

2	0	5	4	5	3	5	2	9	4	6	6
3	5	0	0	9	4	0	0				

Ref. No. 841033

1984 12 13

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

Attention: R. S. Griffiths

Dear Sir:

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

In reply to your application of 1984 10 23, and supplemental application of 1984 11 21, modification of the Boundary Lake Unit No. 1 Waterflood is hereby approved as follows:

1. The approval given by the Ministry to convert wells 14-2-84-14 and 14-4-84-14 to fresh water injectors in our letter dated 1984 08 07, will apply until expansion is implemented as submitted in your application of 1984 10 23.
2. When expansion is implemented, the two-well approval mentioned above will be withdrawn and consolidated with this new approval for a total of 20 wells converted to injectors.
3. Seventeen additional producing wells will be converted to fresh water injection service;

6-18-84-13	6-21-84-14
6-19-84-13	6-22-84-14
6-20-84-13	6-23-84-14
6-30-84-13	16-23-84-14
6-10-84-14	6-24-84-14
6-13-84-14	6-25-84-14
6-14-84-14	6-26-84-14
6-15-84-14	6-27-84-14
6-16-84-14	

4. One additional producing well will be converted to produced water injection service; 6-35-84-14.
5. The volume of water injected in these wells will maintain voidage in the proposed patterns.
6. One fresh water injector will be suspended; 4-25-84-14.
7. The total ratio factor for NORP and Royalty rate to be applied to the Boundary Lake Unit 1 to account for the incremental oil production from waterflood modification by converting 18 wells to injectors plus the previously approved two wells, for a total of 20 wells, is to be 15.20%.
8. 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 all twenty converted injection wells is started.
9. "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 the value of the ratio factor applied to account for the incremental oil production as a result of converting all twenty wells to injectors is somewhat lower than that proposed in your submissions. Although the Ministry has accepted your estimate of 5% incremental recovery, the approved ratio factor is based on the Ministry's estimates of oil-in-place for both the entire unit and the portion affected by the conversions.

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

Yours truly,



A. G. T. Weaver
Acting Director, Engineering and Operations

CV/lou

cc: Director - Mineral Revenue
Senior Development Engineer