

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672
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March 17, 1983

QUALIFICATIONS -- DMEM PROFESSIONAL AND TECHNICAL STAFF

Following are the qualifications and credentials of professional and managerial staff at the Division of Minerals and Energy Management (DMEM), Department of Natural Resources. For purposes of this compilation, qualifications of those individuals at and above section chief level as well as those with professional or technical responsibilities have been listed. These individuals represent all top management positions within the division.

OIL & GAS

Kay Brown, Director: Holds a bachelors degree in journalism from Baylor University. Served as energy policy analyst for the Alaska Legislative Research Agency; served as special assistant to the Commissioner of Natural Resources for oil and gas policy development and implementation. Was promoted to Deputy Director of DMEM for Oil and Gas in July, 1980 because of previous key role in assuring that the 1979 Joint Federal/State Beaufort Sea Sale was held on schedule and in a legally defensible manner, and because of outstanding managerial abilities. Was promoted to Director of DMEM in January, 1982 for continuing excellence as a manager. Brown has successfully implemented the state's five-year oil and gas leasing program; she is the first director to solicit broad public involvement in the leasing program.

Jim Eason, Deputy Director for Oil and Gas: Petroleum Geologist with a masters degree in geology. Prior industry experience with Amoco Production Company and the Atlantic Richfield Company. Prior government experience included performing oil and gas evaluations for the U.S. Geological Survey. Promoted to Deputy Director because of technical expertise and outstanding administrative capability.

Bill Van Dyke, Petroleum Manager and Chief of the Lease Administration Section: Petroleum Engineer. Prior industry experience with Gulf Oil Company. Served as a petroleum reservoir engineer with DMEM until promotion to Petroleum Manager because of technical expertise and knowledge. Responsible for oversight of exploration and development plans and operations on all state leases, as well as negotiation of unitization agreements. Prepares reserve estimates and production forecasts. Expertise in petroleum reservoir management and engineering.

Donna Wood, Royalty Manager and Chief of the Royalty Section: Has extensive experience in performing complex audits, including the management of full-scale audits of multi-national oil companies for compliance with state corporate income tax, severance tax and royalty payment requirements while with the Alaska Department of Revenue, Division of Petroleum Revenue. Private industry experience includes management, tax and audit responsibilities with Arthur Young Company, one of the "big eight" CPA firms in the country.

Pamela Rogers, Leasing Manager and Chief of the Lease Sales Section: Has extensive experience in the field of journalism; specialized in covering land use and economic issues. Began employment with the Department of Natural Resources in 1977 as a Research Analyst. Was transferred to DMEM in 1979 by the Deputy Commissioner because of outstanding organizational abilities needed by DMEM in carrying out responsibilities related to the 1979 Joint Federal/State Beaufort Sea Sale. Was promoted to Leasing Manager for DMEM in 1980 because of continued excellence as an organizer and manager. Manages the state's five-year oil and gas leasing program.

Catherine Arley, Petroleum Geologist: Works in the division's Lease Sales Section. Responsible for prospect evaluation and geologic evaluation of unitization proposals. Prior industry experience with Atlantic Richfield Company; prior government experience with the U.S. Geological Survey. Has oil and gas operational experience ranging from geologic analysis to well site evaluation.

Ed Phillips, Petroleum Economist: Works in DMEM's Lease Sales Section. Performs prospect analyses for all oil and gas lease sales. Holds masters degree in economics. As a senior economist with private business prior to his employment with DMEM in 1977, he served as a consultant developing socio-economic impact studies for oil companies operating in the Gulf of Alaska .

Ted Bond, Petroleum Engineer: Supervises the Plans of Operation Unit in the Lease Administration Section, which approves oil and gas development plans on all state leases. Is a graduate petroleum engineer whose industry experience includes employment with Getty Oil Company, Tenneco Oil Company, and Dresser Magcobar. Previous government experience included work for the Texas Railroad Commission, which is the agency that regulates oil and gas development in Texas.

Catherine Fortney, Petroleum Engineer: Supervises the Unitization Unit in the Lease Administration Section. Is a graduate chemical engineer, and registered professional engineer in California and Alaska. Prior industry experience with Atlantic Richfield Company in Alaska, Phillips Petroleum, and the Bechtel Corporation. Her experience in private industry includes facility design, operation and improvement as well as design of oil and gas handling, processing and transportation systems.

Sam Murray, Petroleum Economist: Holds a masters degree in economics, which he received at age 21. Works for the Lease Administration Section evaluating the economic implications of unitization proposals. Previous experience includes three years with the U.S. Army Corps of Engineers preparing economic feasibility analyses of energy facilities and evaluating alternative energy sources.

STATE OF ALASKA
OIL AND GAS LEASE UNITIZATION PROCESS

Unitization of State of Alaska Oil and Gas leases is governed by Title 11, Chapter 83, Article 3 of the Alaska Administrative Code (AAC). The following is a brief summary of the steps necessary to form an Alaskan Oil and Gas Unit:

1. The lessees of the leases overlying a reservoir or a potential hydrocarbon accumulation as those terms are defined in 11 AAC 83.395 must determine an prospective area to be unitized. For units which intend to commence production immediately, an appropriate participating area must also be determined in accordance with 11 AAC 83.351. We strongly recommend that the prospective lessees to be included within the unit area (the "working interest owners") meet with Division of Oil and Gas staff to review the technical data supporting the proposed unit prior to any submittal of an application for unitization.
2. The working interest owners must select a unit operator, which must be qualified to act as unit operator under 11 AAC 83.331.
3. The unit operator, acting on behalf of all of the working interest owners, must submit an application for unitization. The application must include the following items:
 - A. A Unit Agreement based on the State of Alaska Standard Unit Agreement Form (DNR Form 10-1128), executed by all of the working interest owners, including all exhibits required under 11 AAC 83.341, 11 AAC 83.343, 11 AAC 83.346, 11 AAC 83.351, and 11 AAC 83.371, as applicable.
 - B. A Unit Operating Agreement executed by all working interest owners, which is submitted for information only, and does not require the commissioner's approval for adoption or amendment. Most Unit Operating Agreements for State of Alaska oil and gas units are executed on the Rocky Mountain Unit Operating Agreement Form 2 (Divided Interest)¹, but this is not required.
 - C. Evidence of reasonable effort made to obtain joinder of any proper party who has refused to execute the Unit Agreement and commit its interests within the unit area to the unit². A proper party is defined in 11 AAC 83.328.

1. Model Rocky Mountain Unit Operating Agreement forms are available from the Rocky Mountain Mineral Law Foundation, University of Colorado, Fleming Law Bldg., Boulder, Colorado 80309.

2. The State requires that at least 70% of the acreage within the proposed unit area commit to the Unit Agreement to ensure "reasonably effective control of operations" as required by 11 AAC 83.316(c). Unit applications with less than 70% of the acreage committed will not be accepted by the division as complete.

D. If any modifications or changes to the State of Alaska's Standard Unit Agreement Form are proposed, an explanation of why such changes should be accepted by the State.

E. All pertinent geological, geophysical, engineering, and well data, and interpretations of those data, directly supporting the application.

3. All signatures on the application must meet the provisions of 11 AAC 83.379; that is they must have the signator's name and title typed or printed underneath, and must be notarized or attested by two separate individuals. All persons signing on behalf of a corporation must be qualified to sign for that corporation, and their signatures must be on file with the division as evidenced by the qualification files for that corporation.
4. An application fee of \$1000.00 for a new unitization application must accompany the above application for unitization [11 AAC 05.010 (10) (D)]. The check should be made out to the State of Alaska, Department of Revenue.
5. One copy of items A through D above should be forwarded to the Commissioner of the Department of Natural Resources, P. O. Box "M", Juneau, AK 99811; the original application plus three additional copies of items A through D, two copies of item E, and the application fee should be forwarded to the Unit Manager, Department of Natural Resources, Division of Oil and Gas, P. O. Box 7034, Anchorage, AK 99510. Upon written request by the submitter, any technical data submitted will be kept confidential in accordance with the terms of Alaska Statute 38.05.035(9)(C).
6. Within 10 days of the determination by the Division of Oil and Gas that the application as submitted is appropriate and complete, the division will publish notice of receipt of the application in both State-wide and local newspapers. In addition, notice of receipt of the application will be forwarded to certain parties as set out in 11 AAC 83.311. Public comments will be accepted by the division concerning the proposed unit for 30 days after the first publication of the public notice.
7. The division will issue a written decision approving or denying the application based on the criteria in 11 AAC 83.303 within 60 days of the close of the public comment period. In general, the division will not make a conditional or partial approval of a unitization application; this is why we strongly recommend meeting with the division staff prior to submitting a unitization application.

Prior to making an application for unitization of State of Alaska lands, it is recommended that applicants familiarize themselves with the contents of the unitization regulations (11 AAC 83.301 - 11 AAC 83.395) and the terms and provisions of the State's Standard Unit Agreement Form (form DNR 10-1128). If you have any questions relating to the process of unitization, please contact the Unit Manager, Division of Oil and Gas, (907) 762-4241.

ALASKA ADMINISTRATIVE CODE
TITLE 11, CHAPTER 83, ARTICLE 3

UNITIZATION REGULATIONS

Last Amended 3/30/84, Register 89

Section

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UNITIZATION REGULATIONS

Alaska Administrative Code
Title 11, Chapter 83, Article 3

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11 AAC 83.301. PURPOSE. (a) 11 AAC 83.301 - 11 AAC 83.395 establish standards and procedures governing the submission of applications to the commissioner and criteria for approval of unit agreements for state oil and gas leases, and standards to be followed by a state lessee in conducting lease operations under an oil and gas unit agreement approved by the commissioner.

(b) 11 AAC 83.301 - 11 AAC 83.395 apply to an existing oil and gas lease or approved unit agreement where not inconsistent with the lease or unit agreement or regulations in effect on the effective date of the lease or unit agreement. (Effective 6/28/81, Register 78; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.303. CRITERIA. (a) The commissioner will approve a proposed unit agreement for state oil and gas leases if he makes a written decision that the decision is necessary or advisable to protect the public interest considering the provisions of AS 38.05.180(p) and this section. The commissioner will approve a proposed unit agreement upon a written finding that it will

(1) promote conservation of all natural resources, including all or part of an oil or gas pool, field, or like area;

(2) promote the prevention of economic and physical waste; and

(3) provide for the protection of all parties of interest, including the state,

(b) In evaluating the above criteria, the commissioner will consider:

(1) the environmental costs and benefits of unitized exploration or development;

(2) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir proposed for unitization;

(3) prior exploration activities in the proposed unit area;

(4) the applicant's plans for exploration or development of the unit area;

(5) the economic costs and benefits to the state; and

(6) any other relevant factors, including measure to mitigate impacts identified above, the commissioner determines necessary or advisable to protect the public interest.

(c) The commissioner will consider the criteria in (a) and (b) of this section when evaluating each requested authorization or approval under 11 AAC 83.301 - 11 AAC 83.395, including

(1) approval of a unit agreement;

(2) an extension or amendment of a unit agreement;

(3) a plan or amendment of a plan of exploration, development, or operations;

(4) a participating area; or

(5) a proposed or revised production or cost allocation formula. (Effective 9/5/74, Register 51; amended 7/22/79, Register 78; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.306. APPLICATION FOR UNIT APPROVAL. Any person owning an interest in a lease which is proposed to be committed to a unit which would include a state oil and gas lease may propose a unit agreement by applying to the commissioner for approval of the agreement. The following items constitute a complete application for approval:

(1) the unit agreement, including exhibits required under 11 AAC 83.341 or 11 AAC 83.343, executed by the proper parties;

(2) the unit operating agreement executed by the working interest owners, which is submitted for information only and does not require the commissioner's approval for adoption or amendment;

(3) evidence of reasonable effort made to obtain joinder of any proper party who has refused to join the unit agreement;

(4) all pertinent geological, geophysical, engineering, and well data, and interpretations of those data, directly supporting the application; and

(5) an explanation of proposed modifications, if any, of the standard state unit agreement form. (Effective 6/28/81, Register 78; amended 8/15/82, Register 83; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.311. PUBLIC NOTICE. Within 10 days after receipt of a complete application for approval of a unit agreement under 11 AAC 83.356, or extension of the unit term under 11 AAC 83.336(a)(2), the commissioner will publish notice of the application in a newspaper of general statewide circulation and in a newspaper serving the locality in which the unit or proposed unit is located. In addition, the commissioner will, in his discretion, publish notice by radio, television, or other electronic media. If the unit or proposed unit is within the boundary of an organized borough, municipality, regional corporation, or village corporation organized under Section 8(a) of the Alaska Native Claims Settlement Act, the notice will be mailed to the chief executive officer of the borough or municipality, or designated representative of the corporate entity. The notice will also be mailed to the postmaster of each permanent settlement of more than 25 persons located within six miles of the proposed unit area. In the case of a proposed unit expansion, a copy of the notice will be mailed to the unit operator. The notice will include

(1) the name and address of the applicant, and the location of the unit or proposed unit;

(2) a statement explaining the nature of the approval sought;

(3) a statement indicating where copies of the nonconfidential portions of the application may be obtained; and

(4) a statement that any person may file written comments on the application with the commissioner within 30 days after publication of the notice. (Effective 6/28/81, Register 78; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.316. UNIT APPROVAL. (a) Within 60 days after the close of the public comment period required by 11 AAC 83.311, the commissioner will issue a written decision approving or disapproving the unit agreement, in which he states the basis for his decision after considering the provisions of 11 AAC 83.303.

(b) If the commissioner determines that the provisions of 11 AAC 83.303 are not met, the commissioner will, in his discretion, propose modifications which, if accepted by the parties to the proposed unit agreement, would qualify the agreement for approval.

(c) No unit will be approved unless parties to the unit agreement hold sufficient interest in the unit area to give reasonably effective control of operations and at least one lease or portion of a lease in the unit area is a state lease. (Effective 9/5/74, Register 51; amended 7/22/79, Register 71; amended 6/28/81, Register 78; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.321. COPIES OF APPLICATION REQUIRED. In submitting an application under 11 AAC 83.301 - 11 AAC 83.395, the applicant must provide five copies of the nonconfidential portions of the pertinent agreement, plan, modification, or other instrument or document for which approval is sought and two copies of any confidential material submitted. Ten copies of unit plans of operations are required for activities within the coastal zone. (Effective 9/5/74, Register 51; amended 7/22/79, Register 71; amended 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145

11 AAC 83.326. STANDARD UNIT AGREEMENT. (a) Except as provided in 11 AAC 83.393, and as otherwise provided in this section, a unit agreement must be executed on, or in a manner consistent with, a standard state unit agreement form.

(b) The commissioner will allow a modification of the standard state unit agreement form, upon request by the unit applicant, when the commissioner determines that the modification is reasonably required to meet the needs and requirements of the particular unit considering the facts and conditions found to exist with respect to that unit, and the proposed modification meets the provisions of 11 AAC 83.303. The commissioner will require a modification of the standard state unit agreement form if required to meet the provisions of 11 AAC 83.303. Any request by the unit applicant for modification of the standard state unit agreement form must be made in writing not later than the time an application is submitted for approval under 11 AAC 83.306 and must include an explanation of proposed modifications. (Effective 6/28/81, Register 78; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.328. PARTIES. (a) The record owners of any right, title or interest in the oil or gas reservoirs or potential hydrocarbon accumulations to be included in a unit are the proper parties to the unit agreement. All proper parties must be invited to join the unit agreement.

(b) Where authorized by lease, the commissioner will, in his discretion, require a state lessee or any assignee of interest in a state lease to subscribe to a unit agreement. (Effective 9/5/74, Register 51, amended 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.331. UNIT OPERATOR. (a) A unit operator must be qualified to hold a lease as provided in 11 AAC 82.200 - 11 AAC 82.205, and must be qualified to fulfill the duties and obligations prescribed in the unit agreement.

(b) The unit operator may be a working interest owner in the unit area or may be a party selected by the working interest owners.

(c) No designation or change of the unit operator becomes effective until approved by the commissioner. The commissioner will approve or disapprove a proposed change of the unit operator within 30 days after receipt of request, and will explain in writing his basis for

disapproval. (Effective 9/5/74, Register 51; amended 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.336. EFFECTIVE DATE AND TERM OF UNIT AGREEMENT. (a) A unit agreement becomes effective upon approval by the commissioner and automatically terminates five years from the effective date unless

(1) a unit well in the unit area has been certified as capable of producing hydrocarbons in paying quantities, in which case the unit agreement will remain in effect for so long as hydrocarbons are produced in paying quantities from the unit area, or for so long as hydrocarbons can be produced in paying quantities and unit operations are being conducted in accordance with an approved unit plan of exploration or development, or, should production cease, for so long after that as diligent operations are in progress to restore production and then so long after that as unitized substances are produced in paying quantities; or

(2) exploration activities have been conducted in accordance with an approved unit plan of exploration, and the commissioner, after issuing written notice under 11 AAC 83.311, issues a written decision extending the unit term in which he states the basis for his decision, considering the provisions of 11 AAC 83.303; no single extension will exceed five years.

(b) If a suspension of unit operations or production on all or part of the unit area has been ordered or approved under federal, state, or local law, or, if the commissioner determines that the unit operator has been prevented, despite good-faith efforts, from complying with any express or implied promise, term, condition, or covenant of the unit agreement, or from conducting exploration, development, production, transportation, or marketing operations or from the unitized area by reason of force majeure, the unit operator's obligation to comply with the provision will be held in abeyance, but not voided, and the commissioner will extend the term of the unit agreement for a period of time equal to the time lost under the unit term due to the suspension or prevention by force majeure. If unit operations or production are suspended or prevented under this subsection and the continuance of those operations or production without suspension or prevention would have had the effect of extending the unit agreement, the unit agreement does not terminate during the period in which

operations or production are suspended or prevented plus a reasonable time after that, which will not be less than six months, for the unit operator to resume operations or production. Nothing in this subsection holds in abeyance the obligation to pay rentals, royalties, or other production or profit-based payments to the State of Alaska from operations or production in the unitized area which are not suspended or prevented, or from operations or production which are unrelated to any suspension or prevention. For the purposes of this subsection, any seasonal restriction on operations or production or other conditions specifically required or imposed as a term of sale of an original lease, or as a condition required for unit agreement approval, will not be considered a suspension of operations or production ordered under law, or prevention due to force majeure. However, upon application to the commissioner, seasonal restrictions on operations or production imposed subsequent to approval of a unit agreement will be considered a suspension of operations or production ordered under law.

(c) A unit agreement may be terminated at any time with the approval of the commissioner.

(d) Upon termination of a unit, each lease or portion of a lease committed to the unit may be continued in effect only in accordance with the terms and conditions of the lease, statutes, and regulations, or as provided in the unit agreement. (Effective 6/28/81, Register 78; amended 8/15/82, Register 83; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.341. UNIT PLAN OF EXPLORATION. (a) Unless a unit plan of development is filed under 11 AAC 83.343, a unit plan of exploration must be filed for approval by the commissioner as an exhibit to the unit agreement under 11 AAC 83.306. The plan must describe the applicant's proposed exploration activities, including the bottom-hole locations and depths of proposed wells, and the estimated date drilling will commence. All exploration operations must be conducted under an approved plan of exploration. The commissioner will approve a unit plan of exploration if it complies with the provisions of 11 AAC 83.303. If the proposed unit plan of exploration is disapproved, the commissioner will, in his discretion, proposed modifications which, if accepted by the unit operator, would qualify the plan for approval.

