

# STATE OF ALASKA

## DEPARTMENT OF NATURAL RESOURCES

JAY S. HAMMOND, Governor

DIVISION OF LANDS 323 E. 4TH AVENUE—ANCHORAGE 99501  
MINERALS & ENERGY MANAGEMENT

### DECISION AND FINDINGS OF THE DIRECTOR, DIVISION OF MINERALS AND ENERGY MANAGEMENT WITH RESPECT TO APPLICATION FOR APPROVAL OF UNIT AGREEMENT, PRUDHOE BAY

#### INTRODUCTION

On March 29, 1977, Atlantic Richfield Company, BP Alaska, Inc. and Exxon Corporation filed an application with the Commissioner and the Department of Natural Resources pursuant to AS 38.05.180 and 11 AAC 83.355 for approval and certification of a voluntary unit agreement for the Prudhoe Bay Unit. On April 4, 1977, the Director of the Division of Minerals and Energy Management (DMEM) acting pursuant to authority delegated to him by the Commissioner and the Director, Division of Lands, issued proposed findings and a statement of his intention to approve the proposed unit. These proposed findings and decisions found that unitization of the Prudhoe Bay field was in the public interest and in the interest of the State of Alaska.

Because of the public interest in this unit, the Director of the Division of Minerals and Energy Management gave notice of a public hearing to be held at the Ramada Inn in Anchorage on May 3, 1977. The purpose of this meeting was to receive additional comments from all interested parties and other persons before making a final decision concerning the unit agreement. This notice was published in the Anchorage Daily News, the Fairbanks News Miner, the Tundra Times, and the Juneau Empire newspapers on April 6, 13, and 20th. In addition, postings were made in the Division of Lands offices in Fairbanks and Anchorage. A meeting was held with representatives of the North Slope Borough planning group in Anchorage on March 25, 1977 and the borough was advised by letter of April 16, 1977 of the public hearing to be held. A copy of the Director's proposed decision and findings was also included.

Several persons expressed a desire to appear at the May 3, 1977 hearing. The DMEM received communications from Union Oil Company and AMOCO Production Company that they would appear at the hearing to present evidence with respect to certain acreage they believed should have been included in the Prudhoe Bay Unit area. Continental Oil Company also stated it would appear at the hearing to make a statement with respect to inclusion of certain acreage located northwest of the Prudhoe Bay Unit.

The hearing in this matter was held on May 3, 1977, at the Ramada Inn in Anchorage, Alaska. Mr. David Walker of BP Alaska, Inc., Mr. Glen Simpson of Atlantic Richfield Company, Mr. Paul Norgaard of Atlantic Richfield Company, and Mr. George Nelson of BP Alaska, Inc. made sworn statements on behalf of the applicants. Mr. Henry Lee, Mr. Jack Merryman, and Mr. Gary Grahm made statements on behalf of Union Oil Company of California and Mr. Dwayne Bartels entered an unsworn statement on behalf of Continental Oil Company et al.

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Mr. Jerry McCutcheon, a member of the public also made an unsworn statement. Each witness for the applicants and Union and Continental filed copies of their statements for the record and Mr. McCutcheon filed an exhibit for the record. In addition to the statements, the record also includes confidential information contained in the files of the Division of Minerals and Energy Management. This confidential information has been filed by the applicants and by other oil companies, including Mobil, Chevron, Union and Continental under the provisions of AS 38.05.035(9)(C). Also included in this record is a copy of the unit agreement with exhibits which was filed by the applicants on March 29, 1977, a copy of the unit operating agreement which was filed by the applicants on May 6, 1977 and other information filed at various times such as information submitted at the public meeting August 18, 1976; the report entitled, Technical Considerations, Prudhoe Bay Unit Operating Plans, North Slope, Alaska; the application for designation of unit area dated December 2, 1976 submitted by BP, Alaska, Inc., and ARCO, etc.

At the hearing the Director stated that the record would be held open until 4:00PM, May 13, 1977, for the applicants or any other interested person to submit additional statements or evidence. On May 6, 1977, the applicants submitted a copy of the unit operating agreement for the record in this matter.

