

ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672

5446 SRES OIL & GAS HEARING, 3/7/88

1018

NORTH SLOPE RECOVERABLE RESERVES

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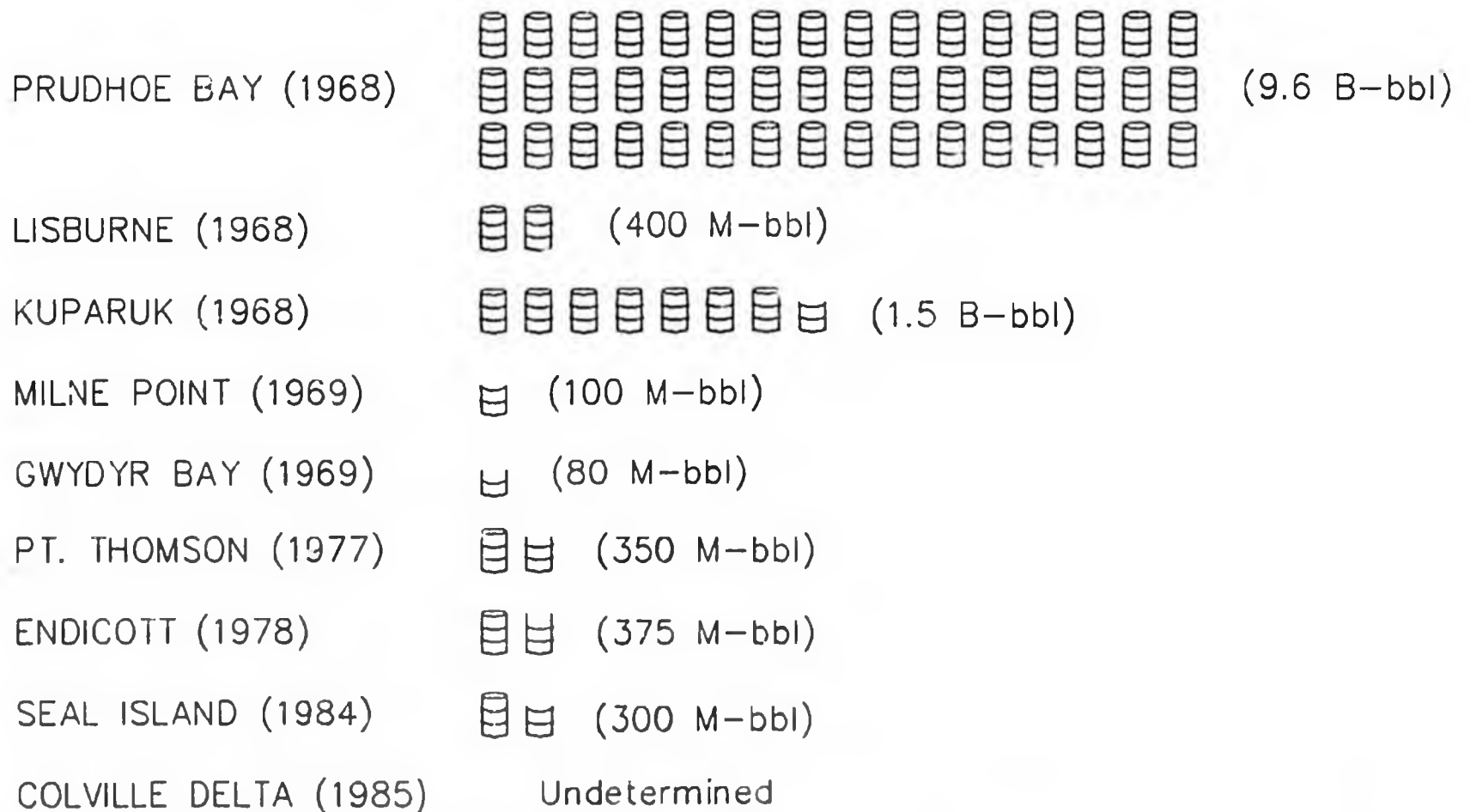


Figure 4. Recoverable Reserves, North Slope Alaska

PREDICTED ALASKA PRODUCTION

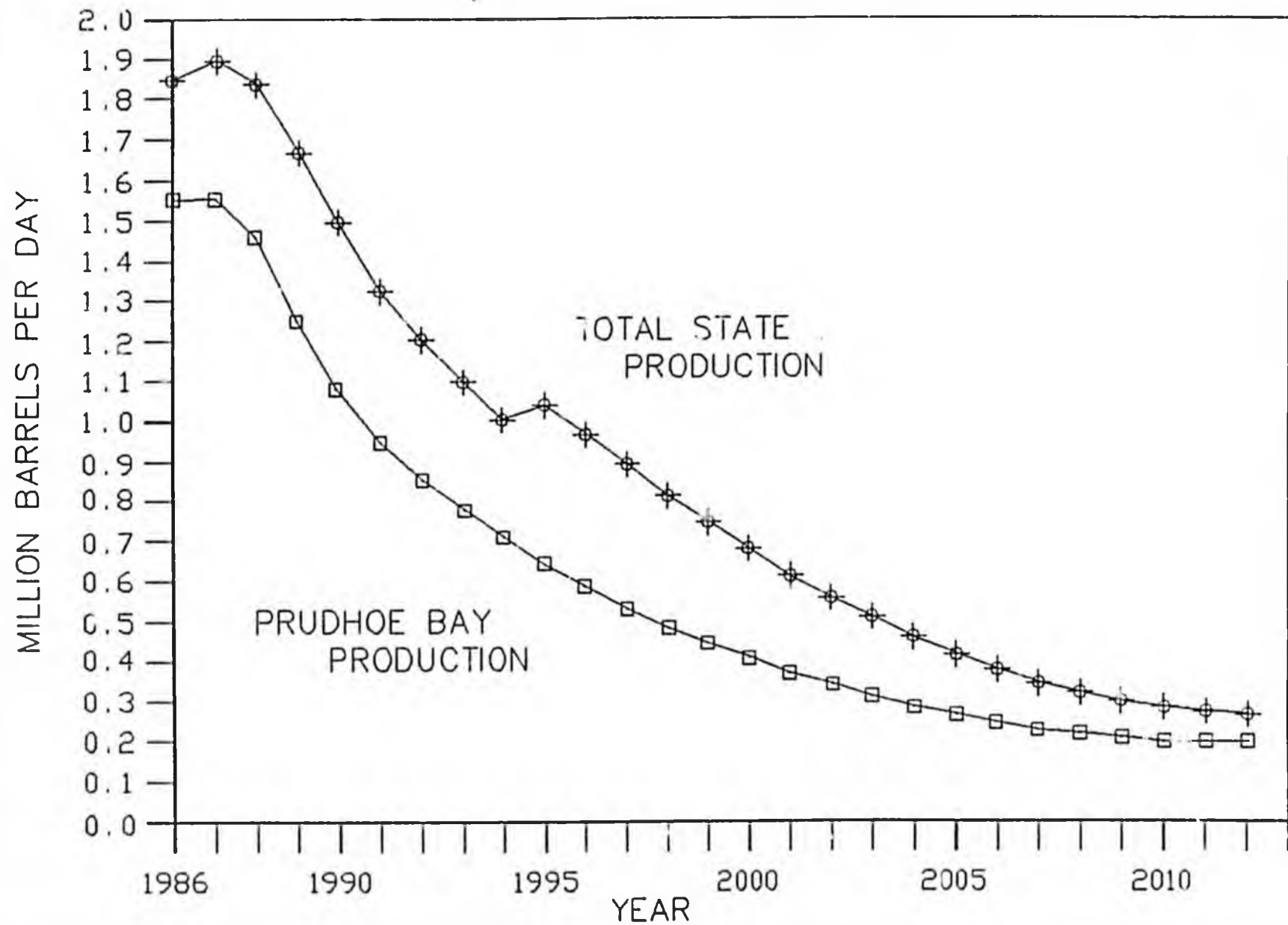


Figure 5. Predicted Oil Production, Alaska

In 1972, the Navy began a new and comprehensive NPR-A assessment program (see Early History section). The USGS took over the operation of this program in 1977. This program included the collection of thousands of line miles of reflection seismic data, the running of extensive gravity, magnetic, and geochemical surveys, and the drilling of 28 test wells (excluding the Barrow area wells). The drilling program discovered the noncommercial Walakpa gas field and good oil and gas shows in several test wells (table 1). The primary aim of this operation, which ceased in 1982, was resource assessment, and not discovery. Private industry has drilled only one exploratory well in NPR-A, the ARCO Brontosaurus well, drilled and subsequently abandoned, in 1985.

Only some 30 wells (table 1) have been drilled with modern methods and based on modern seismic mapping. The drilling data indicate that NPR-A contains at least four oil generating units: The Shublik (Triassic), the Kingak Shale (Jurassic-Cretaceous), the Pebble Shale unit (Lower Cretaceous), and the Torok Shale (Cretaceous). Mapping shows that these units underlie most of NPR-A. Thermal maturity modeling indicates that these units are thermally mature for oil generation in many areas of the reserve. Seismic structural interpretation shows the possible presence of both stratigraphic and structural traps, particularly traps in the structurally complicated foreland and thrust region (southern NPR-A).

Large areas, mainly the foothills belt and the southwestern quarter (Utukok area) remain unexplored or virtually unexplored, and a large-scale, modern exploration effort is still required to adequately define the potential of this part of the North Slope Petroleum Province. Most of the exploratory and test well drilling concentrated in the structurally simple coastal plain sedimentary sequence. The more structurally complex areas to the south of the coastal plain are virtually untested, as only two modern wells, the Awuna and Lisburne, have penetrated this area. Also, since these wells were drilled in 1980, the understanding of structural styles in fold belts, such as the NPR-A foothills province, has undergone major changes. Consequently, there are fresh and untested play concepts in the Brooks Range foothills of the NPR-A. Similar foreland and thrust regions of the Rocky Mountain Cordillera have recently proven productive.

Arctic National Wildlife Refuge

In 1960, Congress created the Arctic National Wildlife Range (figure 3), originally covering about 9 million acres, in northeastern Alaska. Subsequently (1980), Congress renamed it the Arctic National Wildlife Refuge (ANWR) and enlarged it to 19 million acres. Prior to 1983, only surface geological information and gravity and magnetic surveys were conducted in the refuge. As part of the legislation expanding ANWR, Congress set aside about 1.5 million acres of the coastal plain for petroleum evaluation (the so-called 1002 area) because of the presence of oil seeps and oil-stained rocks at the surface. In the winter of 1983-1984, as part of the 1002 exploration program mandated by the Alaska National Interest Lands Conservation Act, private

Table No. 1

First Phase of NPR-A Oil Exploration
1946-1953

<u>Well</u>	<u>Depth</u>	<u>Notation</u>
No. Simpson No. 1	3774	Drilled on basis of extensive surface seeps. 1945-1951, 33 shallow "core tests" were also drilled in this area.
So. Barrow No. 1	3553	Gas well.
So. Barrow No. 2	2504	Gas well.
So. Barrow No. 3	2900	Gas well.
Grandstand No. 1	3937	Oil well in Umiat Field p/a.
Fish Creek No. 1	7020	Drilled on basis of surface seeps. Tested oil 200 bopd from Nanushuk.
Oumalik No. 1	11872	
E. Oumalik No. 1	6035	Gas shows.
Square Lake No. 1	3987	Gas well p/a.
Wolf Lake No. 3	3760	Gas well p/a.
Titaluk No. 1	4020	
Knifeblade 2a	1805	
Meade No. 1	5305	Gas well p/a.
Simpson No. 1	7002	Oil shows.
Topagoruk No. 1	10503	Gas shows.
E. Topagoruk	3589	
Umiat No. 1	6005	Produced oil.
Umiat No. 11	3303	Produced oil.
Umiat No. 2		Oil recovered in Dst.

Table No. 1 (page 2)

First Phase of NPR-A Oil Exploration
1946-1953

<u>Well</u>	<u>Depth</u>	<u>Notation</u>
Umiat No. 3		Bailed oil.
Umiat No. 4		Bailed oil.
Umiat No. 5		400 bopd.
Gubik No. 1	6000	Tested producible gas and recoverable oil.
Kaolak No. 1	6952	
Barrow No. 7	2180	Gas well.
Barrow No. 9	2429	Gas well.
Barrow No. 10	2240	Gas well.
Barrow No. 11	2171	Gas well.
Barrow No. 12		Dry well.
Barrow No. 13	2249	Marginal gas well.
Barrow No. 14	1906	Gas well.
Barrow No. 15	2270	Gas well.
Barrow No. 16	2332	Dry well.
Barrow No. 17		1.09 MMCFD and oil cut mud.
Barrow No. 18		Gas well.
Barrow No. 19		Gas well, best in field.
Barrow No. 20		Gas well, marginal oil well.
1937 drilling:	2 gas wells 2 confidential wells.	

Second Phase of NPR-A Oil Exploration
1974-1977

<u>Well</u>	<u>Depth</u>	<u>Notation</u>
So. Barrow No. 12	2285	
Cape Halkett No. 1	9900	
So. Harrison Bay	11,290	Minor shows.
Atigaru Point No. 1	11,535	Oil and gas shows.
W. Fish Creek No. 1	11,423	Drilled at surface seeps. Fish Creek section removed.
W. T. Foran No. 1	8864	Dead oil, good porosity.
So. Simpson No. 1	8795	Gas shows in Torok.

Third Phase of NPR-A Oil Exploration
USGS-Husky
1977-1981

<u>Well</u>	<u>Depth</u>	<u>Notation</u>
So. Barrow No. 16	2400	
Walakpa No. 1	3666	Producible gas, Jurassic sands, oil stained sand.
W. Dease No. 1	4173	Oil shows, some porosity.
Tulugeak No. 1	4015	
Walakpa No. 2	4360	Gas well, drilled to delineate Walakpa Field 6 mile down dip.
No. Kalikpik No. 1	7395	Gas shows, drilled on seismic anomaly.
No. Inigok No. 1	10,170	Gas shows.
Koluktak No. 1	5882	Gas shows, good porosity.
Awuna No. 1	11,200	Drilled on surface expression of "triangle zone." Tested 2000+ bwpd.
So. Meade No. 1	9945	Tested gas, oil shows, good porosity.
Kugrua No. 1	12,588	Gas shows.
Kuyanak No. 1	6690	Last well drilled.
Drew Point No. 1	7946	Gas show, some oil shows in Sag 16'.
Inigok No. 1	20,102	Gas show and residual oil.
Ikpikpuk No. 1	15,481	Minor gas shows. Lower Cretaceous.
E. Simpson No. 2	7505	Dead oil, good porosity in Ivishak Keketuk.
J. W. Dalton No. 1	9367	Residual oil in Sadlerochit sands.
E. Simpson No. 1	7739	Heavy oil in Ivishak, gas.

Third Phase of NPR-A Oil Exploration (page 2)
USGS-Husky
1977-1981

<u>Well</u>	<u>Depth</u>	<u>Notation</u>
Seabee No. 1	15,611	Gas shows.
E. Teshepak No. 1	9000	Oil shows, Cretaceous sands.
Lisburne	11,608	Drilled on surface seeps, gas shows.