(b) The unit plan of exploration must be updated and submitted to the commissioner for approval at least 60 days before the expiration date of the previously approved plan, as set out in that plan. The update must describe the extent to which requirements of the previously approved plan were achieved; if actual operations deviated from or did not comply with the previously approved plan, an explanation of the deviation or noncompliance must be included in the update. Within 10 days after receipt of an updated plan of exploration, the commissioner will inform the unit operator as to whether a proposed unit plan of exploration is complete. After the commissioner has determined that a unit plan of exploration is complete, as submitted or modified by the unit operator following the commissioner's suggestions, the commissioner will have an additional 30 days in which to approve or disapprove the plan; if no action is taken by the commissioner, the unit plan of exploration is approved.

(c) The commissioner will approve an update of the unit plan of exploration if it complies with the provisions of 11 AAC 83.303. If the proposed update of a unit plan of exploration is disapproved, the commissioner will, in his discretion, propose modifications which, if accepted by the unit operator, would qualify the plan for approval.

(d) The unit operator shall submit an annual report to the commissioner describing the operations conducted under the unit plan of exploration during the preceding year.

(e) The unit operator may, with the approval of the commissioner, amend an approved plan of exploration. (Effective 6/28/81, Register 78, amended 3/18/83; Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.343. UNIT PLAN OF DEVELOPMENT. (a) A unit plan of development must be filed for approval as an exhibit to the unit agreement if a participating area is proposed for the unit area under 11 AAC 83.351, or when a reservoir has become sufficiently delineated so that a prudent operator would initiate development activities in that reservoir. All development operations must be conducted under an approved plan of development. A unit plan of development must contain sufficient information for the commissioner to determine whether the plan is consistent with the provisions of 11 AAC 83.303. The plan must include a description of the proposed development activities based on data reasonably available at the time the plan is submitted for approval as well as plans for

the exploration or delineation of any land in the unit not included in the participating area. The plan must include, to the extent available information exists

(1) long-range proposed development activities for the unit, including plans to delineate all underlying oil or gas reservoirs, bring the reservoirs into production, and maintain and enhance production once established;

(2) plans for the exploration or delineation of any land in the unit not included in a participating area;

(3) details of the proposed operations for at least one year following submission of the plan; and

(4) the surface location of proposed facilities, drill pads, roads, docks, causeways, material sites, base camps, waste disposal sites, water supplies, airstrips, and any other operation or facility necessary for unit operations.

(b) The commissioner will approve the unit plan of development if it complies with the provisions of 11 AAC 83.303. If the proposed unit plan of development is disapproved, the commissioner will, in his discretion, propose modifications which, if accepted by the unit operator, would qualify the plan for approval.

(c) The unit plan of development must be updated and submitted to the commissioner for approval at least 90 days before the expiration date of the previously approved plan, as set out in that plan. The update must describe the extent to which the requirements of the previously approved plan were achieved; if actual operations deviated from or did not comply with the previously approved plan, an explanation of the deviation or noncompliance must be included in the update. The commissioner will approve the updated unit plan of development if it complies with the provisions of 11 AAC 83.303. If the proposed update of a unit plan of development is disapproved, the commissioner will, in his discretion, propose modifications which, if accepted by the unit operator, would qualify the plan for approval. Within 10 days after receipt of an updated plan of development, the commissioner will inform the unit operator as to whether the proposed unit plan of development is complete. After the commissioner has determined that an updated unit plan of development is complete as submitted, or as modified by the unit operator following the commissioner's suggestions, the commissioner will have an additional 60 days in which to approve or disapprove the plan; if no action is taken by the commissioner, the update of the unit plan of development is approved.

(d) The unit operator shall submit an annual report to the commissioner describing the operations conducted under the unit plan of development during the preceding year.

(e) The unit operator may, with the approval of the commissioner, amend an approved plan of development. (Effective 6/28/81, Register 78; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.346. UNIT PLAN OF OPERATIONS. (a) Except as provided in (b) of this section, a unit plan of operations for all or part of the unit area must be approved by the commissioner before any operations may be undertaken on the unit area if

(1) the state owns all or part of the surface estate of the unit area;

(2) the unit includes a lease that reserves a net profit share to the state; or

(3) the state owns all or part of the mineral estate, but the entire surface estate of the unit area is owned by a party other than the state, and a surface owner requests that a unit plan of operations be required by the commissioner for the portion of the unit area owned by that surface owner.

(b) A unit plan of operations will not be required by the commissioner for activities that would not require a land use permit under this title.

(c) Before undertaking operations on the unit area, the unit operator 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. If the surface estate is owned by a party other than the state, the unit operator shall also notify the surface owner of his opportunity to request that the commissioner require a plan of operations before allowing operations to be undertaken on the unit area owned by the requesting surface owner.

(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 in the unit area, including the date operations are proposed to begin and their proposed duration;

(2) projected use requirements directly associated with the proposed operations, including but not limited to 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 unit 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 unit area and adjacent areas, including fish and wildlife habitats, historic and archeological sites, and public use areas.

(e) In approving a unit plan of operations or an amendment of a plan, the commissioner will require amendments he determines necessary to protect the state's interest. The commissioner will not require any 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 unit operator may, with the approval of the commissioner, amend an approved plan of operations.

(g) Upon completion of operations, the unit operator shall inspect the area of operations and submit a report indicating the completion date of operations and stating any known noncompliance of which the unit operator knows, or should reasonably know, with requirements imposed as a condition of approval of the plan. (Effective 6/28/81, Register 76; amended 8/15/82, Register 83; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.130
AS 38.05.145
AS 38.05.180

11 AAC 83.351. PARTICIPATING AREA. (a) At least 90 days before sustained unit production from a reservoir, the unit operator shall submit to the commissioner for approval a description, based on subdivisions of the public land or its aliquot parts, of the proposed participating area. The participating area may include

only the land reasonably known to be underlain by hydrocarbons and known or reasonably estimated through use of geological, geophysical, and engineering data to be capable of producing or contributing to production of hydrocarbons in paying quantities. Under 11 AAC 83.371(a), the unit operator shall also submit to the commissioner for approval a proposed division of interest or formula setting out the percentage of production and costs to be allocated to each lease and portion of lease within the participating area. Upon approval by the commissioner, the area of productivity constitutes a participating area.

(b) A separate participating area must be established as provided in (a) of this section for each reservoir delineated, except that with the consent of the commissioner and all working interest owners, any two or more reservoirs or participating areas within the unit may be combined into one participating area. Separate participating areas may be established to distinguish between an oil rim and a gas cap within the same reservoir.

(c) A participating area must be expanded to include acreage reasonably estimated through use of geological, geophysical, and engineering data to be capable of producing or contributing to the production of hydrocarbons in paying quantities, and must be contracted to exclude acreage reasonably proven through use of geological, geophysical, or engineering data to be incapable of producing hydrocarbons in paying quantities, subject to approval by the commissioner. A revised division of interest or formula allocating production and costs must be submitted under 11 AAC 83.371 at the time of expansion or contraction of a participating area. (Effective 6/28/81, Register 78; amended 3/18/83, Register 85; amended 3/30/84, Register 89.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.356. UNIT AREA; CONTRACTION AND EXPANSION.

(a) A unit must encompass the minimum area required to include all or part of one or more oil or gas reservoirs, or all or part of one or more potential hydrocarbon accumulations.

(b) Ten years after sustained unit production begins, the unit area must be contracted to include only those lands then included in an approved participating area and lands that facilitate production including the immediately adjacent lands necessary for secondary or tertiary recovery, pressure maintenance, reinjection, or cycling

operations. The commissioner will, in his discretion, after considering the provisions of 11 AAC 83.303, delay contraction of the unit area if the circumstances of a particular unit warrant. If any portion of a lease is included in the participating area, the entire lease will remain committed to the unit.

(c) Any expansion or contraction of the unit area must be based on legal subdivisions of land as defined in 11 AAC 88.185.

(d) No land will be excluded from a participating area due to the depletion of hydrocarbons.

(e) Not sooner than 10 years from the effective date of the unit agreement, the commissioner will, in his discretion, contract the unit area to include only that land covered by an approved unit plan of exploration or development, or that area underlain by one or more potential hydrocarbon accumulations and lands that facilitate production as set out in (b) of this section. Before any contraction of the unit area under this subsection, the commissioner will give the unit operator, the working interest owners, and the royalty owners of the leases or portions of leases being excluded reasonable notice and an opportunity to be heard. (Effective 6/28/81, Register 78; amended 3/18/83, Register 85.)

Authority: AS 31.05.110
AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.361. CERTIFICATION OF WELL TEST RESULTS. For the purposes of 11 AAC 83.301 - 11 AAC 83.395, a well will be considered capable of producing hydrocarbons on paying quantities, as defined in 11 AAC 83.395, when so certified by the commissioner following application by the lessee or unit operator. The commissioner will require the submission of data necessary to make the certification, including all results of the flow test or tests, supporting geological data, and cost data reasonably necessary to show that the production capability of the well satisfies the economic requirements of the paying quantities definition. (Effective 6/28/81, Register 78; amended 8/15/82, Register 82; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.366. UNIT OPERATING AGREEMENT. Any revision of the unit operating agreement must be submitted to the commissioner before it takes effect. The unit agreement controls the respective rights and obligations of the unit operator, the working interest owners, the State of Alaska, and royalty owners other than the State of Alaska in case of conflict between the unit agreement and the unit operating agreement. Where conflicts exist solely between working interest owners, the unit operating agreement shall control. (Effective 6/28/81, Register 78; amended 8/15/82, Register 83.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.371. ALLOCATION OF PRODUCTION AND COSTS.

(a) The proposed or revised division of interest or formula allocating hydrocarbon production and unit operating costs among the leases in the unit area may not take effect until approved by the commissioner in writing. When requested by the commissioner, the lessees or unit operator shall promptly file with the commissioner all data that relate to the proposed or revised division of interest or allocation formula for all leases in the participating area. Before any disapproval of the proposed or revised division of interest or allocation formula, the commissioner will give the working interest and royalty owners reasonable notice and an opportunity to be heard. After the hearing, the commissioner will approve the proposed or revised division of interest or allocation formula as submitted unless he finds in writing that the formula does not equitably allocate production and costs among the leases.

(b) If there is a separate division of interest or allocation formula among any of the parties holding an interest in the unit that is different from the division of interest or allocation formula approved by the commissioner, the parties to the separate division of interest or allocation formula not approved by the commissioner shall submit a copy of that formula to the commissioner and a statement explaining the reasons for the difference. (Effective 6/28/81, Register 78; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.373. SEVERANCE. (a) Except as otherwise provided in this section and 11 AAC 83.356, where only a portion of a lease is committed to a unit agreement

approved or prescribed by the commissioner, the commitment constitutes a severance of the lease as to the unitized and nonunitized portions of the lease. The portion of the lease not committed to the unit will be treated as a separate and distinct lease having the same effective date and term as the original lease and may be maintained thereafter only in accordance with the terms of the original lease, statutes, and regulations. Any portion of the lease not committed to the unit agreement will not be affected by the unitization or pooling of any other portion of the lease by operations in the unit, or by suspension approved or ordered for the unit under 11 AAC 83.336(b).

(b) The commissioner will, in his discretion, grant up to a two-year extension of the lease term for that portion of a lease not committed to the unit agreement under this section.

(c) A lease having a well certified as capable of production in paying quantities before commitment to the unit agreement will not be severed. (Effective 9/5/74, Register 51; amended 7/22/79, Register 71; amended 6/28/81, Register 78; amended 8/15/82, Register 83.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.374. DEFAULT. (a) Failure to comply with any of the terms of an approved unit agreement, including any plans of exploration, development, or operations which are a part of the unit agreement, is a default under the unit agreement.

(b) The commissioner will give notice to the unit operator and defaulting party (if other than the unit operator) of the default. The notice will state the nature of the default and include a demand to cure the default by a specific date, which in the case of failure to pay rentals or royalties will be a date determined by the commissioner and in the case of any other default will be a date not less than 90 days after the date of the commissioner's notice of default.

(c) If a default occurs with respect to a unit in which there is no well capable of producing oil or gas in paying quantities and the default is not cured by the date indicated in the demand, the commissioner will, in his discretion, and after giving the unit operator and defaulting party (if other than the unit operator) reasonable notice and an opportunity to be heard, terminate the unit agreement by mailing notice of the

termination to the unit operator and defaulting party. Termination is effective upon mailing the notice.

(d) If a default occurs with respect to a unit in which there is a well capable of producing oil or gas in paying quantities and the default is not cured by the date indicated in the demand, the commissioner will, in his discretion, seek to terminate the unit agreement by judicial proceedings. (Effective 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.379. SIGNATURES. Each signature on the unit agreement must be notarized or attested by at least two witnesses. Corporate or other signatures made in a representative capacity must be accompanied by evidence of the authority of the signatory to act on behalf of the principal or by a reference to such evidence previously filed. The printed or typed name and address of each signatory to the unit agreement must be set out below the signature. (Effective 9/5/74, Register 51; amended 7/22/79, Register 71; amended 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.380. COUNTERPARTS. The parties may execute any number of counterparts of a unit agreement or may execute a ratification, joinder, or consent in a separate instrument. These documents have the same effect as if all parties signed the same instrument. (Effective 9/5/74, Register 51; amended 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.383. NOTATION OF APPROVAL. If approved by the commissioner, the counterparts of each instrument submitted for approval will be returned to the applicant with the commissioner's approval noted on the approved counterparts. (Effective 9/5/74, Register 51; amended 7/22/79, Register 71; amended 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.385. MODIFICATION OF UNIT AGREEMENT. Any modification of an approved unit agreement is subject to the commissioner's approval. (Effective 9/5/74, Register 51; amended 7/22/79, Register 71; amended 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.390. UNIT BONDS. In place of separate bonds required for each lease committed to a unit agreement, the unit operator shall furnish and maintain a statewide oil and gas lease bond under 11 AAC 83.160. (Effective 9/5/74, Register 51; amended 7/22/79, Register 71; amended 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.393. APPROVAL OF FEDERAL AND PRIVATE PARTY UNITS. (a) If the State of Alaska selects or otherwise acquires any federal land which, at the effective date of selection or acquisition, is subject to a federal oil and gas lease which is committed to a unit agreement that has been approved in accordance with federal laws and regulations, the unit agreement will be considered to have been approved by the commissioner for all the purposes of AS 38.05 and 11 AAC 83.301 - 11 AAC 83.395.

(b) The commissioner will, in his discretion, enter into agreements with the federal government to provide for the unitization of state and federal oil and gas leases overlying a common reservoir. If the agreement permits or requires the commissioner to take any action or enter into any unit agreement which is contrary to or inconsistent with 11 AAC 83.301 - 11 AAC 83.395, the commissioner will, in his discretion, do so after making a written finding that his action or the unit agreement is necessary or advisable to protect the public interest, and will, in all cases, comply with the requirements of 11 AAC 83.303 and 11 AAC 83.311.

(c) Any person owning an interest in a state oil and gas lease who has been asked to join a unit in which all state leases proposed to be committed to the unit constitute not more than 10 percent of the surface acreage of the unit or not more than five percent of the initial participation in the unit may request approval of the commissioner to join the unit as a working interest owner and may also request that the commissioner join the unit as a royalty owner. The commissioner will, in his

discretion, approve and join the unit agreement as a royalty owner if; after giving public notice in accordance with 11 AAC 83.311, he makes a written finding that the proposed unit is necessary or advisable to protect the public interest considering the criteria in 11 AAC 83.303. A unit agreement entered into under this section need not comply with the requirements of this chapter. (Effective 9/5/74, Register 51; amended 7/22/79, Register 71; amended 6/28/81, Register 78.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

11 AAC 83.395. DEFINITIONS. Unless the context clearly requires a different meaning, in 11 AAC 83.301 - 11 AAC 83.395 and in the applicable unit agreements

(1) "conservation of the natural resources of all or parts of an oil or gas pool, field, or like area" means maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources;

(2) "commissioner" means the commissioner of the state Department of Natural Resources or his designee;

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

(4) "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;

(5) "potential hydrocarbon accumulation" means any structural or stratigraphic entrapping mechanism which has been reasonably defined and delineated through geophysical, geological, or other means and which contains one or more intervals, zones, strata, or formations having the necessary physical characteristics to accumulate and prevent the escape of oil and gas;

(6) "reservoir" means an oil or gas accumulation which has been discovered by drilling and evaluated by testing and which is separate from any other accumulation of oil and gas;

(7) "unit" means a group of leases covering all or part of one or more potential hydrocarbon accumulations, or all or part of one or more adjacent or vertically separate oil or gas reservoirs, which are subject to a unit agreement;

(8) "unit agreement" means the agreement executed by the State of Alaska, working interest owners, and royalty owners creating the unit; and

(9) "sustained unit production" means continuing production of oil or gas from a reservoir in the unit area into a pipeline or other means of transportation to market, but does not include testing, evaluation, or pilot production. (Effective 6/28/81, Register 78; amended 3/18/83, Register 85.)

Authority: AS 38.05.020
AS 38.05.145
AS 38.05.180

- END OF TITLE 11, CHAPTER 83, ARTICLE 3 -

of this section, or approve alternate means for determining the location of a bore hole. (Eff. 4/13/80, Register 74; am 4/2/86, Register 97)

Authority: AS 31.05.030

20 AAC 25.055. DRILLING UNITS AND WELL SPACING. (a). In proven oil and gas fields, the establishment of drilling units and a spacing pattern may be governed by special pool rules adopted in accordance with 20 AAC 25.520. In the absence of an order by the commission establishing drilling units or prescribing a spacing pattern for a pool, the following apply:

(1) a governmental quarter section constitutes the drilling unit for oil exploration; the surface location for a well exploring for oil must be at least 500 feet from the drilling unit boundary;

(2) a governmental section constitutes the drilling unit for gas exploration; the surface location for a well exploring for gas must be at least 1500 feet from the drilling unit boundary;

(3) where oil has been discovered, not more than one well may be drilled to that pool on any governmental quarter section, nor may any oil pool be opened to the well bore closer than 500 feet to any quarter section line, nor closer than 1,000 feet to any well drilling to or capable of producing from the same pool; and

(4) where gas has been discovered, not more than one well may be drilled to that pool on any governmental section, nor may any gas pool be opened to the well bore closer than 1,500 feet to any section line, nor closer than 3,000 feet to any well drilling to or capable of producing from the same pool.

(b) An application for exception to the provisions of this section must set out the names of all owners and of all operators of governmental quarter sections directly and diagonally offsetting the quarter section where the oil well is located, or the names of all owners and of all operators of governmental sections directly or diagonally offsetting the section where the gas well is located. A plat must be attached, drawn to a scale of one inch equaling 2,640 feet or larger, showing the location of the well for which the exception is sought, all other completed and drilling wells on the property, and all adjoining properties and wells. The application must be verified by a person acquainted with the facts, stating that all facts are true and that the plat correctly portrays pertinent and required data. The applicant for exception must send notice of the application by registered mail to all owners and to all operators noted above, and furnish the commission with a copy of the notice, date of

mailing, and the addresses to which the notices were sent. The application for exception will be handled in accordance with 20 AAC 25.540.

(c) A well may not be re-entered for the purpose of producing oil on a property that is smaller than the governmental quarter section upon which the well is located or for the purpose of producing gas on a property that is smaller than the governmental section upon which the well is located.

