

## Province of British Columbia

ASSISTANT DEPUTY MINISTER

Ministry of Energy, Mines and Petroleum Resources

Parliament Bulldings Victoria British Columbia V8V 1X4

February 15, 1989

Mr. M.E. Trethart
Amoco Canada Petroleum
Company Ltd.
P.O. Box 200, Station M
Calgary, Alberta
T2P 2H8

anceo Project (02)

Dear Mr. Trethart:

APPLICATION FOR GOOD ENGINEERING PRACTICE (Gas)

CYPRESS - BALDONNEL "A"

This refers to your application of November 4, 1988, requesting a Good Engineering Practice (GEP) approval for producing natural gas from the Baldonnel "A" pool in the Cypress field.

The Division's geological interpretation is very similar to that presented by Amoco. Of the five existing wells currently mapped in this pool, only two (a-28-F and d-87-C) are at this time scheduled to be tied into the processing facilities proposed for the Cypress field. This assumes, however, that these two wells will to some extent drain the entire pool, and our allowable ruling is based on this assumption. Accordingly, pool pressure performance will be monitored closely to evaluate effective drainage of gas from the entire pool.

Amoco Canada Petroleum Company Ltd., as operator, is hereby given approval under Division 77 of the British Columbia Drilling and Production Regulations to produce natural gas under GEP, subject to the following conditions:

1. The area of approval for the GEP is defined as follows:

94-B-10: Block K, units 72, 73, 82, 83, 92 and 93.

94-B-15: Block C, units 2, 3, 12, 13, 22, 23, 32-35, 42-45, 52-55, 62-65, 74-77, 84-87, 96 and 97.

Block F, units 6, 7, 16-19, 26-29, 36, 37, 46, 47, 56, 57, 66, and 67.

- 2. The daily gas allowable for the GEP area has been set at 791.4 103m3.
- 3. An annual progress report is required covering the 12 calendar months after the commencement of production and each year-end thereafter. The progress report should contain the following:
  - The daily average rate, during each month, of the gas, condensate and water production from each producing well and from the pool as a whole;
  - ii) The average gas-condensate and water-gas ratios, during each month, from each producing well and from the pool as a whole;
  - iii) Annual pressure buildup analysis with
     minimum seven day shut-in period for
     producing gas wells within the GEP
     area;
  - iv) Annual subsurface pressure surveys for all nonproducing gas wells for pressure monitoring purposes;
  - v) Details of any work-over or well survey and treatment programs carried out during the report period;
  - vi) A general review of operations during the report period together with the latest estimate of gas reserves, and accompanied by a graphical representation of total pool monthly gas offtake, gas-water ratio and estimated average pool pressure since production startup.

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- 4. The Ministry must be notified immediately if water-gas ratio exceeds .05 m<sup>3</sup>/10<sup>3</sup>m<sup>3</sup> (9 Bb1/MMSCF) in any producing well.
- 5. The requirements of Division 13 of the Drilling and Production Regulation (Spacing Areas for Gas Wells) is hereby waived.

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6. This approval or any condition of it may be modified or rescinded by the Director, Engineering and Operations, at a later date based on a review of the production performance and results of the bottom hole pressures, and possibly of non-GEP wells in accordance with Division 83.07 of the Drilling and Production Regulation (Daily Gas Allowables in GEP Areas).

Yours sincerely,

John Allan

Assistant Deputy Minister Energy Resources Division

cc: D.L. Johnson

Manager, Field Operations

Fort St. John

bcc: Approvals

Sylvia Chicorelli Geological Assistant

Linda Macgregor Data Management Supervisor

Jake Hudson Senior Geophysicist