

STATE OF ALASKA
ALASKA OIL AND GAS CONSERVATION COMMISSION
333 West 7th Avenue, Suite 100
Anchorage Alaska 99501

Re: **THE APPLICATION OF BPXA**) **Area Injection Order No. 22C**
EXPLORATION (ALASKA) INC.)
for an order expanding the area in) Prudhoe Bay Field
which injection is authorized in the) Aurora Oil Pool
Aurora Oil Pool, Prudhoe Bay Field,)
North Slope, Alaska) June 25, 2004

IT APPEARING THAT:

1. BP Exploration (Alaska), Inc. (“BPXA”) by application dated March 26, 2004, applied for expansion of the area in which injection is authorized in the Aurora Oil Pool (“AOP”);
2. BPXA provided supplemental information at the Commission’s request on April 12, 2004;
3. Notice of a public hearing, tentatively scheduled for May 6, 2004, was duly published in the Anchorage Daily News on April 2, 2004; and
4. No requests for hearing or objections concerning the application were received.

FINDINGS:

1. AIO 22, effective September 7, 2001 approved water injection for enhanced recovery purposes within the AOP and set forth rules for conducting injection operations.
2. AIO 22B effective May 6, 2003 approved injection of enriched hydrocarbon gas for enhanced recovery purposes and amended reporting requirements for reservoir surveillance.
3. The Commission has issued CO 457B, which finds that subsurface wireline log data, pressure measurements, and newly reprocessed seismic data indicate that the AOP extends beyond the area specified in CO 457 and expands the area subject to pool rules governing the development and operation of the AOP.
4. BPXA proposes to expand water and enriched hydrocarbon gas injection operations to include the additional area defined by CO 457B.
5. The previously issued rules governing injection within the AOP continue to be appropriate for that pool.

CONCLUSION:

The area within which injection into the AOP is authorized should be expanded to conform to the pool rules area defined by CO 457B.

NOW, THEREFORE, IT IS ORDERED:

Underground injection of fluids as described in BPXA's applications for AIO 22, AIO 22A, and AIO 22B is permitted subject to the conditions, limitations, and requirements established in the rules set out below, in Conservation Order 457B and statewide requirements contained in 20 AAC 25. The affected area of this order is:

Umiat Meridian

| <u>Township Range, UM</u> | <u>Sections</u> |
|-------------------------------|---|
| T11N-R12E | Sec 2: W1/2 Sec 3: All Sec 4: E 1/2, NW 1/4, E 1/2 SW 1/4 Sec 5: E 1/2 1/2 NE 1/4 Sec. 9: NE 1/4, N 1/2 SE 1/4 Sec 10: NW 1/4 SW 1/4, W 1/2 NW 1/4 |
| T12N-R12E | Sec 15: S 1/2 SE 1/4, SW 1/4 Sec 16: NW 1/4, S 1/2 Sec 17: S 1/2, NE 1/4 Sec 18: SE 1/4 Sec 19: N 1/2 NE 1/4 Sec 20: E 1/2, N 1/2 NW 1/4 Sec 21: All Sec 22: All Sec 23: S 1/2, S 1/2 NW 1/4, S 1/2 NE 1/4 Sec 25; S 1/2, S 1/2 NW 1/4 Sec 26; All Sec 27: All Sec 28: All Sec 29: E 1/2 NE 1/4, SE 1/4 Sec 32: E 1/2 Sec 33: All Sec 34: All Sec 35: All Sec 36: All |

Rule 1. Authorized Injection Strata for Enhanced Recovery (Source AIO 22)

Injection is permitted into the accumulation of hydrocarbons that is common to, and correlates with, the interval between 6765' - 7765' measured depth ("MD") in the Mobil Oil Corporation Mobil-Phillips North Kuperuk State No. 26-12-12 well.

Rule 2 Injection Pressures (Source AIO 22B)

The injection operations shall not allow fractures to propagate into the confining intervals. Surface wellhead injection pressures shall be limited to 2800 psi for water and 3800 psi for gas.

