

Province of **British Columbia** Ministry of Energy, Mines and **Petroleum Resources**

Parliament Buildings Victoria British Columbia **V8V 1X4**

ASSISTANT DEPUTY MINISTER

Stu Odans. 268-0490.

April 5, 1990

Mr. N.R. Shular Unocal Canada Management Ltd. 150 - 6th Avenue S.W. Box 1180 Calgary, Alberta T2P 2X9

Dear Mr. Shular:

(06)4800 K (07) 4800 M

APPLICATION FOR CONCURRENT PRODUCTION WEASEL HALFWAY "K" AND "M" POOLS

This refers to your application of January 25, 1990, requesting concurrent production approvals from the Weasel Halfway "K" and "M" pools. These pools have been termed Osprey Halfway and Heron Halfway pools, respectively in your application.

The Division has completed a geological and engineering review of these pools recently. Our interpretation is very similar to the one presented by Unocal Canada Management Ltd. (Unocal). The pools have been delineated with the drilling of infill wells within the seismically defined reservoirs. The oil wells suffer from severe gas-oil ratio penalties and we agree that oil recoveries cannot be improved significantly by gas injection because of the risk of gas coning. Also, it is agreed that secondary recovery is not feasible, due to the low permeability, especially in the Halfway "K" pool.

There are no equity concerns with the requested concurrent production schemes, as the land covering these pools is controlled by Unocal. Accordingly, Unocal as operator, is hereby given approval under section 113 of the Petroleum and Natural Gas Act to produce oil and gas concurrently under a Good Engineering Practice from the Halfway "K" and "M" pools of the Weasel field, subject to the following terms and conditions:

Weasel Halfway "K" pool:

1. The area of the approval is unit 70-Block I and units 61 and 71-Block J/ 94-A-15.

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- The daily oil allowable for the area, based on the sum of the individual well allowables, is 22.6 m³.
- 3. Gas production from the area will be limited to $15 \cdot 10^3 \text{m}^3/\text{d}$.
- 4. All gas production from the area will be conserved.
- 5. The effective date of the approval will be the date the Division is advised of the completion of the gas conservation facilities.
- 6. The approval is subject to periodic review and may be modified at a later date by the Director, Engineering and Operations Branch, if deemed appropriate through a change in circumstances.

Weasel Halfway "M" pool:

- 1. The area of the approval is units 58, 59, 68, 69, 76, 77, 78, 86 and 87 Block I/ 94-A-15.
- 2. The daily oil allowable for the area, based on reserves, is 37.7 m³.
- 3. Gas production from the area will be limited to 25 10³m³/d.
- 4. All gas production from the area will be conserved.
- 5. The effective date of the approval will be the date the Division is advised of the completion of the gas conservation facilities.
- 6. The approval is subject to periodic review and may be modified at a later date by the Director, Engineering and Operations Branch, if deemed appropriate through a change in circumstances.

Yours sincerely,

John Allan

Assistant Deputy Minister Energy Resources Division

Jan 21/9/ See attached
(see letter).

Jan 21/91.

Unocal Canada Management Limited 150 - 6th Avenue S.W., Box 1180 Calgary, Alberta T2P 2K9 Telephone (403) 268-0126 FAX (403) 268-0167



25 February 1991

Sharon Foofat Ministry of Energy, Mines and Petroleum Resources 617 Government Street, Room 437 Victoria, B.C. V8V 4S2

Dear Sharon:

Gas conservation facilities for:

Weasel Halfway K Pool; and Weasel Halfway M Pool

were completed as of January 21, 1991. Unocal Canada Management Limited respectfully requests that this be the effective date for concurrent production for these pools.

Yours truly, David a. Bramsen

David A. Bramsen.

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