



May 5, 2000

Ref: OGC-000145
File: 7600-4520-59240-09

Ms. Bev Prefontaine
Consulting Reservoir Technician
Encal Energy Ltd.
Box 2310, Station M
CALGARY, AB T2P 2M6

Encal/Newport Project (02)

Dear Ms. Prefontaine:

**RE: WATERFLOOD PRESSURE MAINTENANCE APPROVAL (AMENDMENT #2)
RIGEL CECIL 'I' POOL**

The Commission has reviewed your application, dated April 20, 2000, wherein you requested an amendment to the waterflood pressure maintenance scheme approval for the subject oil pool.

Attached is Approval #99-09-001 (Amendment #2) for the application, granted under section 100 of the Petroleum and Natural Gas Act. The addition of a water injection well at 2-7-88-18 W6M (WA# 12911) should improve pool oil recovery. The area of the project remains unchanged from the previous approval.

Voidage and performance data, filed with this application, indicates that the pool has shown some favourable response to waterflooding. However, the Commission has concerns that wells in the centre portion of the pool, in the area of and bordering section 16-88-18 W6M, have not yet been effected by injection operations. The project has continued to accumulate significant overproduction of the daily oil allowable in the past several months, at the end of March 2000 overproduction stood at 6,215 m³. We are not prepared to issue a voidage based project allowable until Encal Energy Ltd. (Encal) can demonstrate that the current production strategy will be effective in maximizing oil recovery. Furthermore, based on current overproduction, Encal must adhere to the present oil allowable of 253.3 m³.

Sincerely,

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

Attachment

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

Copy 10

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

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APPROVAL 99-09-001 (Amendment #2)

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 waterflood recovery of oil by water injection into the Rigel Cecil "I" Pool.

The approval granted pursuant to Section 100 of the Petroleum and Natural Gas Act, R.S.B.C. 1996, c.361 is hereby amended as follows:

The pressure maintenance scheme of Encal for waterflood recovery of oil from the Rigel Cecil "I" pool as such scheme is described in the application from Encal dated January 22, 1999 and modified September 10, 1999 and April 20, 2000 is hereby amended, subject to the terms herein contained:

1. The area of the pressure maintenance scheme shall consist of NE/4 sec 6, E/2 sec 7, W/2 & NE/4 sec 8, W/2 sec 16, E/2 & SW/4 sec 17, W/2 & NE/4 sec 21, sec 27, E/2 & SW/4 sec 28, E/2 frac sec 33, frac sec 34 of Twp 88 Rge 18 W6M, frac unit 12, frac unit 13, unit 22 and unit 23 of Block K/94-A-10 .
2. The project daily oil allowable is 253.3 m³.
3. Water may be injected into the Rigel Cecil "I" pool through the wells 15-6, 2-7, 13-27 and A2-28-88-18 W6M.
4. The injection pressure measured at the sandface must not exceed the formation fracture pressure.
5. All associated gas production will be conserved.
6. An oil well may be drilled anywhere within the project area provided that it is not nearer than 100 m to the sides of the project area.
7. Royalty exempt oil production entitlement for the discovery well Encal Rigel 4-21-88-18 W6M (WA 10648) is limited to a volume of 11, 450 m³ or the volume produced in the first 36 producing months, whichever is lesser.
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 6th day of May, 2000.