;">Hunt Petroleum Corporation</td><td></td></tr> <tr><td style="padding-left: 20px;">.18750%</td><td style="padding-left: 20px;">04.20168%</td><td style="padding-left: 20px;">Rosewood Resources, Inc.</td></tr> <tr><td style="padding-left: 20px;">.37500%</td><td></td><td style="padding-left: 20px;">04.72689%</td></tr> </tbody> </table>	.18750%	.18750%	41.07143%	.37500%	Energy Corporation	25.00000%	.09375%	Exxon	25.00000%	.09375%	Hunt Petroleum Corporation		.18750%	04.20168%	Rosewood Resources, Inc.	.37500%		04.72689%	Forest Oil Corporation Devon Mobil Exxon Hunt Petroleum Corporation Rosewood Resources, Inc.
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8	ADL-389525	T4S-R15W, S.M., Sec. 19, N2, Protracted	311.00	12.50%	NA	0.00000	Phillips Alaska, Inc. 100%																																												
9	ADL-389526	T4S-R16W, S.M., Sec. 13, Protracted; Sec., 24, N2, Protracted, All, as listed as "State Acreage" on Alaska's Seaward Boundary Diagram approved by the state on February 2, 1993	100.70	12.50%	NA	0.00000	Phillips Alaska, Inc. 100%																																												
Total Acres			24,600.43																																																

\* MMS is processing assignments of all of Anadarko's working interest to Phillips

\*\*Subject to escalation



-  Unit Boundary
-  Lease Boundary
-  Section Line

 Tract Number



**PHILLIPS Alaska, Inc.**  
A Subsidiary of PHILLIPS PETROLEUM COMPANY

**Exhibit B**  
**Cosmopolitan Unit**  
**Agreement**

## Mitigation Measures for Cook Inlet Areawide 2000

AS 38.05.035(e) and the departmental delegation of authority provide the director, Division of Oil and Gas (DO&G), 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 selected 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.

Under AS 38.05.035(e), ADNR has authority to apply the following mitigation measures developed for this Cook Inlet Areawide lease sale, to all oil and gas activities performed to access the state's leased mineral interest, regardless of the surface ownership status of the land from which the lessee seeks access.

Lessees must obtain approval of a detailed plan of operations from the Director before conducting exploratory or development activities (11 AAC 83.158). An approved plan of operations is the authorization by which DO&G regulates exploration, development, and production activities.

A plan of operations must identify the specific measures, design criteria, and construction methods and standards to be employed to comply with the restrictions listed below. It must also address any potential geophysical hazards that may exist at the site. Plans of operation must comply with coastal zone consistency review standards and procedures established under 6 AAC 50 and 80 including coastal district plans. Applications for required state or federal agency authorizations or permits must be submitted with the plan of operations. DO&G will require, as a condition of consistency approval, such modification or terms as may be necessary to ensure consistency with the ACMP standards.

These measures were developed after considering terms imposed in other Cook Inlet region oil and gas lease sales; fish and wildlife resource and harvest data submitted by ADF&G; environmental data relating to air and water quality, solid and liquid waste disposal, and oil spills submitted by ADEC; consensus items from the Cook Inlet Areawide stakeholders process, as well as comments submitted by the public, local governments, environmental organizations, and other federal, state, and local agencies. Additional project-specific mitigation measures are imposed if and when oil and gas lessees submit proposed plans of exploration, operation, or development.

In addition to compliance with these mitigation measures, lessees must comply with all applicable local, state and federal codes, statutes and regulations, and any subsequent amendments. Lessees must also comply with 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 leased area is located. Federal, state and local government powers to regulate the oil and gas industry are discussed in the "Governmental powers to Regulate Oil and Gas Exploration, Development, Production, and Transportation" Chapter Eight of this finding. In addition, Appendix B lists federal and state statutes and regulations that apply to lease activities.

Information to lessees relevant to the lease sale is also presented in the "Lessee Advisories," section B, which contain precautions which may apply to post-lease sale activities, and reflect existing local, state, and federal law or policy at the time of the sale.

