

Barristers & Solicitors
Patent & Trade-mark Agents

McCarthy Tétrault

McCarthy Tétrault LLP
Suite 3300, 421-7th Avenue S.W.
Calgary AB T2P 4K9
Canada
Telephone: 403 260-3500
Facsimile: 403 260-3501
mccarthy.ca

D. G. Davies
Direct Line: 403 260-3681
Direct Fax: 403-260-3501
E-Mail: ddavies@mccarthy.ca

Assistant: Penny Goebel
Direct Line: 403-260-3662
E-Mail: pgoebel@mccarthy.ca

VIA E-MAIL

February 5, 2007

Alberta Energy and Utilities Board
640 - 5 Avenue S.W.
Calgary Alberta T2P 3G4

Attention: Mr. Gary D. Perkins

Dear Mr. Perkins:

Re: Application No. 1481725
Cold Lake Oil Sands Area – Clearwater Deposit

Attached please find the responses of EnCana to the December 21, 2006 information requests of Husky.

Yours very truly,

McCarthy Tétrault LLP

ORIGINAL SIGNED BY D. G. DAVIES

D. G. DAVIES

DGD/dw
Enclosure

cc: Alberta Energy and Utilities Board
Attention: Mr. Ernie Smith

Canadian Natural Resources Limited
Attention: Mr. Jared Paddock

Thackray Burgess
Attention: Mr. Patrick J. McGovern

Husky Oil Operations Ltd.
Attention: Ms. Susan Anderson

Borden Ladner Gervais LLP
Attention: Mr. Randall W. Block

Imperial Oil Resources
Attention: Ms. Susan C. Stark

ALBERTA ENERGY and UTILITIES BOARD
APPLICATION NO. 1481725
APPLICATION TO SHUT-IN GAS PRODUCTION
COLD LAKE OIL SANDS AREA – CLEARWATER FORMATION

**Responses of EnCana Oil and Gas Partnership (EnCana) to
Additional Information Requests of Husky Oil Operations Limited (December 21, 2006)**

Most of the data requested by Husky in these additional information requests was not used in the Kade September 5, 2006 study. The study was based on a generic model, which allowed Kade to consider various scenarios and sensitivities. EnCana accordingly commissioned J.D. Macgowan & Associates Ltd. to prepare a report with some of the information requested by Husky. A copy of this report is attached.

- (a) **Provide calculations of original gas in place (“OGIP”) by:**
- (i) **volumetric, (ii) material balance and (iii) decline methods for the EnCana Gas Pools. Tabulate all the input data used.**

Please see the attached report.

- (b) **Provide all seismic data used in determining outlines of the EnCana Gas Pools.**

Please see the attached map.

- (c) **Provide all non-public completion, pressure and production data for the EnCana Gas Pools.**

There is no non-public completion, pressure and production data for the EnCana Gas Pools.

- (d) **Provide a map showing the edges of the EnCana Gas Pools, as well as the edges of each corresponding top water zones. Provide the data used to generate this map(s).**

Please see the attached report.

- (e) **Provide calculations of the original bitumen in place (“OBIP”) within a 3 km influence radius of the EnCana Gas Pools in the Clearwater formation and a bitumen net pay map for those pools.**

Please see the attached report. EnCana has not calculated the OBIP within a 3 km distance of EnCana Gas Pools.

- (f) **Provide calculations of OBIP for Husky oil sands lease Nos. 7188110343 and 718811A344 (the “Husky Leases”) and a bitumen net pay map. Provide the data used to generate this map(s).**

Please see the attached report. EnCana has not calculated the OBIP for Husky oil sands leases.

- (g) **Provide a facies and depositional model in the Clearwater formation for the area containing the EnCana Gas Pools and the affected bitumen.**

EnCana recognizes the excellent work on Clearwater Formation depositional models currently in the public domain.

There are fluvial and channalized processes dominant in the southern portion of the study area, evidenced by thick coarsening sand, erosional bottom contacts and their liner geometry. Early work has interpreted these deposits as delta distributary and bar finger sands (Harrison et al, 1981; McLean and Putnam, 1983). Currently the setting is interpreted as valley fill deposits with fill dominated by tidally influenced and channel processes (McCrimmon and Cheadle, 1997; McCrimmond and Arnott, 2002).

