

DEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIA

June 2, 1970

Inga Unit #3

Canadian Superior Oil Ltd.
Three Calgary Place
255 - 4th Avenue, S.W.
Calgary 1, Alberta

Attention: Mr. L.R. Miskew

Dear Sir:

Re: Application for Approval of
Concurrent Production Scheme,
Jeans West Area

Thank you for the letter of May 12, 1970 summarizing the discussions held in Calgary on May 6, 1970 on the above subject. We have now finalized our review of your application to produce gas, from the gas cap associated with the oil pool in Inga Unit #1, through wells located in the proposed Inga Unit #3. Approval for the scheme is now granted, subject to the following conditions:

- (a) Approval is not effective until the proposed Inga Unit #3 has been formed, under the operator-ship of Canadian Superior Oil Co. Ltd.
- (b) Subject to (a), no gas other than that required for test purposes is to be produced from Inga Unit #3 until a mutually acceptable operating agreement is in effect between Inga Units #1 and #3. This agreement is to cover such things as conversion of additional injection wells in Unit #1, the allocation to Unit #3 of additional water to be injected into Unit #1, and the implementation of the reservoir operational program as presented in the Application. The Branch is to be informed of the general terms of the agreement, and also when such an agreement is in effect.

- (c) The reservoir operational program for Units #1 and #3 is to follow the procedures assumed in the performance prediction shown as 'Case 2' in the model study used as a basis for the Application. Any major deviation from this program must be justified to the Branch's satisfaction.
- (d) No gas is to be produced from Inga Unit #3 until additional water injection has commenced into Unit #1, as per the proposed operational program. Following this, average gas production is not to exceed 10 MMSCF/D, this rate to be taken only from the wells located in b-10-A, a-5-B and ~~a-22-B/94-A-13~~ ^{h-82-J/94-A-12}. The additional water injected into Unit #1 is to be sufficient to replace one third of the gas volume produced from Unit #3, as measured at reservoir conditions at project start. Any under-injection imbalance is to be corrected within sixty days.
- (e) A monthly report is to be filed with the Branch, within sixty days of the report month. The report should present:
- 1) a summary of monthly and cumulative production data from Unit #3, together with corresponding water injection volumes allocated from Unit #1.*
 - 2) a summary of monthly and cumulative reservoir withdrawal and replacement data.
 - 3) a graphical reservoir history, showing complete production and injection history for the project.
- (f) An annual progress report is to be filed with the Branch, within sixty days of the end of the report year. The report period should coincide with that covered in the corresponding Unit #1 progress report, and should contain:
- 1) the daily average production rates, during each month, from each well and from the Unit as a whole.
 - 2) the monthly and cumulative production from each well and from the Unit as a whole.
 - 3) the daily average water injection allocated to Unit #3, together with the monthly and cumulative volumes.
 - 4) details of any reservoir pressure data obtained during the report period.

* The Unit #1 monthly and annual reports should show the total volume of water physically injected into Unit #1, and also that proportion allocated to Unit #1. Withdrawal balances for Unit #1 should use this latter figure.

- 5) monthly and cumulative reservoir withdrawal balance calculations.
 - 6) a general review of operations pertinent to the project, and details of all workover and well treatment programs carried out during the report period.
- (g) An annual reservoir pressure survey of all wells in the Unit is to be carried out in March, in conjunction with the survey required in Inga Unit #1. The producing gas wells are to be AOF tested in accordance with the procedures outlined in the 'memo to all operators' dated September 5, 1969. In addition, the wells located in d-42-J and b-44-J/94-A-12 are to be completed as observation wells in the Inga Sand. These wells are to be included in the annual survey and additional data from these wells may be requested from time to time, in order to monitor performance.
- (h) This approval for concurrent production is based on the assumption that actual pool (Unit #1 and #3) performance will follow predictions. Any major deviation may be cause for modifying or rescinding the approval.

Yours truly,

J. D. Lineham
Chief
Petroleum and Natural Gas Branch

AJD:lh

cc WLI
REM
DLJ

Tenneco Oils
Attention: Mr. T.W. Witte