(d) If two or more separately owned properties are embraced within a governmental quarter section to be drilled, or a well re-entered for oil, or a governmental section to be drilled, or a well re-entered for gas, persons owning the oil or gas rights may voluntarily pool their separate interests to form a drilling unit. A copy of the pooling agreement must be submitted to the commission. If one or more persons owning oil and gas rights fail to voluntarily pool their interests, the commission, upon petition or its own motion, and after public hearing, will, in its discretion, issue an order pooling the owner's interests for the development of their land as a drilling unit. (Eff. 4/13/80, Register 74; am 4/2/86, Register 97)

Authority: AS 31.05.030
AS 31.05.100

20 AAC 25.061. WELL SITE SURVEYS. (a) Near surface strata to a depth of 2000 feet in the well site area for all exploratory and stratigraphic test wells must be evaluated seismically by common depth point refraction or reflection profile analysis to identify anomalous velocity variations indicative of potential shallow gas sources. Analysis results must be included with the application for the Permit to Drill (Form 10-401).

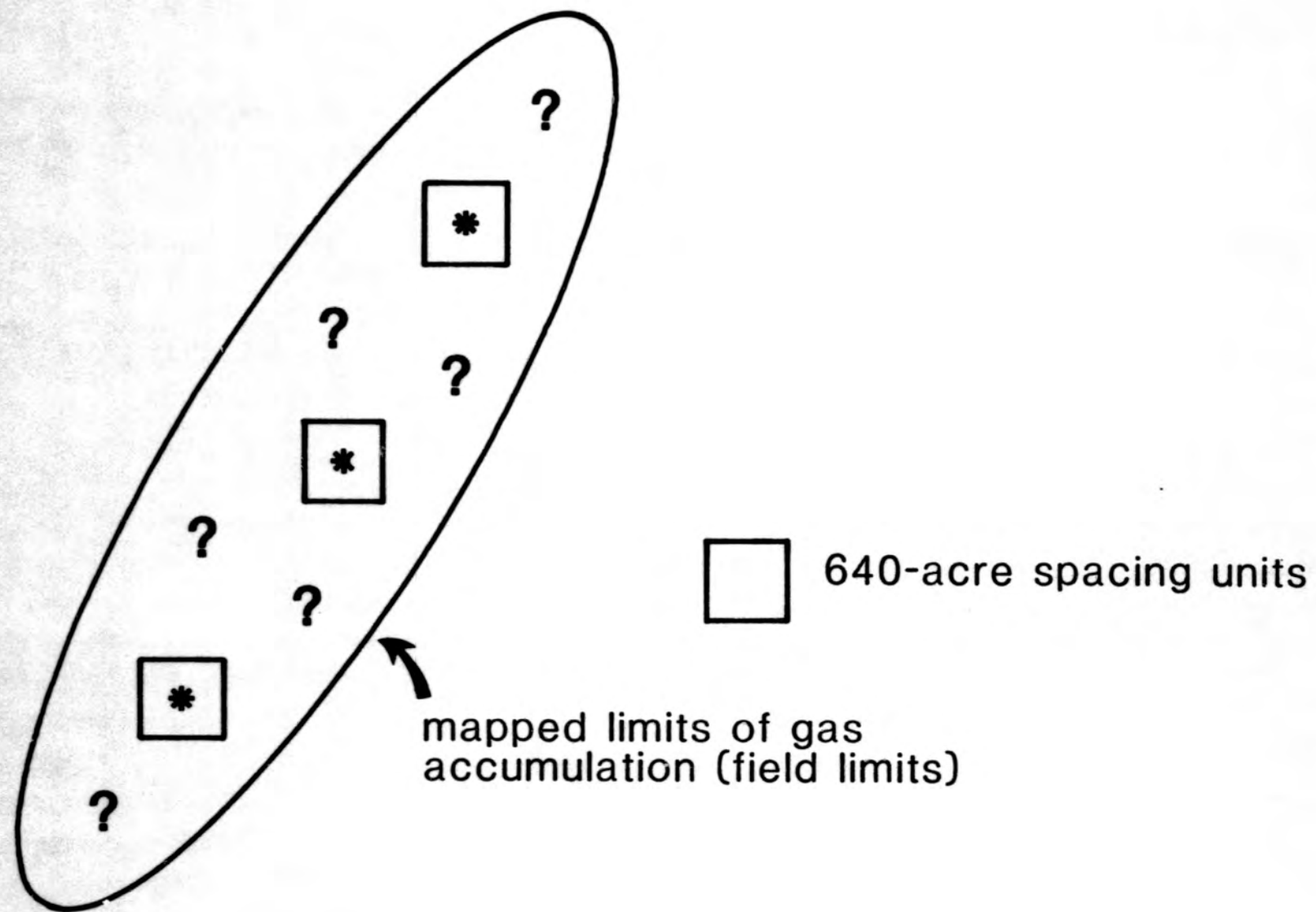
(b) The well site area must be evaluated by sidescan sonar and other pertinent surveys to determine whether potential seabed hazards to drilling operations are present for each type of well listed in 20 AAC 25.005 to be drilled offshore from a mobile bottom-founded, jack-up or floating unit. Survey results must be included with the application for Permit to Drill (Form 10-401).

(c) Upon request by the operator, the commission, in its discretion, will waive the requirements of this section. (Eff. 4/13/80, Register 74; am 4/2/86, Register 97)

Authority: AS 31.05.030

20 AAC 25.065. HYDROGEN SULFIDE. (a) When hydrogen sulfide gas is encountered, the operator shall notify the commission within 24 hours.

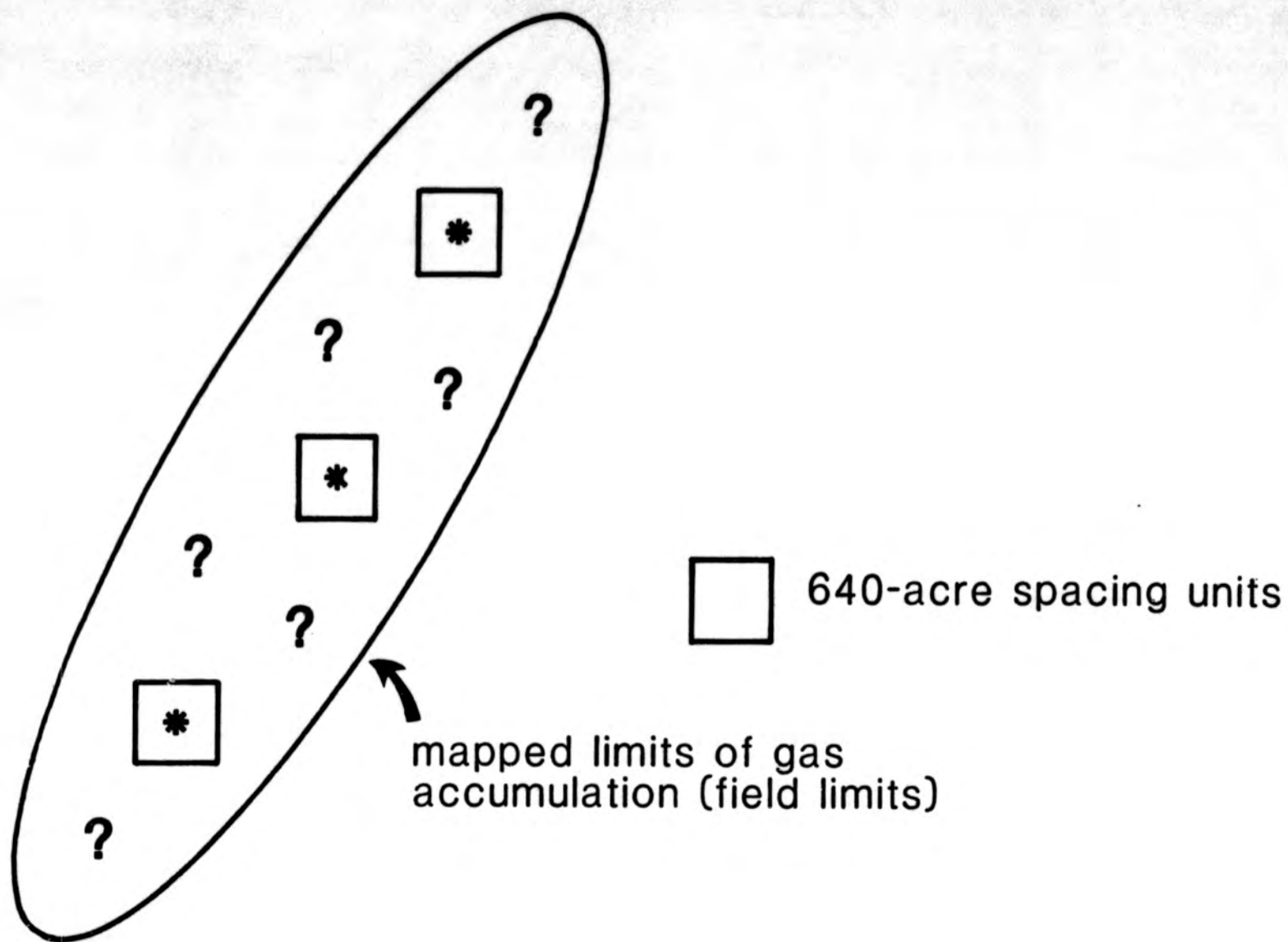
Hypothetical Field Drilled on 640-acre Spacing Units



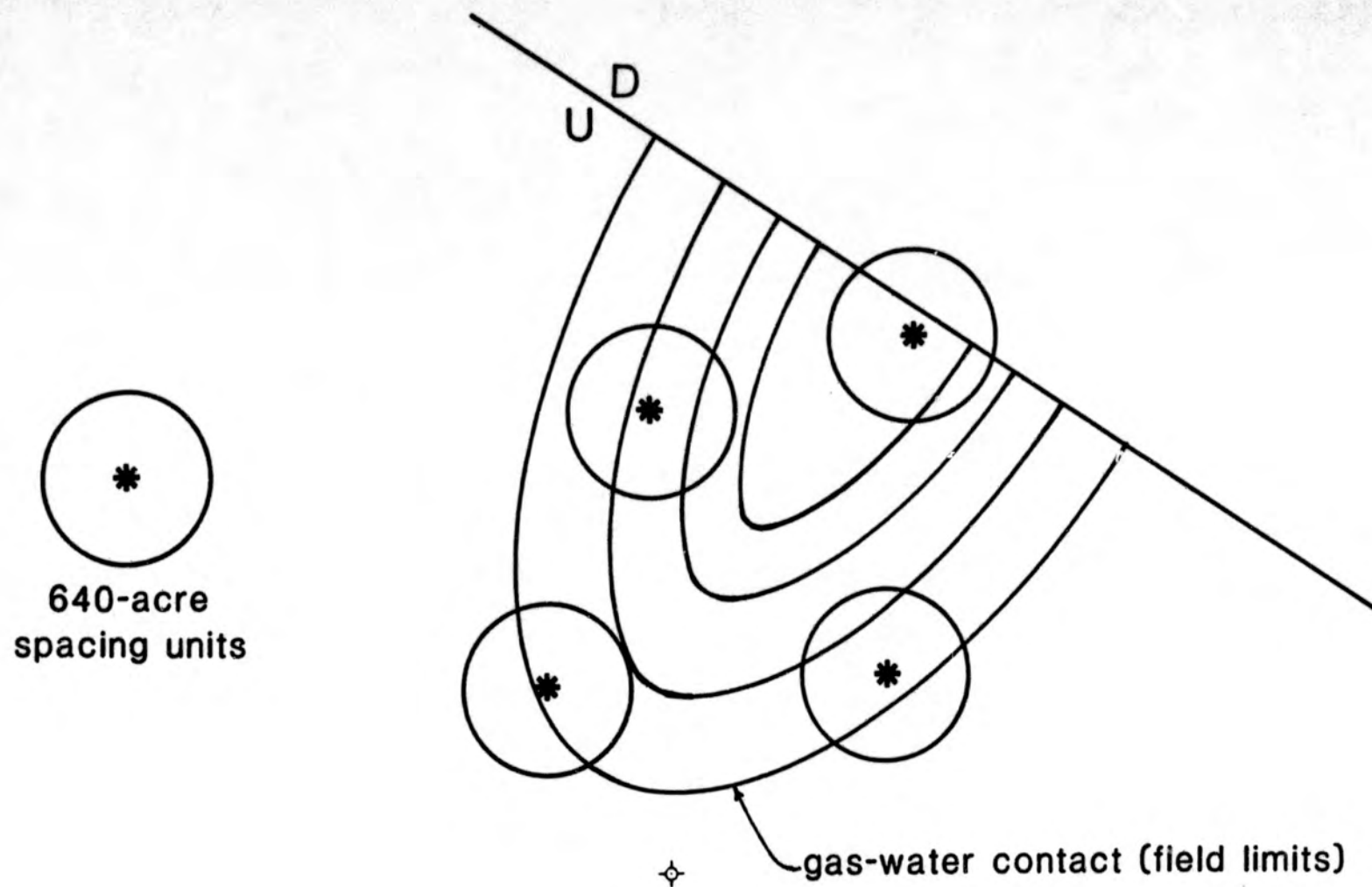
CORRECTION

**THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY**

Hypothetical Field Drilled on 640-acre Spacing Units

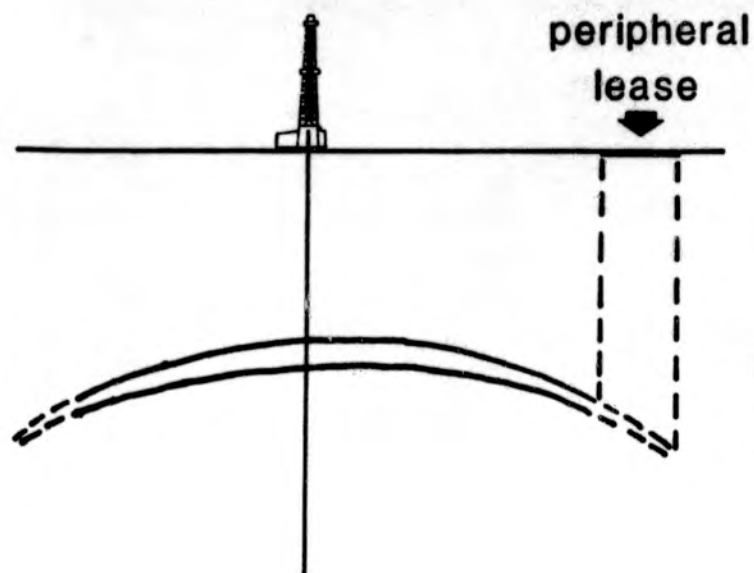


Hypothetical Field Drilled on 640-acre Spacing Units

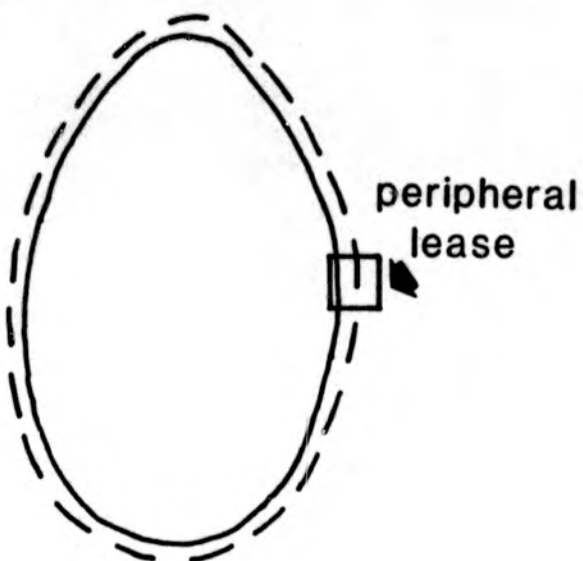


Determining Field Limits

Cross Section



Map View

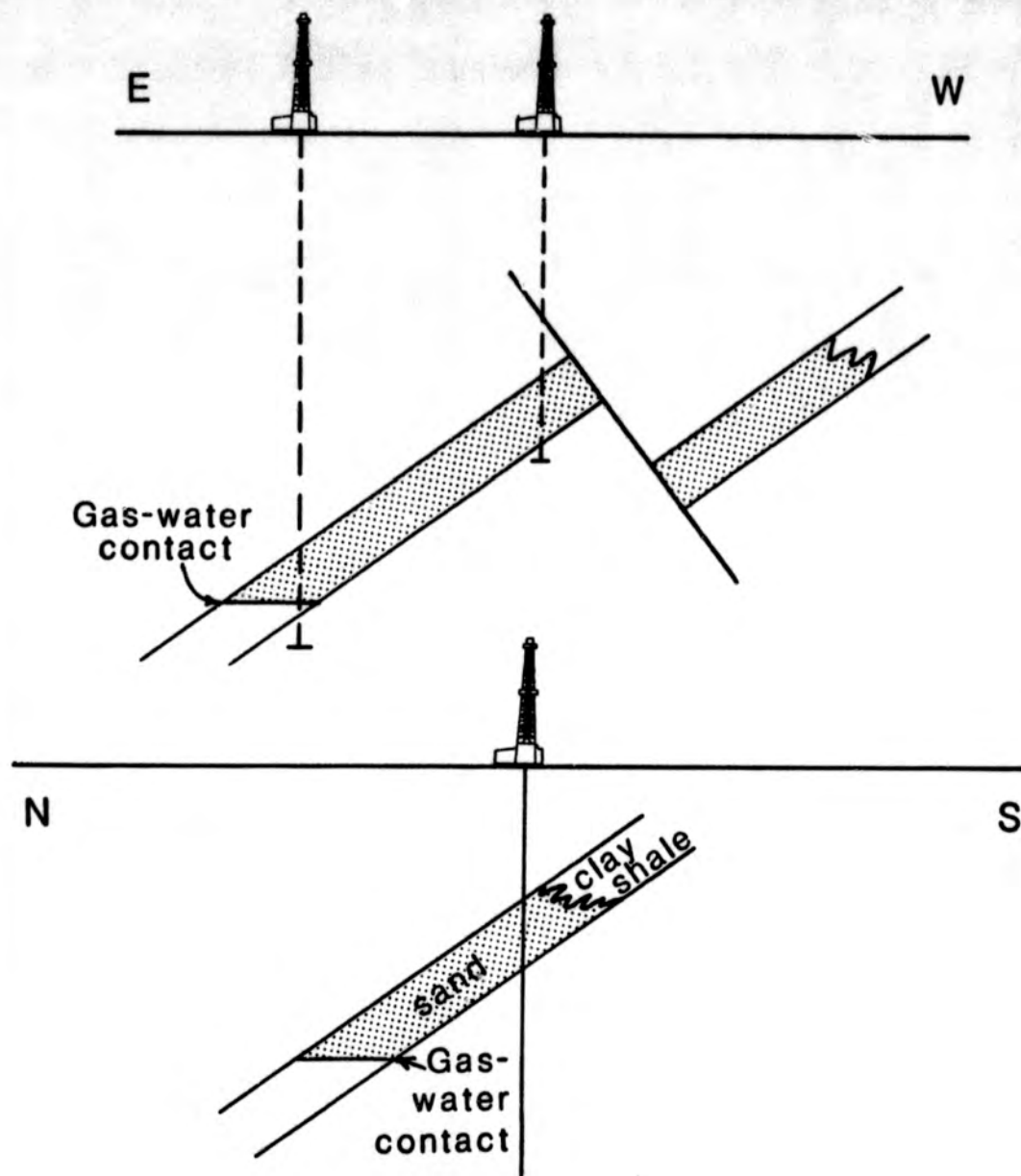


Useful Information

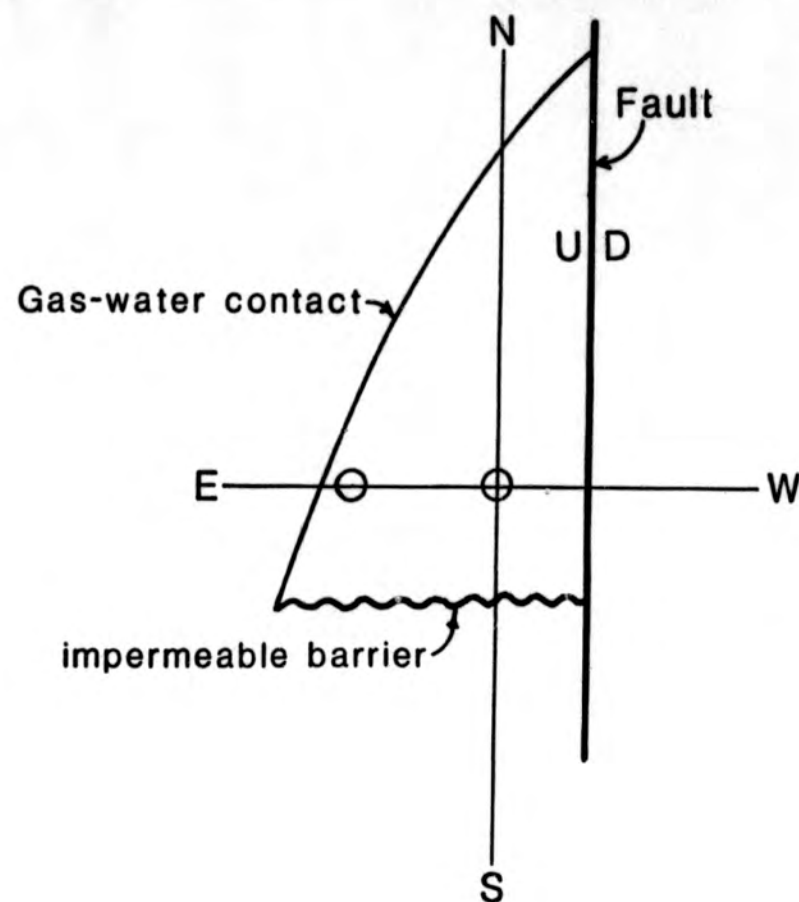
- 1) Seismic data
- 2) Reservoir type
(homogeneous?)
- 3) Other fields in basin
- 4) Well data
oil-water,
gas-water contacts
other log information
- 5) Production data
pressure draw-down etc.