Fourth Phase of NPR-A Oil Exploration (page 2)
Industry wells
1981-Present

<u>Well</u>	<u>Depth</u>	<u>Notation</u>
Chevron Livehorse No. 1	900	Minor shows of oil and gas.
ARCO Brontosaurus		Held confidential

industry collected about 700 line miles of reflection seismic data in the 1002 area (about the western three-fourths of the coastal plain in ANWR). In the winter of 1984-1985, industry collected about 700 more line miles of reflection seismic data. Gravity data and shot hole core samples were also collected. Interpretation of this data revealed promising, large, subsurface exploration targets that had previously only been tentatively inferred. Surface geological studies indicate that the coastal plain also has good hydrocarbon source rocks and good- to excellent-reservoir potential.

One well was drilled during 1984-1985 on Arctic Slope Regional Corporation/ Kaktovik Inupiat Corporation land adjacent to the 1002 area. Only a few Chevron, British Petroleum, and Standard Alaska people know the data revealed by the well. From subsequent acts by this group, however, one could reasonably infer that the KIC-1 well was encouraging.

For further discussion of the 1002 potential, refer to Arctic National Wildlife Refuge, Alaska, Coastal Plain Resource Assessment: Report and Recommendation to the Congress of the United States and Final Legislative Environmental Impact Statement (USDOI, 1987).

Other Resources

Besides oil and gas, the North Slope contains vast quantities of coal.

Barnes (1967) estimated 120,197 million tons of "identified resources" coal on the North Slope of Alaska. Tailleux and Brosge (1976) calculated an "additional speculative resource" of 220 billion to 3.35 trillion tons, for a total of 321 to 3,471 billion tons. Schaff (1980) estimated between 402 and 4,000 billion tons of "hypothetical resources" and 60 to 146 billion tons of identified resources for a total of 460 to 4,146 billion tons of coal on the North Slope.

Schaff (1980) estimated that 55 percent of the coal on the North Slope of Alaska occurs within the Utukok area of NPRA. If correct, the Utukok area may contain 177 to 2,280 billion tons of coal. If Schaff's (1980) other estimates are correct; (1) 50 percent of the nation's coal is in Alaska, and (2) 80 percent of Alaska's coal is in NPRA, then the Utukok area may hold approximately one-quarter of the nation's coal resources (22 percent).

In addition to coal, the Utukok area of NPR-A has additional mineral potential. Phosphate of unknown quantity occurs within this area of NPR-A. Phosphate deposits usually have the rare earth elements, which can have strategic importance, as by-products.

This southern portion of the Utukok area is also on trend with Red Dog, a "world class" lead-zinc discovery. It is not possible to say at this time if there is a greater or lesser potential of similar deposits in NPRA than outside it.

Summary and Conclusions

Because of disappointing results elsewhere in Alaska, oil and gas interest has returned to the North Slope. Currently, the Central Arctic, including Prudhoe Bay, is the most thoroughly explored of the North Slope regions. Even here, with hundreds of wildcat wells, companies continue to drill exploratory wells.

In the NPR-A, the foothills belt and the southwestern quarter (Uukok area) remain virtually untested, while the coastal plain has experienced the most thorough testing. At present, relatively low and somewhat volatile oil prices have dampened enthusiasm for additional NPR-A exploration, but several tracts remain leased.

ANWR currently holds the status of a priority exploration objective. The ANWR coastal plain has good hydrocarbon source rocks, large structures, and good to excellent reservoir potential -- truly the best potential for another Prudhoe Bay-size field in North America.

With known oil fields in NPR-A and the Central Arctic, the North Slope of Alaska remains the best hope of adding to the nation's oil reserves. Further, it should be pointed out that the Central Arctic and NPR-A contain vast coal resources which add to their value as a further source of energy. Placing any part of the North Slope off-limits to exploration is, at best, extremely premature.

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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

Last Amended 3/30/84, Register 89

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 38.05.190

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

(i) 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 36.05.020
AS 36.05.145
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 38.05.160

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 38.05.160

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 83.353, 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 6/26/81, Register 76; 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 38.05.130

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 on 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 38.05.160

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 85.160. (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 6/23/81, 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).

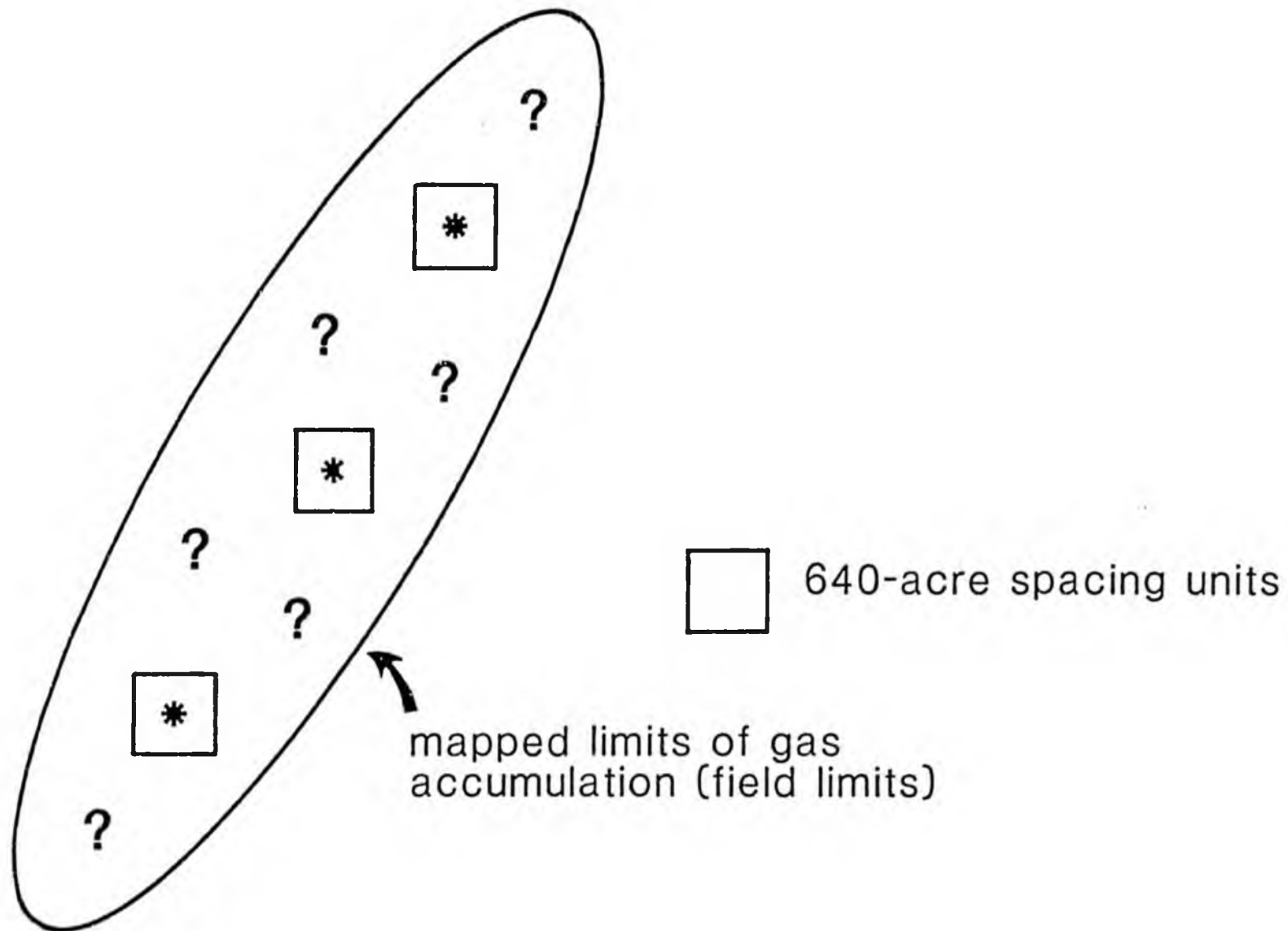
(b) The well site area must be evaluated by sidescan sonar and other pertinent surveys to determine whether potential seabed hazards to drilling operations are present for each type of well listed in 20 AAC 25.005 to be drilled offshore from a mobile bottom-founded, jack-up or floating unit. Survey results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