Hereafter, wherever abbreviations are used they mean: Alaska Coastal Management Program (ACMP), Alaska Department of Environmental Conservation (ADEC), Alaska Department of Fish and Game (ADF&G), Alaska Department of Natural Resources (ADNR), Alaska Oil and Gas Conservation Commission (AOGCC), Areas Meriting Special Attention (AMSA), Director (Director, Division of Oil and Gas), Division of Forestry (DOF), Division of Mining, Land and Water (DMLW), Division of Oil and Gas (DO&G), Division of Parks and Outdoor Recreation (DPOR), Kenai Peninsula Borough (KPB), Municipality of Anchorage (MOA), Matanuska-Susitna Borough (MSB), State Historic Preservation Officer (SHPO), and U.S. Fish and Wildlife Service (USF&WS).

Lessees are advised that portions of the sale area may be subject to special area permits by ADF&G to protect areas designated by the legislature as state game refuges in AS 16.20.010-AS 16.20.080.

For those mitigation measures and lessee advisories that are within ADNR's authority, the Lessee may request, and the Director of DO&G may grant, exceptions if compliance with the mitigation measure is not feasible or prudent, or an equal or better alternative is offered. Requests and justifications for exceptions must be included in the initial Plan of Operations when one is required. The decision whether to grant an exception will be based on review of the Plan of Operations by the public and in consultation with appropriate state resource agencies. Mitigation measures subject to exceptions are noted with an asterisk (\*), followed by the initials of the agency that must be consulted in any decision to grant an exception. Critical habitat areas and state game refuges are jointly managed by ADNR and ADF&G; exceptions to mitigation measures in these areas must be agreed to by both agencies. Agency abbreviations are: ADF&G (Alaska Department of Fish and Game), ADEC (Alaska Department of Environmental Conservation), DL (Division of Lands) and DOF (Division of Forestry).

Except as indicated, the restrictions listed below do not apply to geophysical activity on state land; geophysical exploration is governed by 11 AAC 96.

The following mitigation measures and advisories will be imposed on oil and gas activities in or on all Cook Inlet Areawide leased lands and waterbodies as a condition of the approval of plans of operation. If units are formed with leases issued under different mitigation measures, the most recent measures will most likely be applied to the whole unit.

**General**

1. Oil and hazardous substance pollution control: In addition to addressing the prevention, detection, and cleanup of releases of oil, contingency plans (C-Plans) for oil and gas extraction operations should include, but not be limited to, methods for detecting, responding to, and controlling blowouts; the location and identification of oil spill cleanup equipment; the location and availability of suitable alternative drilling equipment; and a plan of operations to mobilize and drill a relief well.
2. Use of explosives will be prohibited in open water areas of fishbearing streams and lakes. Explosives must not be detonated beneath, or in close proximity to fishbearing streams and lakes if the detonation of the explosive produces a pressure rise in the waterbody greater than 2.5 pounds per square inch (psi) unless the waterbody, including its substrate, is solidly frozen.

Explosives must not produce a peak particle velocity greater than 0.5 inches per second (ips) in a spawning bed during the early stages of egg incubation. The minimum acceptable offset from fishbearing streams and lakes for various size buried charges is:

Charge Weight	Distance from Stream
1 pound charge	37 feet (11.2 m)
2 pound charge	52 feet (15.8 m)
5 pound charge	82 feet (25.0 m)
10 pound charge	116 feet (35.4 m)
25 pound charge	184 feet (50.1 m)
100 pound charge	368 feet (112.2 m)

There are numerous fishbearing streams and lakes within the sale area. Specific information on the location of these waterbodies may be obtained by contacting ADF&G.

- 3.\* Onshore exploration activities must be supported by air service, an existing road system or port facility, ice roads, or by vehicles which do not cause significant damage to the ground surface or vegetation. Unrestricted surface travel may be permitted by the directors of DO&G and DL, if an emergency condition exists.

