



OIL AND GAS COMMISSION

December 5, 2003

6460-4520-59240-09  
OGC - 03323

Bob Mayes  
Sr. Reservoir Engineer  
Apache Canada Ltd.  
1000, 700 – 9<sup>th</sup> Avenue S.W.  
CALGARY, AB T2P 3V4

*Apache Project (03)*

Dear Mr. Mayes:

**RE: PRESSURE MAINTENANCE WATERFLOOD APPROVAL, AMENDMENT #2  
OAK - CECIL "I" POOL**

The Commission has reviewed your application, dated December 2, 2003, requesting an amendment to the pressure maintenance waterflood approval for subject pool, last amended July 28, 1998.

Attached is Approval #97-09-004 (Amendment #3) for the application, granted under Section 100 of the Petroleum and Natural Gas Act.

This approval recognizes the licensed location 5-28-86-17 W6M (WA# 16684) as a new injection site to support pressure in the north portion of the Oak Cecil "I" pool, where performance data indicates the pool has not been benefiting from ongoing injection to the south. Two other previously approved, but never active, injection wells have been removed from the approval. All other conditions remain unchanged.

Should you have any questions, please contact Peter Attariwala at (250) 952-0311 or Ron Stefik at 952-0310.

Sincerely,

Craig Gibson, P. Eng.  
Director  
Resource Conservation Branch

Attachment

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

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|--------------------------|----------------------|
| <input type="checkbox"/> | Wellfile (originals) |
| <input type="checkbox"/> | 59240                |
| <input type="checkbox"/> | Daily                |
| <input type="checkbox"/> | Resource Revenue     |
| <input type="checkbox"/> | S. Chicorelli        |
| <input type="checkbox"/> | R. Stefik            |
| <input type="checkbox"/> | G. Farr              |
| <input type="checkbox"/> | P. Attariwala        |
| <input type="checkbox"/> | D. Krezanoski        |

**RESOURCE CONSERVATION BRANCH**

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**APPROVAL 97-09-004 (AMENDMENT #2)**  
**THE PROVINCE OF BRITISH COLUMBIA**  
**PETROLEUM AND NATURAL GAS ACT**  
**OIL AND GAS COMMISSION**

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IN THE MATTER of a pressure maintenance scheme of Apache Canada Ltd. (Apache) for waterflood recovery of oil by water injection into the Oak - Cecil "T" pool.

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

The pressure maintenance scheme of Apache for waterflood recovery of oil from the Oak Cecil "T" pool as such scheme is described in the application from Apache dated August 13, 1997, July 14, 1998 and December 2, 2003 is hereby amended, subject to the following terms:

1. The project area of the pressure maintenance scheme consists of NE/4 sec 17, SW/4 & E/2 sec 20, W/2 sec 21, sec 28, E/2 sec 29 and sec 33-86-17 W6M.
2. The project daily oil allowable is 100.0 m<sup>3</sup>.
3. Water may be injected into the Cecil "T" pool through the wells A9-17 (WA 11401) and 5-28-86-17 W6M (WA 16684).
4. The injection pressure at the sandface must not exceed the formation fracture pressure.
5. All associated gas production must be conserved.
6. An oil well may be drilled anywhere within the project area provided that it is not completed within 100 m of the boundary 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 are subject to periodic review, and modification to the approval may be ordered, if deemed appropriate.



Craig Gibson, P.Eng.  
Director  
Resource Conservation Branch

DATED AT the City of Victoria, in the Province of British Columbia, this 5<sup>th</sup> day of December, 2003.