



Ref. No. 84755

1984 08 17

*Approval File*

Esso Resources Canada Ltd.  
Esso Plaza 237 Fourth Avenue, S.W.  
Calgary, Alberta  
T2P 0H6

Attention: R. E. Griffiths

Dear Sir:

Re: Application for Boundary Lake  
Unit No. 1 Waterflood Expansion

In reply to your application of 1984 07 26, (received on the 1984 08 13), modification of the Boundary Lake Unit No. 1 Waterflood is hereby approved as follows:

1. The two producing wells will be converted to fresh water injection service; 14-2-84-14 W6M and 14-4-84-14 W6M;
2. The amount of water injected in these wells will maintain voidage replacement in the proposed patterns;
3. The ratio factor for NORP and the royalty rate to be applied to the Boundary Lake unit to account for the incremental oil production from the waterflood modification, is to be 5.72%;
4. The above factor to calculate price received and royalty paid will come into effect on the first of the month following the month in which water injection into the two converted injection wells is started;
5. "Application to Alter a Well" forms will be submitted to the Ministry's Charlie Lake field office when your plans for conversion of the mentioned wells are finalized.

You will note that the approved value of the ratio factor for NORP and royalty rate is somewhat lower than that proposed in your submission. Although the Ministry has accepted your estimate of incremental recovery, the approved ratio is based on the current Ministry estimate of remaining reserves. This estimate is  $6328.5 \times 10^3 \text{ m}^3$  as of 1984 07 01 compared to your proposed value of  $5062 \times 10^3 \text{ m}^3$  and a previous Esso estimate of  $8442 \times 10^3 \text{ m}^3$  \*.

We will be pleased to answer any questions you may have on this approval.

Yours truly,

PETROLEUM RESOURCES DIVISION



A. G. T. Weaver  
Director, Engineering and Operations  
(604) 387-5993

CV:him

cc: Director - Mineral Revenue Branch

\* Value derived from Esso submission "Application for Special Royalty Treatment for Boundary Lake Unit No. 1". August 1979.