Construction of temporary roads may be allowed. Temporary means that a road must be removed to the extent that it is rendered impassable or is otherwise rehabilitated in a manner such that any placed gravel remaining approximates surrounding natural features. Construction of permanent roads will be prohibited during the exploration phase. \*Exception - DL.

4.
  - a. Removal of water from fishbearing rivers, streams, and natural lakes shall be subject to prior written approval by DMWM and ADF&G.
  - b. Compaction or removal of snow cover overlying fishbearing waterbodies will be prohibited except for approved crossings. If ice thickness is not sufficient to facilitate a crossing, ice and/or snow bridges may be required.
5. Water intake pipes used to remove water from fishbearing waterbodies must be surrounded by a screened enclosure to prevent fish entrainment and impingement. Screen mesh size shall not exceed 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 0.1 foot per second.

**Facilities and Structures**

6.
  - a. The siting of onshore facilities, other than docks, or road and pipeline crossings, will be prohibited within 500 feet of all fishbearing streams and lakes. Additionally, siting of facilities will be prohibited within one-half mile of the banks of Harriet, Alexander, Lake, Deep and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Theodore, Beluga,

Susitna, Little Susitna, Kenai, Kasilof, Ninilchik and Anchor rivers. New facilities may be sited within the one-half mile buffer if the lessee demonstrates that the alternate location is environmentally preferable, but in no instance will a facility be located within one-quarter mile of the river bank. ADF&G concurrence will be required for siting within the one-half mile buffer. Road and pipeline crossings must be aligned perpendicular or near perpendicular to watercourses.

- b. Lessees will minimize sight and sound impacts for new facilities sited less than one-half mile from river banks and in areas of high recreational use by (1) providing natural buffers and screening to conceal facilities; (2) conducting exploration operations between October 1 and April 30; and (3) using alternative techniques to minimize impacts.
  - c. Surface entry will be prohibited in parcels that are within the Kenai River Special Management Area (KRSMA).
  - d. 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.
  - e. 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.
  - f. A fresh water aquifer monitoring well with quarterly water quality monitoring should be required down gradient of a permanent storage facility unless alternative acceptable technology is approved by ADEC.
7. The siting of new facilities in key wetlands and sensitive habitat areas should be limited to the extent possible. If facilities are to be located within these areas, the lessee should demonstrate to the satisfaction of the Director and ADF&G that impacts are minimized through appropriate mitigation measures.
- 8.\* Measures will be required by the Director, after consultation with ADF&G and ADEC, to minimize the impact of industrial development on key wetlands. Key wetlands are those wetlands that are important to fish, waterfowl, and shorebirds because of their high value or scarcity in the region or that have been determined to function at a high level using the hydrogeomorphic approach. Lessees must identify on a map or aerial photograph the largest surface area, including reasonably foreseeable future expansion areas, within which a facility is to be sited, or an activity will occur. The map or photograph must accompany the plan of operations. DO&G will consult with ADF&G and ADEC to identify the least sensitive areas within the area of interest. To minimize impacts, the lessee must avoid siting facilities in the identified sensitive habitat areas. \*Exception - ADF&G, ADEC.
- 9.\* Impermeable lining and diking, or equivalent measures such as double-walled tanks, will be required for onshore oil storage facilities (with a total above ground storage capacity greater than 1,320 gallons, provided no single tank capacity exceeds 660 gal) and for sewage ponds. Additional site-specific measures may be required as determined by ADNR, with the concurrence of ADEC, and will be addressed in the existing review of project permits or oil spill contingency plans (C-Plans).
- Buffer zones of not less than 500 feet will be required to separate onshore oil storage facilities and sewage ponds from marine waters and freshwater supplies, streams and lakes, and key wetlands. Sumps and reserve pits must be impermeable and otherwise fully contained through diking or other means. \*Exception - ADF&G, ADEC.
- 10.\* With the exception of drill pads, airstrips, and roads permitted under Term 3, 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. \*Exception - ADF&G, DL.
11. a. Wherever possible, onshore pipelines must utilize existing transportation corridors and be buried where soil and geophysical conditions permit. In areas where pipelines must be placed above ground, pipelines must be sited, designed and constructed to allow free movement of moose and caribou.
- b. Offshore pipelines must be located and constructed to prevent obstructions to marine navigation and fishing operations.
- c. Pipelines must be located upslope of roadways and construction pads and must be designed to facilitate the containment and cleanup of spilled hydrocarbons. Pipelines, flowlines, and gathering lines must be designed and constructed to assure integrity against climatic conditions, tides and currents, and other geophysical hazards.