By letter of April 26, 1977 the North Slope Borough advised the Commissioner of its intention to submit a statement after the May 3, 1977 hearing. The Commissioner advised the borough it had until May 16 to submit its testimony. Although the record closed at 4:00PM May 13, 1977, the borough's statement would have been accepted on May 16 in view of the Commissioner's letter. As of May 24, 1977 no statement or objection has been received from the borough.

#### DISCUSSION OF ISSUES

As a result of the public hearing on May 3, the Director, DMEM, finds that four issues must be considered. These are (1) joinder of the parties, (2) the unit area, (3) confidentiality of data considered in formation of the unit and (4) producing rates of the unit. The first was raised by the testimony of the applicants. The second was raised by the testimony of Union Oil Company and Continental Oil Company. The third and fourth were raised as a result of the statement submitted by Mr. McCutcheon.

##### (1) Joinder of Parties

The record shows that all of the working interest owners within the unit boundaries have signed the unit agreement. Working interest owners owning in excess of ninety-nine percent (99%) of the participation factors for the oil and gas deposits attributable to the leasehold interests in the Prudhoe Bay (Permo-Triassic) Reservoir as defined in the unit agreement have signed the unit operating agreement. One company having leasehold interests within the unit area, Chevron, USA, Inc., has not yet signed the unit operating agreement. Mr. Walker of BP Alaska, Inc. also stated that one hundred percent (100%) of the existing surface unit facilities are located on leases owned by parties signatory to both the unit agreement and unit operating agreement, and that all of the existing wells to be utilized for production and injection are located on leases owned entirely by working interest owners who have signed both agreements. Figure 1 of Exhibit E of the unit agreement supports Mr. Walker's statement. Chevron did not oppose or

otherwise comment on the application or submit any evidence. This evidence shows that the working interest owners who have signed the unit agreement and the unit operating agreement hold sufficient interests in the unit area to effectively control all of the unit operations. The Director is satisfied that a reasonable effort has been and is being made to obtain the signature of Chevron on the unit operating agreement.

(2) Unit Area

The unit area proposed by applicants includes the main Permo-Triassic Reservoir and reservoirs underlying and overlying the "Permo-Triassic" and in the case of the North Prudhoe Reservoir in juxtaposition with an underlying formation and in possible communication with that formation. The Director, after considering a draft of the unit application submitted on December 2, 1976 advised the applicants of his tentative decision that the area proposed in that draft would not be approved because it included land which had insufficient geological evidence to support its inclusion within the unit area. Thereafter, the applicant submitted to the Director a revision of the proposed area. The revision substantially reduced the size of the proposed unit area. At the hearing, Union and AMOCO presented geologic exhibits and testimony to show that the acreage which they propose for inclusion in the unit is productive from the Lisburne Pool. Subsequent to the public hearing, Union and AMOCO also filed an additional cross-section exhibit to further explain their geologic testimony.

After the testimony of Union and AMOCO, the unit applicants made a proposal which indicated they would be agreeable to include a provision that would permit lessees of certain acreage in Section 4, 5, 6, 7, 8, 17, and 18 of Township 11N, R17E, U.M. to make application for inclusion of this acreage in the unit. The unit operators acting pursuant to Section 9.1 of the unit agreement would prepare a notice of enlargement of the unit and thereafter the Director on the basis of then available geological data and interpretations would determine whether such land shall be added to the unit area or not. In any order approving the enlargement, the Director would include such stipulations for further exploration and development of such lands by the owner thereof as he may require, as a condition of such enlargement.

Mr. Bartels made a statement objecting to the boundaries proposed for the Prudhoe Bay Unit, since the unit boundaries do not encompass all tracts in the area appearing to contain hydrocarbons in commercial quantities. Mr. Bartels however, indicated that he did not have geological data to refute the geological interpretations in support of the principles set forth in the findings on which the unit area was based.

The geological information presented in the hearing did not differ significantly from that available to the Director when he issued his proposed decision and findings. The operators holding acreage outside the unit boundaries have the opportunity to drill their acreage and prove whether or not it is productive. If it is productive in the same pool as acreage in the unit, it can be brought into the unit under provisions of Article 9. Additional information to be gained in the next year might clarify the geology in the eastern part of the unit and show more clearly if the unit should be enlarged.