Combination Structural-Stratigraphic Trap Hypothetical Asymmetrical Gas Field

Cross Sections:

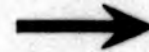


Map View:

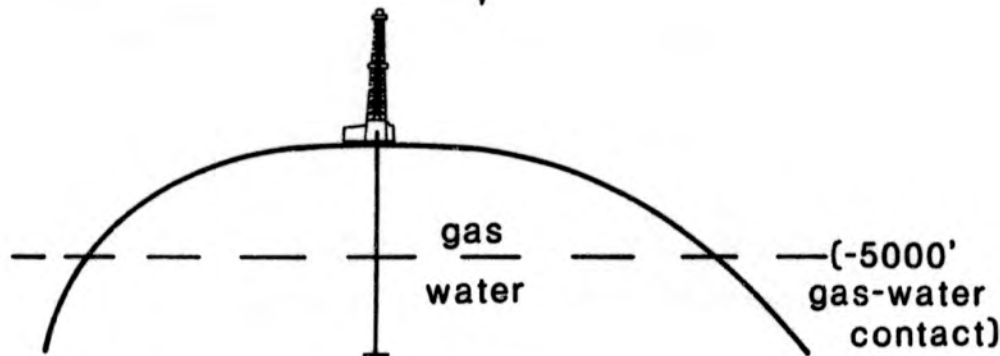


Hypothetical Gas Field showing possible well locations and field (lease) equity

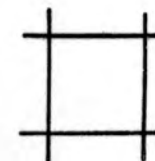
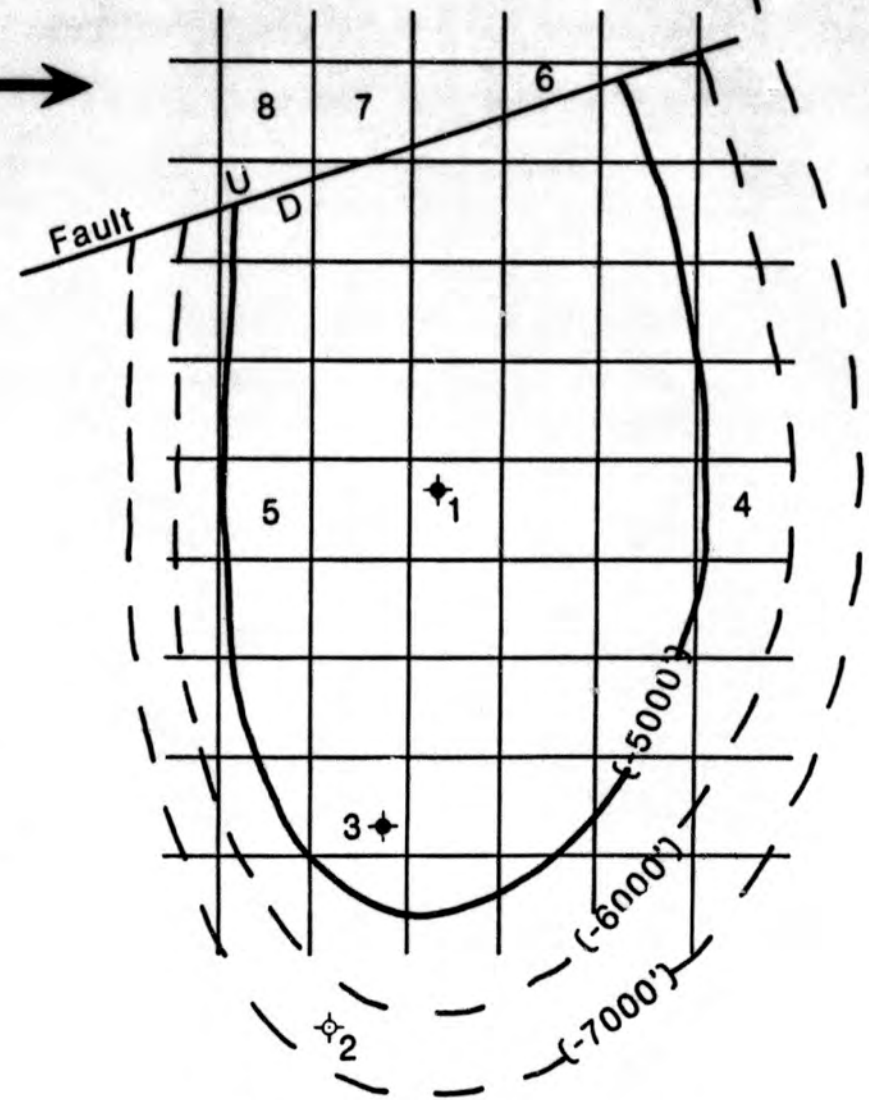
Map View



Cross Section



1. Discovery well
2. Dry hole
3. Confirmation well
4. Lease with minor amount of hydrocarbons
5. Lease with substantial hydrocarbons
6. Hydrocarbons limited by fault
7. Minor hydrocarbons due to fault
8. No hydrocarbons



shows leases based on 4
640-acre sections each

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

MAR 23 1988

STEVE COWPER, GOVERNOR

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ANCHORAGE, ALASKA 99510-7034

(907)762-2550

March 18, 1988

The Honorable Jack Coghill
The Honorable Bettye Fahrenkamp
Alaska State Legislature
P. O. Box V
Juneau, Alaska 99811

Dear Senators Coghill and Fahrenkamp:

Thank you for the opportunity to present testimony at the March 7, 1988 Joint Senate Resources/Senate Special Oil and Gas Committee hearings on unitization policy and procedures.

Because my final testimony was cut short due to the required 3:30 adjournment time, I would like to provide the committees with my answers and views to the points raised by Mr. Cliff Burglin in his testimony. I have addressed the points in the order that Mr. Burglin discussed them.

1. Are state oil and gas leases competitive relative to other private lands and government leases?

The Division clearly recognizes that the state must compete in a worldwide market when it offers oil and gas leases for sale. We take into account the size and location of the lease, the primary term of the lease, required minimum bonus bid, the royalty terms, estimated hydrocarbon potential, and possible exploration incentives. Unitization and permitting policy, though not a direct lease-sale consideration, also are important because they both affect the costs of exploration and development on the leases. Oil prices began to slide in 1982, and crashed in 1986. Since 1984 the division has conducted 10 lease sales. All 10 sales were bonus bid with a fixed royalty rate. A net profit share was not included in any of the leases, nor was an explicit work commitment required. The minimum bonus bid varied from \$1.00 to \$5.00 per acre, and the primary term of the leases was for 10 years. The royalty rate varied from 12.5 to 16.67 percent in those sales. A total of 5.4 million acres were offered for lease in those 10 sales. In our most recent sale (Sale 54), 80 percent of the acreage offered was leased. The royalty rate was 12.5 percent, and the minimum bid was \$5.00 per acre. For the 72 tracts bid on (89 tracts were offered), 164 bids were received. Sale 54 also included an exploration incentive provision. At Sale 50 held last June,

100 percent of the tracts offered were leased. Federal OCS acreage offered in recent years carried a minimum bonus bid ranging between \$25 and \$150 per acre. I believe that state leases are very competitive relative to other leases available worldwide. The division will continue to monitor worldwide events to assure that our leasing program remains competitive.

2. Are state oil and gas resources being drained by wells on federal or private lands?

On the North Slope, there currently is no production from federal or fee lands. In addition, I am not aware of any development activities underway or soon-to-be underway on North Slope federal or fee lands. There are a number of safeguards in our oil and gas leases (and, in fact, in state and federal law) to prevent the type of situation that Mr. Burglin postulated. The state has access to the geological, geophysical and well data from federal OCS lands that are adjacent to our three-mile territorial waters. These adjacent OCS lands are commonly referred to as the 8(g) zone [taken from section 8(g) of the Federal OCS Lands Act]. The state would be aware well in advance of any potential drainage situation. Our own oil and gas leases contain provisions to require offset wells, compensatory royalty payments and required development of a state leasehold in threat of drainage. Contrary to Mr. Burglin's claim, drainage of oil and gas from state lands to federal or private lands is not, and will not be, a problem.

3. Should the state correct a "mistake" it made in setting the lease terms of the Seal Island/North Star Island area of the Beaufort Sea?

The state leased the Seal Island/North Star area in 1979. Amerada Hess and Texas Eastern each acquired two state leases overlying that prospect. All four leases have a fixed 20 percent royalty rate. The net profit share was the bid variable for those specific leases, and the rates bid were 91.2 percent and 93.2 percent (Amerada Hess), and 85.26 percent and 85.26 percent (Texas Eastern). A total of 25 bids were received for the four leases. For these tracts, the cash bonus bid was fixed at \$375.00 per acre. On other state acreage in that sale the high bonus bid (where the bonus was the bid variable) was \$15,170 per acre. Since that sale, the lessees have built two artificial gravel islands and drilled a total of six exploratory wells to evaluate the prospect. A relatively large new oil and gas field was discovered as a result of those wells. However, due to the water depth (about 40 feet), remote offshore location (about seven miles from shore and 18 miles from pump station number 1), and current oil prices, the field does not appear economic to develop at this time.

I am convinced that current and anticipated oil prices, not lease terms, are the primary factor in the decision to not develop the leases at this time. But as history has shown, oil prices and future expectations can change almost overnight.

4. Could the state be earning millions more dollars and creating thousands more jobs by immediately offering all its acreage for lease?

While we do have a few very promising areas left, the majority of the remaining unleased state acreage has only moderate to low oil and gas potential. Initially, only modest additional revenue will be generated from the bonus and rental monies as these low potential lands are leased, and very little, if any, money will be received if these lands are leased noncompetitively. As Mr. Burglin stated, in relative terms the vast majority of oil and gas revenues come from royalty and tax payments associated with production activities, and not at the time of a lease sale. That is why the division is attempting to lease the most prospective acreage over the next five years; hopefully, royalty and production tax payments will follow. As I stated at the hearing, of the 3.8 million state acres currently under lease, only 0.5 million acres are classified as producing. There are 3.3 million acres of state land under lease and ready to be drilled; I do not believe that the current lull in drilling activity is due to the unavailability of state leases. Again, current and forecasted oil prices are the culprit.

5. Should the state convert all its existing leases to 12 1/2 percent royalty rates and offer all future leases at 12 1/2 percent royalty?

Our experience to date with other than 12 1/2 percent royalty leases has not been disappointing. The Endicott field includes one lease which is allocated 26 percent of the total field oil and gas production where the royalty rate is 20 percent and the net profit share rate on the lease is 79 percent. About 80 percent of the Milne Point field is comprised of 20 percent royalty rate leases. The Kuparuk field has two net profit share leases included in the producing area and, as stated earlier, the North Star/Seal Island area leases are at 20 percent royalty and include a net profit share. I believe that oil prices (both current and projected) are the driving force behind development decisions. While royalty rate is a consideration at the time of proposed development, I do not believe it is the only or primary deciding factor.

6. Why aren't more "independents" operating in Alaska?

Quite a few independents have purchased oil and gas leases at state lease sales. Our low minimum bid requirements and generous 10 year lease terms provide ample opportunity for independents to become active in Alaska if they want to. However, the cost of exploration and development in the state, for the most part, prevents most of those parties from actively participating in the drilling of wells. By definition, independents have limited monies available for exploration on an annual basis. It would not be a wise business decision for an independent to gamble all its annual exploration budget on drilling one well in Alaska when it could drill 10 wells elsewhere for the same total cost. Fundamental laws of risk analysis dictate that you spread your risk to maximize your profits (or, conversely, to minimize your losses). Until costs of exploration in Alaska come down, there will be few independents actively drilling wells in our state, though independents still seem interested in acquiring leases here.

7. Are Alaska's oil and gas fields currently "undefined"?

Mr. Burglin stated that the administration was remiss in not knowing what the oil and gas reserves were in each recognized field and in not knowing the field limits for each accumulation. The document Mr. Burglin used as an example was a monthly bulletin printed by the Alaska Oil and Gas Conservation Commission (AOGCC). Unfortunately, Mr. Burglin misinterpreted the term "undefined" as used by the AOGCC. The AOGCC uses the term undefined to classify oil and gas produced from pools (reservoirs) where specific ~~specific~~ field rules have yet to be established. The absence of field rules for a given pool in no way implies that reserve estimates or accumulation limits are not known. It is unfortunate that Mr. Burglin chose to use this specific example out of context. If you have any further questions on this issue, I suggest that you contact the AOGCC directly for a full explanation of how it estimates reserves and employs field rules.

8. Why doesn't the state reveal its proprietary oil and gas data to Mr. Burglin prior to issuing certain unitization decisions?

Two points need to be addressed concerning this issue. First, by law (AS 38.05.035(a)(c)), the state is prohibited from releasing proprietary information to third parties without the written consent of the "owner" of the proprietary data. Since almost all of the state's proprietary data are supplied by third parties, we cannot release the data to Mr. Burglin without prior approval. The second point concerns the state's unitization decision process. Even if Mr. Burglin was given access to the state's data, I doubt that the state's final decision would be different. Our decision is based upon all the available information in the record regardless of whether or not Mr. Burglin agrees with the interpretation of all that data. As was discussed on March 7, the parties seldom disagree with the basic geological, geophysical and well data; however, interpretation of the data does, on occasion, bring about disagreements. And as also was stated at the March 7 hearing, all lessees, including Mr. Burglin, have the option to drill on their leases to prove the existence of hydrocarbons if there are insufficient data to prove or disprove conclusively whether the acreage is productive. A unit does not have to be approved prior to drilling a well on a lease.

9. If unitization is beneficial, why doesn't the state approve any and all applications for units?

Commitment of a lease to a unit agreement extends that lease for the life of the unit. Commitment of a lease to a unit agreement also satisfies any work commitment stipulation that is made part of that lease. In addition, a unit area is intended to cover a defined potential hydrocarbon accumulation or a known reservoir. Unless the affected lessees have a sound geological and geophysical basis for an exploratory unit or well data to confirm the need for a development unit (i.e., a seismically or geologically defined subsurface "prospect"), the approval of a unit application to explore the area is not warranted. The lessees must also

commit to an exploration plan or development plan at the time the unit is formed. Units will not be approved for areas where no prospect is defined for which an adequate work plan is not a part of the proposal. Again, the lessee(s) can always drill a well to prove its point. Unitization should not be used to arbitrarily extend the primary term of unproven leases.

10. Should the state institute a noncompetitive leasing system?

With the 1987 amendment to 38.05.035(e)(7), the division now can reoffer acreage on a more regular basis. In addition, the division has 12 "regular" lease sales already scheduled over the next five years. In recent years both the State of Alaska and the federal government have experienced a number of fraud and consumer "rip-offs" through lower 48 boiler-room, high-pressure telephone sales schemes involving resale of predominantly noncompetitive leases to unsuspecting individuals. Unfortunately, these few illegal schemes have seriously jeopardized the future of all noncompetitive leasing. In 1987 the Alaska State Legislature abolished noncompetitive leasing of state lands in 1978. The United States Congress completely overhauled the federal noncompetitive leasing program in to require that all lands first be offered competitively for lease. Federal acreage that is offered competitively, but that receives no bids, can then be offered noncompetitively over the next two-year period. Minimum bonus bid is \$2.00 per acre, and the first year annual rental is \$1.50 per acre.

I believe that a dependable lease sale schedule, combined with regular competitive reofferings of expired or previously unpurchased leases, best accomplishes the goal of making acreage available for exploration and, at the same time, protects the state's interests. I do not believe that a state noncompetitive leasing program is needed, nor would it provide all the benefits described by Mr. Burglin in his testimony.

11. Is there a consensus that unitization policy or leasing policy needs change?

Prior to considering changes to the statutes, I recommend that the committee hear from such parties as the Alaska Oil and Gas Conservation Commission, other independents active in leasing in the state, in-state and out-of-state oil and gas consultants, and representatives from the major oil and gas companies active in Alaska. Because of the varied nature and objectives of the parties active in oil and gas leasing in Alaska, it is seldom that all parties will totally agree with each policy or statute currently in place. However, if there is a consensus that change is needed, then ways to bring about that change should be investigated.

12. Are changes necessary in the state oil and gas permitting process?

Over the last five years, considerable improvements have been made in the oil and gas permit processing and decision-making procedures for both individual agency permits and coastal zone management act consistency

March 18, 1988

determinations. The outcome of recent major project reviews such as Lisburne, Endicott, and Steelhead illustrate this fact. The state and the respective local governments have been out front in these permitting actions. Complications involving required federal permits or disputes with fee owners of the surface estate have slowed down some applications after state permits for the proposed projects were already approved. However, I do not believe that the state permitting process is hindering or prohibiting exploration or development in Alaska.

As you requested, enclosed is a copy of the departmental regulations (11 AAC 88) governing appeal of Director or Commissioner decisions.

Again, thank you for the opportunity to present testimony to the committees on March 7. I would be happy to discuss the points outlined in this letter with the committees or with individual committee members as your interests and time constraints dictate. Please contact me if you need further clarification on any of these issues or want to discuss the issues in further detail.

