

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

Re: **THE REQUEST OF FOREST**) **Aquifer Exemption Order No. 7**
 OIL CORPORATION for an Aquifer)
Exemption Order for the Redoubt Unit #D1) Upper Tyonek Formation
well, Sec.14, T7N, R14W, Seward Meridian,) Redoubt Unit
offshore Cook Inlet.) Well Redoubt Unit #D1

August 1, 2001

IT APPEARING THAT:

1. Forest Oil Corporation (“Forest”) submitted an application, dated May 9, 2001, requesting that the Alaska Oil and Gas Conservation Commission issue an aquifer exemption for purposes of Class II disposal in the Redoubt Unit #D1 well. Additional information requested by the Commission was received on June 5, June 22 and July 5, 2001. Subsequent to numerous changes, a revised application for aquifer exemption and disposal injection orders was submitted on July 27, 2001.
2. The Commission published notice of an opportunity for a public hearing in the Anchorage Daily News and Peninsula Clarion on May 14, 2001.
3. The Commission did not receive any protest or request for a public hearing.
4. The Commission has jurisdiction in this matter under AS 31.05.030(h), 20 AAC 25.440, and 40 CFR 147, Subpart C - Alaska.
5. The Commission submitted a copy of Forests’ Aquifer Exemption application to the U.S. Environmental Protection Agency, Region 10, (“EPA Region 10”) on May 10, 2001, in accordance with Section 14 of the November 22, 1991 Memorandum of Agreement between EPA Region 10 and the Commission. A copy of the revised application was submitted to EPA Region 10 on July 27, 2001.
6. The Commission submitted a copy of a proposed aquifer exemption order to EPA Region 10 on July 31, 2001.
7. EPA Region 10 did not object to the aquifer exemption order for the Redoubt Unit.

FINDINGS:

1. In correspondence dated May 8, 2001 Forest requested an order authorizing Class II disposal into the Tyonek Formation in the Redoubt Unit #D1 well. Subsequent to numerous plan changes and data correction efforts, a revised application was submitted on July 27, 2001.
2. The Redoubt Unit (“RU”) is located offshore in Cook Inlet, approximately 2 miles east the West Forelands area, and is being developed from the Osprey platform.

3. Development of the RU calls for drilling the surface hole sections with water-based drilling fluid systems and the lower hole sections with oil-based systems. Operators in Cook Inlet are prohibited from discharging oil-based drilling fluids. Current disposal options are limited to either annular disposal or Class II injection in approved wells.
4. Wireline log analytical techniques, which are compliant with EPA recommended methods as described in "Survey of Methods to Determine Total Dissolved Solids Concentrations", (KEDA Project No. 30-956), were used to characterize formation water salinities in the Redoubt Unit.
5. Wireline log analysis from the RU #D1 well show the proposed Class II disposal injection zone contains freshwater with a total dissolved solids (TDS) concentration generally between 3,000 and 10,000 mg/l.
6. Current perforations in the RU #D1 well are between 8216' and 8450' measured depth (MD), within sandstones of the Tyonek Formation. Forest intends to also perforate and inject into another sand interval between 7650' and 7900' MD. A packer is currently set at 7620' MD.
7. Forest has requested an Aquifer Exemption Order (AEO) for all aquifers below 3749' MD (3650' true vertical depth subsea) and within one-half mile radius of the RU #D1 well, to prepare for the possibility of a need for Class II disposal into intervals at shallower depths than originally anticipated.
8. The proposed disposal interval is overlain and confined by siltstones, coals and shales within the Tyonek and Beluga Formations which will prevent vertical migration of Class II wastes into formation waters with TDS content less than 3000 mg/l.
9. The closest drinking water well to the RU is located onshore, approximately 8 miles to the northwest, in the West McArthur River Unit.
10. All freshwater used by the Osprey platform is brought to the platform by boat. Forest has no plans to use the underlying aquifers as a source of drinking water.
11. Development of the freshwater aquifers below the RU by entities other than Forest is economically impractical because of the offshore location, water depths and currents, drilling costs and readily available alternative freshwater sources onshore.
12. The Commission's authority to act in this matter is embodied in 40 CFR 147 Subpart C, the Alaska Oil and Gas Conservation Act (AS 31.05), and the Alaska Administrative Code (20 AAC 25.005 through 20 AAC 25.570).
13. Portions of aquifers beneath the Cook Inlet underlying the Granite Point, McArthur River, Middle Ground Shoal and Trading Bay fields, regardless of total dissolved solids content, were exempted for Class II injection activities by EPA under 40 CFR 147.102.
14. On September 29, 1998, the Commission exempted the portions of aquifers in North Cook Inlet Field common to and which correlate with the interval below 2900' MD in the NCIU A-12 well.

CONCLUSIONS:

1. Those portions of freshwater aquifers occurring beneath the Redoubt Unit do not currently serve as a source of drinking water.

2. Those portions of freshwater aquifers occurring beneath the Redoubt Unit are situated at a depth and location that makes recovery of water for drinking water purposes economically impractical.
3. Those portions of aquifers occurring beneath and within one-quarter mile radius of the Redoubt Unit cannot reasonably be expected to serve as an underground source of drinking water.
4. Those portions of aquifers occurring within a one-half mile radius and below the depth of 3749' MD in the Redoubt Unit #D1 well qualify as exempt freshwater aquifers under 20 AAC 25.440(a)(2).

NOW, THEREFORE, IT IS ORDERED THAT the aquifers occurring within a one-half mile radius and below the depth of 3749' MD (3650' TVDSS) in the Redoubt Unit #D1 well are exempt under 20 AAC 25.440.

DONE at Anchorage, Alaska, and dated August 1, 2001.

Cammy Taylor, Chair
Alaska Oil and Gas Conservation Commission

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

Julie M. Heusser, 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).