## **Local Hire**

12. To the extent they are available and qualified, the lessee is encouraged to employ local and Alaska residents and contractors for work performed on the leased 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 and hire local and Alaska residents and contractors. 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.

## **Training**

13. Lessee must include in any plan of exploration or plan of development, a training program for all personnel, including contractors and subcontractors, involved in any activity. The program must be designed to inform each person working on the project of environmental, social, and cultural concerns which relate to the individual's job.

The program must employ effective 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.

## **Access**

14.
  - a. Public access to, or use of, the leased area may not be restricted except within 1,500 feet (457 m) or less of onshore drill sites, buildings, and other related structures. Areas of restricted access must be identified in the plan of operations.
  - b. No lease facilities or operations may be located so as to block access to or along navigable and public waters as defined at AS 38.05.965(13) and (17).
15. Lease-related use will be restricted when the commissioner determines it is necessary to prevent unreasonable conflicts with local subsistence harvests and commercial fishing operations. In enforcing this term the division, during review of plans of operation or development, will work with other agencies and the public to assure that potential conflicts are identified and avoided. In order to avoid conflicts with fishing activities, restrictions may include alternative site selection, requiring directional drilling, seasonal drilling restrictions, subsea completion techniques, and other technologies deemed appropriate by the commissioner.

## **Prehistoric, Historic, and Archeological Sites**

16.
  - a. Prior to the construction or placement of any 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 KPB, MOA, MSB 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 must be submitted to the Director for distribution to DPOR for review and comment. In the event that a prehistoric, historic, or archeological site or area may be adversely affected by a leasehold activity, the Director, after consultation with DPOR and the KPB, MOA or MSB, will direct the lessee as to what course of action will be necessary to avoid or minimize the adverse effect.
  - c. Discovery of prehistoric, historic, or archaeological objects: In the event any site, structure, or object of prehistoric, historic, or archaeological significance is discovered during leasehold operations, the lessee must immediately report such findings to the Director. The lessee must make every reasonable effort to preserve and protect such site, structure, or object from damage until the Director, after consultation with the SHPO, has given directions as to its preservation.

## **Fishbearing Streams**

17. Under Title 16 of the Alaska Statutes, the measures listed below will be imposed by ADF&G below the ordinary high water mark to protect designated anadromous fish-bearing streams. Similar provisions will be imposed by the Director to protect non-anadromous fishbearing streams. Specific information on the location of anadromous waterbodies in and near the area may be obtained from ADF&G.

- a. Alteration of river banks will be prohibited.
- b. Operation of equipment within riparian habitats will be prohibited.
- c. The operation of equipment, excluding boats, in open water areas of rivers and streams will be prohibited.
- d. Bridges or non-bottom founded structures will be required for crossing fish spawning and important rearing habitats. In areas where culverts are used, they must be designed, installed, and maintained to provide efficient passage of fish.

### **Waste Disposal**

#### **18. Solid waste disposal:**

- a. Solid waste generated from the development and/or operation of the lease areas shall be reduced, reused, or recycled to the maximum extent practicable. Garbage and domestic combustible refuse must be incinerated where appropriate. Remaining solid waste shall be taken to an approved disposal site, in accordance with 18 AAC 60.

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.

