

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS
Alaska Oil and Gas Conservation Committee

3001 Porcupine Drive
Anchorage, Alaska 99504

*Note: this order supervised
by C.O. # 80 T.R.M.*

Re: THE APPLICATION OF UNION OIL COMPANY) Conservation Order No. 71
OF CALIFORNIA for an order permitting a) McArthur River Field:
pressure maintenance project for the) Pressure Maintenance Project
McArthur River Field and the motion of the) and Field Rules
Alaska Oil and Gas Conservation Committee) Hemlock Oil Pool
to establish field rules within the) Middle Kenai Gas Pool
McArthur River Field.) March 28, 1969

IT APPEARING THAT:

1. Union Oil Company of California submitted a petition dated January 10, 1969, requesting the referenced project pursuant to Section 2226 of the Alaska Oil and Gas Conservation Regulations.
2. The Alaska Oil and Gas Conservation Committee moved to hear testimony on rules for the referenced field.
3. Notice of the hearing was published in the Anchorage Daily News on January 27, 1969.
4. A public hearing was held in the City Council Chambers of the Z. J. Loussac Library, Anchorage, Alaska, on February 27, 1969. Testimony was presented in support of the petition and on the proposed field rules.

AND IT FURTHER APPEARING THAT reservoir performance data as shown at the hearing indicate the feasibility of a pressure maintenance project and that such a project should be approved.

AND IT FURTHER APPEARING THAT pools should be defined and field rules prescribed for the regulation of such pools.

NOW, THEREFORE, IT IS ORDERED that the rules hereinafter set forth apply to the following described area:

Township 8 North, Range 13 West, Seward Meridian

Sections 4 through 8:	All
Section 9:	W $\frac{1}{2}$, NE $\frac{1}{4}$
Section 16:	W $\frac{1}{2}$
Sections 17 through 20:	All
Section 29:	NW $\frac{1}{4}$
Section 30:	NE $\frac{1}{4}$

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Township 8 North, Range 14 West, Seward Meridian

Section 1: All
Section 12: E $\frac{1}{2}$, NW $\frac{1}{4}$

Township 9 North, Range 13 West, Seward Meridian

Section 9: S $\frac{1}{2}$
Section 14: SW $\frac{1}{4}$
Sections 15 through 17: All
Section 18: S $\frac{1}{2}$
Sections 19 through 22: All
Section 23: W $\frac{1}{2}$
Section 26: W $\frac{1}{2}$
Sections 27 through 34: All
Section 35: NW $\frac{1}{4}$

Township 9 North, Range 14 West, Seward Meridian

Section 24: E $\frac{1}{2}$
Section 25: E $\frac{1}{2}$
Section 36: NE $\frac{1}{4}$

Rule 1. Definition of Pools.

(a) The McArthur River Hemlock Oil Pool is defined as the accumulation of oil common to and which correlates with the accumulation found in the Union Grayling No. 1A well between the depths of 9,372 feet and 9,897 feet.

(b) The McArthur River Middle Kenai Gas Pool is defined as the accumulation of gas common to and which correlates with the accumulation found in the Union Trading Bay Unit No. G-18 well between the depths of 5,360 feet and 6,010 feet.

Rule 2. Casing and Cementing Requirements.

(a) Surface casing shall be landed at not less than 2,000 feet and cement shall be circulated to the sea floor. Casing and control equipment shall be hydrostatically tested to not less than 1,000 pounds per square inch pressure before drilling the shoe.

(b) Production casing shall be landed through the completion zone and cement shall cover and extend to at least 500 feet above each potentially productive sand interval. The use of multi-stage cementing procedures shall be permitted. Alternatively, a casing string shall be adequately cemented at an intermediate point and a liner landed through the completion zone. If a liner is run, the annular space behind the liner

shall be filled with cement to at least 100 feet above the casing shoe or the top of the liner shall be squeezed with sufficient cement to provide at least 100 feet of cement between the liner and casing annulus. Cement must cover all potentially productive intervals behind the liner. Casing and well head equipment shall be hydrostatically tested to not less than 2,000 pounds per square inch pressure.

Rule 3. Bottom Hole Pressure Surveys.

A key well bottom hole pressure survey shall be made in the McArthur River Hemlock Oil Pool and the McArthur River Middle Kenai Gas Pool upon Committee request; provided, however, such surveys shall not be required more often than twice in any calendar year. The time and length of survey, number and locations of wells, datum and other details will be determined by the Committee upon consultation with the operators.

Rule 4. Pressure Maintenance Project.

The injection of water for the purpose of pressure maintenance, secondary recovery or of conducting injectivity tests is hereby permitted in the McArthur River Hemlock Oil Pool. A semiannual progress report detailing project operations and results shall be submitted to the Committee in January and July of each year.

Rule 5. Administrative Approval.

Upon request of the applicant and a showing that the affected parties have been notified of such request, the Committee may authorize the conversion or drilling of any well at any location, the termination or suspension of the project, or any operation reasonably designed to further the purposes of the project.

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DONE at Anchorage, Alaska, and dated March 28, 1969.



Harry W. Kugler

Harry W. Kugler, Acting Executive Secretary
Alaska Oil and Gas Conservation Committee

Concurrence:

Thomas R. Marshall, Jr.

Thomas R. Marshall, Jr., Acting Chairman
Alaska Oil and Gas Conservation Committee

O. K. Gilbreth, Jr.

O. K. Gilbreth, Jr., Member as designated
by the Deputy Commissioner
Alaska Oil and Gas Conservation Committee

Karl L. VonderAhe

Karl L. VonderAhe, Member
Alaska Oil and Gas Conservation Committee