Sincerely,



William Van Dyke
Petroleum Manager

Enclosure

cc: Senate Resource Committee Members:

Senator Paul Fischer
Senator Arliss Sturgulewski
Senator Jim Duncan
Senator Fred Zharoff
Senator Dick Eliason
Senator Ken Fanning

Senate Special Oil and Gas Committee Members:

Senator Jack Coghill
Senator Paul Fischer

Judith M. Brady, Commissioner, DNP

Cliff Burglin, Land Consultant

Chat Chatterton, Chairman, AOGCC

Cass Arie, Petroleum Geologist, Division of Oil and Gas

Mike Kotowski, Petroleum Engineer, Division of Oil and Gas

CHAPTER 88. PRACTICE AND PROCEDURE

Section

- 100. Applicability
- 105. Applications
- 110. Withdrawal of applications
- 115. Additional information
- 120. Deficient filings
- 125. Time for filing
- 130. Timely filing
- 135. Means of filing
- 140. Notices
- 145. Refunds
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- 151. Notice required by AS 38.05.945(c)
- 155. Reconsideration
- 160. Judicial appeals
- 165. Applications for reconsideration and appeal
- 170. Briefs
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- 185. Definitions

Editor's Note: The mineral-leasing regulations in 11 AAC 82, 11 AAC 83, 11 AAC 84, 11 AAC 86 and 11 AAC 88, effective September 5, 1974, and distributed in Alaska Administrative Register 51, constitute a comprehensive reorganization and revision of this material, and thus a history line at the end of each section does not reflect the history of the provision before September 5, 1974, and the section numbering may or may not be related to the numbering before that date.

11 AAC 88.100. APPLICABILITY. This chapter applies to 11 AAC 82 – 11 AAC 86 unless specifically provided otherwise by the sections dealing with the subject of the application, filing or payment. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.105. APPLICATIONS. All applications filed under 11 AAC 82 – 11 AAC 86 must comply with any requirements imposed by the regulations dealing with the subject of the applications, and must

- (1) be typewritten or printed in ink;
- (2) be signed by the applicant;
- (3) be filed by mail or personal delivery at any filing office of the division;
- (4) identify any affected lease, permit, or application by serial number or date of filing;

(5) describe the land affected by the application;

(6) state the address to which any notice concerning the application may be mailed; and

(7) be accompanied by the fee or fees prescribed by 11 AAC 05.010. (Eff. 9/5/74, Reg. 51; am 1/1/86, Reg. 96)

Authority: AS 38.05.020(b)(1)

11 AAC 88.110. WITHDRAWAL OF APPLICATIONS. At any time before a lease or permit is issued, the application may be withdrawn in whole or in part. If withdrawn, in part, the application as modified must meet all the requirements of the applicable laws and regulations. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.115. ADDITIONAL INFORMATION. The director may require any additional information regarding an applicant's, claimant's, permittee's or lessee's compliance with the statutes and regulations except proprietary data not specifically authorized by other regulation or statute. Failure to comply results in rejection of the application and is a default under the terms of the permit or lease and the regulations applicable to it. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)
AS 38.05.035(a)(4)

11 AAC 88.120. DEFICIENT FILINGS. (a) Applications and documents filed with omissions or errors give the applicant no priority if

(1) the land description is insufficient to identify the land or the description does not comply with the compactness requirements;

(2) the total acreage exceeds the maximum established by law or regulation, except where the rule of approximation applies;

(3) the total acreage is less than the minimum established by law or regulation;

(4) the full filing fee and the first year's rental, where required, is not filed; and

(5) the application is not signed by or on behalf of each person having an interest in the application whether by written or oral agreement or contract.

(b) Applications with the defects listed in (a) of this section may be corrected without loss of filing fee if done within 15 days of receipt of notice of the defect, but the time of filing is the date of the receipt of the correct information.

(c) The director may allow the correction of any other omission or error in an application or document other than those listed in (a) of this section without affecting the original filing time if he determines that the omission or error is immaterial or due to excusable inadvertence. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.125. TIME FOR FILING. (a) Filing hours for payments and applications are from 10:00 a.m. to the end of posted office hours on business days, which are Mondays through Fridays, holidays excepted.

(b) Filing hours for all documents to be filed for record in the recording district in which the claim or site is located are from 8:30 a.m. to the end of posted office hours from Monday through Friday, holidays excepted.

(c) All documents, including payments and applications, received during filing hours on business days are stamped with the exact date and time of filing.

(d) Payments and applications received at any other time are filed at 10:00 a.m. on the next business day.

(e) Documents to be filed under (b) of this section received at any other time are considered to be filed at 8:30 a.m. on the next business day.

(f) Applications and documents showing the same time stamp are considered to have been filed simultaneously. (Eff. 9/5/74, Reg. 51; am 12/31/82, Reg. 84)

Authority: AS 38.05.020

11 AAC 88.130. TIMELY FILING. (a) Payments are timely if an affected lease or permit is identified by an Alaska Division of Lands' serial number, and is either (1) delivered at any of the division offices designated by the director as "filing offices" during filing hours within the time allowed by any notice, decision, regulation or law, or (2) mailed on or before the due date provided by any notice, decision, regulation or law and the mailing date can be verified by postmark or other post office record or notation.

(b) If the serial number is not identified, as required in (a) of this section, the time of filing is the time of receipt of correct information unless the director determines that the lack of such information is immaterial or due to excusable inadvertance.

(c) All other documents are timely filed if received during filing hours within the time allowed by any notice, decision, regulation, or law at any office designated by the director and posted in the office as a filing office.

(d) When the last day of the time for filing or payment falls on a day the designated filing office is officially closed, the time for filing is extended to the next day the office is open to the public. (Eff. 9/5/74, Reg. 51; am 12/31/82, Reg. 84)

Authority: AS 38.05.020(b)(1)

11 AAC 88.135. MEANS OF FILING. Filings and payments may be made by mail or personal delivery, unless provided otherwise by the section dealing with the subject of the filing or payment. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.140. NOTICES. (a) Any notice which the director gives to any person must be in writing and must be delivered in person or mailed by registered or certified mail, return receipt requested, to the person at his current address of record with the division.

(b) Any person may file his current mailing address with the division in writing and may change his address of record by written notice filed with the division at any time. "Current mailing address" is the most recent or permanent legal address of an applicant,

permittee, lessee or claimant. It is the responsibility of any person doing business with the division to notify the division of his most recent or permanent legal address.

(c) A notice is considered to be given and received on the date delivered to the current address of record.

(d) Whenever any notice is required to be given to a lessee, permittee or claimant, copies of the notice shall also be given, in the manner provided by (a) of this section, to any assignee whose assignment has been filed for approval. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.145. REFUNDS. (a) If an application on which rental has been submitted is rejected or withdrawn in whole or in part, the first year's rental will be refunded in whole or in pro rata part on an acreage basis.

(b) Notwithstanding any other provision of 11 AAC 82 - 11 AAC 88, no refund will be made for less than \$2.00. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.150. MAILING LIST. The division shall maintain a mailing list for the purpose of sending general notices, orders and other information which the director determines to be of public interest regarding mineral activities of the division to persons who file a written request to be put on a list. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.151. NOTICE REQUIRED BY AS 38.05.945(c). (a) A village corporation will be given notice under AS 38.05.945(c)(3) if it owns or has selected land within six miles of the state land proposed for disposal.

(b) A community will be given notice under AS 38.05.945(c)(4) if land within its boundaries is no more than six miles from the state land proposed for disposal. A community is an incorporated or unincorporated place with 25 or more inhabitants, according to the most recent census of the U.S. Census Bureau. An incorporated community's boundaries will be those reported to the department by the Local Boundary Commission. An unincorporated community's boundaries will be those delineated

by the U.S. Census Bureau in the most recent census. (Eff. 6/28/81, Reg. 78; am 12/31/82, Reg. 84)

Authority: AS 38.05.020
AS 38.05.945

11 AAC 88.155. RECONSIDERATION. (a) An order, decision or other action of the director or the division which may be made or taken without the advance approval, consent or concurrence of the commissioner is subject to reconsideration by the director. After reconsideration by the director, any person aggrieved by the decision of the director may appeal the decision to the commissioner.

(b) An order, decision or other action of the commissioner, or of the director with the

advance approval, consent, or concurrence of the commissioner, is subject to reconsideration only by the commissioner. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.160. JUDICIAL APPEALS. A decision or other action of the division, the director or the commissioner becomes final for purposes of an appeal to the superior court 30 days after delivery as provided in 11 AAC 88.140 or as provided by applicable provisions of the Administrative Procedure Act, including AS 44.62.540, 44.62.560 and 44.62.570, and the Rules of Appellate Procedure of the State of Alaska, including Rule 44. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.165. APPLICATIONS FOR RECONSIDERATION AND APPEAL. An application for reconsideration or an appeal must

(1) be filed within 30 days after receipt of notice of the action;

(2) be filed at the principal office of the director;

(3) comply with 11 AAC 88.105 except that there is no filing fee;

(4) specify the action to be reconsidered or appealed; and

(5) specify the grounds on which the reversal or modification of the action is urged. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.170. BRIEFS. Written briefs in support of an application for reconsideration or an appeal may be filed with the division within 20 days after the filing of the application. The intention to file a brief must be specified in the application for reconsideration or appeal. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.175. ORAL ARGUMENT. Oral argument may be allowed at the discretion of the officer who is to reconsider the action if written request for it is filed with the division

within the time allowed for filing written briefs. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.180. NOTICE OF DECISION. Following reconsideration of any action or final decision on appeal, the applicant will be given notice of the decision reached, specifying whether the action is affirmed, reversed, or modified, and, if the last, the details of the action as modified. (Eff. 9/5/74, Reg. 51)

Authority: AS 38.05.020(b)(1)

11 AAC 88.185. DEFINITIONS. As used in 11 AAC 82 – 11 AAC 88 and unless the context clearly requires a different meaning or unless otherwise defined in these chapters

(1) "adjacent" means touching or lying in close proximity, as opposed to "contiguous" which requires a common boundary;

(2) "cash" means cashier's or certified checks drawn on any solvent bank in the United States, postal or telegraphic money orders or legal tender of the United States of America, or any combination of these;

(3) "commissioner" means the Commissioner of the Department of Natural Resources;

(4) "cooperative agreement" means an agreement or plan of development and operation for the recovery of oil and gas from any pool, field, or like area or any part thereof in which separate ownership units are independently operated pursuant to the agreement without allocation of production;

(5) "director" means the Director of the Division of Lands;

(6) "division" means the Division of Lands, Department of Natural Resources;

(7) "filing office" means any place designated by the director as a filing office for applications, payments and filings under 11 AAC 82 – 11 AAC 88;

(8) "gas" means all natural gas and all hydrocarbons produced at a well not defined herein as oil;

(9) "gas well" means (A) a well which produces natural gas only; (B) that part of a well where the gas producing stratum has been successfully cased off from the oil, and the gas and oil being produced through separate casing or tubing; (C) any well classed as a gas well by the Alaska Oil and Gas Conservation Commission in the administration of the Alaska Oil and Gas Conservation Act;

(10) "leasehold location" or "mining leasehold location" means the interests in land subject to a location under AS 38.05.205 before a lease has been issued;

(11) "legal subdivision" means an aliquot part of a section of land according to the public land rectangular survey system, not smaller than one-quarter of one-quarter of one section of land, containing approximately 40 acres; where a section of land contains section lots, "legal subdivision" also means those section lots; "legal subdivision" also means a protracted legal subdivision according to any protracted public land rectangular survey prepared by the division or Bureau of Land Management of the Department of the Interior, and made available to prospective applicants for leases;

(12) "lessee or permittee of record" means the original lessee or permittee under any lease or permit or, if an assignment has been approved at any time, the latest assignee whose assignment has been approved;

(13) "locatable minerals" means those minerals which, on January 3, 1959, were subject to location under the United States mining laws (Title 30, USC);

(14) "Mineral Leasing Act" means the Act of Congress of February 25, 1920 (41 Stat. 437, 30 USC § 181, et seq.), as amended;

(15) "offshore" means tide and submerged lands, that is, those lands lying seaward from the line of mean high tide;

(16) "oil" means crude petroleum oil and other hydrocarbons regardless of gravity which are produced and saved in liquid form at the well by ordinary production methods;

(17) "oil well" means any well operated for

the primary purpose of producing oil and which by the nature of its production cannot be classed as a gas well as defined in paragraph (6) of this section;

(18) "operating agreement" means an agreement giving the operator the right to carry on operations authorized by a lease or leases and to share in production obtained from the leased lands;

(19) "option" means an option to obtain an assignment of or an operating agreement covering a lease or portion of one;

(20) "order" means a determination made by the director or the commissioner in accordance with authority lawfully vested in him, issued in writing, filed in the permanent files of the division, posted in a conspicuous place in the offices of the division and made continuously available for inspection by the public;

(21) "participating area" means that part of an oil and gas lease unit area to which production is allocated in the manner described in a unit agreement;

(22) "person" includes a corporation and an association of persons;

(23) "pool" means an underground reservoir containing or appearing to contain a common accumulation of oil or gas or both; each zone of a general structure which is completely separated from any other zone in the structure is a pool;

(24) "primary term" means the initial term of an oil and gas lease and any extension of it;

(25) "smallest legal subdivision" means one-quarter of one-quarter of one section of land, containing 40 acres more or less, except where a section contains smaller section lots according to the public land rectangular survey or a protracted public land rectangular survey prepared by the division or by the Bureau of Land Management of the Department of the Interior, and made available to prospective applicants for leases, in which case "smallest legal subdivision" means those smaller section lots; as to unsurveyed land not covered by such

a protracted survey, it means a square containing 40 acres, more or less;

(26) "status record" means the basic record maintained by the division to show the status of every tract of land and of leases and applications for leases on them;

(27) "unit agreement" means an agreement or plan of development and operation for the recovery of oil and gas from a pool, field or like area, or any part of one, as a single consolidated unit without regard to separate ownerships, and for the allocation of costs and benefits on a basis as defined in the agreement or plan; "unit agreement" also includes "cooperative agreement" unless the context clearly requires the more restricted meaning;

(28) "unit area" means the area described in a unit agreement as constituting the land logically subject to development under the agreement;

(29) "unit operator" means the person, corporation or association designated under a unit agreement to conduct operations on unitized lands as specified in the agreement;

(30) "unitized land" means the part of a unit area committed to a unit agreement;

(31) "unitized substance" means deposits of oil, gas and associated substances produced with them recoverable by operations pursuant to a unit agreement;

(32) "working interest" means the interest held in lands by virtue of a lease, operating agreement, fee title or otherwise, under which the owner of the interest is vested with the right to explore for, develop and produce minerals; the right delegated to a unit operator by a unit agreement is not a working interest;

(33) "qualified to do business in Alaska" means holding the state certificates necessary to lawfully conduct business within the state;

(34) "leasehold," "mining lease," or "upland mining lease" means the interests in land subject to a mining lease issued in accordance with AS 38.05.205;

(35) "location" or "mining location" means a mining claim made under AS 38.05.195, a leasehold location made under AS 38.05.205, or a prospecting site location made under AS 38.05.245. (Eff. 9/5/74, Reg. 51; am 3/27/82, Reg. 81; am 5/30/85, Reg. 94)

Authority: AS 38.05.020

DMEM Form No. 18-83 (UNIT AGREEMENT)
DNR Form No. 10-1128
(Revised June, 1983)

UNIT AGREEMENT
FOR THE EXPLORATION, DEVELOPMENT, AND OPERATION
OF THE KEY UNIT

STATE OF ALASKA
THIRD JUDICIAL DISTRICT

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ATTACHMENTS

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B	MAP OF UNIT AREA AND TRACTS	24
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UNIT AGREEMENT
FOR THE EXPLORATION, DEVELOPMENT, AND OPERATION
OF THE KEY UNIT

STATE OF ALASKA
THIRD JUDICIAL DISTRICT

THIS AGREEMENT is entered into as of the _____ day of _____, 19__ by the parties who have signed this Agreement, and with the approval of the State of Alaska.

WHEREAS, the parties to this Agreement are the owners of Working, Royalty, or other oil and gas interests in the Unit Area subject to this Agreement; and

WHEREAS, Section 31.05.110(a) of the Alaska Statutes (Oil and Gas Conservation) provides that to prevent, or to assist in preventing waste, to insure a greater ultimate recovery of oil and gas, and to protect the correlative rights of owners of interests in the tracts of land affected, these owners may validly integrate their interests to provide for the unitized development and operation of such tracts of land as a unit; and

WHEREAS, the Commissioner of the Department of Natural Resources, State of Alaska, is authorized by Alaska Statute 38.05.180 and regulations adopted under that statute to consent to and approve oil and gas unit agreements containing oil and gas leases for which the State of Alaska is the lessor; and

WHEREAS, the parties to this Agreement have complied with the Alaska Statutes and regulations prescribing the standards and procedures governing the submission of applications and criteria for approval of oil and gas unit agreements containing oil and gas leases for which the State of Alaska is the lessor; and

WHEREAS, the Commissioner of the Department of Natural Resources has found that this Agreement is necessary or advisable to protect the public interest;

NOW THEREFORE, in consideration of the provisions contained in this Agreement, it is agreed as follows:

ARTICLE 1

DEFINITIONS

1.1 Commissioner means the Commissioner of the Department of Natural Resources, State of Alaska, or his duly authorized representative, who is authorized and has been delegated the authority to act for and on behalf of the Commissioner of the Department of Natural Resources.

1.2 Effective Date means the time and date this Agreement becomes effective as provided in Article 13.1.

1.3' Force Majeure means war, riots, acts of God, unusually severe weather, or any other cause beyond the Unit Operator's reasonable ability to foresee or control (including delays caused by operational failure of existing transportation facilities and judicial decisions or lack of them), whether similar to those enumerated or not.

1.4 Oil and Gas Rights means the rights to explore, develop, and operate on lands within the Unit Area for the production of Unitized Substances, or to share in the production, the proceeds, or the value of the Unitized Substances.

1.5 Outside Substances means substances purchased or otherwise obtained by the Working Interest Owners and injected into a Reservoir in the Unit Area.

1.6 Participating Area means a Tract or group of Tracts described and designated as a Participating Area under this Agreement for the purposes of developing, producing, or allocating one or more Unitized Substances from all or part of a Reservoir.

1.7 Participating Area Expense means all cost, expense, or indebtedness incurred by the Working Interest Owners or Unit Operator under this Agreement or the Unit Operating Agreement for or on account of production from or operations in a Participating Area, and allocated solely to the Tracts in that Participating Area and not to any other Tracts in the Unit.

1.8 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. A well will be considered capable of producing Unitized Substances in Paying Quantities when so certified by the Commissioner following application by the Unit Operator.

1.9 Reservoir means an accumulation of Unitized Substances which has been discovered by drilling and evaluated by testing and which is separate from any other accumulation of Unitized Substances.

1.10 Royalty Interest means a right to or interest in any portion of, or the proceeds or value of the Unitized Substances other than a Working Interest.

1.11 Royalty Owner means the State of Alaska and any other party that owns a Royalty Interest.

1.12 State means the State of Alaska acting in this Agreement by and through the Commissioner of the Department of Natural Resources or his authorized representative.

1.13 Sustained Unit Production means continuing production of Unitized Substances from a Reservoir in the Unit Area into a pipeline or other means of transportation to market, but does not include testing, evaluation, or pilot production.

1.14 Tract means the land which is described in Exhibit A and given a Tract number.

1.15 Tract Participation means the percentage assigned to a Tract in a Participating Area for allocating Unitized Substances to that Tract.

1.16 Unit Area means the land identified by Tracts in Exhibit A and shown on Exhibit B to which this Agreement applies or to which it may be extended as provided in this Agreement.