- b. The preferred method for disposal of muds and cuttings from oil and gas activities is by underground injection. Injection of non-hazardous oilfield wastes generated during development is regulated by AOGCC through its Underground Injection Control (UIC) Program for oil and gas wells.
- c. Discharge of drilling muds and cuttings into lakes, streams, rivers, and high value wetlands is prohibited. Surface discharge of drilling muds and cuttings into reserve pits shall be allowed only when it is determined that underground injection is not technically achievable. A solid waste disposal permit must be obtained from ADEC. If use of a reserve pit is proposed, the operator must demonstrate the advantages of a reserve pit over other disposal methods, and describe methods to be employed to reduce the disposed volume. Onpad temporary cuttings storage will be allowed as necessary to facilitate annular injection and/or backhaul operations in accordance with ADEC solid waste regulations 18 AAC 60.

#### **19. Wastewater disposal:**

- a. Unless authorized by NPDES and/or state permit, disposal of wastewater into freshwater bodies, intertidal areas, or estuarine waters is prohibited.
- b. Disposal of produced waters to freshwater bodies, intertidal areas, and estuarine waters is prohibited.
- c. Disposal of produced waters in upland areas, including wetlands, will be by subsurface disposal techniques.
- d. Surface discharge of reserve pit fluids will be prohibited unless authorized in a permit issued by AOGCC and approved by DL.

### **Gravel Mining**

- 20. Gravel mining within an active floodplain will be prohibited. Upland sites will be restricted to the minimum necessary to develop the field in an efficient manner.

### **Special Areas**

- 21. Management of legislatively designated state game refuges and critical habitat areas is the co-responsibility of ADF&G (AS 16.20.050-060) and ADNR (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.

Five state game refuges (SGR) and four critical habitat areas (CHA) are located within or partially within the sale area: The 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 must comply with the terms and conditions of the sale, the regulations contained in 5 AAC 95, and the requirements applicable to special area management plans. Where the requirements of this term are more restrictive than the requirements of other Sale 85 terms, the provisions of this term prevail.

- a. 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 Director to protect primary shorebird habitat in Redoubt Bay south of the CHA.
- b. Exploration, development, and major maintenance within important Tule goose and trumpeter swan habitat in Trading Bay SGR, the Redoubt Bay CHA, and the 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.
- c. 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.

Construction activities within a refuge must utilize the best available technology to minimize the visual, biological, and physical impacts of these structures and must be approved in writing by ADF&G and the Director.

- d. Surface discharge of produced waters will be prohibited.
  - e. Disposal of drilling muds and cuttings will be allowed only at upland sites approved by the Director and ADF&G, after consultation with DL and ADEC.
  - f. Facilities must be designed and constructed to prevent the spill and spread of hydrocarbons and to facilitate cleanup efforts.
  - g. Facilities must be designed to minimize the possibility of spills or fires resulting from vandalism or hunting accidents.
  - h. Upon abandonment or expiration of a lease, all facilities must be removed and the sites rehabilitated to the satisfaction of ADF&G and the Director. The departments may determine that it is in the best interest of the public to retain some or all of the facilities. Rehabilitation requirements will be identified in a Habitat Special Area Permit (AS 16.20.060 and/or AS 16.20.530).
  - i. Gravel roads will not be allowed during exploration unless an exception is granted as provided above.
  - j. Public access to, or use of, the leased area may not be restricted except within the immediate vicinity of onshore drill sites, buildings, and other related structures. Areas of restricted access must be identified in the plan of operations. No lease facilities or operations may be located so as to block access to or along navigable and public waters as defined at AS 38.05.965(13) and (17).
22. Surface entry into the critical waterfowl habitat along the Kasilof River is prohibited. Directional drilling from adjacent sites may be allowed.
  - 23.\* Surface entry will be prohibited within one-quarter mile of trumpeter swan nesting sites between April 1 through 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. \*Exception - ADF&G.
  24. If the lessee discovers a previously unreported active or inactive bald eagle nest site, the lessee must immediately report the nest location to the Director. Lessees are advised that oil and gas activities likely to disturb nesting eagles are subject to the provisions of the Bald Eagle Act of 1940, as amended.