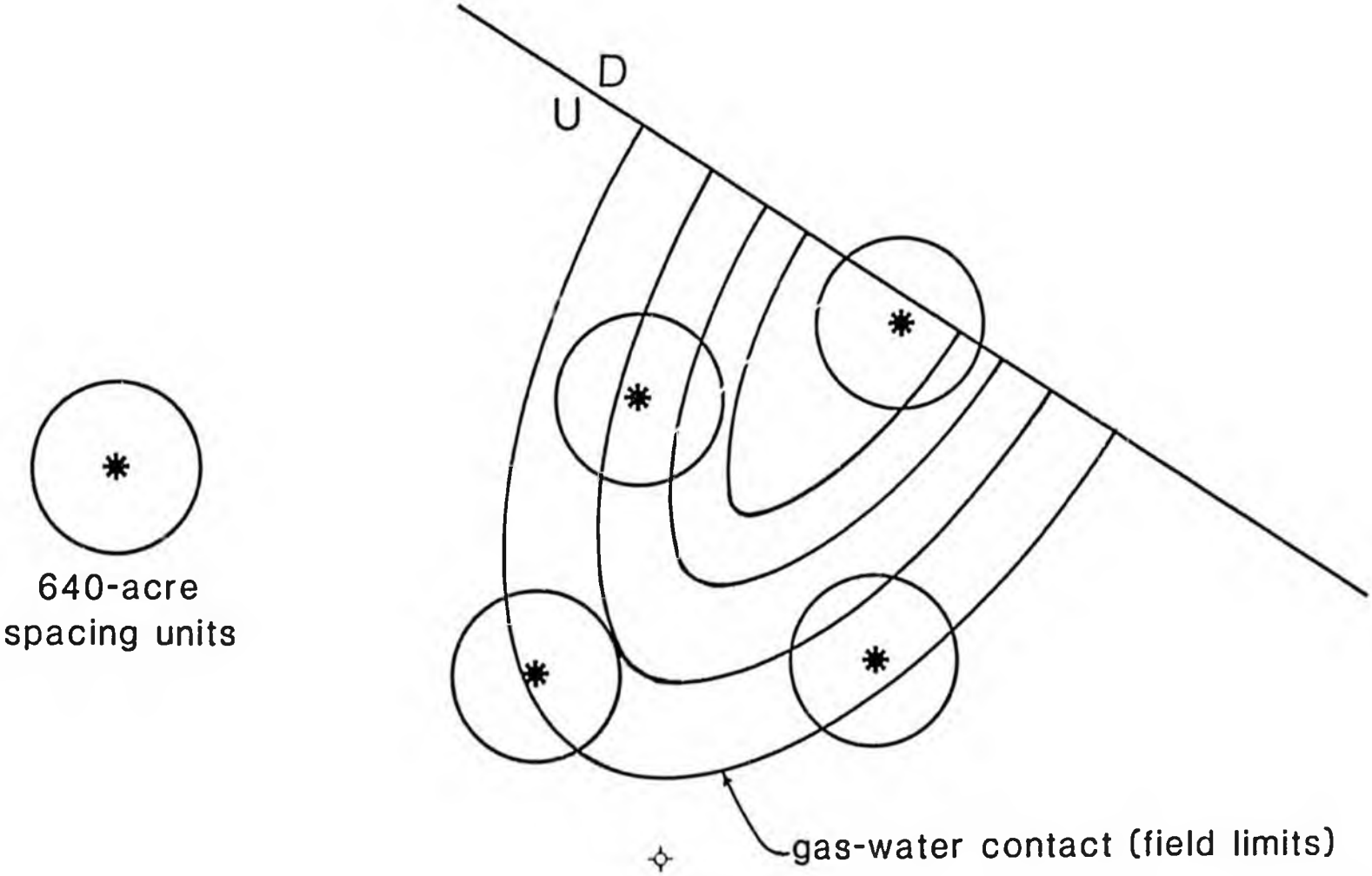
Authority: AS 31.05.030

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

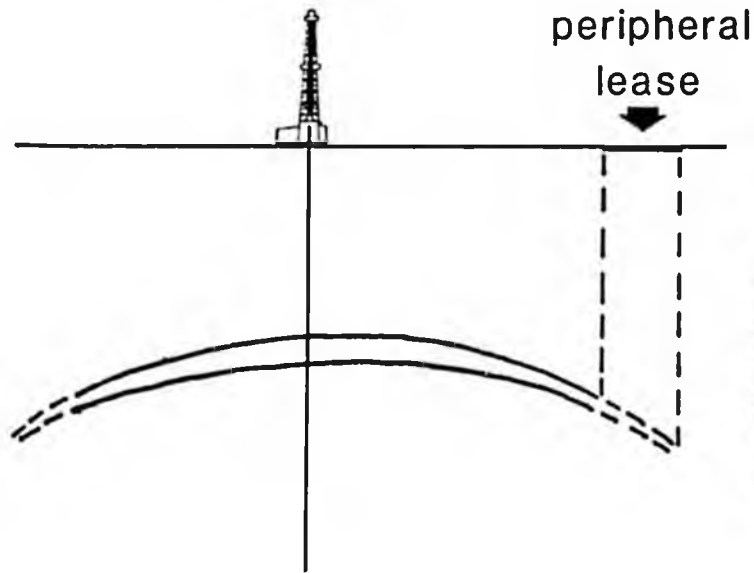


Hypothetical Field Drilled on 640-acre Spacing Units

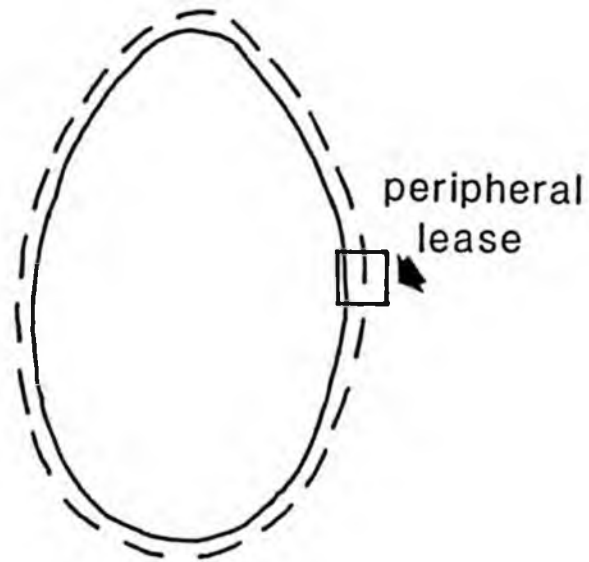


Determining Field Limits

Cross Section



Map View

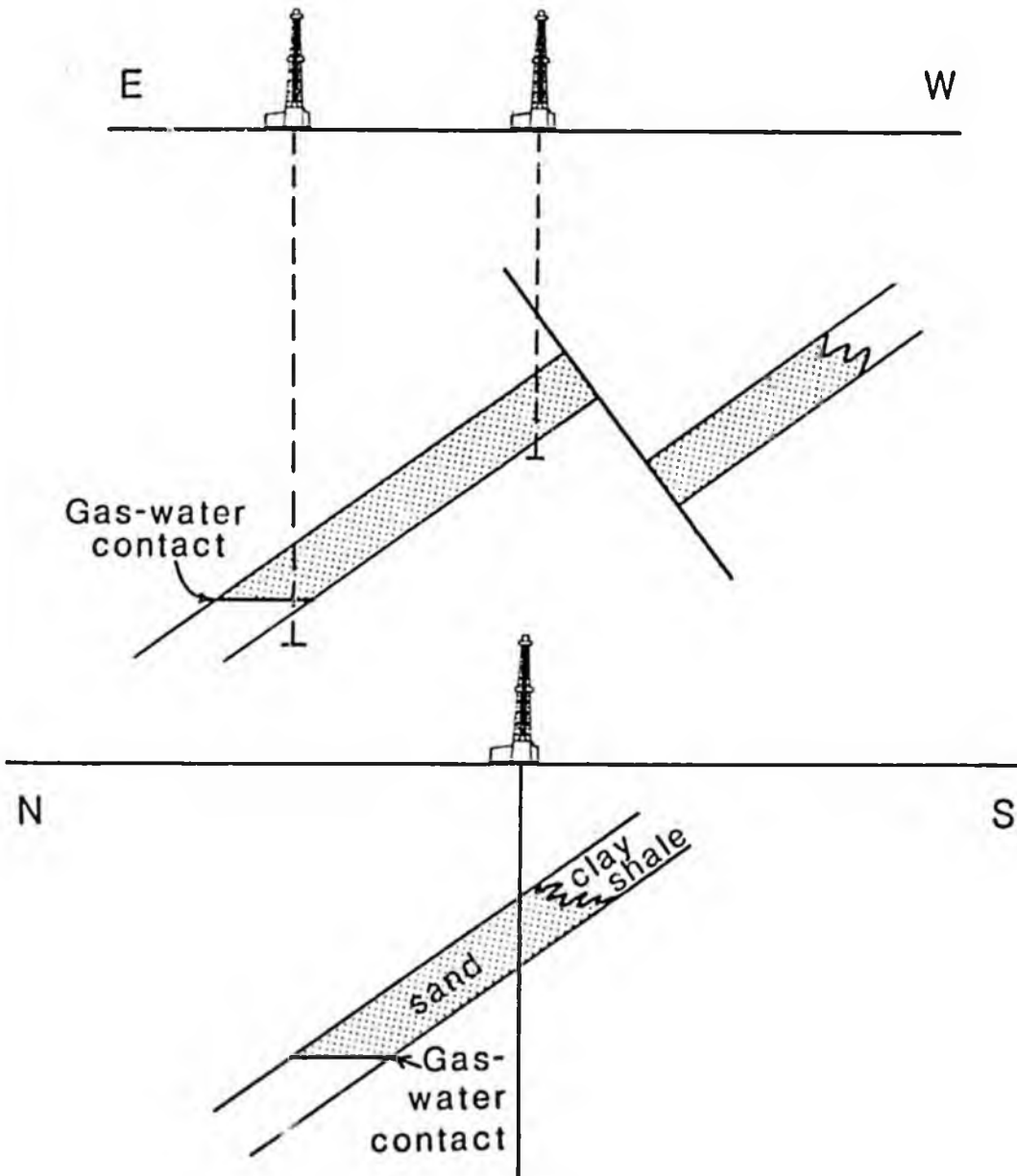


Useful Information

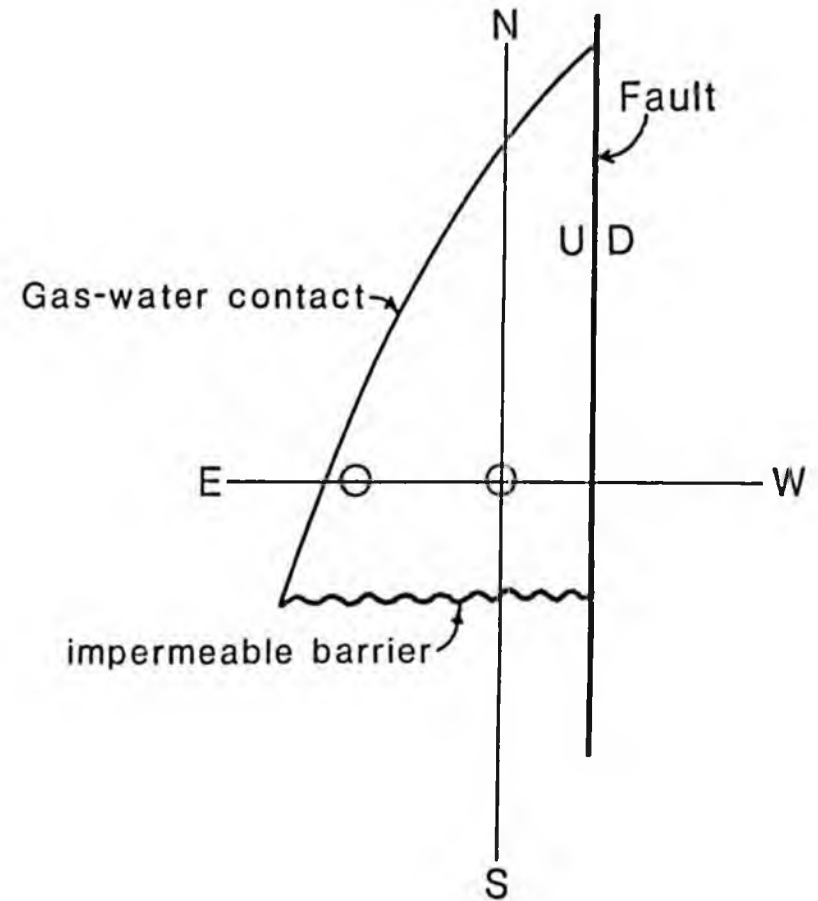
- 1) Seismic data
- 2) Reservoir type
(homogeneous?)
- 3) Other fields in basin
- 4) Well data
oil-water,
gas-water contacts
other log information
- 5) Production data
pressure draw-down etc.

Combination Structural-Stratigraphic Trap Hypothetical Asymmetrical Gas Field

Cross Sections:



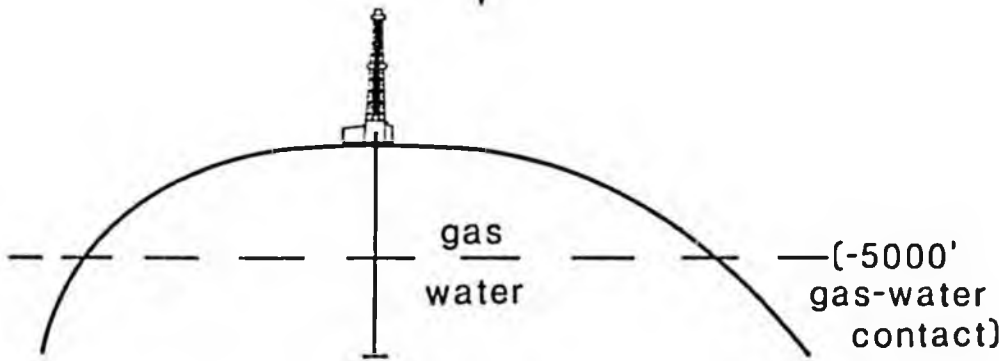
Map View:



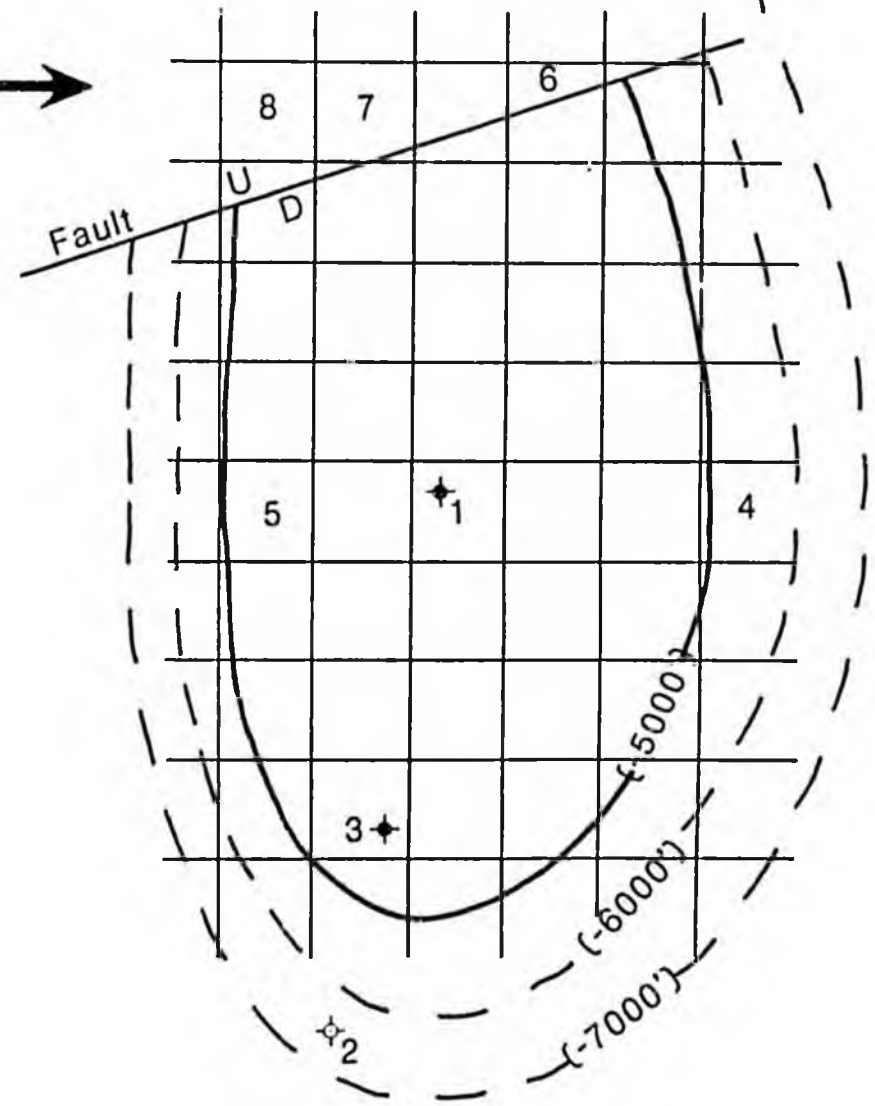
Hypothetical Gas Field showing possible well locations and field (lease) equity

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

Sec. 38.05.180. Oil and gas leasing. (a) The legislature finds that (1) the people of Alaska have an interest in the development of the state's oil and gas resources to

(A) maximize the economic and physical recovery of the resources;
 (B) maximize competition among parties seeking to explore and develop the resources;

(C) maximize use of Alaska's human resources in the development of the resources;

(2) it is in the best interests of the state to encourage an assessment of its oil and gas resources and to allow the maximum flexibility in the methods of issuing leases to

(A) recognize the many varied geographical regions of the state and the different costs of exploring for oil and gas in these regions;

(B) minimize the adverse impact of exploration, development, production, and transportation activity.

(b) The commissioner shall annually prepare and submit to the legislature, between the first and the fifteenth day of each regular legislative session, a five-year proposed oil and gas leasing program consisting of a schedule of proposed lease sales and specifying as precisely as practicable the location of tracts proposed to be offered for oil and gas leasing during the calendar year in which the proposed program is submitted to the legislature and the following four calendar years.

(c) Except as provided in (d) and (w) of this section, an oil and gas lease sale may not be held unless it was included in the proposed leasing programs submitted to the legislature during the two calendar years preceding the year in which the sale is held. A lease sale shall be held during the calendar quarter for which it is scheduled in the proposed oil and gas leasing program but may be delayed by the commissioner for not more than 90 days after the last day of the calendar quarter for which it was scheduled if the commissioner determines that a delay is in the best interest of the state. A lease sale which is not held during the calendar quarter for which it was scheduled in the oil and gas leasing program, or in the following 90-day period authorized by this subsection, may be held only if rescheduled as provided in (b) of this section. A lease sale may not be held before the date it is scheduled in the proposed oil and gas leasing program.

(d) The commissioner may issue oil and gas leases in an area that has not been included in a leasing program submitted, in accordance with (b) of this section, to the legislature if

(1) the land to be leased was previously subject to a valid state or federal oil and gas lease; or

(2) the land to be leased is contiguous to land already under state, federal or private lease and the commissioner makes a written finding, after hearing, that leasing of the land would result in a substan-

*Don't know
time*

tial probability of early evaluation and development of the land to be leased; or

(3) the land to be leased is adjacent to land owned or controlled by another party on which a discovery of commercial quantities of oil or gas has been made, and the commissioner finds, after hearing, that there is a reasonable probability that the land to be leased contains oil or gas in communication with the oil or gas discovered on the land of the other party; or

(4) the land to be leased is adjacent to land included in the federal five-year Outer Continental Shelf leasing program under 43 U.S.C. § 1344, and the commissioner makes a written finding, after hearing, that coordinated or simultaneous leasing with the federal government is in the public interest.

(e) Simultaneously with submission of the leasing program required under (b) of this section, the commissioner shall submit to the legislature a report containing the following:

(1) the schedule of all lease sales held during the preceding calendar year, the bidding method or methods utilized, and an analysis of the results of the bidding;

(2) if determined, a description of the bidding methods to be used for all lease sales to be held during the current and next two succeeding calendar years;

(3) the reasons a particular bidding method has been selected.

(f) The commissioner may issue oil and gas leases on state land to the highest responsible qualified bidder determined by competitive bidding under regulations adopted by the commissioner. Bidding may be by sealed bid or according to any other bidding procedure the commissioner determines is in the best interests of the state. Whenever, under any of the leasing methods listed in this subsection, a royalty share is reserved to the state, it shall be delivered in pipeline quality and free of all lease or unit expenses, including but not limited to separation, cleaning, dehydration, gathering, salt water disposal, and preparation for transportation off the lease or unit area. Following a pre-sale analysis, the commissioner may choose at least one of the following leasing methods:

(1) a cash bonus bid with a fixed royalty share reserved to the state of not less than 12 1/2 per cent in amount or value of the production removed or sold from the lease;

(2) a cash bonus bid with a fixed royalty share reserved to the state of not less than 12 1/2 per cent in amount or value of the production removed or sold from the lease and a fixed share of the net profit derived from the lease of not less than 30 per cent reserved to the state;

(3) a fixed cash bonus with a royalty share reserved to the state as the bid variable but no less than 12 1/2 per cent in amount or value of the production removed or sold from the lease;

(4) a fixed cash bonus with the share of the net profit derived from the lease reserved to the state as the bid variable;

(5) a fixed cash bonus with a fixed royalty share reserved to the state of not less than 12 1/2 per cent in amount or value of the production removed or sold from the lease with the share of the net profit derived from the lease reserved to the state as the bid variable;

(6) a cash bonus bid with a fixed royalty share reserved to the state based on a sliding scale according to the volume of production or other factor but in no event less than 12 1/2 per cent in amount or value of the production removed or sold from the lease;

(7) a fixed cash bonus with a royalty share reserved to the state based on a sliding scale according to the volume of production or other factor as the bid variable but not less than 12 1/2 per cent in amount or value of the production removed or sold from the lease.

(g) The share of the net profit derived from a lease reserved to the state under (f) of this section is royalty sale proceeds for the purposes of the Alaska permanent fund under AS 37.13.010.

(h) The commissioner may include terms in any oil and gas lease imposing a minimum work commitment on the lessee. These terms shall be made public before the sale, and may include appropriate penalty provisions to take effect in the event the lessee does not fulfill the minimum work commitment. If it is demonstrated that a lease has been proven unproductive by actions of adjacent lease holders, the commissioner may set aside a work commitment. The commissioner may waive for a period not to exceed one two-year period any term of a minimum work commitment if the commissioner makes a written finding either that conditions preventing drilling or exploration were beyond the lessee's reasonable ability to foresee or control or that the lessee has demonstrated through good faith efforts an intent and ability to drill or develop the lease during the term of the waiver.

