

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;

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 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 certification 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 as capable of production in paying quantities 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 certified as 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.

(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 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 quantities sufficient to yield a return in excess of operating costs, even if drilling and equipment costs may never be repaid and the undertaking considered as a whole may ultimately result in a loss; quantities are insufficient to yield a return in excess of operating costs unless those quantities, not considering the costs of transportation and marketing, will produce sufficient revenue to induce a prudent operator to produce those quantities; 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 reasonable costs of transportation away from the leased or unit area to the point of sale. The "reasonable costs of transportation" are as defined in 11 AAC 83.228 and 11 AAC 83.229 as those regulations exist on the effective date of this lease.

(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 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: _____
Kenneth A. Boyd
Director, Division of Oil and Gas

STATE OF ALASKA)
) ss.
Third Judicial District)

On _____, before me appeared Kenneth A. Boyd 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.

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, Chultna, Theodore, Beluga, Susitna, Little Susitna, Kenai, Kaslof, Ninitchik 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, Kaigin 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 Kaigin 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 Kaigin 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 Kaslof 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.

Tumagaln Arm: 320, 321, 328, 330, 333, 334, 391-409, 462, 464-475.

Kenai River: 126, 127, 129 thru 132, 161, 162.

Drift River: 177.

Blg 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.