Northward more wave influenced strata is evidenced in core and has been interpreted both as a wave impacted shoreface (Harrison et al 1981; McCrimmon and Cheadle, 1997) and as deposits within a largely valley fill setting (Wiseman, 1997; McCrimmon and Cheadle, 1997)

The depositional environment, at the township scale of this project, within a low stand valley incorporates tidal channels, estuarine channels, mouth bars as well as wave dominated coastal beds. During sea level rise the valley drowns and can develop into bayhead delta/estuarine complexes.

To quote McCrimmon and Arnott (2002) “ This is a complex assemblage of non marine, marginal marine and shallow marine strata”

Given the diversity and complexity of the lithofacies and the extensive core coverage in the Husky area, EnCana estimates it would take approximately 3-4 man months of dedicated work to fully define all the depositional processes in play. While EnCana believes that such work is extremely important to the design of any thermal recovery project, it is not critical to any of the current issues before the Board.

References:

Harrison, D.B., Glaiser, R.P., and Nelson, H.W., 1981. Reservoir description of the Clearwater oil sand, Cold Lake Alberta. In: The future of heavy crude oil and tar sands, R.G. Meyer and C.T. Steele (eds.). McGraw-Hill, p. 264-280

McCrimmon, G.G. and Arnott, R.W.C., 2002. The Clearwater Formation, Cold Lake, Alberta: a worldclass hydrocarbon reservoir hosted in a complex succession of tide-dominated deltaic deposits. Bulletin of Canadian Petroleum Geology, v. 50, p.370-392.

McCrimmon, G.G. and Cheadle, B.A., 1997. Tidal-fluvial facies of stacked incised-valley complexes in the Lower Cretaceous Clearwater Formation, Cold Lake, Alberta. In: Canadian society of petroleum geologists and Society of economic paleontologist and mineralogists Joint convention. L.Wood and B. Martindale (eds.). Core conference, p. 335-354.

McLean, J.R. and Putnam, P.E., 1983. Comparison of heavy oil reservoirs: the Lloydminster Formation, Lloydminster area, and the Clearwater Formation, Cold lake area. In: Sedimentology of selected Mesozoic clastic sequences, Proceeding of Corexpo'83, J.R. McLean and G.E. Reinson (eds.). Canadian society of petroleum geologists, p 81-93.

Wiseman, T.R., 1997. Sequence stratigraphy and sedimentology of incised valleys within the Clearwater Formation (Aptian-Albian) east-central Alberta. In: Canadian society of petroleum geologists and Society of economic paleontologist and mineralogists Joint convention. L.Wood and B. Martindale (eds.). Core conference, p. 355-386.

- (h) Provide a discussion of any EnCana heavy oil/bitumen production experience in the Clearwater formation in the Cold Lake area. Provide calculations for the hydraulic diffusivity in the Clearwater formation for the Husky Leases.**

All of EnCana's production experience is public information.

The STARS reservoir simulator model does not require an input for hydraulic diffusivity because it is a three dimensional model and not an analytical model. It is possible to calculate hydraulic diffusivity from input and output data of the models . EnCana has provided to Husky all the input and output data for EnCana's simulation models and Husky may carry out the calculations for hydraulic diffusivity using the simulation data files provided to Husky.

- (i) Provide a shale isopach map within the 3 km radius around the combined area of the EnCana Gas Pools and the Husky Leases. Provide the data used to generate this map(s).**

Please see the attached report.

- (j) **What is EnCana's definition of a “radius of influence”? Provide a calculation to determine the EnCana's radius of influence around the EnCana Gas Pools.**

The region of influence is the region within which gas production could be expected to have a material impact on bitumen recovery. EnCana considers that there is no region within the hearing area where this is the case.

- (k) **Provide EnCana's interpretation of the latest piezometer data provided by Husky on November 24, 2006.**

EnCana has no further interpretation of the piezometer data.

- (l) **Provide EnCana's geological mapping or cross-section with relevant well logs used to construct the flank model containing shale barrier (Figure E.6).**

Please see the attached report.

- (m) **Provide core analysis and core photos for all EnCana gas wells in the Cold Lake area that are not currently publicly available.**

At the time this information request was submitted, core analysis and core photos of all EnCana gas wells were all public. Since that time, EnCana has performed capillary pressure studies to determine water saturation. The results will be forwarded when they are available.

Clearwater B Amplitude Map

Primrose_ATS26

Scale: 1:66741

Date: Tuesday January 30, 2007

Grid (s) Displayed: SBC_C1WB AMP 008_L007 Grid