(i) The commissioner may provide for the establishment of an exploration incentive credit system under which a lessee of state land drilling an exploratory well on that land may earn credits based upon the footage drilled and the region in which the well is situated. The commissioner may also provide for credits to be earned by persons performing geophysical work on state land, if that work is performed during the two seasons immediately preceding an announced lease sale and on land included within the sale area and the geophysical information is made public following the sale. Credits may not exceed 50 percent of the cost of the drilling or geophysical work. Credits may be used during a limited period established by the commissioner and may be assigned during that period. Credits may be applied against (1) oil and gas royalty and rental payments payable to the state or (2) taxes payable under AS 43.55. A credit may not exceed 50 percent of the payment toward which it is being applied. Amounts due the

Alaska permanent fund (AS 37.13.010) shall be calculated before the application of credits under this subsection.

(j) To prolong the economic life of an oil and gas field, the commissioner shall adopt regulations for all bidding methods to allow reduction of royalty on leases within the field to compensate for increasing costs in the later stages of production decline. The commissioner may not grant a reduction of royalty until two years' initial production from the field has occurred and each lessee requesting the reduction has made a clear showing that the revenue from all hydrocarbons produced from the field is insufficient to produce a reasonable rate of return with respect to that lessee's total investment in the field.

(k) The commissioner shall define all terms and adopt all regulations necessary for a reasonable understanding and evaluation of a particular bidding method before the public announcement of the terms of proposed sale employing that method.

(l) Subject to the provisions of AS 31.05, the commissioner has discretion to enter into an agreement whereby, with the consent of the lessee, the state's royalty share of oil and gas production may be stored or retained in storage by the lessee, or the commissioner may enter into an agreement with one or more of the affected field lease holders to trade current royalty production from a field for a like amount, kind, and quality of future production, on the condition that the state receives back its stored or traded royalty share during the first half of the estimated field life or no later than 15 years after start of production, whichever is sooner.

(m) An oil and gas lease must cover a reasonably compact area not exceeding 5,760 acres, and may be for a maximum period of 10 years, except that the commissioner may issue a lease for a period not less than five years upon a finding that it is in the best interests of the state. An oil and gas lease shall be automatically extended if and for so long thereafter as oil or gas is produced in paying quantities from the lease or if the lease is committed to a unit approved by the commissioner. A lease issued under this section covering land on which there is a well capable of producing oil or gas in paying quantities does not expire because the lessee fails to produce oil or gas unless the lessee is allowed reasonable time to place the well on a producing status. Upon extension, the commissioner may increase lease rentals so long as the increased rental rate does not exceed 150 per cent of the rate for the preceding year. If drilling has commenced on the expiration date of the primary term of the lease and is continued with reasonable diligence, including such operations as redrilling, sidetracking, or other means necessary to reach the originally proposed bottom hole location, the lease continues in effect until 90 days after drilling has ceased and for so long thereafter as oil or gas is produced in paying quantities. An oil and gas lease issued under this section which is subject to termination by reason of cessation of production

does not terminate if, within 60 days after production ceases, reworking or drilling operations are commenced on the land under lease and are thereafter conducted with reasonable diligence during the period of nonproduction.

(n) The commissioner may establish by regulation that after a well has been plugged and abandoned, the rental rate which was in effect during the year of abandonment is maintained for the remainder of the term. Rental is payable in advance and continues until income to the state from royalty or net profit share exceeds rental income to the state for that year. Oil and gas leases shall provide for payment to the state of rental on the following basis:

- (1) for the first year, \$1.00 per acre;
- (2) for the second year, \$1.50 per acre;
- (3) for the third year, \$2.00 per acre;
- (4) for the fourth year, \$2.50 per acre;
- (5) for the fifth and following years, \$3.00 per acre.

(o) Upon timely application as provided by regulation, the state may issue to the holder of a federal or private lease, a state shoreland lease covering land within the exterior boundaries of the federal or private lease which has been excluded on the basis of navigability or which is later administratively or judicially determined to be shoreland. The term of such a state shoreland lease shall be the same as the term of the federal or private lease.

(p) To conserve the natural resources of all or a part of an oil or gas pool, field, or like area, the lessees and their representatives may unite with each other, or jointly or separately with others, in collectively adopting or operating under a cooperative or a unit plan of development or operation of the pool, field, or like area, or a part of it, when determined and certified by the commissioner to be necessary or advisable in the public interest. The commissioner may, with the consent of the holders of leases involved, establish, change, or revoke drilling, producing, and royalty requirements of the leases and adopt regulations with reference to the leases, with like consent on the part of the lessees, in connection with the institution and operation of a cooperative or unit plan as the commissioner determines necessary or proper to secure the proper protection of the public interest. The commissioner may require oil and gas leases issued under this section to contain a provision requiring the lessee to operate under a reasonable cooperative or unit plan, and may prescribe a plan under which the lessee must operate. The plan must adequately protect all parties in interest, including the state.

(q) A plan authorized by (p) of this section, which includes land owned by the state, may contain a provision vesting the commissioner, or a person, committee, or state agency, with authority to modify from time to time the rate of prospecting and development and the quantity and rate of production under the plan. All leases operated under a

plan approved or prescribed by the commissioner are excepted in determining holdings or control under AS 38.05.140. The provisions of this section concerning cooperative or unit plans are in addition to and do not affect AS 31.05.

(r) Producing acreage on a known geologic structure of a producing oil or gas field is excluded from chargeability as against the acreage limitation provisions of AS 38.05.140.

(s) When separate tracts cannot be individually developed and operated in conformity with an established well-spacing or development program, a lease, or a portion of a lease, may be pooled with other land, whether or not owned by the state, under a communization or drilling agreement providing for an apportionment of production or royalties among the separate tracts of land comprising the drilling or spacing unit when determined by the commissioner to be in the public interest. Operations or production under the agreement are considered as operations or production as to each lease committed to the agreement.

(t) The commissioner may prescribe conditions and approve, on conditions, drilling, or development contracts made by one or more lessees of oil or gas leases, with one or more persons, when, in the discretion of the commissioner, the conservation of natural resources or the public convenience or necessity requires it or the interests of the state are best served. All leases operated under approved drilling or development contracts and interests under them, are excepted in determining holding or control under AS 38.05.140.

(u) To avoid waste or to promote conservation of natural resources, the commissioner may authorize the subsurface storage of oil or gas whether or not produced from state land, in land leased or subject to lease under this section. This authorization may provide for the payment of a storage fee or rental on the stored oil or gas, or, instead of the fee or rental, for a royalty other than that prescribed in the lease when the stored oil or gas is produced in conjunction with oil or gas not previously produced. A lease on which storage is so authorized shall be extended at least for the period of storage and so long thereafter as oil or gas not previously produced is produced in paying quantities.

(v) *[Repealed, § 36 ch 94 SLA 1980.]*

(w) Notwithstanding any other provisions of this section, land which has been offered for lease within the previous five years and which received no bids at competitive sale or for which no bid was accepted may be, at the discretion of the commissioner, immediately offered for lease, under regulations adopted by the commissioner, upon terms appearing most advantageous to the state; however, non-competitive leasing is prohibited. The commissioner shall establish a royalty determined to be in the public interest but not less than 12 1/2 percent. A lease must provide for payment to the state or rental but

need not adhere to the rental schedule in (n) c. this section nor to the 5,760-acres-per-lease limitation in (m) of this section. The lease term may not exceed five years except as provided in (m) and (o) of this section.

(x) A lessee conducting or permitting any exploration for, or development or production of, oil or gas on state land shall provide the commissioner access to all noninterpretive data obtained from that lease and shall provide copies of that data, as the commissioner may request. The confidentiality provisions of AS 38.05.035 apply to the information obtained under this subsection.

(y) A noncompetitive lease existing at October 10, 1978 shall be extended for a period of two years and so long thereafter as oil and gas is produced in paying quantities. A noncompetitive lease extended under this subsection is subject to the regulations in force at the expiration of the initial five-year term of the lease. No extension may be granted, however, unless within a period of 90 days before the expiration date an application for extension is filed by the record title holder or an assignee whose assignment has been filed for approval, or an operator whose operating agreement has been filed for approval.

(z) No leases may be issued under this section without the inclusion of the following language: "The landowners' royalty share of the unit production allocated to each separately owned tract shall be regarded as royalty to be distributed to and among, or the proceeds of it paid to, the landowners, free and clear of all unit expense and free of any lien for it." Leases issued in violation of this subsection shall, for all purposes, be construed as containing the language required by this subsection.

(aa) Within 90 days after the written request of a lessee of a lease issued under this section, the commissioner shall enter into an agreement with the lessee to use the price for the gas established in the contract between the lessee and a gas or electric utility as the value of the state's royalty share of gas production sold by the lessee under the contract unless the commissioner makes a written finding, based on clear and convincing evidence, that

- (1) the contract price is unreasonably low;
- (2) the prospective reduction in royalty receipts would not be balanced by increased benefits to in-state gas and electric consumers;
- (3) the lessee and the utility are related in management, ownership, or other aspect; and
- (4) the contract price is not in the best interest of the state.

(bb) In (aa) of this section

(1) "gas or electric utility" includes an electric cooperative organized under AS 10.25, a municipal utility, and a gas or electric utility regulated under AS 42.05; provided that if the contract gas is transmitted to consumers through a pipeline and the gas utility either owns the pipeline or is related in ownership to the owner of the pipe-

line, then the gas utility qualifies as a "gas or electric utility" within the meaning of this paragraph only if it is bound or agrees to be bound by the covenants set out in AS 38.35.120;

(2) "price for the gas established in the contract" includes tax reimbursement amounts, deliverability and other charges, and other forms of consideration paid by the gas or electric utility under the contract;

(3) "state's royalty share of gas production" does not include the state's royalty share of gas production from land patented to the state under

(A) P.L. 84-830, 70 Stat. 709 (Alaska Mental Health Enabling Act);

(B) 38 Stat. 1214 (Act of March 4, 1915); or

(C) 43 U.S.C. 1635 in settlement of the claims of the state under 38 Stat. 1214. (§ 3(7) art VIII ch 169 SLA 1959; am § 13 ch 61 SLA 1960; am § 1 ch 124 SLA 1962; am §§ 4 — 7 ch 30 SLA 1964; am § 20 ch 70 SLA 1964; am § 2 ch 91 SLA 1967; am § 1 ch 65 SLA 1969; am § 1 ch 86 SLA 1970; am § 1 ch 155 SLA 1978; am § 16 ch 160 SLA 1978; am §§ 3, 4 ch 65 SLA 1979; am § 6 ch 18 SLA 1980; am § 36 ch 94 SLA 1980; am §§ 1 — 5 ch 111 SLA 1980; am §§ 11, 12 ch 161 SLA 1984; am § 1 ch 89 SLA 1985; am § 2 ch 55 SLA 1986)

Cross references. — For legislative findings in connection with the 1986 amendment to this section, see § 1, ch. 55, SLA 1986, in the Temporary and Special Acts.

Effect of amendments. — The 1985 amendment in subsection (h) substituted "If it is" for "Should it be" at the beginning of the third sentence and added the last sentence.

The 1986 amendment added subsections (aa) and (bb).

Editor's notes. — Section 5, ch. 55, SLA 1986 provides that subsection (aa) of this section "applies to agreements to establish for a lease issued under AS 38.05.180 the in-value royalties on gas production that is sold under a contract entered into on or after May 30, 1986, between the state's lessee and a gas or electric utility."

Sec. 38.05.183. Sale of royalty. (a) The sale, exchange or other disposal of a mineral obtained by the state as a royalty under AS 38.05.182, or the sale, exchange or other disposal in whole or in part of a right to receive future mineral production under a state lease under this chapter, shall be by competitive bid and the sale, exchange or other disposal made to the highest responsible bidder, except that competitive bidding is not required when the commissioner, after prior written notice to the Alaska Royalty Oil and Gas Development Advisory Board under AS 38.06.050, determines that the best interest of the state does not require it or that no competition exists.

(b) When competitive bids are required, the commissioner, after prior written notice to the Alaska Royalty Oil and Gas Development Advisory Board, may reject all bids on a determination that because of the amount of the bids, the lack of responsibility on the part of the bidders, or for reasons consistent with the criteria set out in AS 38.06.070, the acceptance of the bids would not be in the best interest of the state.

FIVE-YEAR OIL AND GAS LEASING PROGRAM

JANUARY 1988

AS 38.05.180



Alaska Department of

**NATURAL
RESOURCES**
DIVISION OF OIL & GAS



FIVE-YEAR OIL & GAS LEASING PROGRAM

ALASKA DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL & GAS

Proposed Area & Date	1987					1988					1989					1990					1991					1992																												
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S														
54 Kuparuk Upl. 1-88			P					MF		S																																												
55 Demarcation Pt. 6-88									P			MF		S																																								
66A N.S. Exempt* 6-88	N		C ¹				C ²		A			P		F		S																																						
52 Beaufort Sea 1-89																	P			MF		S																																
56 Alaska Peninsula 6-89								L													P			MF		S																												
67A Cook Inlet Exempt* 6-89	N		C ¹				L		A			C ²									P			MF		S																												
59 Cook Inlet 1-90													L			C ³									P			MF		S																								
57 N.S. Foothills 6-90																	L			C ³									P			MF		S																				
64 Kavik 1-91																					L			C ³							P		MF		S																			
65 Beaufort Sea 6-91																																		P			MF		S															
61 White Hills 1-92	N		C ¹						A																				L			C ³									P			MF		S								
68 Beaufort Sea 6-92	N		C ¹						A																												L			C ³									P			MF		S

N = Nominations Requested
 A = Proposed Sale Area Added to 5-Year Leasing Schedule
 C = Call for Comments:
 New Sales and 5-Year Schedule Revisions¹
 Request for General Information²
 Request for Socioeconomic and Environmental Information³

L = Preliminary Land Status Check
 P = Preliminary Finding/Preliminary Notice
 [AS 38.05.945(a)(3)]
 M = Public Meetings or Teleconference

F = Final Finding/Final Notice of Sale and Terms
 [AS 38.05.945(a)(4)] and Alaska Coastal Management
 = Program Consistency Determination, if Required
 S = Sale
 * = A Best Interest Finding May not be Required
 [AS 38.05.035(e)(7)]

