



October 24, 2000

6460-4520-59240-09
OGC - 000253

Heather Christie Burns, P. Eng.
Senior Reservoir Engineer
Encal Energy Ltd.
1800, 421 Seventh Ave. S.W.
Calgary, AB T2P 4K9

Encal Project (02)

Dear Ms. Burns:

**RE: PRESSURE MAINTENANCE APPROVAL
OAK CECIL "J" POOL**

This refers to the waterflood and gas injection pressure maintenance scheme approval for the subject pool, as requested in your application dated August 25, 2000.

Attached is Approval # 00-09-005 for the application, granted under Section 100 of the Petroleum and Natural Gas Act. No objections were received following the publication of a notice of the application in the B.C. Gazette.

The produced gas injection is considered to be an interim measure and may be terminated once adequate supply of fresh water is available for full voidage replacement. Note that gas-oil ratio penalties will 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 00-09-005

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

IN THE MATTER of a pressure maintenance scheme of Encal Energy Ltd. (Encal) for recovery of oil by water and gas injection in the Oak Cecil "J" 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 Encal for recovery of oil by waterflooding and produced gas re-injection in the Oak Cecil "J" Pool as described in the application from Encal to the Commission dated August 25, 2000 is approved, subject to the following terms:

1. The project area of the pressure maintenance scheme consists of NW/4 sec 26, S/2 sec 27, NE/4 sec 27, and SE/4 sec 34 and W/2 sec 35 ~~85-18~~ W6M and sec 2-86-18 W6M.
2. The project daily oil allowable is 60.8 m³.
3. Water may be injected into the Oak Cecil "J" pool through the well 6-27-85-18 W6M.
4. Produced gas may be re-injected into the Oak Cecil "J" pool through the well 7-2-86-18 W6M.
5. The scheme is deemed to have commenced upon water and/or gas being injected into the wells referred to in clause 3 and 4.
6. The Commission must be notified in writing of the date of commencement.
7. All gas injection will be deducted from produced gas in calculating gas-oil ratios for the project oil allowable.
8. The injection pressure measured at the sandface must not exceed the formation fracture pressure.
9. 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.
10. Progress reports shall be filed as stipulated in Section 8 of the *Petroleum and Natural Gas General Regulation*.
11. 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 October, 2000.