Permanent facilities may be prohibited within one-quarter mile and will be prohibited within 500 feet of nests, active or inactive. Surface entry, fixed wing aircraft flights below 500 vertical feet, and helicopter flights below 1,500 vertical feet will be prohibited within 500 feet of active nests between April 1 and August 31. Human safety shall take precedence over this provision.

Temporary activities within 500 feet of nesting sites may be allowed between September 1 and March 31 if they will not alter bald eagle habitat.

Maps identifying documented nest sites will be made available by ADF&G, upon request.

25. The following measures will be required to minimize impacts on Kenai Lowlands Caribou Herd:
- a. Surface entry within the core caribou calving area is prohibited, except that surface entry for seismic exploration will be allowed from October 16 to March 31.
  - \*b. Exploration and development activities will be restricted or prohibited between April 1 and October 15 within the core caribou summer habitat, 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 caribou summer habitat that required year-round access must be located in forested areas, where practical. \*Exception - ADF&G
  - \*c. Pipelines must be buried within the core caribou summer habitat. \*Exception - ADF&G.
- 26 Because of concerns regarding the current number of Cook Inlet beluga whales, the following measures will be imposed on the tracts listed in subparagraph c.
- a. Exploration drilling must be conducted from onshore. Offshore exploratory drilling will only be allowed if approved by the Director in consultation with NMFS. When considering a request to approve offshore exploration, the Director will consider the most recent information on beluga abundance, distribution and behavior provided by NMFS; the measures imposed on other Cook Inlet resource development and transportation industries to mitigate the effects of these operations on beluga whales; and information and mitigation from the review processes for other state and federal permits required for an offshore exploration facility, including but not limited to, the US Army Corps of Engineers Section 10/404 permit.
  - b. Production facilities must be located, and production drilling conducted from, onshore. Offshore production facilities will only be allowed if approved by the Director in consultation with NMFS. When considering a request to approve offshore production facilities, the Director will consider the most recent information on beluga abundance, distribution and behavior provided by NMFS; the measures imposed on other Cook Inlet resource development and transportation industries to mitigate the effects of these operations on beluga whales; and information and mitigation from the review processes for other state and federal permits required for offshore production facilities, including but not limited to, the US Army Corps of Engineers Section 10/404 permit.
  - c. The above measures apply to the offshore portions of the following tracts:
    - Chuitna River: 494, 497, 498.
    - Beluga River: 485, 486, 493, 544, 547- 552, 559.
    - Ivan River: 541, 542.
    - Susitna River: 536-540, 543, 593, 594, 598.
    - Little Susitna River: 529, 532- 535, 585, 586, 590.
    - Knik Arm: 575- 577, 579, 581, 582, 616- 618, 620-623, 627, 655-658, 662.
    - Anchorage: 522, 524- 528, 530, 531.
    - Chickaloon River: 322- 327, 329, 331, 332.
    - Turnagain Arm: 320, 321, 328, 330, 333, 334, 391-409, 462, 464-475.
    - Kenai River: 126, 127, 129 thru 132, 161, 162.
    - Drift River: 177.
    - Big River: 175, 218.
    - Kustatan River: 211, 257.
    - McArthur River: 301, 302, 384.
    - Middle River: 373, 376, 377.

NOTE ; As of December, 1999, NMFS has been in the scoping stage for a National Environmental Policy Act (NEPA) Environmental Impact Statement to evaluate listing the beluga whale as a depleted species under the Marine Mammal Protection Act (MMPA). Additionally, NMFS plans to continue annual population and distribution research and is pursuing a cooperative agreement with parties utilizing beluga whales for subsistence purposes. These efforts may provide NMFS additional direction for managing the Cook Inlet beluga population. Annually, during the required call for new information on the Cook Inlet Areawide Lease Sale, DNR will work with NMFS to remain current on NMFS research data and management strategies and will modify the above measure as necessary to be consistent with the management approaches NMFS applies to Cook Inlet industrial activity to manage the beluga whales.