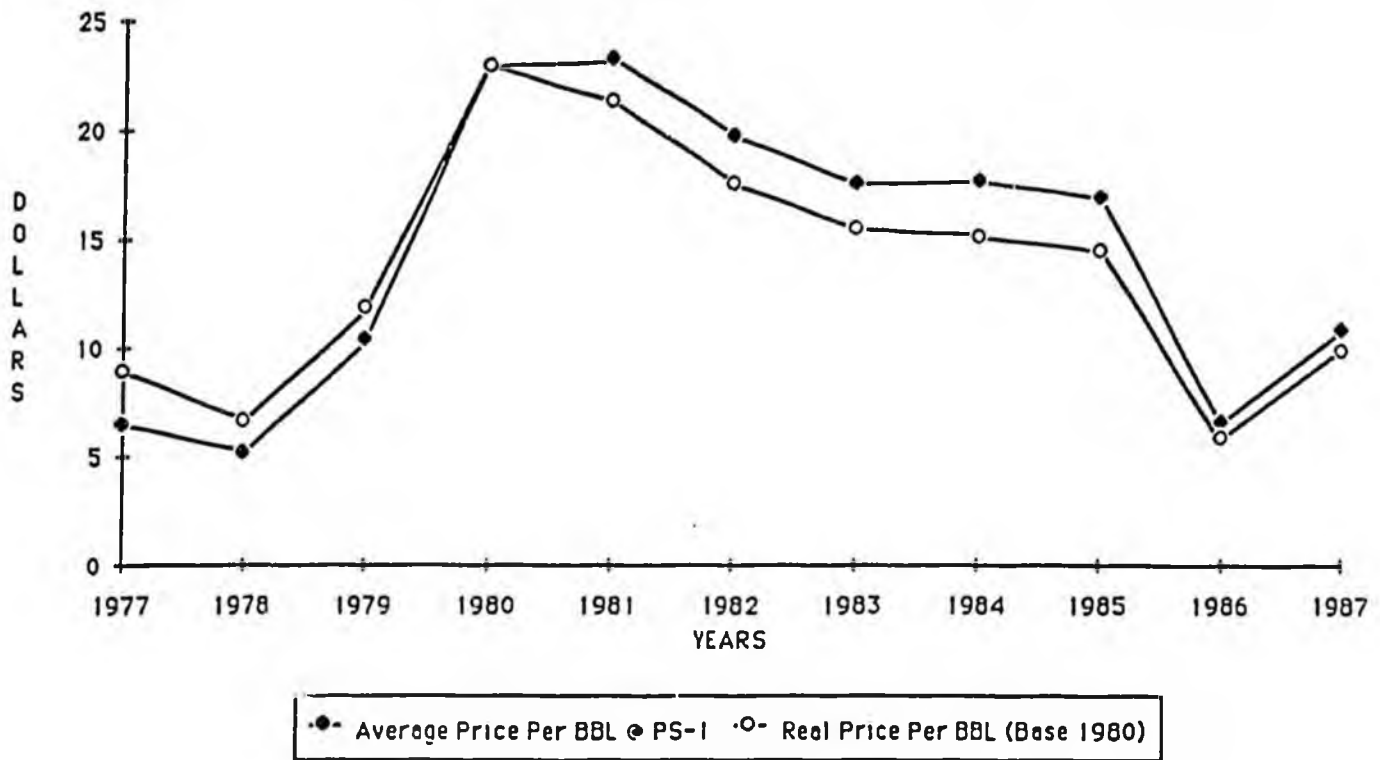
Proven and Probable Oil Reserves on Currently Leased State Lands
North Slope, Alaska (1)

AREA	Range of Reserves (millions of barrels)		
	low	most probable	high
Prudhoe Bay Unit	4100	4800	6000
Kuparuk River Unit	600	900	1100
Milne Point Area	0	60	95
Gwydyr Bay Area	0	0	10
Shallow Cretaceous Sands	0	1500	3000
Prudhoe Bay Lisburne Reservoir	280	380	580
Endicott	270	370	445
Point Thomson Area and Flexman Island Area (2)	0	0	350
Beaufort Sea	0	0	300
Totals	5250	8010	11880
Totals (minus Prudhoe Bay)	1150	3210	5880

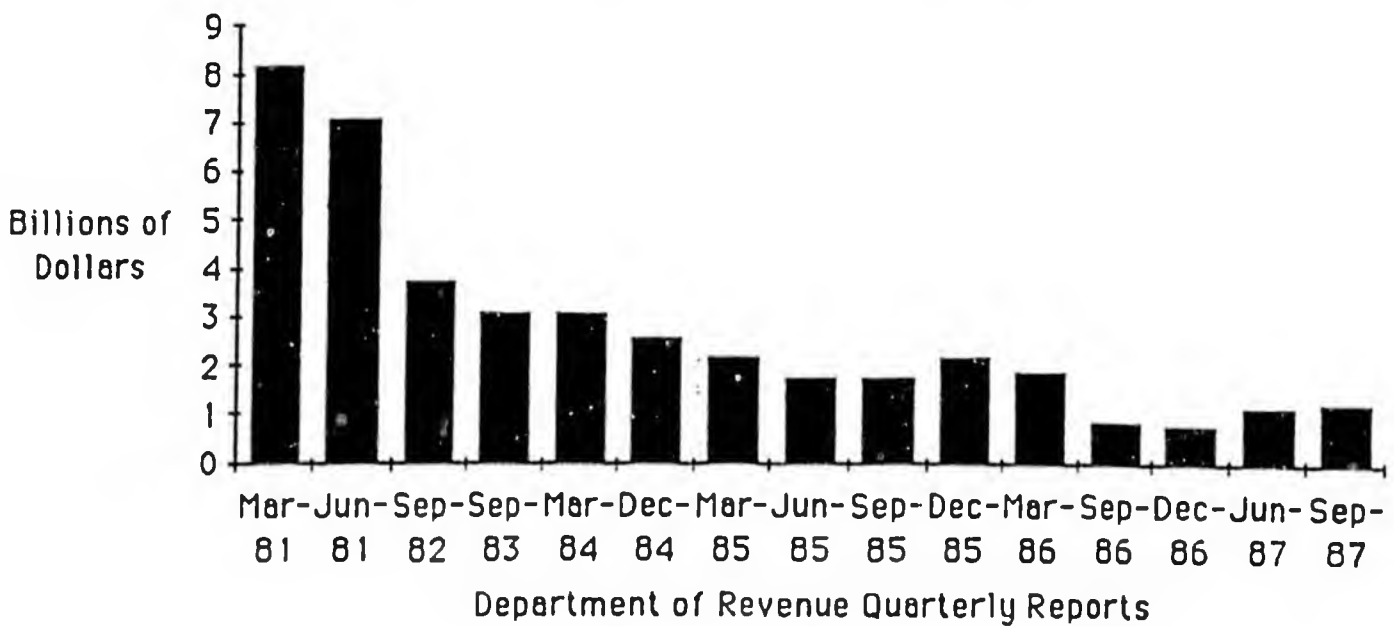
(1) As of 1/88, estimates by W. Van Dyke, Department of Natural Resources
Division of Oil & Gas.

(2) Oil and gas condensate.

Average Price Per Barrel at Pump Station No. 1



State Revenue Forecasts for Fiscal '87



North Slope Petroleum Development Summary (as of October 1987)

FIELD NAME	Prudhoe Bay	Lisburne	Kuparuk	Mline Point	Endicott
Discovery Date	12/67	12/67	4/69	10/69	3/78
Size of Oil Pool (sq. mi.)	400	125	400	45	40
Production Start-up Date	6/77	12/86	12/81	11/85	10/87
Production to Date (mill. bbls)	4,918	5	292	5 (1)	(2)
1986 Average Production Rate (barrels/day)	1,554,000	40,000	257,000	12,900	100,000
Remaining Reserves:					
million barrels	4,672	395	1,308	55	375
billion cubic feet	26,000	625	565	0	730
Existing Wells	828	37	505	29	4 (3)
Drill Sites/Pads	38	5	34	4	2
Production Centers	6	1	3	1	1
Base Camps	2	1	1	1	1
Construction Camps	2	0	1	1	1
Power Plants	1	1	1	1	1
Topping Plants	1	0	1	0	0
Gas Compression Plants	1	1	1	1	1
Sea water Treatment Plants	1	0	1	0	1
Enhanced Oil Recovery Plants	1	0	1	0	0
Docks	1	0	1	0	1
Causeways	1	2	0	0	1
Water Injection Centers	2	0	(4)	(4)	0
Associated Support and Industrial Sites	1	0	1	0	0
Airports and Company Operated Airstrips	2	0	1	0	0
Pipelines (miles)	63 (5)	(5)	418	15	28
Roads (miles)	218 (5)	(5)	94	19	15
Acresage Filled (acres)	5374 (5)	(5)	1409	54	198
River Crossings (number)	3 (5)	(5)	5	1	1

(1) Field shut in January 1987

(2) Production commenced October 1987

(3) 80-100 wells planned

(4) Water Injection system included in production centers

(5) Lisburne numbers included with Prudhoe Bay

Standard Alaska Production Company has recently applied for discovery royalty for a new field, Niakuk, located offshore between the Lisburne and Endicott fields. Standard currently is considering various development plans. No estimate of reserves is available at this time.

Camp Lonely, located 80 miles west of Oliktok Point and the Kuparuk field, has served as a staging area for western Beaufort Sea activities. The camp was constructed by the federal government for exploration activities in the National Petroleum Reserve Alaska. The Cook Inlet Region, Incorporated (CIRI) bought the camp in 1982. CIRI plans to operate the facility as a joint venture with Arctic Slope Regional Corporation. Infrastructure includes a 100 person camp, offices, carpentry shop, communications shop, sewage treatment plant, generating system, vehicle maintenance shop, a large tank farm, and warm and cold storage warehouses. Inventory on hand consists of drill pipe, casing and drilling mud.

In addition to these areas, future development is possible from the West Sak Reservoir in the Prudhoe Bay Unit, Seal Island, Tern Island, Sandpiper Island, Colville Delta, Flaxman Island/Point Thomson, Hemi Springs Unit, ARCO Alaska's K-10 and Bullen Point Staging Area.

EXPLORATION INCENTIVE CREDITS
Report Month: October 1987

ADL	WELL	COMPANY	CERTIFICATION DATE	TOTAL AMOUNT
343109	G-2 Well	Exxon	10/5/83	\$6,197,625.00
		Standard Alaska	12/27/83	\$4,152,408.75
		BP&E	10/5/83	\$2,045,216.25
344010	Leffingwell	Arco	10/2/84	\$3,706,000.00
		Union	10/2/84	\$3,706,000.00
344033	J-1 Well	Exxon	10/31/84	\$5,119,500.00
355005	Long Island Well	Exxon	11/14/84	\$1,378,076.00
		Standard Alaska	11/14/84	\$1,378,076.00
345126	Totek Hills	Arco Alaska	8/02/85	\$715,530.81
355037	Colville Delta #1	Texaco	07/09/86	\$637,500.00
		Amerada Hess	07/09/86	\$888,594.00
		Diamond Shamrock(A)	07/09/86	\$100,128.00
		Mobil	02/05/87	\$432,511.00
		Placid Oil (C)	07/09/86	\$314,679.00
		Union Texas (B)	07/09/86	\$475,631.00
		Rosewood Resources	07/09/86	\$12,662.00
		Hunt Pet Co.	07/09/86	\$11,213.00
364478	Colville Delta Area AHC 25-13-6 #1 well	Amerada Hess	10/12/87	\$677,853.00
		Union Texas	10/12/87	\$508,390.00
		Texaco	10/12/87	\$225,951.00
		Maxus Expl.	10/12/87	\$225,951.00
		Placid Oil	10/12/87	\$129,115.00
		Rosewood Res.	10/12/87	\$21,360.00
		Hunt Pet Co.	10/12/87	\$18,987.00
		355038	Colville Delta #2	Amerada Hess
Union Texas	10/28/87			\$205,106.95
Texaco	10/28/87			\$273,475.93
Maxus Expl.	10/28/87			\$273,475.93
Placid Oil	10/28/87			\$423,982.26
Rosewood Res.	10/28/87			\$77,561.49
Hunt Pet Co.	10/28/87			\$68,943.50
355039	Colville Delta #3			Amerada Hess
		Union Texas	10/28/87	\$91,012.03
		Texaco	10/28/87	\$364,048.13
		Maxus Expl.	10/28/87	\$364,048.13
		Placid Oil	10/28/87	\$178,918.37
		Rosewood Res.	10/28/87	\$34,416.31
		Hunt Pet Co.	10/28/87	\$30,592.28
GRAND TOTAL				\$36,575,980.71

- (A) Assigned \$432,511 of EIC to Mobil Oil Corp. effective 02/05/87
 (B) Assigned entire EIC to BP Alaska effective 02/03/87
 (C) Assigned entire EIC to Texaco Inc. effective 03/31/87

Source: Alaska Department of Natural Resources, Division of Oil and Gas

SUMMARY OF PAST COMPETITIVE LEASE SALES

<u>Sale No.</u>	<u>Acres Offered</u>	<u>Percent Leased</u>	<u>Acres Leased</u>	<u>Average \$/Acre</u>	<u>Tracts Offered</u>	<u>Tracts Leased</u>	<u>Bonus Received</u>
1.	88,055.00	87.66	77,191.00	52.08	37	31	\$4,020,342.43
2.	17,567.51	93.96	16,505.57	24.70	27	26	407,654.54
3.	73,047.70	31.30	22,866.70	1.55	26	9	35,325.31
4.	400.00	100.00	400.00	679.04	3	3	271,614.40
5.	97,876.00	98.06	95,980.00	74.71	102	99	7,170,464.88
6.	13,257.00	100.00	13,257.00	8.35	6	6	110,671.55
7.	255,708.44	73.14	187,025.40	79.47	68	53	14,863,049.33
8.	1,061.70	100.00	1,061.70	4.80	8	8	5,097.00
9.	315,668.93	87.77	264,437.13	59.43	89	76	15,714,112.60
10.	167,583.06	84.43	141,490.51	29.23	200	158	4,136,224.92
11.		C A N C E L L E D					
12.	346,782.40	71.25	247,089.00	12.31	308	207	3,042,680.74
13.	1,194,373.00	60.51	722,659.00	7.66	610	341	5,537,100.94
14.	754,033.00	53.45	403,000.00	15.25	297	159	6,145,472.59
15.	403,042.06	74.87	301,751.28	15.49	293	216	4,674,343.74
16.	184,410.05	72.66	133,987.29	52.55	205	153	7,040,880.17
17.	19,229.70	96.67	18,589.70	7.33	36	35	136,279.67
18.	47,729.00	88.82	42,397.00	34.88	23	19	1,478,777.23
19.	2,560.00	R E J E C T E D 12/9/74					
20.	311,249.89	82.39	256,447.31	73.14	295	220	18,757,340.88
21.	346,623.00	47.59	164,961.00	18.24	308	147	3,009,224.00
22.	111,199.48	54.20	60,272.15	17.29	230	125	1,042,219.90
23.	450,858.47	91.50	412,548.47	2,181.66	179	164	900,041,605.34
24.	196,635.07	47.10	92,617.97	4.92	244	106	455,640.57
25.	325,401.42	54.78	178,244.71	7.43	259	152	1,324,673.40
26.	399,920.96	44.50	177,972.56	8.75	218	105	1,557,848.84
27.	308,400.81	36.93	113,891.71	9.93	210	96	1,130,324.51
28.	166,648.04	58.69	97,803.69	253.77	98	62	24,819,189.91
29.	278,269.43	50.00	127,119.65	8.19	164	82	1,040,909.98
29A.		C A N C E L L E D					
29B.	34,678.04	100.00	34,678.04	4.56	20	20	158,041.78
30.	341,140.18	86.80	296,307.65	1,914.87	71	62	567,391,497.48
31.	196,268.00	100.00	196,268.00	63.12	78	78	12,387,469.60
33.	815,000.00	50.99	429,978.16	10.00	202	103	4,299,781.60
32.	202,836.74	75.15	152,428.22	10.00	78	59	1,524,282.20
35.	601,171.50	21.82	131,190.69	10.00	149	31	1,311,906.90
36.	56,862.41	100.00	56,862.41	573.02	13	13	32,583,451.87
37.	852,603.08	19.80	168,849.00	3.33	217	33	562,943.90
37A.	1,874.60	100.00	1,874.60	52.00	1	1	97,479.20
34.	1,231,517.00	46.44	571,954.00	46.71	261	119	26,713,018.17
38.		C A N C E L L E D					
39.	211,988.08	100.00	211,988.08	99.05	42	42	20,998,100.98
40.	1,044,745.02	42.44	443,354.88	7.17	284	140	3,177,178.26
43&43A.	374,152.89	95.64	357,863.02	94.53	84	81	33,827,377.15
41.	1,437,930.46	19.39	278,938.96	3.03	308	63	843,964.92
46A.	248,584.64	76.45	190,041.54	13.28	65	50	2,523,333.71
45A.	606,385.00	27.19	164,885.00	28.25	113	32	4,657,478.08
47.	192,568.81	94.80	182,559.81	63.79	50	48	11,645,003.26
48.	526,101.00	50.70	266,736.00	9.16	104	54	2,444,341.85
48A.	42,053.00	100.00	42,053.00	12.13	11	11	510,255.16
49.	1,189,099.61	33.21	394,880.74	2.40	260	98	947,171.27
51.	592,142.00	17.99	100,632.00	2.88	119	26	289,624.90
50.	118,147.31	100.00	118,147.31	56.05	35	35	6,621,722.81
	17,797,475.92	52.63	9,165,038.61	189.54	7,108	4,057	1,763,484,494.32

