



February 28, 2001

6460-4520-59240-09  
OGC - 01052

Mr. Peter Checknita  
Sr. Engineer Consultant  
Encal Energy Ltd.  
Box 2310, Postal Station "M"  
Calgary, AB T2P 2M6

*Encal Project (03)*

Dear Mr. Checknita:

**RE: PRESSURE MAINTENANCE APPROVAL AMENDMENT  
OAK CECIL "C" POOL**

The Commission has reviewed your application dated February 6, 2001 wherein you requested an amendment to the waterflood pressure maintenance approval for the Oak Cecil "J" pool.

Based on a review of the data presented, the Commission has remapped the pool by coalescing the Oak Cecil "C" and "J" pools into a single pool designated as the Oak Cecil "C" pool. Accordingly, expansion of the waterflood pressure maintenance is considered appropriate. There are no equity issues as letters of consent from your other partners namely, Celsius Energy Resources Ltd. and Courage Energy Inc., have been submitted.

Attached is Approval # 00-09-005 (Amendment #1) for the application, granted under Section 100 of the Petroleum and Natural Gas Act.

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 GEOLOG**  
PO Box 9329 Stn Prov Gov't, Victoria BC V8W 9N3 Tel:  
Location: 6<sup>th</sup> Flr 1810 Blanshard S

APPROVAL 00-09-005 (AMENDMENT #1)


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 "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 Encal for recovery of oil by waterflooding and produced gas re-injection in the Oak Cecil "C" Pool as described in the application from Encal to the Commission dated August 25, 2000 and February 6, 2001 is hereby amended, 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, sec 34 and W/2 sec 35 17-85-18 W6M, sec 2, S/2 sec 3, NE/4 sec 3, SE/4 sec 10, sec 11, NW/4 sec 13 and E/2 sec 14-86-18 W6M.
2. The project daily oil allowable is 150.8 m<sup>3</sup>.
3. Water may be injected into the Oak Cecil "C" pool through the wells 6-27, 6-34-85-18 W6M, 7-2 and 7-3-86-18 W6M.
4. Produced gas may be re-injected into the Oak Cecil "C" pool through the well 11-11-86-18 W6M. (commenced Feb. 3, 2003)
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 28<sup>th</sup> day of February, 2001.