



Canadian Natural Resources Limited

Application for Pool Delineation and Gas Shut-in
Athabasca Wabiskaw-McMurray

February 24, 2009

ENERGY RESOURCES CONSERVATION BOARD

Decision 2009-024: Canadian Natural Resources Limited, Application for Pool Delineation and Gas Shut-in, Athabasca Wabiskaw-McMurray

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ENERGY RESOURCES CONSERVATION BOARD

Calgary Alberta

**CANADIAN NATURAL RESOURCES LIMITED
POOL DELINEATION AND GAS SHUT-IN APPLICATION
KIRBY 00/12-28-73-8W4M
ATHABASCA WABISKAW-MCMURRAY**

**Decision 2009-024
Application No. 1576629**

1 DECISION

Having considered the evidence and the submissions provided by the parties, the Energy Resources Conservation Board (ERCB/Board) approves Application No. 1576629, submitted by Canadian Natural Resources Limited (CNRL) for a pool delineation order to include the Wabiskaw interval in the well at 12-28-73-8W4M (the 12-28 well) in the Kirby Upper Mannville U2U Pool (U2U Pool) and for an order to shut in gas production from the Wabiskaw interval. An amended pool order for the U2U Pool will be issued by the Board, the existing pool order for the Kirby Upper Mannville RR Pool (RR Pool) will be rescinded, and a final order shutting in gas production from the Wabiskaw interval in the 12-28 well will be issued in the form attached as Appendix 1.

The Board is not prepared at this time to require ISH Energy Ltd. (ISH) to obtain a pressure measurement at the 12-28 well, but the Board encourages the parties to pursue the acquisition of pressure data on their own initiative.

2 BACKGROUND

The Wabiskaw interval in the 12-28 well, which directly offsets the multiwell U2U Pool, is currently designated by the ERCB as the single-well RR Pool. The Board shut in gas production from the U2U Pool in *Decision 2004-045*.¹ The Board stated in that decision and in the subsequent *Decision 2005-122*² that decisions regarding the production status of particular intervals are made on a pool basis. The Wabiskaw interval in the 12-28 well was shut in on an interim basis on December 31, 2008, following a request by CNRL and a preliminary consideration by the Board.

3 APPLICATION

CNRL applied to the Board for a pool delineation order to include the Wabiskaw interval in the 12-28 well in the U2U Pool and for an order to shut in gas production from the interval. CNRL

¹ *Decision 2004-045: Phase 3 Proceedings Under Bitumen Conservation Requirements and Applications for Approval to Produce Gas in the Athabasca Wabiskaw-McMurray Area*, May 31, 2004.

² *Decision 2005-122: Phase 3 Final Proceeding Under Bitumen Conservation Requirements in the Athabasca Wabiskaw-McMurray*, November 10, 2005.

was concerned about the production of gas from the Wabiskaw interval in the 12-28 well for two reasons:

- The interval directly offset an area in which CNRL had applied to the ERCB to develop a thermal bitumen recovery scheme.
- There was a potential equity issue of gas being produced from the U2U Pool by the 12-28 well, while the rest of the wells in the pool, some of which were owned by CNRL, were shut in by Board order.

CNRL stated that the Wabiskaw interval in the 12-28 well had been incorrectly designated as a single-well pool as a result of an error in determining the ground elevation for the well. Because ISH refused to grant CNRL access to survey the ground elevation at the 12-28 well, CNRL acquired a survey of the ground elevations of each of the four corners of the 12-28 lease, which showed the elevations to be about 15 metres (m) higher than the ground elevation indicated in the original survey of the 12-28 well. Since the lease was generally flat, CNRL believed the ground elevation of the well was also about 15 m higher than the elevation from the original survey. Based on the adjusted elevation, CNRL argued that the Wabiskaw interval in the 12-28 well was in the same stratigraphic unit as the Wabiskaw intervals in the surrounding U2U Pool wells and that therefore the Wabiskaw interval in the 12-28 well was part of the U2U Pool.

CNRL also stated that its pool interpretation was supported by a material balance analysis of the U2U Pool that included the 12-28 well, by a pressure measurement at the 12-28 well that was similar to the pressures at offsetting U2U Pool wells, and by the increase in gas production from the 12-28 well after the shut-in of the U2U Pool.

CNRL submitted that its applied-for orders should be issued without a hearing since ISH and Enerplus Resources Fund (Enerplus) were in agreement that the orders should be issued.

4 INTERVENTIONS

Enerplus filed an intervention supporting CNRL's application. As owner of the oil sands rights in Section 28-73-8W4M and several surrounding sections, it was concerned that gas production from the Wabiskaw interval in the 12-28 well was impacting the recovery options for the bitumen underlying its lands. Enerplus acquired a survey for the 12-28 well that indicated a ground elevation that was close to the new elevation obtained by ISH. Enerplus agreed with CNRL that the Wabiskaw interval in the 12-28 well should be designated as being in the U2U Pool and that the interval should be shut in to protect the underlying bitumen.

Enerplus requested that as part of the application process, ISH be required to obtain a current reservoir pressure at its 12-28 well to confirm the level of pressure depletion and to assist with appropriate resource development planning. If its objectives could be met without a hearing, Enerplus was in favour of not having a hearing.

