



OIL AND GAS COMMISSION

March 25, 2002

7900-4580-59240-09
OGC - 02063

Dave Brock
Sr. Exploitation Engineer
Calpine Canada Resources Company
2900, 240 - 4th Ave. S.W.
Calgary, AB T2P 4H4

Calpine Project (03)

Dear Mr. Brock:

**RE: PRESSURE MAINTENANCE APPROVAL, AMENDMENT #4
SQUIRREL NORTH PINE "C" POOL**

The Commission has reviewed your application dated March 8, 2002 requesting an amendment to the waterflood and gas injection pressure maintenance scheme approval for the subject oil pool.

Based on a review of production/injection performance, we note that pressure maintenance in this pool, implemented at an early stage in life, is showing good waterflood response. Also, it is noted that the voidage replacement ratios have been averaging above unity for almost a year. In view of this, your request of a voidage based oil allowable is considered appropriate. Attached is Approval # 01-09-001 (Amendment #4) for the application, granted under Section 100 of the Petroleum and Natural Gas Act.

We have received the voidage report from Calpine Canada dated March 11, 2002 for the Rigel Cecil "B", "G" and "H" and Oak Cecil "E" pools. These pools were granted similar voidage based oil allowables. However, a review of the voidage report indicates that recent production has exceeded voidage replacement in all of the pools except Oak Cecil "E" pool. This must be rectified immediately. Failure to do so may result in the pool being shut-in. Alternatively, project approvals may be amended, reverting to reserve based project oil allowables.

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 GEC
PO Box 9329 Stn Prov Gov't, Victoria BC V8W 9N3
Location: 6th Flr 1810 Blanshard St. Victoria BC

APPROVAL 01-09-001 (Amendment # 4)

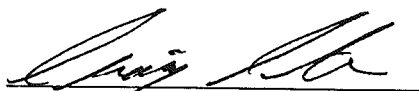
THE PROVINCE OF BRITISH COLUMBIA
PETROLEUM AND NATURAL GAS ACT
OIL AND GAS COMMISSION

IN THE MATTER of a pressure maintenance scheme of Calpine Canada Resources Corporation (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, November 16, 2001 and March 8, 2002 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 project oil allowable for a month shall be based on the previous month's voidage replacement.
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. The injection pressure measured at the sandface must not exceed the formation fracture pressure.
6. 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.
7. Progress reports shall be filed as stipulated in Section 8 of the *Petroleum and Natural Gas General Regulation*.
8. 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 25th day of March 2002.