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VIA E-MAIL AND COURIER

April 23, 2007

Alberta Energy and Utilities Board  
640 - 5<sup>th</sup> Avenue S.W.  
Calgary, Alberta  
T2P 3G4

**Attention: Mr. Gary Perkins  
Board Counsel**

Dear Sir:

**Re: EnCana Oil and Gas Partnership (EnCana) Application No. 1394112  
Canadian Natural Resources Limited (CNRL) Application No. 1409180  
Husky Oil Operations (Husky) Application No. 1481725  
Cold Lake Oil Sands Area - Clearwater Deposit**

Attached please find Husky's responses to information requests filed by the Board and EnCana. As explained in Husky's response to EnCana information request number 1, EnCana has once again taken the limited opportunity provided by the Board to ask information requests to attempt to file evidence in this proceeding after the close of the oral hearing.

Husky has declined to assist what Husky considers to be an abuse of the Board's hearing process by providing a response to the additional information filed. Husky respectfully asks the Board to disregard the new information improperly provided in EnCana's information request and to give it no weight.

Yours truly,

**BORDEN LADNER GERVAIS LLP**

**RANDALL W. BLOCK, Q.C.**

cc: McCarthy Tetrault LLP  
Attention: Mr. Don Davies

Thackray Burgess  
Attention: Mr. Patrick J. McGovern

Husky Oil Operations Limited  
Attention: Ms. Susan Anderson  
Attention: Gokhan Coskuner

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Imperial Oil Resources

Attention: Mr. Peter L. Miller

Attention: Ms. Cheryl L. Trudell

Canadian Natural Resources Limited

Attention: Mr. Jared Paddock

Alberta Energy Utilities Board (EUB)

Attention: Mr. Ernie Smith, Utilities Board

## **Husky's replies to the Board staff questions on Husky input/output files.**

1. *It appears that in the non-depleted HWCSS case the gas well was produced, but in the non-depleted HSAGD case the gas well was not produced. Explain why the gas well was produced in the non-depleted HWCSS case and discuss the effect not producing the well would have on the predicted results.*

### ***Husky Response:***

Husky acknowledges that there was an inconsistency between these two cases. Without gas production in the non-depleted case, the oil phase viscosity would be lower and solution gas drive would be slightly more maintained than if the gas well was produced. Not producing the gas well in the non-depleted case will eliminate any gas exsolution from the bitumen due to gas cap depressuring and increase the bitumen reservoir pressure and GOR. This should increase the performance of the non-depleted case. Thus it is expected that if the gas well is shut in, the conclusions would remain the same.

2. *In the HWCSS cases (both non-depleted and depleted), the output files indicate there are long periods of time between cycles where there is no bitumen production, particularly in the later cycles. Explain why Husky used such long cycle times during which there is no bitumen production for a large part of the production period.*

### ***Husky Response:***

Husky saw that EnCana's HWCSS operating strategy had very short cycles, which precluded any solution gas drive. In an attempt to quantify the effect of solution gas drive, Husky wanted to ensure that solution gas drive had time to act. Husky's cycle lengths are certainly not optimal. In future, the production cycles could be shortened and the process improved. This would be done in a full reservoir simulation optimization study.

3. *With respect to the HSAGD cases, Husky states that "solution gas impact is demonstrated". Explain the basis for this statement, considering that the plot provided by Husky shows that the bitumen recoveries at the ends of the runs for the non-depleted and depleted cases are essentially the same and that the output files indicate that the Field cumulative steam-oil ratios at the end of the runs for the non-depleted and depleted cases are also essentially the same.*

### ***Husky Response:***

These simulations do indicate that the ultimate recoveries are similar, eventually. However, for the first 15 years of HSAGD, the non-depleted case recoveries always exceed those of the depleted case. The total bitumen recoveries over time for the non-depleted case are up to 38% higher than those for the depleted case. As a result, the economics are far worse for the depleted case. Because the process evolves into a gravity drainage one, the ultimate recovery achieves the same value in both the depleted and non-depleted cases.

The same is true for the cSOR values. The cSORs for the non-depleted case are lower for the first 10 years, although the ultimate cSOR is the same as the depleted case at the end. The economic benefit of the lower SORs for the non-depleted case is greater than the depleted case where the SORs are higher during the early years.

The importance of the increased recoveries and the lower cSORs in the initial years of the HSAGD process cannot be overstated. The HSAGD process is experimental, therefore any early positive indications of the economic viability of the process are vital in determining whether the process should proceed, or whether it should be replaced by the HWCSS process.

Furthermore, it is well known that earlier project response has higher impact on the net present value than the response in the latter stages of the process. Consequently, for an experimental process such as HSAGD with challenging economics, the difference between the depleted and non-depleted cases in the first 10 years is likely to make the project uneconomic.