(3) Confidentiality of Data

Mr. McCutcheon stated his belief that there is no reason to continue holding the engineering, geological, and geophysical data confidential on which decisions about the unitization agreement are based. Information which is being kept confidential is not required to be filed by law but has been requested by the Director as an aid to determine the proper boundaries for the unit. Much of the information which has been filed is from leases in the proximity of unleased acreage. Operators do not want information released to their competition hence have requested that the information be kept confidential under provision of the statute. This information has been filed under provisions of AS 38.05.035(9)(C) which provides that all geological, geophysical, and engineering data supplied shall be kept confidential by the Director when requested by the filing party. The Director has no discretion in this matter.

(4) Production Rates of the Unit

Mr. McCutcheon questioned the results obtained by the State in its reservoir simulation analysis to determine production standards for the Prudhoe Bay Unit. The Director has considered this and is satisfied that the reservoir simulation study performed by the Division of Oil and Gas Conservation is a reliable analysis based on the data available. An inquiry has been made to the Oil and Gas Conservation Committee and they have advised by letter of May 19, 1977, that it is their belief the plan of operations will result in efficient operation of the field.

DECISION AND FINDINGS

After considering the proposed decision and findings and the subsequent information presented at the public hearing the following decision and findings are made concerning the approval of the Prudhoe Bay Unit.

1. It is necessary and advisable in the public interest to approve and certify the unitized development and operation provided for in the unit agreement because such unitized development and operation:
  - (a) would prevent and assist in preventing waste of oil and gas;
  - (b) would provide for and ensure conservation of natural resources;
  - (c) would reasonably increase the probability of recovering substantially more oil and gas from the unit area;
  - (d) would protect the correlative rights of persons owning interests in the tracts of land referred to in the unit agreement;
  - (e) would protect the State royalty interest in the oil and gas of the unit area;
  - (f) would ensure efficient operation and development of the unit area;
  - (g) would reduce the cost of development and operation of the tracts included in the unit agreement; and

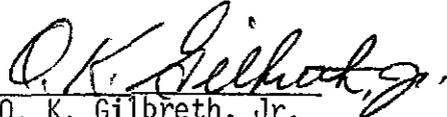
- (h) would provide for approval, control and review by the Director of the Division of Lands, Department of Natural Resources of further plans of development and operation of lands not included in the initial participating area designated in the unit agreement.
2. The unitized development and operation of the subject tracts as a unit would substantially reduce the amount of surface lands and resources that would be utilized if the oil and gas leases were to be developed and operated on a non-unitized basis. This reduction in environmental impact would be in the public interest. Approval of this agreement will not limit or diminish access to public and navigable waters beyond any limitations (if any) already contained in the oil and gas leases covered by the unit agreement.
  3. The agreement will fairly, equitably, reasonably and adequately protect all parties in interest, including the State of Alaska. Each present and prospective party to the unit agreement is a holder of an Alaskan oil and gas lease, or interest therein, and the signatories to the agreement hold sufficient interests in the proposed unit area to give reasonably effective control of operations.
  4. The provisions of the unit agreement, which establish, alter, change or revoke provisions of the oil and gas leases relating to drilling, producing, term, rental, minimum royalty and royalty, protect the correlative rights of all parties having interests in the oil and gas resources and secure the proper protection of the public interest.
  5. Because of the size and geologic and engineering characteristic of the Prudhoe Bay oil pool, unitization of the leases covering the lands overlying that pool will assist in the conservation of oil and gas resources and is therefore in the public interest.
  6. Inclusion within such unit agreement of other hydrocarbon pools will likely further the production and development of those pools and is, therefore, in the public interest.
  7. The area contained within the unit is proper in the light of geologic and engineering data submitted to the Department. Further, where uncertainty or disagreement might exist with respect to the proper boundary of the unit, the provisions in the unit agreement provide for future expansions or for contractions of the unit area. The proposed unit boundary is hereby approved subject to the additional stipulation that the oil and gas operators owning interests in Sections 5, 6, 7, 8, 17, and 18 of Township 11N, R17E, U.M. will have the right to make application for expansion of the unit to include their leases within one year from the effective date of this unit. Unit operators acting pursuant to Section 9.1 of the unit agreement shall prepare a notice of such proposed enlargement. The Director, on the basis of the then available geologic data and interpretation, shall determine whether or not such land or any other lands shall be added to the unit. The Director may at that time include such stipulations for further exploration and development of such lands, by the owners thereof as he may require as a condition of such enlargement. Thereafter, any of such lands as approved by the Director shall be added to the unit area pursuant to Section 9.1.
  8. It is appropriate to conform the effective date of approval and