Rule 3. Fluid Injection Wells (Source AIO 22B)

- a. The underground injection of fluids must be through a well permitted for drilling as a service well for injection in conformance with 20 AAC 25.005, or through a well approved for conversion to a service well for injection in conformance with 20 AAC 25.280.
- b. An application to drill or convert a well for injection must be accompanied by the information required by 20 AAC 25.402(c), and must include cementing records, cement quality log or formation integrity test records.

Rule 4. Monitoring the Tubing-Casing Annulus Pressure Variations (Source AIO 22)

The tubing-casing annulus pressure and injection rate of each injection well must be checked at least weekly to confirm continued mechanical integrity.

Rule 5. Demonstration of Tubing-Casing Annulus Mechanical Integrity (Source AIO 22)

A schedule shall be developed and coordinated with the Commission that ensures that the tubing-casing annulus for each injection well is pressure tested prior to initiating injection, following well workovers affecting mechanical integrity, and at least once every four years thereafter.

Rule 6. Notification of Improper Class II Injection (Source AIO 22)

The operator shall notify the Commission if it learns of any improper injection of fluids into a Class II well. Additionally, compliance with the notification requirements of any other State or Federal agency remains the operator's responsibility.

Rule 7. Other conditions (Source AIO 22)

- a. It is a condition of the authorization granted by this Order that the operator shall comply with all applicable Commission regulations.
- b. The Commission may suspend, revoke, or modify this authorization if injected fluids fail to be confined within the designated injection strata.

Rule 8. Administrative Action (Source AIO 22B)

Unless notice and public hearing are otherwise required, the Commission may administratively waive the requirements of any rule herein or administratively amend any rule as long as the change does not promote waste or jeopardize correlative rights, is based on sound engineering and geoscience principles, and will not result in an increased risk of fluid movement into freshwater.

Rule 9. Authorized Fluids for Enhanced Recovery (Source AIO 22B)

The fluids authorized by this Order for injection and conditions of the authorization are as follows:

- a. produced water from the AOP or Prudhoe Bay Unit processing facilities;
- b. source water from the Prince Creek formation provided that the water is shown to be compatible with the AOP formation and administrative approval to inject is obtained from the Commission;
- c. enriched hydrocarbon gas processed within the Prudhoe Bay Unit processing facilities, with the following conditions:
 1. reservoir pressure must be maintained to ensure miscibility of the injectant, and
 2. expansion of injection outside of the North of Crest and West Blocks must be administratively approved prior to long-term injection;
- d. immiscible hydrocarbon gas from the AOP or Prudhoe Bay Unit processing facilities provided that Commission approval of the associated depletion strategy and surveillance plans is obtained prior to start of injection;

- e. tracer survey fluid to monitor reservoir performance; and
- f. non-hazardous filtered water collected from AOP well house cellars and well pads.

By Order of the Commission at Anchorage, Alaska, this 25th day June 2004.

John K. Norman, Chair
Alaska Oil and Gas Conservation Commission

Daniel T. Seamount, Jr., Commissioner
Alaska Oil and Gas Conservation Commission

AS 31.05.080 provides that within 20 days after receipt of written notice of the entry of an order, a person affected by it may file with the Commission an application for rehearing. A request for rehearing must be received by 4:30 PM on the 23rd day following the date of the order, or next working day if a holiday or weekend, to be timely filed. The Commission shall grant or refuse the application in whole or in part within 10 days. The Commission can refuse an application by not acting on it within the 10-day period. An affected person has 30 days from the date the Commission refuses the application or mails (or otherwise distributes) an order upon rehearing, both being the final order of the Commission, to appeal the decision to Superior Court. Where a request for rehearing is denied by nonaction of the Commission, the 30-day period for appeal to Superior Court runs from the date on which the request is deemed denied (i.e., 10th day after the application for rehearing was filed).