27. For projects in close proximity to areas frequented by bears, lessees are encouraged to prepare and implement bear interaction plans to minimize conflicts between bears and humans. These plans could include measures to: (a) minimize attraction of bears to drill sites; (b) organize layout of buildings and work areas to minimize human/bear interactions; (c) warn personnel of bears near or on drill sites and the proper procedures to take; (d) if authorized, deter bears from the drill site; (e) provide contingencies in the event bears do not leave the site; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on site and in the immediate area.
28. Prior to commencement of any activities, lessees shall confirm the locations of den sites that are actually occupied in the season of the proposed work with the Division of Wildlife Conservation, DF&G, based on data provided by DF&G. Exploration and development activities, begun between November 15 and March 31, will not be conducted within one-half mile of occupied brown bear dens, unless alternative mitigation measures are approved by DF&G. Occupied dens not previously identified by DF&G that are encountered in the field must be reported to the Division of Wildlife Conservation, DF&G, within 24 hours. Mobile activities shall avoid such dens by one-half mile unless alternative mitigation measures are approved by DO&G with concurrence from DF&G. Non-mobile facilities will not be required to be relocated.
29. 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.
30. Lessees must disclose any requests for exceptions to these mitigation measures and advisories in their plans of operation and applicable permit applications.
31. Plans of operation submitted for review and approval must describe the lessee's efforts to communicate with local communities, and interested local community groups, if any, in the development of such plans.
32. Lessees must submit a plan of operations to the state for approval as required by 11 AAC 83.158. Where surface activities are proposed on non state-owned land, lessees must submit a copy of the plan of operations to the private surface owner. Plans of operation must describe the lessee's efforts to minimize impacts on residential areas and privately-owned surface lands.

#### **Lessee Advisories**

1. The use of explosives for seismic activities with a velocity of greater than 3,000 feet per second in marine waters is prohibited.
2. Lessees must include in their seismic permit applications a plan for notifying the public of their activities.
3. Forest clearing for seismic activity must be approved by the Director, after consultation with DOF and ADF&G.
4.
  - a. Aircraft flying over the primary shorebird habitat within the Susitna Flats SGR, Trading Bay SGR, and Redoubt Bay CHA must maintain a minimum altitude of 1,500 feet above ground level or a horizontal distance of one mile.
  - b. Aircraft flying over the Goose Bay SGR and the Palmer Hay Flats SGR, the primary waterfowl habitat above mean high tide within the Susitna Flats SGR and Trading Bay SGR, and the core Tule goose and trumpeter swan molting and nesting corridors in Trading Bay SGR and Redoubt Bay CHA must 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.
5.
  - a. Because of the state's interest in encouraging clean air, lessees are encouraged to adopt conservation measures to reduce hydrocarbon emissions.
  - b. The state recognizes that in the long run sources of energy other than oil and gas will be needed. Lessee participation in conducting research on alternative energy sources is appreciated.

6. In populated areas where there is no local planning and zoning, ADNR may require in approval of plans of operation that permanent structures be designed to be compatible with the aesthetics of the surrounding area.
7. Lessees are advised that when permitting offshore seismic operations, DNR will consult with NMFS to determine whether to require that an independent observer be on board to conduct a beluga whale monitoring program. The taking of beluga whales is prohibited by the federal Marine Mammal Protection Act (MMPA). The incidental taking of marine mammals may be authorized under the MMPA. Lessees are advised to discuss incidental taking with NMFS in advance of any geophysical survey.
8. To ensure sufficient vegetative cover in Kenai Peninsula brown bear feeding concentration areas, lessees may be required to locate exploration and development facilities beyond the 500 foot buffer along anadromous fish bearing streams. This requirement will be considered during review of site-specific plans of operations, in consultation with DF&G.
9. If data indicate that brown bear movement will be hindered by development and production activities, lessees may be required to locate facilities outside of the Kenai Peninsula brown bear movement corridors around Skilak Lake, Tustumena Lake, along the upper Anchor River drainage, and at the head of Kachemak Bay. This requirement will be considered during review of site-specific plans of operations, in consultation with DF&G.