



December 7, 2001

7900-4580-59240-09

OGC - 01239

Encal Project (03)

Randy O. Litun, P. Eng.
Sr. Exploitation Engineer
Calpine Canada Energy Ltd.
1800, 421 Seventh Ave. S.W.
Calgary, AB T2P 4K9

Dear Mr. Litun:

**RE: PRESSURE MAINTENANCE APPROVAL, AMENDMENT #3
SQUIRREL NORTH PINE "C" POOL**

The Commission has reviewed your application dated November 16, 2001, requesting an amendment to the waterflood and gas injection pressure maintenance scheme approval for the subject oil pool.

Attached is Approval # 01-09-001 (Amendment #3) for the application, granted under Section 100 of the Petroleum and Natural Gas Act.

We concur with your conclusions that the pressure maintenance is showing excellent waterflood response throughout the pool. Oil wells near the gas injector are the exception but this is to be expected. In view of this it is considered appropriate to increase the project oil allowable. As a consequence, the project daily oil allowable is increased to 450.0 m³. Gas-oil ratio penalties will continue to be based on net gas produced from the project, re-injected gas noted as "Gas Credit" on the monthly Production Allowable Report.

Sincerely,

Craig Gibson, P. Eng.
Manager
Reservoir Engineering and Geology

Attachment

Approval Letters to Industry
GEP, SWD, CONCURRENT PROD,
PRESSURE MAINTENANCE,
WATERFLOOD, ETC.

Copy 9

- Wellfile (originals)
- 59240
- Daily
- Resource Revenue
- S. Chicorelli
- R. Stefik
- G. Farr
- P. Attariwala
- D. Krezanoski

ENGINEERING AND GEOLOGY BRANCH

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APPROVAL 01-09-001 (Amendment # 3)

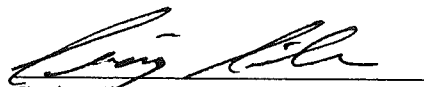
**THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION**

IN THE MATTER of a pressure maintenance scheme of Calpine Canada (Calpine) for recovery of oil by water and gas injection in the Squirrel North Pine "C" Pool.

NOW THEREFORE, the Commission, pursuant to Section 100 of the Petroleum and Natural Gas Act, R.S.B.C. 1996, c.361 orders as follows:

The pressure maintenance scheme of Calpine for recovery of oil by waterflooding and produced gas re-injection in the Squirrel North Pine "C" Pool as described in the application from Calpine to the Commission dated February 6, June 14, September 7, 2001 and November 16, 2001 is amended, subject to the following terms:

1. The project area of the pressure maintenance scheme consists of NW/4 sec 30 and sec 31-87-19 W6M, N/2 sec 25, NE/4 sec 26, sec 35 and sec 36-87-20 W6M, sec 6-88-19 W6M, sec 1, S/2 sec 2 and NE/4 sec 2-88-20 W6M.
2. The reserves based project daily oil allowable is 450.0 m³.
3. Water may be injected into the Squirrel North Pine "C" pool through the wells 3-35, 7-36-87-20, 4-6-88-19 and 1-2-88-20 W6M.
4. Produced gas may be re-injected into the Squirrel North Pine "C" pool through the well 7-31-87-19 W6M.
5. All gas injection will be deducted from produced gas in calculating gas-oil ratios for the project oil allowable.
6. The injection pressure measured at the sandface must not exceed the formation fracture pressure.
7. An oil well may be completed anywhere within the project area provided that it is not nearer than 100 m to the sides of the project area.
8. Progress reports shall be filed as stipulated in Section 8 of the *Petroleum and Natural Gas General Regulation*.
9. The operations of the pressure maintenance scheme will be subject to periodic review and modification to the approval may be ordered, if deemed appropriate.


Craig Gibson
Manager
Reservoir Engineering and Geology

DATED AT the City of Victoria, in the Province of British Columbia, this 27th day of December, 2001.