1.17 Unit Expense means all cost, expense, or indebtedness incurred by the Working Interest Owners or the Unit Operator under this Agreement and the Unit Operating Agreement for or on account of Unit Operations, except for Participating Area Expense.

1.18 Unit Operating Agreement means the agreement entered into by the Working Interest Owners, having the same Effective Date as this Agreement, entitled "Unit Operating Agreement, KEY Unit, State of Alaska," as amended or supplemented from time to time.

1.19 Unit Operations means all operations conducted under this Agreement and the Unit Operating Agreement.

1.20 Unit Operator means the Working Interest Owner or other party designated by the Working Interest Owners under the Unit Operating Agreement to conduct Unit Operations, acting as operator and not as a Working Interest Owner.

1.21 Unitized Substances means all oil, gas, and associated substances other than Outside Substances within or produced from the Unit Area.

1.22 Working Interest means an interest in Unitized Substances by virtue of a lease, operating agreement, fee title, or otherwise, including a carried interest, under which the owner of that interest has the right to drill, develop, and produce, or cause to be drilled for, developed, or produced, oil and gas, and the owner of which interest is obligated to pay, either in cash or out of production or otherwise, a portion of the Unit Expense or the Participating Area Expense. A Royalty Interest created out of a Working Interest subsequent to the execution of this Agreement by the owner of that Working Interest shall continue to be subject to those Working Interest burdens and obligations that are stated in this Agreement and the Unit Operating Agreement.

1.23 Working Interest Owner means a party to this Agreement owning a Working Interest.

ARTICLE 2

EXHIBITS

2.1 Exhibits. The following exhibits which are attached to this Agreement are incorporated into this Agreement by reference:

2.1.1* Exhibit A is a schedule that identifies and describes each Tract in the Unit Area, and shows the Working Interest Ownership of Oil and Gas Rights in each Tract and a schedule of the Royalty and Net Profit Share rates applicable to each Tract in the Unit Area.

2.1.2 Exhibit B is a map depicting the boundaries of the Unit Area and the Tracts.

2.1.3** Exhibit C is a description of the Participating Areas formed under this Agreement, including general geologic descriptions and schedules showing Tract Numbers, Legal Descriptions, Alaska Lease Numbers (ADLs), and Tract Participations.

2.1.4** Exhibit D is a map depicting the boundary lines of the Participating Areas and the Tracts formed under this Agreement.

2.1.5** Exhibit E is a schedule that describes the allocation of Participating Area Expense to each Tract in the Participating Areas formed under this Agreement.

2.1.6 Exhibit F is a schedule that describes the allocation of the Unit Expense to each Tract in the Unit Area.

2.1.7*** Exhibit G is the plan of exploration or development for the Unit Area.

2.2 Reference to Exhibits. When reference is made to an exhibit, it is to the exhibit as originally attached or, if revised, to the latest approved revision.

*Exhibit A will reflect the royalty rate from the leases; if a royalty rate is renegotiated at the time of unitization, Exhibit A will reflect this modification.

**If there is more than one Participating Area when the Unit is initially created, these areas should be described in Exhibits C-1, C-2, etc., D-1, D-2, etc., and E-1, E-2, etc.

***If no Participating Areas are established at the time this unit is approved, Exhibit G should be a plan of exploration. If a Participating Area is established at the time of unitization, Exhibit G should be a plan of development.

2.3 Exhibits Considered Correct. Exhibits A, B, C, D, E, F, and G have been established using the best information available and shall be considered to be correct until revised.

2.4 Correcting Errors. If subsequent to the date of this Agreement it appears that any Tract should be divided into more than one Tract because of diverse Royalty or Working Interest Ownership, or that any mechanical miscalculation or clerical error has been made, the Unit Operator, with the approval of the Working Interest Owners and the Commissioner, shall correct the mistake by revising the exhibits to conform to the facts. The revision shall not include any reevaluation of engineering or geological interpretations used in determining Tract Participation. Each revision of an exhibit made less than 30 days after the Effective Date shall be effective as of the Effective Date. Each revision made 30 days or more after the Effective Date shall be effective at 12:01 a.m. on the first day of the next calendar month following the filing of the revised exhibit with the Commissioner for his approval or on any other date as may be agreed upon by the Working Interest Owners and the Commissioner and set forth in the revised exhibit.

2.5 Filing Revised Exhibits. If an exhibit is revised, the Unit Operator shall execute an appropriate instrument with the revised exhibit attached and file the same for record in the filing office of the Department of Natural Resources, Anchorage, Alaska.

2.6 Exhibits for New Participating Areas. The Unit Operator shall prepare Exhibits C, D, and E for each new Participating Area created under Article 6 of this Agreement, and shall submit these exhibits to the Working Interest Owners and, after approval by them, to the Commissioner for approval. The Working Interest Owners also shall submit revisions to Exhibit F at the same time for approval by the Commissioner.

ARTICLE 3

CREATION AND EFFECT OF UNIT

3.1 Oil and Gas Rights Unitized. All Oil and Gas Rights in and to the lands described in Exhibit A are unitized so that Unit Operations may be conducted as if the Unit Area had been included in a single lease executed by the State of Alaska and any other party who has authority to execute oil and gas leases, as lessor, in favor of all Working Interest Owners, as lessees.

3.2 Amendment of Leases and Other Agreements. The provisions of the various leases, agreements, division and transfer orders, or other instruments pertaining to the respective Tracts or the production from those Tracts, are amended to the extent necessary to make them conform to the provisions of this Agreement, but otherwise shall remain in effect.

3.3 Continuation of Leases and Term Interests. Except for the purpose of determining payments to the State of Alaska and other Royalty Owners, production from any part of a Participating Area shall be considered as production from each Tract in the Participating Area and shall continue each lease in the Participating Area in effect just as if a well were producing

from each Tract, so long as that Tract remains committed to the Unit. Unit Operations, if conducted under and in compliance with an approved plan of exploration or development, shall continue each lease in the Unit Area in effect as if Unit Operations were conducted on each Tract, so long as that Tract remains committed to the Unit.

3.4 Rental Settlement. Rental due on leases committed to this Agreement shall be paid by the Working Interest Owners who are lessees of the leases. The lessee shall pay annual rental to the State in accordance with the following rental schedule:

- (1) For the first year of the term of the lease, \$1.00 per acre or fraction of an acre;
- (2) For the second year of the term of the lease, \$1.50 per acre or fraction of an acre;
- (3) For the third year of the term of the lease, \$2.00 per acre or fraction of an acre;
- (4) For the fourth year of the term of the lease, \$2.50 per acre or fraction of an acre;
- (5) For the fifth year of the term of the lease, and all following years, \$3.00 per acre or fraction of an acre. Rental may be waived or suspended by the Commissioner.

3.4.1 Annual rental paid in advance on a lease, any portion of which is committed to a Participating Area, is a credit on the royalty or net profit share due under the lease for that year.

3.4.2 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 the 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 the 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. Rental may be waived or suspended by the Commissioner.

3.5 Minimum Royalty. If any State oil and gas lease committed to this Agreement requires the payment of minimum royalty, that lease is amended to delete that minimum royalty obligation. Rental, at the rate specified in Alaska Statute 38.05.180(n), shall be paid in lieu of minimum royalty.

3.6 Injection Rights. Under the plan of development attached as Exhibit G, the Working Interest Owners may inject substances into the Unit Area for Unit Operations, may drill, use, and maintain injection wells in the Unit Area, and may use for injection purposes any nonproducing or abandoned wells or dry holes, and any producing wells completed in the Unit Area.

3.7 Surface and Subsurface Operating Rights. Except to the extent modified in this Agreement, the Working Interest Owners, and the Unit Operator in their behalf, shall have the same rights to use of the surface and subsurface and use of water and any other rights as are granted in the

leases. Except to the extent modified in this Agreement, any stipulations or operating conditions attached to a lease at the time of sale remain applicable to the lease. The State of Alaska retains all rights reserved it to explore, use, dispose of, or otherwise act upon or with respect to the surface and subsurface to the same extent as those rights are reserved in the oil and gas leases. The Working Interest Owners and the Unit Operator will, to the extent possible, minimize and consolidate surface facilities in order to minimize surface impacts.

3.8 Personal Property Excepted. All lease and well equipment, materials, and other facilities placed by any of the Working Interest Owners in the Unit Area are and shall remain personal property belonging to and removable by the Working Interest Owners. The rights and interests in that property as among the Working Interest Owners are set out in the Unit Operating Agreement.

3.9 Titles Unaffected by Unitization. Nothing in this Agreement shall be construed to result in the transfer of title to Oil and Gas Rights by any party to any other party or to the Unit Operator.

ARTICLE 4

UNIT OPERATOR

4.1 Unit Operator. The Working Interest Owners are concurrently entering into the KEY Unit Operating Agreement. The Working Interest Owners by the Unit Operating Agreement designate BURGLIN as the Unit Operator, which the Commissioner, by his signature to this Agreement, approves as the Unit Operator. By signature to this Agreement, BURGLIN affirms that it is qualified under Alaska law to be a Unit Operator and accepts the duties and obligations of the Unit Operator for the KEY Unit. A change of the Unit Operator may be made in accordance with the Unit Operating Agreement, but no change shall become effective until approved by the Commissioner, who shall not be required to grant approval unless he determines that the new Unit Operator is qualified under Alaska law to be a Unit Operator. Except as otherwise provided in this Agreement or in the Unit Operating Agreement, the Unit Operator shall have the exclusive right to conduct Unit Operations, which shall conform to the provisions of this Agreement and the Unit Operating Agreement. In the event of any change of Operator, the Unit Operator designated in this Agreement shall continue in its capacity as Unit Operator until a qualified successor has been selected by the Working Interest Owners and approved by the Commissioner, and the successor has assumed its duties as Unit Operator.

ARTICLE 5

PLANS OF EXPLORATION, DEVELOPMENT, AND OPERATIONS

5.1 Unit Plan of Exploration. If, upon the Effective Date of this Agreement, a Unit Plan of Development is not in effect as described in Article 5.2 of this Agreement, the Unit Operator, on behalf of the Working Interest Owners, with diligence and in accordance with good engineering practice, shall explore the Unit Area as described in the Unit Plan of Exploration attached to this Agreement as Exhibit G. The Unit Plan of Exploration shall conform to the provisions of 11 AAC 83.341, and may be amended or modified from time to time by the Unit Operator with the approval of the Commissioner.

5.2 Unit Plan of Development. If, upon the Effective Date of this Agreement, or at any time thereafter, a Reservoir in the Unit Area has been sufficiently delineated such that a prudent operator would initiate development activities in that Reservoir, the Unit Operator, on behalf of the Working Interest Owners, with diligence and in accordance with good engineering and production practice, shall explore, develop, and produce from the Unit Area in accordance with the Unit Plan of Development attached to this Agreement as Exhibit G. The Unit Plan of Development shall conform to the provisions of 11 AAC 83.343, and may be amended or modified from time to time by the Unit Operator with the approval of the Commissioner.

5.3 Unit Plan of Operations. A Unit Plan of Operations approved by the Commissioner is required before any operations may be undertaken on the Unit Area. The Unit Plan of Operations shall conform to the provisions of 11 AAC 83.346, and may be amended or modified from time to time by the Unit Operator with the approval of the Commissioner.

5.4 Rate of Exploration, Development, and Production. The Commissioner, after giving the Unit Operator written notice and an opportunity to be heard, may require the Unit Operator to modify the rate of exploration of, development of, or production from the Unit Area. Any modification required by the Commissioner shall not be contrary to any state or federal law or regulation or require the Unit Operator to violate a valid order or rule of the Alaska Oil and Gas Conservation Commission; shall not require any increase in the rate of exploration or development of, or production from the Unit Area that would be in excess of that permitted under prudent oil and gas engineering and production practices; shall not require the Unit Operator to alter or modify the rates of exploration or development of, or production from the Unit Area from those provided in the Unit Plan of Exploration or Development then in effect; or, in any case, shall not curtail rates of production to an unreasonable extent, considering Unit productive capacity, transportation facilities available, and conservation objectives. Nothing in this section is intended to preclude the enforcement by the Commissioner of any law or regulation which, by its terms, is required to be enforced by the Commissioner.

5.5 Drilling by Working Interest Owners. Any Working Interest Owner shall be entitled to drill wells on its lease under circumstances and limitations prescribed in the Unit Operating Agreement. Subject to the provisions of the Unit Operating Agreement, and with the approval of the Commissioner, a plan of testing, evaluation, and pilot production may be carried out by such Working Interest Owner or the Unit Operator to determine if such wells are capable of sustained production of Unitized Substances in sufficient quantities to justify the Working Interest Owners in developing and producing the Reservoir into which such well is completed; provided, however, that any such wells which are determined to be capable of production in Paying Quantities must thereafter be operated by the Unit Operator. Production of Unitized Substances resulting from testing, evaluation, or pilot plant operations saved, removed, or sold from the Unit Area shall be allocated to the lease from which such production occurred, and royalties paid on such production in accordance with Articles 7 and 8 of this Agreement.

ARTICLE 6

PARTICIPATING AREAS

6.1 Participating Areas Established. Participating Areas established under this Agreement are described in Exhibits C, D, and E.

6.1.1 At least 90 days before commencement of Sustained Unit Production from a Reservoir, the Unit Operator, on behalf of the Working Interest Owners, shall submit to the Commissioner for approval (1) proposed Exhibits C, D, and E describing a Participating Area for the Reservoir; (2) a proposed division of interest or formula allocating Tract Participation and Participating Area Expense as described in proposed Exhibits C and E; (3) if needed, a proposed modification of Exhibit F allocating Unit Expense to each Tract; (4) a proposed plan of development for the Unit Area (Exhibit G); and (5) a proposed plan of operations for the Unit Area. A Participating Area becomes effective on the day Sustained Unit Production commences.

6.1.2 A Participating Area may, but need not, encompass the entire Unit Area. A Participating Area shall include only the land reasonably known to be underlain by hydrocarbons and known or reasonably estimated through use of geological, geophysical, and engineering data to be capable of producing or contributing to production of Unitized Substances in Paying Quantities. A separate Participating Area shall be established for each separate Reservoir delineated in or partially in the Unit Area. Any two or more Participating Areas may be combined into one with the consent of the Commissioner and all Working Interest Owners in the Participating Areas to be combined.

6.2 Expansion and Contraction of Participating Area. A Participating Area shall be expanded or contracted from time to time by the Unit Operator with the approval of the Working Interest Owners and the Commissioner, whenever expansion or contraction is warranted on the basis of further drilling or otherwise. A Participating Area shall be expanded to include acreage reasonably proven through use of geological, geophysical, and engineering data to be capable of producing or contributing to production of Unitized Substances in Paying Quantities, or contracted to exclude acreage

reasonably proven through use of geological, geophysical, and engineering data to be incapable of producing or contributing to production of Unitized Substances in Paying Quantities, subject to the approval of the Commissioner. A revised division of interest or formula allocating production and costs must be submitted for approval by the Commissioner at the time of application for expansion or contraction of a Participating Area. No land in a Participating Area shall be excluded from the Participating Area due to the depletion of Unitized Substances.

ARTICLE 7

ALLOCATION OF UNITIZED SUBSTANCES AND EXPENSES; PAYMENT OF ROYALTY

7.1 Allocation of Production and Costs. The division of interest or the formula which allocates the Tract participations of production, Unit Expense, and Participating Area Expense among the leases within the Unit Area shall not take effect until approved by the Commissioner in writing. Any proposed revision of an approved division of interest or allocation formula shall not take effect until approved by the Commissioner in writing. When requested by the Commissioner, the lessees or Unit Operator shall promptly file with the Commissioner all data that relates to the proposed or revised division of interest or the allocation formula.

7.2 Allocation of Unitized Substances Produced From Participating Areas. All Unitized Substances produced and saved or sold from the Unit Area shall be allocated to the Participating Area established for the Reservoir from which the Unitized Substances were produced. Unitized Substances allocated to a Participating Area shall be allocated to each Tract within the Participating Area in accordance with each Tract's Tract Participation and among each Working Interest Owner in accordance with each Working Interest Owner's ownership in the Oil and Gas Rights in the Tract. The amount of Unitized Substances allocated to each Tract, regardless of whether the amount is more or less than the actual production of Unitized Substances from the wells, if any, on a Tract, shall be considered for all purposes to have been produced from that Tract.

7.3 Provisions Common to All Reservoirs. For all Participating Areas, the Working Interest Owners and the Royalty Owners other than the State may allocate Unitized Substances, Participating Area Expense, and Unit Expense in amounts other than those set out in Exhibits C, E, and F, provided that any allocation which is different from the allocations required by Exhibits C, E, and F shall be submitted to the Commissioner for his information with a statement explaining the reasons for the different allocations.

7.4 Royalty Reports. Each month, the Unit Operator shall furnish to the Commissioner a schedule which shall specify, for the previous month, the total amount of Unitized Substances produced, the amount of Unitized Substances used for Unit Operations or unavoidably lost as provided in Article 8 of this Agreement, the amount of Unitized Substances allocated to each Tract as royalty delivered in kind to the Commissioner, and the amount of Unitized Substances allocated to each Tract as royalty production to be settled in value.

7.5 Royalty in Value. Each Working Interest Owner shall make settlement for its share of royalty on Unitized Substances taken in value by the State as follows:

7.5.1 Royalty paid in value shall be free and clear of all lease expense, Unit Expense, and Participating Area Expense (and any portion of those expenses that is incurred away from the Unit Area), including, but not limited to, expenses for separating, cleaning, dehydration, gathering, salt water disposal, and preparing the Unitized Substances for transportation off the Unit Area, and free from any lien for them. All royalty that may become payable in money to the State shall be paid on or before the last day of the calendar month following the month in which the Unitized Substances are produced. The amount of all royalty in value payments which are not paid when due under this Agreement or which are subsequently determined to be due as a result of a redetermination will bear interest from the date the obligation accrued until it is paid in full, at a variable annual rate equal to 1.25 percent plus the prime rate as announced from time to time by the Bank of America, San Francisco, California. Royalty payments shall be accompanied by copies of run tickets or other information relating to the valuation of royalty as the State may require, which may include, but is not limited to, evidence of sales and shipments of Unitized Substances produced from the Unit Area.

7.5.2 For purposes of computing royalties due under this Agreement, the value of Unitized Substances payable to the State as Royalty Owner shall not be less than the highest of:

(1) the field price received by the Working Interest Owner for the Unitized Substances;

(2) the volume-weighted average of the three highest field prices received by other producers in the same field or area for Unitized Substances of like kind, character, and quality at the time the Unitized Substances are sold or removed from the Unit Area or, in the case of gas, at the time that gas is delivered to an extraction plant if that plant is located on the Unit Area. If there are less than three prices reported by other producers, the volume-weighted average shall be calculated by using the lesser number of prices received by other producers in the field or area;

(3) the Working Interest Owner's posted price in the field or area for Unitized 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 Unitized Substances of like kind, character, and quality at the time the Unitized Substances are sold or removed from the Unit Area, or, in the case of gas, at the time that gas is delivered to an extraction plant if that plant is located on the Unit Area. If there are less than three prices posted by other producers, the volume-weighted average shall be calculated using the lesser number of prices posted by other producers in the field or area.

7.5.3 If Unitized Substances are sold away from the Unit Area, the term "field price" in 7.5.2 of this Article shall be the cash value of all consideration received by the Working Interest Owner from the purchaser of the Unitized Substances, less the reasonable costs of transportation away from the Unit Area to the point of sale. The "reasonable costs of transportation" as used in this Article shall be those costs as defined in 11 AAC 83.228 -- 11 AAC 83.229 as those regulations exist on the Effective Date of this Agreement.

