

September 19, 2006

Imperial Oil Resources

237 – 4th Avenue S.W.

Calgary, AB T2P 0H6

Attention: Susan C. Stark

Dear Ms. Stark:

**RE: INFORMATION REQUESTS
IMPERIAL SEPTEMBER 5, 2006 SUBMISSION
APPLICATION NOS. 1394112 and 1409180
APPLICATIONS TO PRODUCE AND SHUT-IN GAS
COLD LAKE OIL SANDS AREA CLEARWATER FORMATION**

Please find enclosed information requests made by the Board staff to Imperial Oil Resources with respect to Imperial's September 5, 2006 submission to Application Nos. 1394112 and 11409180.

Yours truly,

<Original Signed By Giuseppa Bentivegna>

Giuseppa Bentivegna
Board Counsel

cc: Canadian Natural Resources Limited, c/o Thackray Burgess, Patrick McGovern
Husky Oil Operations Limited, Susan Anderson
EnCana Oil and Gas Partnership, c/o McCarthy Tétrault LLP, Mr.D. G. Davies

Board Staff Information Requests for Imperial Oil Resources (September 19, 2006)

1. On the first page of its submission Imperial Oil states that with respect to four Clearwater gas pools at Cold Lake, the cumulative gas production has exceeded the volumetric gas in place (GIP) and this indicates that gas production was being supported by degassing of the bitumen. Provide the details of Imperial Oil's determination of the volumetric GIP for the four pools, including the parameters used (i.e. porosity, water saturation, and gas formation volume factor) and the basis for the parameters. Also provide isopach maps for the pools that show the net gas pay values for each well posted on the maps and the well control used to determine the zero edge of the isopach maps. Elaborate on why Imperial Oil believes its volumetric GIP estimates are accurate enough to allow Imperial Oil to conclude that gas production was being supported by degassing of the bitumen because the cumulative gas production exceeded the volumetric GIP.

Imperial Oil also states on the first page of its submission that with respect to the E Pool, after a lengthy shut-in period of approximately 2.5 years, the gas pool pressure increased 50 % which indicates that the pressure was being supported by the partial degassing of the associated bitumen column. Comment on whether the increase in pool pressure could be due to pressure equalization with less depleted edges of the pool rather than due to degassing of the underlying bitumen.

2. On the second page of its submission Imperial Oil suggests that as it has been demonstrated that degassing is occurring within the bitumen column directly under the gas cap, it is logical to believe that degassing will extend laterally in the bitumen column beyond the zero edge of the gas cap. Provide a discussion of the mechanism by which degassing of the bitumen column beyond the zero edge of the gas cap would occur.

On the third page of its submission Imperial Oil states that with respect to CSS wells located adjacent to, but outside of the zero edge of the M & P and Bourque gas pools, the fraction of the solution gas removed from the associated bitumen column as a result of the Clearwater gas production is expected to be small. What is the basis for this statement? Does this mean that in Imperial Oil's view, gas production is not a concern for CSS wells that are adjacent to but outside the zero edge of a depleted gas pool? Explain your answer.

Also on the third page, Imperial indicates the no material changes in cumulative SOR performance were noted between the wells located adjacent to the gas pools and wells located one additional spacing unit from the gas pools. Provide performance plots and a tabulation of the performance of the two groups of wells.

3. On the first page of its submission Imperial Oil states that it has shut in the gas wells in four Clearwater pools at Cold Lake. On the second page of its submission Imperial Oil states that the presence of a large depleted gas cap is expected to reduce the recovery performance of CSS by 25 %, but that Imperial

Oil does not have any experience with the presence of a large undepleted gas zone which overlies CSS operations. Why did Imperial Oil decide to shut in gas production when it only had experience with the presence of a depleted gas zone but not with an undepleted gas zone?

Also, provide an explanation of why the presence of a large depleted gas cap is expected to reduce the recovery performance of CSS by 25%.

4. Discuss whether Imperial Oil believes the effect of the production of gas cap gas on CSS performance could be different for horizontal wellbore CSS than for vertical wellbore CSS.