ISH, as the sole working interest owner of the 12-28 well, initially opposed CNRL's application. However, ISH subsequently acquired a ground elevation measurement at the 12-28 well that was different from the elevation reported on the original survey and was close to CNRL's estimated elevation that was based on CNRL's survey of the corners of the 12-28 lease. ISH maintained its view that pressure data was the most effective means of delineating pools, and it believed that the variation in currently available pressure data suggested that the U2U Pool was made up of several smaller pools. Ultimately, however, given the new information regarding the ground elevation of the 12-28 well, ISH acknowledged that the well could be in communication with the U2U Pool and therefore should remain shut in. ISH reserved the right to request the removal of the shut-in order if additional information became available that allowed a more specific delineation of the U2U Pool. ISH agreed with CNRL that the hearing of the application should be cancelled and the orders requested by CNRL be issued.

ISH argued that it would be inappropriate for the Board to require ISH to provide a current reservoir pressure measurement for the 12-28 well, as requested by Enerplus. It stated that if the Board were to require ISH to provide such pressure data, other parties, including CNRL, should be required to obtain additional pressure data to properly delineate the U2U Pool.

5 DISCUSSION

The ERCB has designated the U2U Pool as a 28-well gas pool. Based on structural differences between the Wabiskaw interval in the 12-28 well and the Wabiskaw intervals in the offsetting wells in the U2U Pool, the Wabiskaw interval in the 12-28 well was originally designated as a single-well pool. However, using the revised ground elevation from ISH's new survey for the 12-28 well, the Wabiskaw interval in the 12-28 well fits structurally with the Wabiskaw intervals in the offsetting wells in the U2U Pool. Considering the close proximity of the 12-28 well to the current zero edge of the U2U Pool, the Board concludes the Wabiskaw interval in the 12-28 well should be placed in the U2U Pool. Having concluded that the Wabiskaw interval in the 12-28 well should be placed in the U2U Pool, the Board believes that a shut-in order should be issued for the interval to be consistent with the existing shut-in order protecting bitumen that applies to the other wells in the U2U Pool.

Considering that gas production from the 12-28 well is shut in, the Board is not convinced that there is a compelling reason to require ISH to obtain a pressure measurement at the well at this time. The Board recognizes that there may be value in obtaining additional pressure data in the U2U Pool and encourages the parties to pursue the matter on their own.

The Board concluded that there was no need for a hearing and therefore cancelled the hearing scheduled for January 29, 2009.

Dated in Calgary, Alberta, on February 24, 2009.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

M. J. Bruni, Q.C.
Presiding Member

<original signed by>

G. Eynon, P.Geol.
Board Member

<original signed by>

R. J. Willard, P.Eng.
Acting Board Member

APPENDIX 1 SHUT-IN ORDER**ENERGY RESOURCES CONSERVATION BOARD**

IN THE MATTER of the *ENERGY RESOURCES CONSERVATION ACT*, R.S.A. 2000, Chapter E-10; the *OIL AND GAS CONSERVATION ACT*, R.S.A. 2000, Chapter O-7; and Section 3 of the *OIL SANDS CONSERVATION REGULATION*, AR 76/88.

AND IN THE MATTER OF APPLICATION NUMBER 1576629 filed by Canadian Natural Resources Ltd.

ORDER 09-001

WHEREAS on July 22, 2003, the Alberta Energy and Utilities Board (EUB) issued *General Bulletin (GB) 2003-28: Bitumen Conservation Requirements Athabasca Wabiskaw–McMurray*, as it appeared to the EUB that the ultimate recovery of crude bitumen from the Wabiskaw–McMurray in the Athabasca Oil Sands Area was affected by gas production from wells completed in the oil sands strata in the area or in the areas set out in the Wabiskaw or McMurray Pool Orders that overlap the Athabasca Oil Sands Area and that immediate action was required;

AND WHEREAS the EUB adopted a phased approach for purposes of conservation of the ultimate recovery of crude bitumen in the Wabiskaw-McMurray of the Athabasca Oil Sands Area;

AND WHEREAS on June 14, 2005, the EUB convened a final hearing under *Phase 3 of the Bitumen Conservation Requirements Athabasca Wabiskaw–McMurray* to consider the production status of any interval within a well where a party disagreed with a previous EUB decision or order respecting the gas production from the interval;

AND WHEREAS on November 10, 2005, the EUB issued *Decision 2005-122* with respect to the said proceeding; and on December 21, 2005, the EUB issued an *Addendum to Decision 2005-122* and *Order 05-001*, which Order shut in gas production from certain intervals in wells including those in the Kirby Upper Mannville U2U Pool;

AND WHEREAS on February 12, 2008, Canadian Natural Resources Limited (CNRL) filed Application No. 1576629 with the Energy Resources Conservation Board (ERCB/Board), requesting that the ERCB designate the Wabiskaw interval in the ISH Energy Ltd. well at 12-28-73-8W4M as part of the Kirby Upper Mannville U2U Pool and shut in gas production from the said interval;

AND WHEREAS on February 24, 2009, the Board issued *Decision 2009-024* with respect to the said application, granting the relief requested in the application.

THEREFORE, for purposes of conservation of the ultimate recovery of bitumen in the Wabiskaw-McMurray of the Athabasca Oil Sands Area, it is ordered that

1. ISH Energy Limited must shut in or cause to remain shut in (as the case may be) the particular Wabiskaw-McMurray interval listed in Table 1 attached to this Order, and
2. Interim Shut-in Order 08-002, issued by the Board on December 3, 2008, be rescinded.

MADE at the City of Calgary, in the Province of Alberta, this 24th day of February 2009.

ENERGY RESOURCES CONSERVATION BOARD

Board Member

Table 1. Shut-in Order 09-001

Field Name	Pool Name	Well ID	Pay Top Depth (TVD m)	Pay Base Depth (TVD m)	Licensee
Kirby	Upper Mannville U2U	00/12-28-073-08W4/0	461.0	464.0	ISH Energy Limited