7.5.4 In the event the Working Interest Owner does not sell in an arm's-length transaction the Unitized Substances after removal from the Unit Area, the term "field price" in 7.5.2 and 7.5.3 of this Article shall mean the price on the Unit Area the Working Interest Owner would expect to receive for the Unitized Substances if the Working Interest Owner did sell the Unitized Substances in a arm's-length transaction. The Working Interest Owner shall determine this price in a consistent and logical manner using information available to the Working Interest Owner and report this price to the Commissioner.

7.5.5 The Commissioner may establish minimum values for purposes of computing royalties on Unitized Substances obtained from this Unit, with consideration being given to the price actually received by the Working Interest Owner, 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 Working Interest Owner and other producers from sales occurring away from the Unit Area, and to other relevant matters. In establishing minimum values, the Commissioner may use, but is not limited to, the Department of Revenue's methodology for determining "prevailing value" for purposes of the oil and gas property production tax, AS 43.55 et seq., or the methodology for determining "prevailing value" as defined in 11 AAC 83.227, in circumstances where terms of a contract set a single price for Unitized Substances without adjustments tied to market conditions for periods of longer than six years, or where the terms of a contract set prices which do not reasonably reflect market conditions for production from that field or area prevailing at the time the contract is executed or renegotiated, or where fraud or an intent to evade payment is demonstrated. Each minimum value determination shall be made only after the Working Interest Owner has been given reasonable notice and an opportunity to be heard. Under this provision, it is expressly agreed that the minimum value of royalty on Unitized Substances under this Agreement may not necessarily equal the price of such Unitized Substances.

7.5.6 The Commissioner may determine which of the methods contained in this Article shall be used to establish the minimum value of royalty for the purposes of royalties payable under this Agreement.

7.6 Payment of Royalty in Value. All payment to the State shall be made payable to the State in the manner directed by the Commissioner and, unless otherwise specified, must be tendered at

Department of Natural Resources
Pouch 7-034
Anchorage, Alaska 99510
Attention: Accounting

or to any depository designated by the Commissioner with at least 60 days notice to Unit Operator and the Working Interest Owners.

7.7 Failure to Pay Royalty. In the event of the failure of any Working Interest Owner to make proper settlement of any royalty due, the Commissioner shall have all rights and remedies available to him under law, the lease, and this Agreement, including any rights of cancellation and termination of the lease. If there is any conflict between a lease provision and the provisions of this Agreement, this Agreement shall govern.

7.8 Royalty In Kind. As close as practicable to 12 months before the commencement of Sustained Unit Production from a Participating Area, the Unit Operator shall give the Commissioner notice of the anticipated date for commencement of production. Within six months of receipt of that notice, the Commissioner shall give written notice to the Unit Operator of the State's election to take in kind all, none, a specified percentage, or a specified quantity of its royalty on any Unitized Substances produced from the Participating Area.

7.8.1 Anytime after the commencement of Sustained Unit Production from a Participating Area, the Commissioner, upon six months advance written notice to the Unit Operator, may elect to take in kind all, none, a specified percentage, or a specified quantity of the State's royalty on any Unitized Substance produced from the Participating Area. Upon six months advance written notice to the Unit Operator, the Commissioner may increase or decrease (including ceasing to take royalty in kind) the amount of royalty on any Unitized Substances the State takes in kind, except that this provision does not authorize the State to receive a royalty percentage on any Unitized Substances greater than the royalty percentage set out in Exhibit A of this Agreement.

7.8.2 In the written notices given under this Article, the Commissioner may elect to specify the Tracts from which royalty taken in kind by the State is to be allocated. If the Commissioner does not specify any Tracts in the notice, the royalty taken in kind shall be allocated to all Tracts in accordance with the Tract Participation.

7.8.3 The royalty taken in kind by the State shall be delivered to the Commissioner, or his designee, at the Unit Area boundary and in a pipeline or other facility capable of carrying the State's royalty share with the Unitized Substances of the Working Interest Owners, or at any other place mutually agreed upon by the Commissioner and the Unit Operator, and shall be delivered to the State or to any individual, firm, or corporation designated by the Commissioner.

7.8.4 The State's royalty Unitized Substances delivered in kind shall be delivered in good and merchantable condition and be of pipeline quality. Royalty delivered in kind shall be free and clear of all lease expenses, Unit Expense, and Participating Area Expense (including any portion of those expenses which is incurred away from the Unit Area), including but not limited to expenses for separating, cleaning, dehydration, gathering, salt water disposal, and preparing the Unitized Substances for transportation off the Unit Area.

7.8.5 Each Working Interest Owner shall furnish storage for royalty oil and natural gas liquids produced from the Unit Area to the same extent that Working Interest Owner provides storage for its own share of oil and natural gas liquids. The Working Interest Owner shall not be liable for the loss or destruction of stored royalty oil and natural gas liquids from causes beyond the Unit Operator's or the Working Interest Owner's reasonable control.

7.8.6 If a State royalty purchaser refuses or for any reason fails to take delivery of Unitized Substances, or in an emergency, and with as much notice to the Unit Operator as practical or reasonable under the circumstances, the Commissioner may elect without penalty to underlift for up to six months all or a portion of the State's royalty on Unitized Substances produced from the Unit or from any Tract and taken in kind. The State's right to underlift is limited to the portion of royalty Unitized Substances that the royalty purchaser refused or failed to take delivery of, or the portion necessary to meet the emergency condition. Underlifted Unitized 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. Recovery of underlifted Unitized Substances will be completed within two years of the date such underlift commences.

7.9 Royalty on Outside Substances. If any Outside Substance consisting of natural gases is injected into any Reservoir in the Unit Area, _____ percent of any like substance contained in the Unitized Substances subsequently produced from that Reservoir and allocated to the Participating Area for that Reservoir and sold, or used for other than Unit Operations, shall be considered to be a part of the Outside Substance injected until the total volume considered to be those Outside Substances equals the total volume of the Outside Substances injected. If liquefied petroleum gas or other liquid hydrocarbons which are Outside Substances are injected into the Reservoir,

_____ percent of all those Unitized Substances produced and sold after one year from the time the injection of those Outside Substances was commenced shall be considered to be a part of the Outside Substances until the total value of the production considered to be those Outside Substances equals the total cost of the Outside Substances so injected. _____ percent of the Unitized Substances considered to be Outside Substances will be in addition to that which is being recovered for natural gases as provided in this Article if both liquefied petroleum gas or other liquid hydrocarbons and natural gases are injected. No payment shall be due or payable to the Royalty Owners on substances produced from any Reservoir in the Unit Area that are considered to be Outside Substances.

7.10 Records. The Unit Operator and the Working Interest Owners shall keep and have in their possession books and records showing the development and production (including records of development and production expenses) and disposition (including records of sales prices, volumes, and purchasers) of all Unitized Substances produced from the Unit Area. The Unit Operator and the Working Interest Owners shall permit the Commissioner to examine those books and records at all reasonable times. These books and records of development, production, and disposition shall employ methods and techniques that shall ensure the most accurate figures reasonably available without requiring separate tankage or meters for each well. The Working Interest Owners shall use generally accepted and internally consistent accounting procedures.

ARTICLE 8

USE OR LOSS OF UNITIZED SUBSTANCES

8.1 Use of Unitized Substances. Working Interest Owners may use or consume Unitized Substances for Unit Operations, including but not limited to the injection of Unitized Substances into any Reservoir underlying the Unit Area, provided the injection is made under an approved Plan of Development.

8.2 Royalty Payments. No royalty, overriding royalty, production, or other profit-based payments shall be payable on account of Unitized Substances used, unavoidably lost, stored, or consumed in Unit Operations. Royalty, overriding royalty, production, or other profit-based payments on Unitized Substances reinjected into the Unit Area will not be payable until those Unitized Substances are finally produced and transported off the Unit Area or used for other than Unit Operations. If Unitized Substances are consumed in the operation of any facility which is not exclusively devoted to Unit Operations, royalty, overriding royalty, production, or profit-based payments shall not be payable on the Unitized Substances consumed by that facility which are allocatable to Unit Operations.

ARTICLE 9

EXPANSION AND CONTRACTION OF UNIT AREA

9.1 Expansion of Unit Area. The Unit Area may be expanded from time to time to include any additional lands determined to overlie any Reservoir all or part of which is within the Unit Area, or any additional lands regarded as reasonably necessary to facilitate production of hydrocarbons or for any other purpose of this Agreement. Any expansion shall not be effective until approved by the Commissioner. The lands to be included shall be based on subdivisions of the public land surveys as may be approved by the Commissioner. Expansion shall be effected in the following manner:

9.1.1 Unit Operator, acting under the terms of the Unit Operating Agreement or on demand of the Commissioner, shall prepare a notice of the proposed expansion describing the contemplated additions to the Unit Area, the reasons for expansion, and the proposed Effective Date.

9.1.2 The notice shall be delivered to the Commissioner and a copy mailed to each Working Interest Owner and Royalty Interest Owner at its last known address, and to any other party believed by the Unit Operator to own any Oil and Gas Rights in any lands proposed to be added. The notice shall state a definite period, which shall not end earlier than 30 days after the mailing of the last notice to be mailed, during which time any interested party may file with the Unit Operator written objections to the proposed expansion.

9.1.3 Upon expiration of the period stated in the notice, the Unit Operator shall file with the Commissioner evidence of mailing of the notice of expansion, copies of all objections which have been submitted to the Unit Operator, and applications for joinder executed by those owning Oil and Gas Rights in any land sought to be added as have been submitted to the Unit Operator.

9.1.4 After consideration of all pertinent information, the Commissioner shall approve or disapprove the expansion as to each lease or lands submitted for commitment. Unless the Commissioner's decision states to the contrary, that decision shall become effective as of the time specified in the notice. The Commissioner will notify Working Interest and Royalty Owners and all other parties who have requested notification upon approval or disapproval of a proposed expansion.

9.1.5 If permitted by a lease issued by the State, the Commissioner may compel joinder to this Agreement by any lessee, or any assignee of an interest in a State lease. The parties to this Agreement agree to accept that joinder upon reasonable terms and conditions. Before compelling joinder under this Article, the Commissioner will give all affected parties reasonable notice and an opportunity to be heard.

9.2 Contraction of Unit Area Ten Years After Sustained Unit Production. Any lease, a part of which is neither included in a Participating Area nor which facilitates production of hydrocarbons in Paying Quantities on the tenth anniversary of the commencement of Sustained Unit Production from the initial Participating Area formed under this Agreement, shall be excluded from the Unit Area and from this Agreement. If any portion of a lease is included in a Participating Area or facilitates production of hydrocarbons in Paying Quantities, the entire lease will remain committed to the Unit. Nothing in this Agreement shall operate to excuse further development on the portion of any lease lying outside the Unit Area where the circumstances would require a prudent lessee to further develop.

9.3 Contraction for Failure to Drill Second Well pursuant to Exhibit G. Unless a well has been commenced on or before March 31, 1987 which will have a bottomhole location in Block B, which Block is shown in Exhibits A and B, or such drilling obligation has been suspended in accordance with the provisions of 11 AAC.83.336(b), the Unit Area shall be contracted to exclude all of the Tracts in Block B, except those Tracts included in an established Participating Area or a Participating Area for which an application is pending.

9.3.1 Effect of Contraction. Upon contraction of the Unit Area as provided in Article 9.3 of this Agreement, operations on any Tract excluded from the Unit Area may be continued. Each oil and gas lease covering lands within Block B excluded from the Unit Area shall remain in force for at least one year after the date on which such a contraction is made, and for a further period, if any, as provided by the lease. The salvaging of any equipment or the need for rehabilitation of lands excluded from the Unit Area shall be as provided for in Article 14.4.

9.3.2 If any lease within Block A of the Unit Area as set out in Exhibits A and B of this Agreement includes a work commitment pursuant to Stipulation #5 of such lease, that work commitment will be satisfied by the drilling of the first well with a bottom hole location under a lease contained in Block A of the Unit Area. If any lease within Block B of the Unit Area as set out in Exhibits A and B of this Agreement includes a work commitment pursuant to Stipulation #5 of such lease, that work commitment will be satisfied by the drilling of the first well with a bottom hole location under a lease contained in Block B of the Unit Area. Any well with a bottom hole location under a lease contained in Block A of the Unit Area will not satisfy a work commitment for any lease contained in Block B of the Unit Area and vice versa.

9.3.3 If any lease committed to this Agreement is eliminated from the Unit Area in accordance with the provisions of Article 9.3 of this Agreement, and that lease contains a work commitment pursuant to Stipulation #5 of such lease, that work commitment will reattach to such lease at the time of its contraction out of the Unit Area. The time period allowed for the lessee to commence the drilling of a well as required by the work commitment shall be the period of time that remained for the completion of the work commitment at the time such lease was committed to Unit Area but in no event shall that period be less than one year from the date such work commitment reattaches.

ARTICLE 10 TITLES

10.1 Removal of Tract from Unit Agreement. If a Working Interest Owner or a Royalty Owner ceases to have any of its Tracts committed to this Agreement because of failure of title, those Tracts shall be removed from this Agreement effective as of 12:01 a.m. on the first day in the calendar month in which the failure of title is finally determined unless within 90 days after the date of its final determination of the failure of title, the true Working Interest Owner and Royalty Owner of the Tract execute this Agreement and, if a Working Interest Owner, the Unit Operating Agreement.

10.2 Revision of Exhibits. If a Tract in a Participating Area is removed from this Agreement because of failure of title, the Unit Operator shall recompute the Tract Participation of each of the Tracts remaining in the

Participating Area and shall revise the exhibits to this Agreement accordingly; provided, however, that the revised Tract Participations of the Tracts remaining in the Participating Area shall remain in the same ratio one to another. The revised exhibits shall be effective as of 12:01 a.m. on the first day of the calendar month in which the failure of title is finally determined.

10.3 Failure of Title of Part of Tract. In the event of the failure of title of any party to this Agreement as to a divided portion of any Tract, the Unit Operator, with the approval of the Working Interest Owners and the Commissioner, shall divide that Tract into separate Tracts, and if that Tract is in a Participating Area, shall recompute the Tract Participation of each of the resulting Tracts (the sum of which shall equal the Tract Participation of the original Tract) and revise the Exhibits to this Agreement accordingly. After that revision, that resulting Tract in which title was not affected shall remain in this Agreement, and the resulting Tract in which title failed shall be subject to the provisions of Articles 10.1 and 10.2 of this Agreement.

10.4 Working Interest Titles. If title to a Working Interest fails, the rights and obligations of the Working Interest Owners by reason of the failure of title shall be governed by the Unit Operating Agreement.

10.5 Royalty Interest Titles. If title to a Royalty Interest fails, but the Tract to which it relates is not removed from this Agreement, the party whose title failed shall not be entitled to royalty.

10.6 Production Where Title is in Dispute. If the title or right of any party claiming the right to receive all or any portion of the Unitized Substances allocated to a Tract is in dispute, the Unit Operator, at its discretion, shall either

(1) require that the party to whom Unitized Substances are delivered or to whom the proceeds or value are paid furnish security for the proper accounting to the rightful owner if the title or right of that party fails in whole or in part; or

(2) withhold and market the portion of Unitized Substances with respect to which title or right is in dispute, and impound the proceeds until the title or right is established by a final judgment of a court of competent jurisdiction or otherwise to the satisfaction of Working Interest Owners, whereupon the proceeds impounded shall be paid to the party rightfully entitled to them.

10.7 Definition of "In Dispute." For purposes of Article 10.6 of this Agreement, the State of Alaska's title shall not be deemed "in dispute" until a court with initial jurisdiction to adjudicate title has entered a judgment that the State does not have title to the lands.

10.8 Payment of Taxes to Protect Title. The owner of surface rights to lands within the Unit Area, or severed mineral interests or Royalty Interest in those lands or lands outside the Unit Area on which personal property, lease and well equipment, plants, and other facilities and equipment used, taken over, or otherwise acquired by the Working Interest Owners for use in Unit Operations are located, is responsible for the payment of any ad valorem taxes on all those

rights, interests, or property, unless that owner and the Working Interest Owners otherwise agree. If any ad valorem taxes are not paid by or for that owner when due, the Unit Operator may, with approval of the Working Interest Owners, at any time prior to tax sale, or prior to expiration of the period of redemption after tax sale, pay the tax lien. Any payment shall be an item of Unit Expense or Participating Area Expense. Unit Operator shall, if possible, withhold from any proceeds derived from the sale of Unitized Substances otherwise due any delinquent taxpayer an amount sufficient to defray the costs of payment or redemption, and credit the withholding to the Working Interest Owners. Withholding shall be without prejudice to any other remedy available to Unit Operator or Working Interest Owners.

10.9 Transfer of Title. Any conveyance of all or any part of any interest owned by any party with respect to any Tract shall be made expressly subject to this Agreement.

10.10 Successors and Assigns. This Agreement shall extend to, be binding upon, and inure to the benefit of the parties and their respective heirs, devisees, legal representatives, successors, and assigns and shall constitute a covenant and equitable servitude running with the land, leases, and interest covered by them.

ARTICLE 11

RELATIONSHIP OF PARTIES

11.1 No Partnership. The duties, obligations, and liabilities of the parties are intended to be several and not joint or collective. This Agreement is not intended to create, and shall not be construed to create, an association or trust, or to impose a partnership duty, obligation, or liability with regard to any one or more of the parties to this Agreement. Each party shall be individually responsible for its own obligations.

11.2 No Joint Refining or Marketing. This Agreement is not intended to provide, and shall not be construed to provide, directly or indirectly, for any joint refining or marketing of Unitized Substances.

11.3 Royalty Owners Free of Costs. This Agreement is not intended to impose, and shall not be construed to impose upon the State of Alaska or any other Royalty Owner any obligation to pay Unit Expense or Participating Area Expense.

11.4 Confidentiality of Information. Upon the request of the Unit Operator or the Working Interest Owners, the Commissioner shall hold as confidential to the extent authorized by statute any engineering, geophysical, or geological data, well data, daily drilling reports, or any other data or information of a similar nature which may be required by the State for any purpose of this Agreement.

ARTICLE 12

FORCE MAJEURE AND SUSPENSION OF OPERATIONS

12.1 Force Majeure and Suspension of Operations. If a suspension of Unit Operations or production on all or part of the Unit Area has been ordered under federal, state, or local law, or if the Commissioner determines that the Unit Operator has been prevented, after efforts made in good faith, from complying with any express or implied promise, term, condition, or covenant of this Agreement, from conducting drilling operations, or from producing or marketing Unitized Substances from the Unit Area by reason of Force Majeure, the Unit Operator's obligation to comply with that provision will be held in abeyance, but not voided, and the Commissioner will extend the term of the Unit Agreement for a period of time equal to the time lost under the unit term due to the suspension or prevention by Force Majeure. If Unit Operations or production are suspended or prevented under this Article and the continuation of those operations or production without suspension or prevention would have had the effect of extending the Unit Agreement, the Unit Agreement does not terminate during the period in which operations or production are suspended or prevented plus a reasonable time after that period, which shall not be less than six months, for the Unit Operator to resume operations or production. Nothing in this Article holds in abeyance the obligation to pay rentals, royalties, or other production or profit-based payments to the State of Alaska from operations or production in the Unit Area which are not suspended or prevented, or from operations or production which are unrelated to any suspension or prevention. For the purposes of this Article, any seasonal restriction on operations or production or other conditions specifically required or imposed as a term of sale of an original lease, or as a condition imposed under this Agreement, will not be considered a suspension of operations or production ordered pursuant to law, or prevention due to Force Majeure. However, upon application to the Commissioner, seasonal restrictions on operations or production imposed subsequent to approval of a Unit Agreement will be considered a suspension of operations or production ordered under law.