STATE COMPETITIVE SALE AREAS

<u>SALE</u>	<u>DATE</u>	<u>DESCRIPTION</u>	<u>BIDDING METHOD</u>
1. Wide Bay; offshore Kenai to Ninilichik; Kachemak Bay	12/10/59	Offshore	Cash Bonus Bid with fixed Royalty
2. Kenai Peninsula; West Forelands; Nushagak Bay	7/13/60	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
3. Katalla; Kalifonsky Beach; Herendeen Bay; offsh. Kodiak	12/7/60	Offshore	Cash Bonus Bid with fixed Royalty
4. Uplands Ninilichik	1/25/61	Uplands	Cash Bonus Bid with fixed Royalty
5. Tyonek, Controller Bay; Pavlov Bay	5/23/61	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
6. Controller Bay (Special Sale)	8/4/61	Tidelands	Cash Bonus Bid with fixed Royalty
7. Icy, Yakutat & Kachemak Bays; So. Kenai Penin.; N. Cook Inlet	12/19/61	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
8. Big Lake	4/24/62	Uplands	Cash Bonus Bid with fixed Royalty
9. Tyonek; W. Forelands; Knik Arm/Kalgin Island; Chisik Island; So. Kenai Penin.; Wide Bay	7/11/62	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
10. Tyonek; Kenai Offshore & Uplands	5/8/63	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
11. Yakutat Bay	C A N C E L L E D		
12. S. of Forelands; Knik & Turnagain Arms; Upper Cook Inlet; Kenai Pen.; Tyonek to Katunuk River	12/11/63	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
13. Fire Island; W. Forelands; Trinity Islands; Prudhoe West	12/9/64	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
14. Prudhoe West to Canning River	7/14/65	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
15. Fire Island & N. Cook Inlet; Kalgin Island & Redoubt Bay; Knik; S. Kenai Peninsula	9/28/65	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
16. Kenai Penin. & Knik; Middleton Island; Fire Island, Redoubt Bay; Kalgin Island, Iliamna Mt.; N. Cook Inlet	7/19/66	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
17. Big Lake; Kenai	11/22/66	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
18. Katalla; Prudhoe	1/24/67	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
19. Lower Cook Inlet	3/28/67	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
20. Big Lake; Knik; Iliamna Mt.; Belukha; N. Cook Inlet; Kalgin Island; Ninilichik	7/25/67	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
21. Fort Helden & Port Moller	3/26/68	Offshore	Cash Bonus Bid with fixed Royalty
22. Big Lake; Knik; Belukha; West Forelands; Ninilichik; Kachemak & Kenai	10/29/68	Uplands	Cash Bonus Bid with fixed Royalty

STATE COMPETITIVE SALE AREAS

<u>SALE</u>	<u>DATE</u>	<u>DESCRIPTION</u>	<u>BIDDING METHOD</u>
23. Colville to Canning River	9/10/69	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
24. Big Lake; Knik; Kenal; West Forelands	5/12/71	Uplands	Cash Bonus Bid with fixed Royalty
25. Big Lake; Knik; Belukha; North Cook Inlet	9/26/72	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
26. Cook Inlet (Between Forelands & Turnagain Arm)	12/11/72	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
27. Tuxedni; Ninilichik; Kenal; Kalgin	5/9/73	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
28. Ninilichik; Kachemak Bay; Belukha	12/13/73	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
29. Kalgin & West Forelands; Chisik; Ninilichik N. Cook Inlet; Turnagain; Big Lake	10/23/74	Offshore Uplands	Cash Bonus Bid with fixed Royalty
29A. Point Thomson	C A N C E L L E D		
29B. Copper River Basin	7/24/79	Uplands	Cash Bonus Bid with fixed Royalty
30. Beaufort Sea (Joint Federal & State Sale)	12/12/79	Offshore	Cash Bonus w/fixed Sliding Scale Royalty; Net Profit Share (NPS) Bid w/fixed Royalty and fixed Cash Bonus
31. Prudhoe Uplands	9/16/80	Uplands	Cash Bonus Bid with fixed Royalty and fixed NPS
32. Lower Cook Inlet	8/25/81	Offshore/Uplands	Royalty Bid with fixed Cash Bonus
33. Upper Cook Inlet	5/13/81	Offshore/Uplands	Royalty Bid with fixed Cash Bonus
35. Lower Cook Inlet	2/2/82	Offshore/Uplands	Royalty Bid with fixed Cash Bonus
36. Beaufort Sea	5/26/82	Offshore/Uplands	Cash Bonus Bid with fixed Royalty and fixed NPS
37. Middle Tanana & Copper River Basins	8/24/82	Uplands	Cash Bonus Bid with fixed Royalty and fixed NPS
37A. Chukchi River, Exempt	8/24/82	Uplands	Cash Bonus Bid with fixed Royalty
34. Prudhoe Uplands	9/28/82	Uplands	Cash Bonus Bid with fixed Royalty and fixed NPS
38. Norton Basin	C A N C E L L E D		

STATE COMPETITIVE SALE AREAS

<u>SALE</u>	<u>DATE</u>	<u>DESCRIPTION</u>	<u>BIDDING METHOD</u>
39. Beaufort Sea	5/17/83	Offshore/Uplands	Cash Bonus Bid with fixed Royalty and fixed NPS
40. Upper Cook Inlet	9/28/83	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
43. Beaufort Sea	5/22/84	Offshore	Cash Bonus Bid with fixed Royalty
43A. Colville River Delta/Prudhoe Bay Uplands	5/22/84	Offshore/Uplands	Cash Bonus Bid with fixed Royalty and fixed NPS
41. Bristol Bay Uplands	9/18/84	Uplands	Cash Bonus Bid with fixed Royalty
46A. Cook Inlet Exempt	2/26/85	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
45A. North Slope Exempt	9/24/85	Uplands	Cash Bonus Bid with fixed Royalty
47. Kuparuk Uplands	9/24/85	Uplands	Cash Bonus Bid with fixed Royalty
48. Kuparuk Uplands	2/25/86	Uplands	Cash Bonus Bid with fixed Royalty
48A. Mikkelson	2/25/86	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
49. Cook Inlet	6/24/86	Offshore/Uplands	Cash Bonus Bid with fixed Royalty
51. Prudhoe Bay Uplands	1/27/87	Uplands	Cash Bonus Bid with fixed Royalty
50. Camden Bay	6/30/87	Offshore	Cash Bonus Bid with fixed Royalty

CURRENT STATE OIL & GAS LEASE INVENTORY
(December 1987)

CATEGORY	NO. OF LEASES	NO. OF ACRES
ACTIVE LEASES	1155	3,843,827
OFFSHORE		1,629,247
ONSHORE		2,214,580
TOTAL PRODUCING LEASES	278	548,719
UNITIZED LEASES	436	957,078
COMPETITIVE LEASES	1125	3,820,104
OFFSHORE		1,629,247
ONSHORE		2,190,857
NONCOMPETITIVE LEASES	12	8,890
OFFSHORE		-0-
ONSHORE		8,890
NET PROFIT SHARE LEASES	141	620,414
OFFSHORE		290,795
ONSHORE		329,620
CONDITIONAL LEASES (1)	84	176,950
OFFSHORE		17,382
ONSHORE		159,567
TRANSFERRED FEDERAL LEASES (2)	15	14,181
OFFSHORE		-0-
ONSHORE		14,180
SHORELAND PREFERENCE LEASES (3)	3	651

(1) State leases issued prior to May 6, 1969 on lands which the state has not yet received patent.

(2) Federal leases which have since been transferred to state ownership.

(3) State leases for the bottoms of navigable waterbodies issued to federal leaseholders whose tracts surround those waterbodies.

PARTICIPATING AREAS

Study shows as much as 25% error

by Ruth A. Maurer and Bruce C. Kirchhoff

Millions of dollars are invested in scientific exploration and development in federal oil and gas units. Yet participating area determinations are often made by simple observation.

And those determinations can be wrong.

Those are among the conclusions of a sample study of 30 successful exploratory wells in Colorado and Wyoming conducted at the Colorado School of Mines. Using a precise, computer-generated determination of the participating areas, the study showed 16 of the 30 improperly included or excluded acreage.

Even state-of-the-art technology cannot pinpoint the optimal well location within a reservoir.

Geophysical and geological information can only suggest, within a section or quarter-section of the public land survey, the well location having the greatest potential.

Geological data is of limited use or accuracy in determining, upon completion of a well, which lands are reasonably proved productive of unitized substances in paying quantities, such that certain lands should or should not be included in a participating area. Therefore, a technologically sound proxy must be developed to determine the boundaries from within which oil and gas are actually produced.

Several methods of allocation are used in the region, the study revealed. New Mexico uses a drilling block system, defined by a state well-spacing statute. Montana attempts, optimistically, to use only geological information in its determination of participating areas. Utah has reportedly processed relatively few operating federal units, but uses the circle-tangent method.

Off target

This chart shows both the working interest for each participating area as approved by working interest owners and accepted by the ELM, and as precisely determined by the software used in the study. Errors ranged up to 25%.

Colorado and Wyoming are the only Rocky Mountain states surveyed that extensively use the circle-tangent method. This method reasonably assumes that the fluid flow from the reservoir into the wellbore is in the radial direction.

The radius of this drainage boundary is determined primarily by geologic and engineering information. Consid-

eration is also given to the depth of the productive zone and whether oil or gas is the primary substance produced. Only after a well is determined to be productive in paying quantities is the circle-tangent method applied.

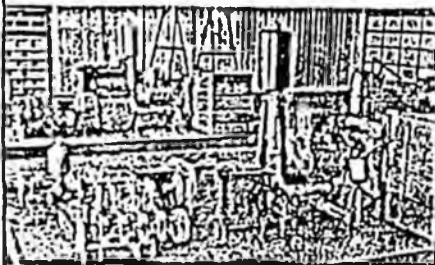
According to the circle-tangent method, 40- or 10-acre tracts entirely within the drainage boundary are included in the participating area. Tracts

Summary of working interest changes						
Calculated from precise participating area determinations						
Well No.	Working Interest	Approved By	Actual	Change	Comment	
1	No	14/17	14/17		Operator holds no tracts	
2	No	15/15	15/15			
3	No	10/17	10/17			
4	Yes	17/13	17/16	0.01423	Operator's benefit	
5	Yes	8/8	6/8	0.25000	Operator's benefit	
6	Yes	16/16	15/15		Operator's benefit subsequent well	
7	Yes	8/14	8/15	0.038095	Operator's benefit	
8	No	8/8	8/8			
9	Yes	8/8	8/8		Operator's benefit drilled to southwest	
10	No	13/15	13/15			
11	No	11/15	11/15			
12	No	8/17	8/17			
13	No	0	0			
14	No	9/14	9/14			
15	Yes	15/16	14/15	0.00467	Operator's benefit	
16	Yes	1/8	1/7	0.071429	Not operator's benefit	
17	Yes	14/14	15/15		No consequence	
18	No	11/15	11/15			
19	No	17/17	17/17			
20	Yes	15/17	14/16	0.007353	Operator's benefit	
21	Yes	8/8	8/7		No consequence	
22	No	16/16	16/16			
23	Yes	0/16	14/17	0.058824	Not operator's benefit	
24	No	16/16	16/16			
25	Yes	14/15	13/14	0.052381	Not operator's benefit	
26	Yes	15/15	16/16		Operator's benefit when P.A. enlarged	
27	No	16/16	16/16			
28	Yes	8/8	8/8		No consequence	
29	Yes	16/16	15/15		Operator's benefit subsequent well	
30	Yes	3/14	3/15	0.014286	Operator's benefit	



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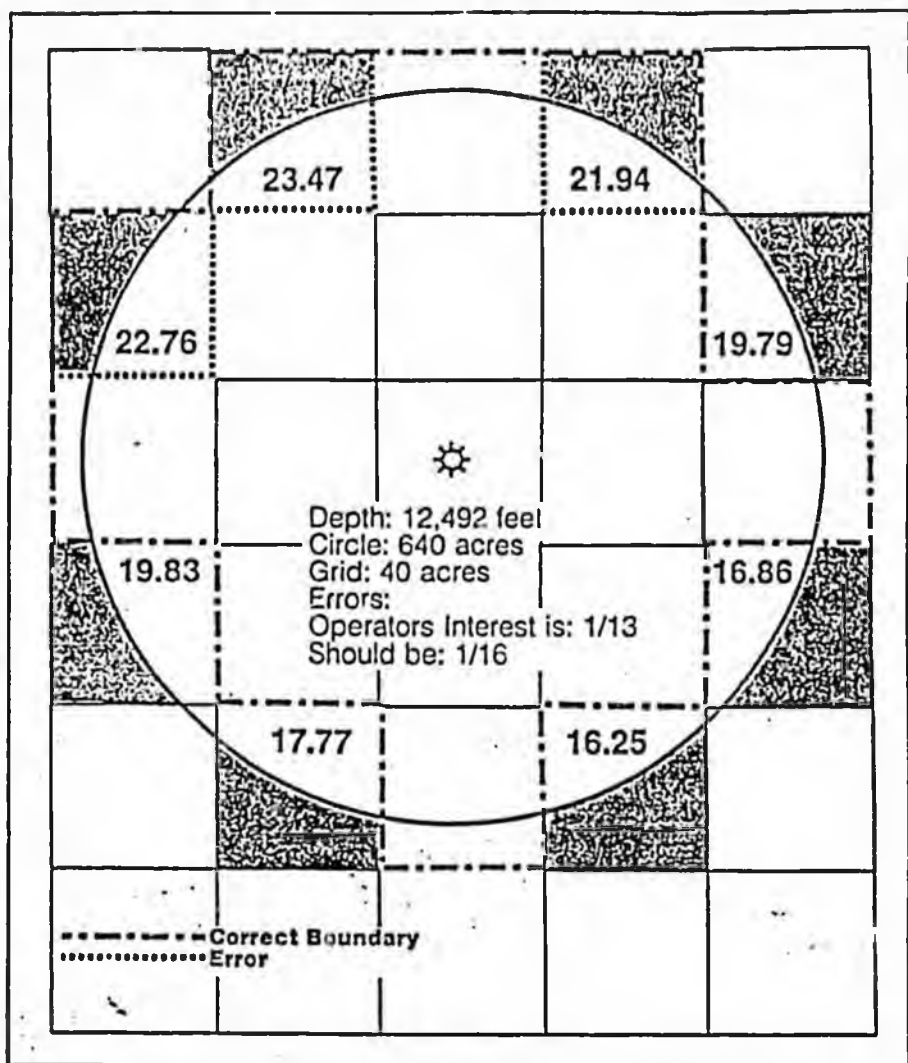
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Human error

One of the incorrectly determined participating areas. Computer-generated determinations showed that 16 out of 30 areas improperly included or excluded acreage. Most often operators benefited from the errors.

cut half or more by the boundary are also included.