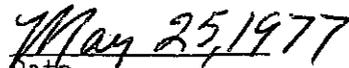
certification of the unit agreement to the effective date of the agreement itself.

9. The unitized development and operation of the tracts as provided in the unit agreement is necessary to and does prevent or assist in preventing waste, ensure a greater ultimate recovery of oil and gas, protect the correlative rights of persons owning interest in the tracts referred to in the unit agreement, and increase recovery of oil and gas from the unit area, and otherwise furthers conservation of natural products in the public interest.
10. The engineering, geological and geophysical information which is being held confidential by the Division of Minerals and Energy Management is information which has been filed under AS 38.05.035(a)(9)(C). This information shall be kept confidential by the Director as required by the statute.
11. The plan of operations provides for production rates of 1.5 million barrels of oil per day and gas production rates of 2.7 billion cubic feet per day which should give a gas sales of 2 billion cubic feet per day. The Oil and Gas Conservation Committee has advised that these plans are consistent with sound conservation practices based on currently available data. These rates are approved subject to continuing surveillance by the Oil and Gas Conservation Committee.

The Director hereby approves the unit application and the plan of operations for the Prudhoe Bay Unit subject to the conditions imposed in paragraphs 7 and 11 above. Acceptance of state approval of this unit by the operators signifies their acceptance of the Director's findings and conclusions and the conditions of approval listed herein.

This approval along with the record of the May 3 hearing and other files are being transmitted to the Commissioner for his review in accordance with his delegations of authority to the Director, DMEM, of March 30 and April 14, 1977.

  
O. K. Gilbreth, Jr.  
Director

  
Date

APPROVAL OF PRUDHOE BAY  
UNIT AGREEMENT BY  
THE COMMISSIONER OF THE  
DEPARTMENT OF NATURAL  
RESOURCES

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By memorandum of April 14, 1977, to O.K. Gilbreth, Director, Division of Minerals and Energy Management (DMEM), I delegated all my authority under AS 38.05.180 to review and approve the unit agreement application for the Prudhoe Bay Unit. In that memorandum, I expressed my intent to review Director Gilbreth's action under my general statutory authority to review actions of the Director of the Division of Lands and his designees [(AS 38.05.020(b)(3))]. Under AS 31.05 the Department of Natural Resources also has authority to review and approve unit agreements as part of its broad responsibility to prevent waste and protect correlative rights. This authority is delegated by regulation to the Alaska Oil and Gas Conservation Committee.

I have reviewed the DECISION AND FINDINGS OF THE DIRECTOR, DIVISION OF MINERALS AND ENERGY MANAGEMENT WITH RESPECT TO APPLICATION FOR APPROVAL OF UNIT AGREEMENT, PRUDHOE BAY, dated May 25, 1977, the initial findings of the Director, dated April 4, 1977, the transcript of the hearing before the Director of DMEM, held on May 3, 1977, certain additional information supplied me by the Director, DMEM, including certain confidential information, and the decision of the Oil and Gas Conservation Committee, dated May 31, 1977.

I find the decisions of the Director, DMEM, and the Oil and Gas Conservation Committee consistent in all respects. I find that the actions taken by the Director, DMEM and the Oil and Gas Conservation Committee are in the public interest and the interest of the State of Alaska, and accordingly hereby specifically approve the decision and findings of the Director, DMEM and the Oil and Gas Conservation Committee.



Robert E. LeResche  
Commissioner  
Department of Natural Resources

Date: 2 June 1977

cc: O.K. Gilbreth  
Hoyle Hamilton  
Joe Green