ARTICLE 13

EFFECTIVE DATE

13.1 Effective Date. This Agreement shall become binding upon each party as of the date each party signs the instrument by which it becomes a party, and shall become effective as of 12:01 a.m. on the day following approval by the Commissioner. At least one counterpart of this Agreement shall be filed for record by the Unit Operator in the filing office of the Department of Natural Resources, Anchorage, Alaska.

ARTICLE 14

TERM

14.1 Term. This Agreement terminates five years from the Effective Date unless

(1) a unit well in the Unit Area has been certified as capable of producing Unitized Substances in Paying Quantities, in which case this Agreement shall remain in effect for so long as Unitized Substances are produced in Paying Quantities from the Unit Area, or for so long as Unitized Substances can be produced in Paying Quantities and Unit Operations are being conducted in accordance with an approved Unit Plan of Exploration or Development, or, should production cease, for so long thereafter as diligent operations are in progress to restore production and then so long thereafter as Unitized Substances are produced in Paying Quantities; or

(2) the unit term is extended by the Commissioner in accordance with applicable regulations.

14.2 Termination by Working Interest Owners. This Agreement may be terminated at any time by the Working Interest Owners with the approval of the Commissioner.

14.3 Effect of Termination. Upon termination of this Agreement, the further development and operation of the Unit Area as a unit shall be abandoned, and Unit Operations shall cease. Each oil and gas lease or other agreement covering lands within the Unit Area shall remain in force for at least one year after the date on which this Agreement terminates, and for a further period, if any, as provided by the lease.

14.4 Salvaging Equipment and Rehabilitation Upon Termination. The Unit Operator and the Working Interest Owners shall have the right for a period of 3 years after the date of termination of this Agreement in which to salvage and remove all personal property, lease and well equipment, plants, and other facilities and equipment used, taken over, or otherwise acquired by the Working Interest Owners for use in Unit Operations. The Unit Operator shall rehabilitate the Unit Area to the satisfaction of the Commissioner within 3 years after the date of termination of this Agreement. The Commissioner may extend the period for salvage and removal of equipment and rehabilitation of the Unit Area. Upon the expiration of this period, and at the discretion of the Commissioner, any equipment not removed from the Unit Area becomes the property of the State of Alaska or may be removed by the State at the expense of the Working Interest Owners. All other improvements, such as roads, well pads, water reservoirs, landing strips, and material sites either shall be abandoned and the sites rehabilitated to the satisfaction of the Commissioner or shall be left intact and the Unit Operator and the Working Interest Owners absolved of all further responsibility or liability as to their maintenance, repair, and eventual abandonment and rehabilitation.

ARTICLE 15

EXECUTION

15.1 Original, Counterpart, or Other Instrument. An owner of Oil and Gas Rights may become a party to this Agreement by signing the original of this instrument, a counterpart, or other instrument agreeing to become a party. The signing of these instruments shall have the same effect as if all parties had signed this Agreement.

15.2 Joinder in Dual Capacity. Execution of this Agreement by any party as either a Working Interest Owner or a Royalty Owner shall commit all interests owned or controlled by that party in the Unit Area to this Agreement.

ARTICLE 16

RELATIONSHIP OF AGREEMENTS

16.1 Unit Agreement and Unit Operating Agreement. This Unit Agreement shall control the respective rights and obligations of the Unit Operator, the Working Interest Owners, the State of Alaska, and Royalty Interest Owners other than the State of Alaska in case of any conflict between this Agreement and the Unit Operating Agreement. However, where conflicts exist solely between Working Interest Owners, the Unit Operating Agreement shall prevail.

ARTICLE 17

LAWS AND REGULATIONS

17.1 Laws and Regulations. This Agreement shall be subject to all applicable federal, state, and local laws, rules, regulations, and orders in effect on the Effective Date and, insofar as is constitutionally permissible, to all laws, rules, regulations, and orders subsequently enacted or adopted after the Effective Date of this Agreement.

17.2 Construction. This agreement shall be construed according to the laws of the State of Alaska.

ARTICLE 18

GENERAL

18.1 Amendments. Except as otherwise provided in this Agreement, this Agreement may be amended by the parties. Except as otherwise provided in this Agreement, an amendment becomes effective upon approval by the Commissioner.

18.2 Action by Working Interest Owners. Except as otherwise provided in this Agreement, any action or approval required by the Working Interest Owners under this Agreement shall be in accordance with the provisions of the Unit Operating Agreement.

ARTICLE 19

DEFAULT

19.1 Default. Failure to comply substantially with any of the terms of this Agreement, including any Plans of Exploration, Development, or Operations which are a part of this Agreement, is a default under this Agreement.

19.1.1 The Commissioner will give notice to the Unit Operator and defaulting party (if other than the Unit Operator) of the default. The notice will state the nature of the default and include a demand to cure the default within a reasonable time, which, in the case of failure to pay rentals or royalties, will be a date determined by the Commissioner, and the case of any other default will be a date not less than 90 days after the date of the Commissioner's notice of default.

19.1.2 If there is no well certified as capable of producing Unitized Substances in Paying Quantities at the time a default occurs under this Agreement and the default is not cured by the date indicated in the demand, the Commissioner will, in his discretion, and after giving the Unit Operator and defaulting party (if other than the Unit Operator) reasonable notice and an opportunity to be heard, terminate this Agreement by mailing notice of the termination to the Unit Operator and defaulting party. Termination is effective upon mailing the notice.

19.1.3 If there is a well capable of producing Unitized Substances in Paying Quantities at the time a default occurs under this Agreement and the default is not cured by the date indicated in the demand, the Commissioner will, in his discretion, seek to terminate this Agreement by judicial proceedings.

IN WITNESS OF THE FOREGOING, the parties have executed this Unit Agreement on the dates opposite their respective signatures.

Party: _____
By: _____
Title: _____
Address: _____

Date: _____

Party: _____
By: _____
Title: _____
Address: _____

Date: _____

EXHIBIT A
OWNERSHIP INFORMATION
KEY UNIT "A" BLOCK

<u>Tract No.</u>	<u>Legal Description</u>	<u>No. of Acres</u>	<u>ADL#</u>	<u>Lessee of Record Ownership</u>	<u>Working Interest</u>	<u>State Royalty</u>	<u>NPSL</u>
1			318601	CHEVRON			
2			318615	CHEVRON			
3	T10N-R17E-UM Sec. 5, 6, 7, 8	2501	318618	KELLEY EVERETTE C. BURGLIN R. WAGNER W. COURTNEY R. GREGORY DAVID BURGLIN	5% 15% 15% 15% 15% 35%	20%	30%
4	T10N-R18E-UM Sec. 17, 18, 19, 20	2512	318626	KELLEY EVERETTE C. BURGLIN A. GRIEG J. DIERINGER R. WAGNER BRIAN BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
5				UNLEASED			
6	T10N-R17E-UM Sec. 15, 16, 21, 22	2560	318621	KELLEY EVERETTE C. BURGLIN W. WAUGAMAN J. RIBAR V. GAVORA MARY GUSTAFSON	5% 15% 20% 20% 20% 20%	20%	30%

**EXHIBIT A
OWNERSHIP INFORMATION
KEY UNIT "A" BLOCK**

<u>Tract No..</u>	<u>Legal Description</u>	<u>No. of Acres</u>	<u>ADL#</u>	<u>Lessee of Record Ownership</u>	<u>Working Interest</u>	<u>State Royalty</u>	<u>NPSL</u>
7	T10N-R17E-UM Sec. 17, 18, 19, 20	2512	318620	KELLEY EVERETTE C. BURGLIN J. THURMAN R. GREGORY C. COLE MARY GUSTAFSON	5% 15% 20% 20% 20% 20%	20%	30%
8			318616	CHEVRON			
9			318617	CHEVRON			
10			318622	CHEVRON			
11	T10N-R17E-UM Sec. 27, 28, 33, 34	2560	318623	KELLEY EVERETTE C. BURGLIN A. GRANT BOB GROSECLOSE M. MILLER BRIAN BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
12	T10N-R17E-UM Sec. 25, 26, 35, 36	2560	318624	KELLEY EVERETTE C. BURGLIN L. SANDERS E. COOK E. BIVENS MARY GUSTAFSON	5% 15% 20% 20% 20% 20%	20%	30%
13			318627	AMOCO			

**EXHIBIT A
OWNERSHIP INFORMATION
KEY UNIT "B" BLOCK**

<u>Tract No.</u>	<u>Legal Description</u>	<u>No. of Acres</u>	<u>ADL#</u>	<u>Lessee of Record Ownership</u>	<u>Working Interest</u>	<u>State Royalty</u>	<u>NPSL</u>
14			318673	AMOCO			
15				UNLEASED			
16	T9N-R17E-UM Sec. 1, 2, 11, 12	2560	318667	KELLEY EVERETTE C. BURGLIN C. COLE W. BOGGESS D. MORRISON DAVID BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
17	T9N-R17E-UM Sec. 3, 4, 9, 10	2560	318666	KELLEY EVERETTE C. BURGLIN R. WAGNER J. ARSENAULT M. MILLER MARY GUSTAFSON	5% 15% 20% 20% 20% 20%	20%	30%
18	T9N-R16E-UM Sec. 5, 6, 7, 8	2533	318665	KELLEY EVERETTE C. BURGLIN C. COLE W. BOGGESS D. LARSON BRIAN BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%

**EXHIBIT A
OWNERSHIP INFORMATION
KEY UNIT "B" BLOCK**

<u>Tract No..</u>	<u>Legal Description</u>	<u>No. of Acres</u>	<u>ADL#</u>	<u>Lessee of Record Ownership</u>	<u>Working Interest</u>	<u>State Royalty</u>	<u>NPSL</u>
19	T9N-R17E-UM Sec. 17, 18, 19, 20	2544	318668	K. EVERETTE C. BURGLIN R. WAGNER J. ARSENAULT O. DROZ BRIAN BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
20				UNLEASED			
21	T9N-R17E-UM Sec. 13, 14, 23, 24	2560	318669	K. EVERETTE C. BURGLIN C. COLE R. SPAKE J. JOHNSON MARY GUSTAFSON	5% 15% 20% 20% 20% 20%	20%	30%
22	T9N-R18E-UM Sec. 17, 18, 19, 20	2544	318674	K. EVERETTE C. BURGLIN R. WAGNER J. DIERINGER R. SPAKE BARBARA BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
23			318675	AMOCO			
24			318676	AMOCO			
25				AMOCO			
26				UNLEASED			
27				UNLEASED			

**EXHIBIT A
OWNERSHIP INFORMATION
KEY UNIT "B" BLOCK**

<u>Tract No.</u>	<u>Legal Description</u>	<u>No. of Acres</u>	<u>ADL#</u>	<u>Lessee of Record Ownership</u>	<u>Working Interest</u>	<u>State Royalty</u>	<u>NPSL</u>
28	T9N-R20E-UM Sec. 29, 30, 31, 32	2555	318682	K. EVERETTE C. BURGLIN R. GREGORY J. THURMAN J. MURPHY BRUCE BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
29	T9N-R19E-UM Sec. 25, 26, 35, 36	2560	318681	K. EVERETTE C. BURGLIN J. ARSENAULT J. THURMAN C. COLE BRUCE BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
30				UNLEASED			
31	T9N-R19E-UM Sec. 29, 30, 31, 32	2555	318680	K. EVERETTE C. BURGLIN R. GREGORY J. THURMAN R. GOMEZ BARBARA BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
32				MOBIL/PHILLIPS			

**EXHIBIT A
OWNERSHIP INFORMATION
KEY UNIT "B" BLOCK**

<u>Tract No.</u>	<u>Legal Description</u>	<u>No. of Acres</u>	<u>ADL#</u>	<u>Lessee of Record Ownership</u>	<u>Working Interest</u>	<u>State Royalty</u>	<u>NPSI</u>
33	T9N-R18E-UM Sec. 27, 28, 33, 34	2560	318678	K. EVERETTE C. BURGLIN R. GREGORY J. THURMAN R. WAGNER BARBARA BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
34	T9N-R18E-UM Sec. 29, 30, 31, 32	2555	318677	K. EVERETTE C. BURGLIN J. THURMAN J. ARSENAULT R. WAGNER BARBARA BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
35	T9N-R17E-UM Sec. 25, 26, 35, 36	2560	318671	K. EVERETTE C. BURGLIN R. GREGORY J. THURMAN C. COLE BARBARA BURGLIN	5% 15% 20% 20% 20% 20%	20%	30%
36				UNLEASED			
37	T9N-R17E-UM Sec. 29, 30, 31, 32	2555	318670	K. EVERETTE C. BURGLIN R. GREGORY J. THURMAN R. SPAKE MARY GUSTAFSON	5% 15% 20% 20% 20% 20%	20%	30%

R 16 E

"A" BLOCK

R 17 E

EXHIBIT B

KEY UNIT

AREA MAP
 BASED ON UNIAT MERIDIAN, ALASKA
 FEB 85 *KE*

UNIT BOUNDARY

① DENOTES TRACT NUMBERS

"A" BLOCK 31771 ACRES
 TRACTS 1 thru TRACTS 13

"B" BLOCK 60065 ACRES
 TRACTS 14 thru tracts 37

TOTAL UNIT ACREAGE 91836 ACRES

CHEVRON
 26 25
 + ①
 35 36
 ADL
 318601 2560ac

CHEVRON
 2 1
 + ②
 11 12
 ADL
 318615 2560ac

BURGLIN, et al
 6 5
 + ③
 7 8
 ADL
 318618 2501ac

CHEVRON
 14 13
 + ⑧
 23 24
 ADL
 318616 2560ac

BURGLIN, et al
 18 17
 + ⑦
 19 20
 ADL
 318620 2512ac

BURGLIN, et al
 16 15
 + ⑥
 21 22
 ADL
 318621 2560ac

UN-
 LEASED
 13
 + ⑤
 24
 1280ac

BURGLIN, et al
 18 17
 + ④
 19 20
 ADL
 318626 2512ac

CHEVRON
 26 25
 + ⑨
 35 36
 ADL
 318617 2560ac

CHEVRON
 30 29
 + ⑩
 31 32
 ADL
 318622 2523ac

BURGLIN, et al
 28 27
 + ⑪
 33 34
 ADL
 318623 2560ac

BURGLIN, et al
 26 25
 + ⑫
 35 36
 ADL
 318624 2560ac

AMOCO
 30 29
 + ⑬
 31 32
 ADL
 318627 2523ac

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R 16 E

R 17 E

R 18 E

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scale in miles

EXHIBIT B

KEY UNIT "B" BLOCK

R 17 E

R 18 E

BURGLIN, et al 6 5 + (18) 7 8 ADL 318665 2533ac.	BURGLIN, et al 4 3 + (17) 9 10 ADL 318666 2560ac.	BURGLIN, et al 2 1 + (16) 11 12 ADL 318667 2560ac.	UNLEASED 6 5 + (15) 7 8 2560ac.	AMOCO 4 3 + (14) 9 10 ADL 318673 2560ac.		
BURGLIN, et al 18 17 + (19) 19 20 ADL 318668 2544ac.	UNLEASED 16 15 + (20) 21 22 2560ac.	BURGLIN, et al 14 13 + (21) 23 24 ADL 318669 2560ac.	BURGLIN, et al 18 17 + (22) 19 20 ADL 318674 2544ac.	AMOCO 16 15 + (23) 21 22 ADL 318675 2560ac.	AMOCO 14 13 + (24) 23 24 ADL 318676 2560ac.	T 9 N
BURGLIN, et al 30 29 + (37) 31 32 ADL 318670 2555ac.	UNLEASED 28 27 + (36) 33 34 2560ac.	BURGLIN, et al 26 25 + (35) 35 36 ADL 318671 2560ac.	BURGLIN, et al 30 29 + (34) 31 32 ADL 318677 2555ac.	BURGLIN, et al 28 27 + (33) 33 34 ADL 318678 2560ac.	MOBIL/PHILLIPS 26 25 + (32) 35 36 2560ac.	CONTINUED ON PAGE 3
R 17 E			R 18 E			

EXHIBIT B

KEY UNIT
"B" BLOCK

R 19 E

CONTINUED FROM PAGE 2

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9
N

AMOCO 18 17 + (25) 19 20 ADL 318679 2544ac.	UNLEASED 16 15 + (26) 21 22 2560ac.	UNLEASED (27) 23 24 1280ac.	
BURGLIN, et al 30 29 + (31) 31 32 ADL 318680 2555ac.	UNLEASED 28 27 + (30) 33 34 2560ac.	BURGLIN, et al 26 25 + (29) 35 36 ADL 318681 2560ac.	BURGLIN, et al 30 29 + (28) 31 32 ADL 318682 2555ac.

R 20 E

T
9
N

R 19 E

R 20 W

EXHIBIT A
Ownership Information

Tract No.	Description (Township, Range, Sec., Lot)	No. of Acres	ADL No.	Lessee of Record Ownership	Working Interest	Royalty Percentage and Owner	NPSL
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EXHIBIT B
Map of Unit Area and Tracts

EXHIBIT C
Participating Area
(General Geologic Description)

Tract No.	Legal Description (Township, Range, Sec., Lot)	ADL No.	Tract Participation
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EXHIBIT D
Map of _____ Participating Area

EXHIBIT E
Allocation of Participating Area Expense

Tract No.	Allocation of _____ Participating Area Expense (%)
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EXHIBIT F
Allocation of Unit Expense

Tract No.	Allocation of Unit Expense
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EXHIBIT G
Plan of Development or Exploration

KEY TO ABBREVIATIONS:

ACC - Alaskan Crude Corporation

BURGLIN - Burglin, et al

EXHIBIT G

UNIT PLAN OF EXPLORATION

Attached to and made a part of
the Key Unit Agreement

For the period starting with the Effective Date of this Agreement and continuing for five (5) years thereafter, the Working Interest Owners intend to proceed with the following Unit Plan of Exploration.

1. Exploratory Wells

- a. The first well will have a bottomhole location in the northeast quarter (NE $\frac{1}{4}$) of Section 5 of T10N-R17E on Lease ADL 318618 drilled to a depth sufficient to test the hydrocarbon potential of the Lisburne Group. The Lisburne Group is that interval (or stratigraphic equivalent) which was encountered between 9353 and 9656 feet measured depth in the ARCO Delta State No. 1. (Section 10-T10N-R16E). This well is planned to commenced prior to March 31, 1987.
- b. A second exploratory well is planned to be commenced prior to March 31, 1989. The bottomhole location of the second well will be in Block B of the Unit as described in Exhibits A and B and will take into account information obtained from all previous wells and the studies mentioned below. The geological justification for the well bottom-hole location will be provided to the State.

2. Studies

Geological, geophysical and engineering studies based on available information and integrated with new data will continue to be carried out by the Working Interest Owners in order to evaluate the hydrocarbon potential of the leases within the Unit boundary.

The terms of the Unit Plan of Exploration shall cover the time period from Effective Date of this Agreement through a period of five (5) years.

The Unit Operator will continue to obtain applications and permits for Unit Operations as required by State laws, regulations and/or State Oil and Gas Lease Stipulations. Commencing in 1986, The Unit Operator will file annual progress reports describing operations and results to date under the Unit Plan of Exploration.