When subsequent wells are drilled and determined to be productive from a common pool, the participating area is often enlarged. The revised participating area now includes all lands within each separate participating area by virtue of the common acreage drained.

An individual working interest within the participating area is determined by the proportion of acreage contributed by that working interest owner to the total acreage in the participating area.

Critical to this study is the rule that all acreage proved reasonably productive by this method shall be included in the participating area and will share in its expense and revenue.

Tools implementing the circle-tangent method today are basic. Wells are

located on a scaled map by ruler and pencil. Circles are drawn by compass. The "eyeball technique" determines whether, in a questionable situation, a given tract is cut half or more by the drainage boundary.

A second technique attempts to be more accurate. A scaled grid system is employed to determine whether a given tract is cut half or more by the drainage boundary. For example, the number of grids in a questionable tract contained within the drainage boundary are counted and converted to an acreage figure. Such a tedious technique must assume the accuracy of the graph paper, the ruler and the compass.

Clearly, a problem exists where millions of dollars are invested in scientific exploration and development, but the participative determinations are made by simple observation. In order to de-

REGIONAL NEWS

termine the problem's magnitude, a study was conducted at Colorado School of Mines.

A sample of 30 successful exploratory wells was studied to determine whether the corresponding participating areas were correctly determined. Data was obtained from several Bureau of Land Management (BLM) offices in Colorado and Wyoming. The information requested included the unitized substance produced, productive zone depths, well location coordinates and land maps showing participating area boundaries.

Using a newly available software package by Precision Units Inc., the participating area for each well was precisely determined, based on the circle-tangent method and the following assumptions:

- Unless otherwise noted on state well completion forms, surface well location coordinates indicate the bottomhole location, the true predicate for participating area determination.

- All information received concerned participating areas determined by the circle-tangent method, rather

than by an exception to the method.

Of the 30 participating areas, 16 were in error. Of the 16 errors made by operators and approved by other working interest owners, 10 accrued, or likely would accrue to the operator's benefit. Of the remaining six errors, three were neutral and three decreased the operator's working interest.

In the study, differences between correct operator's working interests and working interests as approved ranged from 0.4167% to 25%.

Three of the errors deserve special mention. In one application, interest owners approved a participating area based on a well location established in the wrong 40-acre tract.

In another application, the operator submitted a completed well drilled in SW NW 17 and incorrectly determined the participating area to include all of the section. The operator omitted the acreage reasonably proved productive in Section 18. Incredibly, no acreage in Section 17 was leased by the operator, who held all of Section 18 under lease. The participating area was modified to include some of the operator's acreage,

in Section 18, but one 40-acre tract too many was included.

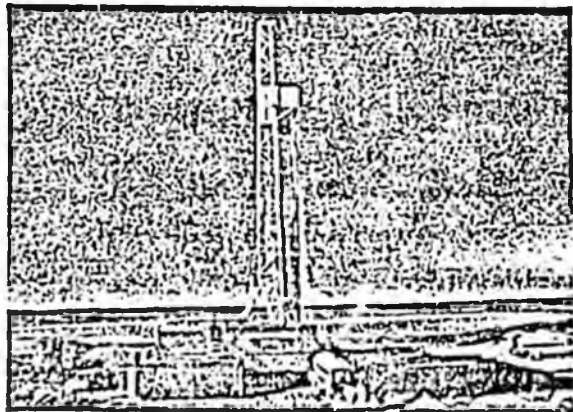
In a third case, an operator submitted a participating area which could only have been determined from a state regulatory commission spacing order. But no such order was issued for the acreage in question. The adjoining interest owners approved an 8/8 working interest in favor of a single party. That party's correct interest was 6/8. In this case, a single working interest owner lost the 1/4 interest in the well. □

About the authors

Ruth A. Maurer, Ph.D., is associate professor of mineral economics at the Colorado School of Mines, Golden, Colo. She has served as a consultant for several firms.

Bruce C. Kirchhoff will graduate this month from the Colorado School of Mines with a master of science degree in mineral economics. He completed his law degree at the University of Denver and is employed by a Denver law firm. He is also founder and president of Precision Units Inc., Denver, consultants in unitization.

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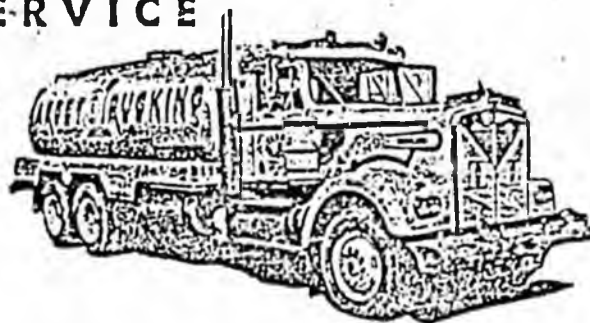


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1. What is the purpose of establishing a P.A. (participating area: (-11 AAC 83.351)?
2. How does determination of a P.A. effect state revenues?
3. Why is it necessary to compromise P.A. s?
4. Who determines whether or not a P.A. compromise (revenue compromise) is in the State of Alaska or any other parties' best interest?
5. What state agency has statutory or regulatory authority to "compromise" geological, geophysical and engineering data used to establish an initial P.A.?
6. How many gas fields have been clearly delineated (defined) in the State of Alaska?
7. Is the drilling of delineation wells the most accurate method of determining the productive limits of a gas field?
8. Is there any consistent procedure or common industry knowledge (i.e. basic engineering principles used by the DO&G (Division of Oil & Gas) to "compromise" data used to determine P.A. s?
9. In general would a single gas pool with one producing well estimated to contain 50 BCF of gas reserves have a larger or smaller initial P.A. than one producing well in a single gas pool estimated to contain 400 BCF of gas reserves?
10. Does the DO&G feel it should have to comply with statutes and regulations adopted by the AOGCC?
11. Does the AOGCC feel it should have to comply and abide by the statutes and regulations adopted by the DO&G?
12. According to state regulation 20 AAC 25.055 Drilling Units and Well Spacing, what is the minimum area (acres) drained by a productive gas well as determined by the AOGCC (ALASKA OIL AND GAS CONSERVATION COMMISSION)?
13. When a gas well has been certified by the DO&G as capable of producing in paying quantities (11 AAC 83.105) is it reasonably known that at least 640 acres around the well bore is contributing to the gas being produced from a producing gas well?

C. Burglin
Land Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907) 452-5149

April 7, 1987

Katherine Fortney
State Division of Oil and Gas
Pouch 7-034
Anchorage, Alaska 99510-0734

Dear Kate:

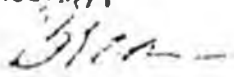
Burglin et al (Burglin) is requesting a written policy from the Division of Oil and Gas regarding PA (participating area) review. It is clear under II AAC 83.351 (c) "A participating area must be expanded to include acreage reasonably estimated through use of geological, geophysical, and engineering 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 for approval under II AAC 83.371 at the time of expansion or contraction of a participating area."

The Division of Oil and Gas staff has emphasized initial P.A.'s in their recent decisions concerning P.A.'s. Burglin is requesting the division address Burglin's following concerns:

- (1) How often are P.A.'s reviewed by division staff?
- (2) When does an initial P.A. become a final P.A.?
- (3) How are initial P.A.'s clearly delineated?
- (4) Does the division staff take any initiative to expand or contract P.A.'s based on additional information?
- (5) Does the unit operator have any obligation to expand or contract a P.A. when additional information dictates a P.A. expansion or contraction?

If you have any questions concerning Burglin's request you may contact Brian at 452-5149.

Sincerely,


Brian Burglin

PB/mhg

cc: James Paxon
Bill Van Dyke
Comm. Edy Paxon

Senator Lettye Fahrenkamp
Senator Jack Coghill
Senator Dan Alquist

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

STEVE COWPER, GOVERNOR

PO BOX 7034
ANCHORAGE, ALASKA 99510-7034

April 17, 1987

(907) 762-4241

Mr. Brian Burglin
P. O. Box 131
Fairbanks, AK 99707

Dear Mr. Burglin:

I have reviewed your April 7, 1987 request to Ms. Catherine Fortney for a written policy regarding the Division of Oil and Gas's review and determination of participating areas (PAs) for oil and gas units.

In brief, the division agrees with you that the determination of participating areas is governed by 11 AAC 83.351, and that the configuration of participating areas, both initial and subsequent, must be determined on the basis of all geological and engineering data available at the time the PA is established or expanded/contracted. It is almost inevitable that some technical information pertaining to the establishment of participating areas will be proprietary, and not available to all parties within or adjacent to the unit; however, the division must, by the terms of 11 AAC 83.351, take all available information into account when approving a participating area.

The answers to your specific questions are as follows:

(1) Reviews of participating areas are generally triggered by internal unit action such as planned expansions or contractions of the unit area, or a request by one or more of the unit working interest owners for expansion or contraction of the participating area. However, the division may initiate a review and revision to an approved participating area on its own volition or at the request of others when new data are presented indicating that such a revision is necessary to protect the state's interest or the correlative rights of others.

(2) Generally there is no such thing as a "final" participating area until unit reserves are depleted. Participating areas are continually subject to review and expansion or contraction based on new technical data. For most oil and gas units, contraction of the unit area to exclude all lands outside of an approved participating area is tied to the date of establishment of the "initial" participating area (the first participating area within the unit). There may be no practical difference between "initial" participating areas and subsequent participating areas if sufficient data are available at the time the initial participating area is approved to confirm the distribution of reserves within the unit area.

Mr. Brian Burglin
April 17, 1987
Page 2

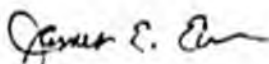
(3) Initial participating areas are delineated on the basis of all geological, geophysical, and engineering data available to the division at the time the participating area is established. Data may be available from more than one source, and the separate parties, which may not have access to all information regarding the participating area limits, may not agree with one another's interpretations. In the case of conflicting technical data, the division reviews all information available, and makes an independent determination of an appropriate participating area based on the terms of 11 AAC 83.351.

(4) Under certain circumstances, the division has initiated action for expansion or contraction of a participating area, particularly in those instances where data indicate that an existing participating area does not adequately and equitably represent the interests of all parties involved. However, normal practice is for one or more of the working interest owners of a unit to initiate action for expansion or contraction of a participating area. A lessee adjacent to the unit may also initiate expansion or contraction if that lessee possesses technical information showing that such action is warranted.

(5) In general, under the terms of 11 AAC 83.351, the unit operator, representing the working interest owners of a unit, is obligated to expand or contract when additional information indicates that such an expansion or contraction is appropriate. This obligation is also usually reflected in the provisions of the various unit agreements.

I hope this is responsive to your questions regarding the division's policy on the establishment and expansion/contraction of participating areas. If you have any additional questions on the above, please feel free to contact me.

Sincerely,


James E. Eason
Director

cc: Judith M. Brady, Commissioner
Catherine Fortney, DNR/DO&G
Bill Van Dyke, DNR/DO&G
Cass Arley, DNR/DO&G

Senator Bettye Fahrenkamp
Senator Jack Coghill
Senator Don Bennett

C. Burglin
Lead Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907) 452-5149

April 28, 1987

James Eason
Division of Oil and Gas
P. O. Box 7034
Anchorage, Alaska 99510-7034

Dear Jim:

As Burglin et al. (Burglin) understands your 4/17/87 letter, the division generally does not review participating areas unless requested to do so by an interested party.

Burglin's concern with this policy is that in undefined gas fields there can be many years and substantial drilling activity which change initial geological interpretation before a participating area is reviewed by the division.

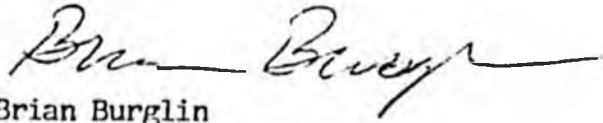
For example, the last participating area review and revision for the Beluga River Unit was made in 1977. From 1968 thru 1977 six (6) gas wells were drilled within the Beluga River Unit, during which time there were five participating area revisions of the Beluga River Field. From 1978 to 1987 twelve (12) gas wells have been drilled with no participating area review by the Division of Oil and Gas. Mr. Bill Van Dyke confirmed that the Beluga River Unit participating areas had not been reviewed by the division staff in over 2 1/2 years, and was unaware of any Beluga River Unit participating area review since 1978. From 1985 thru 1986 eight (8) additional wells have been drilled in the Beluga River Unit. There is no economic incentive for a unit operator to initiate a participating area expansion or contraction when additional well data confirms, modifies, or rejects initial structural interpretation and estimated productive limits, once the original Working Interest Owners have lost their interest in the surrounding acreage, through unit contraction. Well data is usually confidential to adjacent lease holders or interested parties for at least two years after wells have been drilled.

Burglin feels the State's interest would be better protected if participating areas were reviewed on an annual basis and

C. Burglin
Land Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907) 452-5149

this review incorporated into unit plans of a development and operation, especially in undefined gas pools.

Sincerely,



Brian Burglin

BB/kd

cc: Commissioner Brady
Bill Van Dyke
Senator Fahrenkamp
Senator Coghill
Senator Bennett
Commissioner C. Chatterton

C. Burglin
Land Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907) 452-5149

February 19, 1988

Mr. Bruce Geraghty
Administrative Aide to Senator Coghill
Post Office Box V
Juneau, Alaska 99811

Attention: Senator Jack Coghill and Senator Bettye Fahrenkamp

Dear Senators:

Enclosed is a copy of a check that I wrote personally to pay for bonds that were forced on myself and others as leaseholders.

Senator Fahrenkamp, as the late Senator Bennett, former Representative John Ringstad, Representative Steve Frank and yourself know and testified to during the public hearings concerning SB 232, bonding for these leases was definitely not the intent of the legislature according to your testimony.

Notwithstanding the fact that these leases carried a 20% overriding royalty to the State of Alaska plus a 30% net profits interest which in Burglin's case would have netted the State approximately 50% of production, the State was anything but cooperative. Burglin et al were the only ones who drilled a well on any of the leases acquired in Sale 31.

Despite the fact that it was the intent of the State Legislature to magnify the profits to the State and Burglin et al were the only leaseholders that worked dilligently to develop these leases. Despite the fact that Burglin et al did everything humanly possible even in the face of falling oil prices to develop these leases, the State penalized Burglin by enforcing bonding provisions that were never the intent of the legislation. By discouraging the development of these leases the responsible personnel in the Department of Natural Resources deliberately sabotaged the State's opportunity to increase its' income.

In going back over all of the correspondence between Burglin et al and the State Department of Natural Resources, the stand of the State is incomprehensible. The only way that these decisions make any sense would be if the Department of Natural Resources were being run as a branch of ARCO. The decision making State employees are all ex-employees of this company.

Page 2

Mr. Bruce Geraghty - February 19, 1988

As a result of terminating these potential productive and enormously profitable leases, some of these tracts are now being drained by the development of the Lisburne formation. If Burglin et al had been allowed to extend these leases and develop these tracts the benefit to the State could have been measured in tens of millions of dollars.

The State of Alaska has put some of these leases up for sale after forcing Burglin et al to relinquish them. The terms were for 12½% override, not 20% override and 30% net profits. The bonus bids brought in less money than the rental would have brought in if these leases had been extended. The Governor and Legislators should not look for any economic expertise from their bureaucratic employees in the Department of Natural Resources or the Attorney General's office. In an economic course, most if not all, of these employees would be wearing dunce caps.

The State's own geologic department and Oil and Gas Conservation Commission had these leases as part of the Lisburne field based on their accumulated data.

Senators, if the Geologic Division of the State Division of Oil and Gas will condescend to show you, our elected representatives, their data, it will bear out the truth of the above statement.

Burglin et al did everything humanly possible to try to develop these leases. The State Department of Natural Resources and Attorney General's office succeeded in blocking the development.

If you can put yourself in the position of an individual who has had the State government extort \$140,000.00 from him in deliberate contempt of legislative intent, then you will know exactly how I feel.

I am sending a copy of this letter and the enclosed documents to all of the parties who had an interest in these leases. The State Attorney General's office and the Department of Natural Resources, not only cheated the State, but all of the enclosed list of Alaskans and their families.

Yours very truly,



Cliff Burglin

CB:mkc

Enclosures

List of interested parties in these leases:

Arsenault, Lennie	Gustafson, Mary
Bogges, Bill	Johnson, J.
Brashier, Judy	Larson, Dennie
Burglin Family	Menefee, Mike
Bushey, Bill	Miller, Mildred
Cole, Charles	Morrison, Dean
Cook, Earl]	Nerland, Ron
Courtney, Rose	Pryor, Billy
Courtney, Wilburt	Dr. Ribar, Joe
Deiringer, Jim	Rushton, Jean
Droz, Olinda	Schikora, Fred
Everette, Kelley	Schlotfeldt, Leo
Gavora, Paul	Schlotfeldt, Walter
Grant, Alberta	Scollan, Kenneth
Gregory, Richard	Spake, Rodell
Greig, Albina	Thurman, James
Groseclose, Bob	Wagner, Rick
	Waugaman, William
	Witcher, William

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

STEVE COWPER, GOVERNOR

PO BOX 7034
ANCHORAGE, ALASKA 99510-7034

February 12, 1988

C. Burglin
P.O. Box 131
Fairbanks, Alaska 99707

Re: Work Commitment Bond
Forfeiture for State Oil
and Gas Leases ADL Nos.
318631, 318632, 318635, 318618,
318620, 318621, 318623

Dear Mr. Burglin:

The State of Alaska, Department of Natural Resources, Division of Oil and Gas is in receipt of your check for \$140,000. The receipt of funds pursuant to this check relieves Fidelity and Deposit Company of Maryland of its obligations under the performance bonds it posted to secure fulfillment of the work commitment obligations under the above referenced leases.

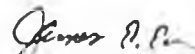
Your letter of January 27, 1988 indicated that the payment "will settle all claims in full of the State of Alaska vs. Burglin, et al and Burglin vs. State of Alaska." We are unaware of any litigation between the State of Alaska and Burglin at this time. If you intended to reference the litigation between the State of Alaska and Alaskan Crude Corporation (Supreme Court case numbers S-2276 and S-2277) we confirm that the receipt of funds under this check will allow the previously-agreed settlement between Alaskan Crude Corporation and the State of Alaska to become effective. A Stipulation and Order of Dismissal With Prejudice is being presented to the counsel for Alaskan Crude for execution and delivery to the Supreme Court at this time. Because the above-referenced leases have now all terminated, and the bond liability issue is resolved, you are correct in assuming that there are no further obligations or disputes with regard to these leases.

C. Burglin

- 2 -

February 12, 1988

Very truly yours,


James E. Eason
Director

MPW/JE:so

cc: Mark P. Worcester, Assistant Attorney General
George Trefry, Esquire, Counsel for Alaskan Crude Corporation
John Downes, Fidelity and Deposit Company of Maryland
Skyline Tower 10900
N.E. Fourth Street, Suite 1625
Bellevue, Washington 98004

C. Burglin
Land Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907)452-5149

January 27, 1988

Mr. James E. Eason
State of Alaska
Department of Natural Resources
Division of Management, Revenue Unit
P. O. Box 107036
Anchorage, AK 99510-7036


Re: Bonding ADL's 318631, 318632, 318635, 318618
318620, 318621, 318623

Fidelity and Deposit Company of Maryland

Dear Mr. Eason:

Enclosed is a check for \$140,000.00 which will cover the \$20,000.00 bond for each lease and will settle all claims in full of the State of Alaska vs. Burglin, et al and Burglin vs. State of Alaska. This payment will relieve the bonding company of all obligations concerning any or all disputes over these oil and gas leases.

Yours very truly.


Cliff Burglin

CH:mc

Encl.

C. BURLIN
LAND CONSULTANT
P. O. BOX 131
FAIRBANKS, AK 99707

MAIN OFFICE
First National Bank
OF FAIRBANKS
A MEMBER OF THE
FIRST NATIONAL BANK GROUP


FCM
CORP

5819

89-7/1252

PAY TO THE ORDER OF STATE OF ALASKA, DEPT. NATURAL RESOURCES \$ 140,000.00
ONE HUNDRED FORTY THOUSAND AND 00/100 DOLLARS

FOR



Land Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907)452-5149

October 18, 1985

Kay Brown
State Department of Natural Resources
Pouch 7-034
Anchorage, Alaska 99510

Re: Applications for Waiver of Work Commitments

Dear Ms. Brown:

In accordance with 11 AAC 83.700 (b) and AAC 83.100-155, Burglin hereby submits the additional information requested by DNR to complete Burglin's application requesting abrogation of the work commitment terms in each of the oil and gas leases listed below:

ADL's 318618, 318620, 318621, 318623, 318624, 318626, 318665, 318666, 318667, 318668, 318669, 318670, 318671, 318674, 318677, 318678, 318680, 318681, 318682

1. Burglin has submitted geological data in support of Burglin's proposed Key Unit application. Burglin requests that this data be submitted in confidence with the application requesting waiver under 11 AAC 83.700 (b) of the work commitment for ADL's 318618, 318620, 318621, 318623, 318624, 318626, 318665, 318666, 318667, 318668, 318669, 318670, 318671, 318674, 318677, 318678, 318680, 318681, and 318682. Burglin feels that development of ADL's 318618, 318620, 318621, 318623, 318624, 318626, 318665, 318666, 318667, 318668, 318669, 318670, 318671, 318674, 318677, 318678, 318680, 318681, and 318682 cannot be conducted economically under Burglin's current interpretation of this geological data. Burglin's initial interpretation of the geological data submitted in support of Burglin's proposed Key Unit has not changed.
2. Burglin's exploratory plans for each lease have been outlined in Exhibit "g", "Unit Plan For Exploration" submitted with the proposed exploratory Key Unit application. Burglin would use data from initial exploration in order to determine further exploration or development plans on ADL's 318618, 318620, 318621, 318624, 318626, 318665, 318666, 318667, 318668, 318669, 318670, 318671, 318674, 318677, 318678, 318680, 318681, and 318682. At this time Burglin feels that unitization of ADL's 318618, 318620, 318621, 318624, 318626, 318665, 318666, 318667, 318668, 318669, 318670, 318671, 318674, 318677, 318678, 318680, 318681, and 318682 would be the most economically feasible way of exploring and developing any reservoirs or hydrocarbon accumulation discovered by drilling on ADL's 318618, 318620, 318621, 318624, 318626, 318665, 318666, 318667, 318668, 318669, 318670, 318671, 318674, 318677, 318678, 318680, 318681, and 318682.

C. Burglin
Land Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907)452-5149

Kay Brown
October 18, 1985
Page 2

3. By granting Burglin's request for a waiver of work commitment, Burglin can proceed with plans to drill initial exploratory wells. Data from initial exploratory activities and from the interpretation of the prospective area would assist Burglin in determining further exploration or development plans on ADL's 318618, 318620, 318621, 318624, 318626, 318665, 318666, 318667, 318668, 318669, 318670, 318671, 318674, 318677, 318678, 318680, 318681, and 318682. It is Burglin's intent to proceed with exploration plans in an economically and environmentally sound manner.

Burglin has contacted Mr. Bill Van Dyke of the Department of Natural Resources for clarification concerning Ms. Brown's request for additional information. Burglin considers the original application requesting waiver under 11 AAC 83. 700 (b) of the work commitment to now be complete.

If there are any questions or if this application is still considered to be incomplete by DNR, please contact Brian Burglin immediately at 452-5149.

Regards,



C. Burglin



Brian Burglin

CB/BB/mbg/pb

enclosures

cc: James Eason
Bill Van Dyke
Commissioner Esther Wunnicke

Land Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907)452-5149

September 27, 1985

Commissioner Esther Wunnicke
State Department of Natural Resources
Pouch 7-034
Anchorage, Alaska 99510

APPLICATION FOR WAIVER OF WORK COMMITMENT

Re: ADL 318626

Dear Commissioner Wunnicke:

Pursuant to SB 232 and proposed AAC 83.700(d): "The commissioner will, in his or her discretion, grant a single waiver of any term of a work commitment imposed on a lease under (a) of this section for a period not to exceed two years if the commissioner makes a written finding that conditions preventing fulfillment of the work commitment were beyond the lessee's reasonable ability to foresee or control." Applicant, Burglin et al (Burglin) requests that the Department of Natural Resources waive the work commitments contained in ADL 318626 for a period of two years. In support of this application Burglin submits the following:

ADL 318626 was acquired by Burglin in Sale 31 in 1980. Burglin had to wait for several key events to happen in order to make tracts acquired in Sale 31 more economically feasible to develop. Some of these events included decisions by ARCO to produce the Lisburne formation and Sohio to produce the Endicott formation. These two events made it necessary for Burglin to wait for the Alaska Oil and Gas Conservation Commission to rule on the Lisburne and Endicott pool boundaries. The Lisburne pool boundary decision by the Alaska Oil and Gas Conservation Commission was not issued until January of 1984. After the Alaska Oil and Gas Conservation Commission decision on the Lisburne pool boundaries was made, Burglin and ACC, through farmout agreement, went ahead with plans to drill an exploratory well on ADL 318618. Burglin and ACC had hoped to be able to drill this exploratory well during the 1984-1985 drilling season. Permitting, logistics, drilling seasons, and other unforeseen problems prevented ACC from maintaining the time schedule for drilling the exploratory well on ADL 318618. ACC is still in the process of trying to obtain all necessary permits required to drill this exploratory well.

Burglin applied for the exploratory Key Unit to allow more time to implement Burglin's exploration plans on leases proposed to be included in the exploratory Key Unit. Burglin's lease with the State of Alaska allows for unitization for the purpose of exploration. Mr. Eason, in his June 13, 1984 letter to Mr. Burglin states, "The regulations which govern the department's administration of units, 11 AAC 83.300-395, became effective in June 1981, after the first Duck Island Unit expansion decision was issued. These regulations were adopted in response to widespread dissatisfaction within the Legislature with what was considered by many members to be lax administration of units and improper

Land Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907)452-5149

Commissioner Wunnicke
September 27, 1985
Page 2

extensions of primary lease terms by the formation of exploratory units without proper technical bases." Again, Burglin acquired ADL 318626 in 1980, before new regulations and policies toward unitization were implemented by DNR staff. Burglin could not foresee or control changes in policy by the State of Alaska toward unitization. Burglin feels that the exploratory Key Unit could be the only way that development of a potential oil reservoir could ever take place.

It is ACC's and Burglin's plan to obtain all necessary permits to commence an exploratory well within the Key Unit boundary before the start of the 1985-1986 drilling season. It is also ACC's and Burglin's intention, as prudent operators, to explore ADL 318626 and all leases proposed in the exploratory Key Unit in an economically and environmentally sound program. It is not ACC's or Burglin's intention to needlessly spend valuable exploration funds in order to recklessly explore ADL 318626 or any of the leases proposed for inclusion in the exploratory Key Unit. Burglin cannot foresee or control lack of timely decision by the Department of Natural Resources, Division of Oil and Gas staff concerning extension of ADL 318626. Funds cannot be committed to exploration without lease extensions.

Burglin has submitted the exploratory Key Unit Application to the Division of Oil and Gas for approval. Burglin has proposed an exploratory well to be drilled within the proposed Key Unit boundaries. ADL 318626 is included in the exploratory Key Unit Application.

Burglin believes that the State of Alaska should encourage and not discourage exploration of oil and gas leases. Burglin cannot meet work commitments on ADL 318626 or any Sale 31 leases if the Commissioner of DNR and the staff of the Division of Oil and Gas do not want exploration activities on Sale 31 leases.

Burglin requests that the Commissioner and the Division of Oil and Gas staff review all oral arguments presented at the public hearings concerning SB 232. Burglin feels that the legislative intent of SB 232 is very clear and that many good arguments were presented to support two year extensions on ADL 318626 and all Sale 31 leases.

The Commissioner's prompt consideration of this application is requested. As the Commissioner is aware, all delays greatly restrict the lessee's ability to meet work requirements.

Land Consultant
P.O. Box 131
Fairbanks, Alaska 99707
(907)452-5149

Commissioner Wunnicke
September 27, 1985
Page 3

If there are any questions concerning this application, please contact
Brian Burglin immediately at (907)452-5149.

Regards,



C. Burglin



Brian Burglin

CB/BB/mbg/pb

cc: Jim Eason
Kay Brown

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>NPSI</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%



Chevron U.S.A. Inc.
6001 Bollinger Canyon Road, San Ramon, California
Mail Address: P.O. Box 6050, San Ramon, CA 94583 0905

September 27, 1985

DEPARTMENT OF
NATURAL RESOURCES

SEP 27 1985

COMMISSIONER'S OFFICE
ANCHORAGE

J.J. Anders
Manager, Alaska Division
Land Department, Western Region

Request for Abrogation
of Terms of Work Commitments
ADL-318601
ADL-318615
ADL-318616
ADL-318617
ADL-318622

Ms. Esther Wunnicke
Commissioner of the Department
of Natural Resources
Pouch 7-034
Anchorage, AK 99510

Dear Ms. Wunnicke:

In accordance with 11 AAC 83.700(b), Chevron U.S.A. Inc. hereby requests abrogation of the work commitment terms included as Stipulation No. 5 in each of the oil and gas leases listed and described as follows:

- ADL-318601: Tract C31-001
Secs. 25, 26, 35 and 36, T11N, R16E, U.M.
- ADL-318615: Tract C31-015
Secs. 1, 2, 11 and 12, T10N, R16E, U.M.
- ADL-318616: Tract C31-016
Secs. 13, 14, 23 and 24, T10N, R16E, U.M.
- ADL-318617: Tract C31-017
Secs. 25, 26, 35 and 36, T10N, R16E, U.M.
- ADL-318622: Tract C31-022
Secs. 29, 30, 31 and 32, T10N, R17E, U.M.

This should be considered as a separate request with respect to each of the aforementioned leases, for convenience combined in a single application.

Basis of application. Each such lease will be unproductive or uneconomic under the terms of the work commitment, as determined by the Department of Natural Resources in its consideration of data submitted to it and review of other well data by the Department.

Pertinent lease stipulations, regulations and law. Each lease was issued to Chevron U.S.A. Inc. effective November 1, 1980, and contains "Stipulation No. 5", reading as follows: