



# TykeWest Limited

Application for a Common Carrier Order  
Knopcik Field

February 10, 2009

**ENERGY RESOURCES CONSERVATION BOARD**

Decision 2009-013: TykeWest Limited, Application for a Common Carrier Order, Knopcik Field

February 10, 2009

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**ENERGY RESOURCES CONSERVATION BOARD**

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Calgary Alberta

**TYKEWEST LIMITED  
APPLICATION FOR A COMMON CARRIER ORDER  
KNOPCIK FIELD**

**Decision 2009-013  
Application No. 1552791**

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**DECISION**

The Energy Resources Conservation Board has considered the findings and recommendations set out in the following examiner report, adopts the recommendations, and directs that

- all Halfway sands in the wells at Legal Subdivision (LSD) 14, Section 9, Township 74, Range 11, West of the 6th Meridian and LSD 3-16-74-11W6M be included in the Knopcik Halfway JJ Pool and the pool order for the Knopcik Halfway NN Pool be rescinded, and
- Application No. 1552791 be approved and a common carrier order be issued, subject to the approval of the Lieutenant Governor in Council, with the form of the order being as shown in Appendix 2,

in accordance with the discussion provided in the examiner report.

Dated in Calgary, Alberta, on February 9, 2009.

**ENERGY RESOURCES CONSERVATION BOARD**

*<original signed by>*

B. T. McManus, Q.C.  
Acting Chair



# ENERGY RESOURCES CONSERVATION BOARD

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Calgary Alberta

## EXAMINER REPORT RESPECTING TYKEWEST LIMITED APPLICATION FOR A COMMON CARRIER ORDER KNOPCIK FIELD

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Decision 2009-013  
Application No. 1552791

### 1 RECOMMENDATIONS

Having considered all the evidence, the examiners recommend that

- all Halfway sands in the wells at Legal Subdivision (LSD) 14, Section 9, Township 74, Range 11, West of the 6th Meridian (the 14-9 well) and LSD 3-16-74-11W6M (the 3-16 well) be included in the Knopcik Halfway JJ Pool and the pool order for the Knopcik Halfway NN Pool be rescinded, and
- Application No. 1552791 be approved and a common carrier order be issued, subject to the approval of the Lieutenant Governor in Council, with the form of the order being as shown in Appendix 2,

for the reasons provided in this report.

### 2 INTRODUCTION

#### 2.1 Application

TykeWest Limited (TykeWest) submitted an application to the Energy Resources Conservation Board (ERCB/Board) pursuant to

- Section 48(1) of the *Oil and Gas Conservation Act (OGCA)* for an order declaring New North Resources Ltd. (New North) as a common carrier of gas from the JJ Pool through a pipeline extending from LSD 3-16-74-11W6M (the 3-16 tie-in) to LSD 13-15-74-11W6M, including a hydrogen sulphide (H<sub>2</sub>S) analyzer and blending facility at LSD 13-15-74-11W6M (the 13-15 blending facility);
- Section 48(4)a of the *OGCA* for the ERCB to designate the 3-16 tie-in location as the point at which the common carrier will take delivery of the gas to be transported under the common carrier order;
- Section 48(4)(b) of the *OGCA* for the ERCB to direct the proportion of production to be taken by the common carrier from each producer or owner in the subject pool; and
- Section 56 of the *OGCA* for the order to be effective the date of the application, December 24, 2007.

#### 2.2 Intervention

New North, the operator of the applied-for common carrier pipeline, filed an intervention opposing the application.

### 2.3 Hearing

The Board held a public hearing in Calgary, Alberta, that commenced on November 12, 2008, and concluded on November 14, 2008, before Board-appointed examiners G. W. Dilay, P.Eng. (Presiding Member), J. R. MacGillivray, P.Geol., and C. A. Crowfoot. Those who appeared at the hearing are listed in [Appendix 1](#).

## 3 BACKGROUND

Anderson Resources Limited drilled the 14-9 well in August 2001 for production from the Doig zone, but the zone was never produced. The 14-9 well is a deviated well, with its surface location at LSD 13-9-74-11W6M. New North and TykeWest acquired the well and completed the Halfway Formation in August 2006. The well commenced production in December 2006 and produces gas containing about 6.5 per cent H<sub>2</sub>S from the JJ Pool. The 14-9 well has produced 13.7 million cubic metres of gas to October 2008. The gas is transported to a blending facility located at 13-15-74-11W6M and into EnCana Corporation's (EnCana) gathering system, as shown in Figure 1. The blending facility is required to dilute the sour gas with sweet gas to an H<sub>2</sub>S concentration that meets the 5 per cent H<sub>2</sub>S limit of the EnCana pipeline that the gas is transported to. There is a contractual dispute between the parties regarding the 14-9 well and the associated facilities, which is currently subject to civil litigation.

TykeWest drilled the 3-16 well in August 2007. The well was tested in October 2007, is capable of production, but is not tied into a gathering system. New North does not have an interest in the 3-16 well.

Effective August 1, 2008, the ERCB included an upper Halfway sand present in the 3-16 well in the JJ Pool. In addition, a middle Halfway sand present in both the 14-9 and 3-16 wells was designated as the NN Pool. Both TykeWest and New North were advised of these pool designations prior to the hearing and were invited to make submissions regarding delineation of the Halfway pool.

## 4 PRELIMINARY MATTER

TykeWest and New North filed the following Agreed Statement of Facts at the commencement of the hearing:

- 1) Any reference to the "Devon Farmout Agreement" shall be a reference to that agreement in writing dated April 10, 2006 between Devon ARL Corporation (Devon), as farmor and New North, as farmee (including all schedules attached thereto), pursuant to which New North was granted the right to earn undivided working interests in Section 9-74-11 W6M.
- 2) Any reference to the "Subparticipation Agreement" shall be a reference to that agreement in writing dated August 4, 2006 entitled "Subparticipation Agreement Knopcik Area, Alberta" among TykeWest, New North and New Range Resources Ltd. ("New Range") incorporating by reference the 1990 CAPL Operating Procedure, with certain amendments to the 1990 CAPL Operating Procedure as identified in Schedule "B" to the Subparticipation Agreement (the "Operating Procedure"). Pursuant to the Subparticipation Agreement, TykeWest and New Range agreed to participate with New North in the performance of New North's obligations, as Farmee under the Devon Farmout Agreement on the basis of New North 30%, New Range 30%, and TykeWest 40%.



- 3) Although disputes remain respecting appropriate operations, expenses and cost allocations among them, New North, New Range and TykeWest earned 30%, 30% and 40% undivided working interests, respectively, in and to the natural gas underlying and within Section 9, in Township 74, Range 11, West of the 6th Meridian, down to the base of the Doig formation, excluding natural gas in the Doe Creek (East Half only) and Paddy formations (“Section 9”), pursuant to the Devon Farmout Agreement. Section 9 comprises the defined “Joint Lands” under the Subparticipation Agreement.
- 4) The well (including related facilities and equipment) drilled at 14-9-74-11 W6M (the “14-9 Well”) is owned in the following undivided interests: New North 30%, New Range 30%, and TykeWest 40%.
- 5) The 4” (114.3 mm) diameter pipeline from the 14-9 Well to the H<sub>2</sub>S analyzing and sour gas dilution facility located in LSD 13 of Section 15-74-11 W6M (the “Gathering Line”) is owned in the following undivided interests: New North 30%, New Range 30%, and TykeWest 40%.
- 6) Section 16-74-11W6M (“Section 16”) contains producible reserves of natural gas which are available to be produced through the well located at 3-16-74-11 W6M (the “3-16 Well”), although the quantum of those reserves is subject to dispute between TykeWest and New North. (*reference is made to Directive 65, Section 1.3.4*)
- 7) There is a reasonable expectation of a market for natural gas produced from Section 16 through the 3-16 Well that is proposed to be transported by the common carrier operation. (*reference is made to Directive 65, Section 1.3.4*)

## 5 ISSUES

The examiners consider the issues respecting the application to be

- pool delineation,
- need for the common carrier order, and
- if an order is issued, the details of the order.

In reaching the findings contained in this report, the examiners considered all relevant materials constituting the record of this proceeding, including the evidence and argument provided by each party. Accordingly, references in this report to specific parts of the record are intended to assist the reader in understanding the examiners’ reasoning relating to a particular matter and should not be taken as an indication that the examiners did not consider all relevant portions of the record with respect to that matter.

## 6 POOL DELINEATION

### 6.1 Views of TykeWest

TykeWest drilled the 3-16 well 715 metres (m) north of the 14-9 well. Based on its geological interpretation, pressure data indicating that the initial pressure of the 3-16 well was lower than the initial pressure of the JJ Pool, and pressure data showing interference effects between the two wells, TykeWest concluded that both wells were in the same pool. TykeWest submitted that the pool comprised three separate sand units, being the upper, middle, and lower, with some form of break between the upper and lower units. TykeWest stated that both wells were fracture stimulated to increase deliverability, which resulted in all three sand units being in vertical

communication. For this reason, TykeWest proposed that all three units should be included in one pool for the purpose of production.

## **6.2 Views of New North**

New North agreed with TykeWest that the 14-9 and 3-16 wells were in the same pool. It also agreed with TykeWest that because large fracture treatments had been conducted on the wells, the different sand units were in communication and consequently were in the same pool.

## **6.3 Findings of the Examiners**

The examiners agree with TykeWest and New North that the geological and pressure data indicate that the 14-9 and 3-16 wells are in the same pool.

The examiners note that the Halfway zone in the two wells is composed of three individual sands separated by small shale breaks less than 1 m thick. Because of the thinness of these shales, the examiners believe that all the sands should be treated as one reservoir unit. Therefore, the examiners recommend that all Halfway sands in the 14-9 and 3-16 wells be designated as the JJ Pool and that the pool order for the NN Pool be rescinded.

# **7 NEED FOR A COMMON CARRIER ORDER**

## **7.1 Basis for Consideration**

The Board has indicated in Section 1.3.4 of *Directive 065: Resources Applications for Conventional Oil and Gas Reservoirs* (July 3, 2007) that a successful applicant for a common carrier would be required to satisfactorily demonstrate that

- producible reserves are available for transportation through an existing pipeline,
- there is a reasonable expectation of a market for the gas proposed to be transported by the common carrier operation,
- the applicant could not make reasonable arrangements to use the existing pipeline, and
- the proposed common carrier operation is the only economically feasible way or the most practical way to transport the gas in question or is clearly superior environmentally.

## **7.2 Views of TykeWest**

In TykeWest's view, it had demonstrated that producible reserves were available for transportation and a market existed for the gas that could be produced from the 3-16 well.

TykeWest submitted that it had been unable to negotiate reasonable arrangements for use of the existing pipeline to transport production from the 3-16 well. TykeWest stated that the contract it had executed with regard to the jointly owned 14-9 well and facilities was under dispute in the Court of Queens Bench and argued that, as a matter of jurisdiction, it should not be considered with regard to the common carrier application. Although portions of the contract were read into the hearing, TykeWest submitted that the entire contract had not been supplied to the proceeding, nor was it relevant. TykeWest maintained that the proposed common carrier offered the only reasonable resolution to transport stranded production from the 3-16 well to market. TykeWest

stated that the contract it had executed did not deal with the situation that existed in this case, where non-jointly owned gas was being drained by the production of jointly owned gas.

TykeWest investigated three possible tie-in options for the 3-16 well, as illustrated in Figure 1 and detailed below.

- 1) TykeWest's preferred option for the 3-16 well was to construct a 0.19 kilometre (km) pipeline to tie directly into the 2.29 km gathering line from the 14-9 well to the H<sub>2</sub>S analyzer and blending facility at 13-15.

Although New North indicated that the system was full, TykeWest calculated the average daily production rate for the 14-9 well to be 21 thousand cubic metres per day ( $10^3 \text{ m}^3/\text{d}$ ) using the publicly available data. Based on its understanding that the blending facility could accommodate  $40 \times 10^3 \text{ m}^3/\text{d}$  with the available sweet gas for blending, TykeWest believed that some capacity existed to accommodate a portion of the production from its 3-16 well. However, TykeWest acknowledged that its calculated average daily production rate for the 14-9 well was for the period December 2006 to August 2008, which included the three-month period when the well was shut in because of the construction of the 13-15 blending facility and the period when New North was experiencing operational problems with the well. TykeWest argued that capacity was not a factor that the ERCB had identified as being determinative in granting a common carrier order. In TykeWest's view, if the ERCB were precluded from issuing a common carrier order because an intervener was currently using the capacity of a pipeline or facility, the common carrier provisions of the ERCB's enabling legislation would be rendered pointless.

TykeWest did not believe that producing the 14-9 and 3-16 wells at reduced rates would increase operational problems due to the formation of hydrates. If the production rates were reduced, TykeWest argued that there would be a lower pressure drop from the reservoir into the wellbore, which would result in less of a temperature drop.

- 2) A second option would be to construct a 5.57 km pipeline to Talisman's gathering system in LSD 6-2-74-11W6M. Without the addition of compression facilities, TykeWest indicated that this option would result in backing out some of Talisman's gas.
- 3) A third option would be to construct a 7.68 km pipeline licensed for greater than 6.5 per cent H<sub>2</sub>S from the pipeline at 13-15 to the EnCana compressor station at LSD 16-30-74-10W6M. This option would still require use of the proposed common carrier pipeline but would bypass the 13-15 blending facility.

TykeWest submitted that its applied-for option 1 was the most economical option, but it acknowledged that the other two options were also economical. However, TykeWest pointed out that its economic analysis was unrisks and the economics of options 2 and 3 would be reduced if approved due to the longer time required to complete these options.

TykeWest indicated that both EnCana and Talisman had informed it that applications for pipelines licensed for greater than 5 per cent H<sub>2</sub>S and for additional facilities would likely be opposed by area residents, who were sensitive to sour gas development. For this reason, TykeWest submitted that the proposed common carrier was the soundest option, in that it was the most economical, was environmentally superior, as it avoided sour gas facility proliferation, and was in keeping with the desires of area residents. Since pressure data showed that the 3-16 well

had a depleted pressure, TykeWest argued that the greatest risk of an alternative option was that the gas reserves in Section 16 would continue to be drained while it faced opposition to its applications for alternative pipeline routes.

### 7.3 Views of New North

New North agreed with TykeWest that producible reserves were available for transportation and there was a reasonable expectation of a market for the gas that could be produced by the 3-16 well.

New North stated the Subparticipation Agreement and the incorporated 1990 CAPL Operating Procedure that TykeWest had agreed to provided a reasonable arrangement for the use of the existing pipeline. One of the clauses in the 1990 CAPL Operating Procedure gave priority to jointly owned gas. By TykeWest agreeing to the Subparticipation Agreement, New North claimed that TykeWest had contractually obligated itself to back out any of its non-jointly owned gas from Section 16 if necessary and had agreed not to attempt to bring third-party gas into the facilities without unanimous consent of the Section 9 owners. New North pointed out that it had never been approached by TykeWest with a request on behalf of third-party owners in Section 16 for the transportation of gas from the 3-16 well. New North argued that the Board should not issue a common carrier order when there was a contract between the parties. In support of its argument, New North referred to *Decision 2006-021*,<sup>1</sup> in which the Board stated: “The Board believes that as a general rule a common carrier order should not override a contract into which parties have freely entered...” It was New North’s position that although the contract between New North and TykeWest was subject to litigation in the civil courts, it was still valid. For this reason, it considered the contractual agreement between the parties to be reasonable and requested that the application for a common carrier order be dismissed.

Although New North recognized that the gas reserves in Section 16 were being drained, it noted that when TykeWest drilled the 3-16 well, TykeWest knew or should have known that there was no spare capacity in the blending facility, which had been operating at a restricted rate since May 2007 due to the shortage of sweet gas for blending. New North indicated that although the contract did not deal directly with drainage, the 1990 CAPL Operating Procedure addressed drainage in a peripheral manner because of the clauses that provided for the priority of jointly owned gas over non-jointly owned gas and the requirement to curtail or cease production of non-jointly owned gas if there were no spare capacity. New North believed that if a signatory to an agreement understood its undertakings with regard to access to the facilities, it would have to consider the drainage issue before it planned its capital projects.

New North stated that in May 2007, when the 13-15 blending facility was placed on stream, sweet gas for blending was restricted to between  $13 \times 10^3 \text{ m}^3/\text{d}$  and  $15 \times 10^3 \text{ m}^3/\text{d}$ , which limited production from the 14-9 well to rates between  $30 \times 10^3 \text{ m}^3/\text{d}$  and  $34 \times 10^3 \text{ m}^3/\text{d}$ . At these rates, New North encountered operational difficulties with the well, since sufficient heat was not generated downhole to prevent hydrates from forming. Solving the problem required daily intervention, including pumping methanol down the wellbore every morning to dissolve the hydrates, then depressuring and blowing down the well each afternoon to lift the liquids that built up downhole. The operations were expensive and hampered the economic viability of the well. The volume of available sweet gas for blending increased marginally in June 2008 to between  $15 \times 10^3 \text{ m}^3/\text{d}$  and

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<sup>1</sup> Alberta Energy and Utilities Board (predecessor to the ERCB) *Decision 2006-021: Avenir Diversified Income Trust, Application for Common Carrier Declaration, Taber Field, March 7, 2006.*

17 10<sup>3</sup> m<sup>3</sup>/d, allowing the production rate of the 14-9 well to increase to between 36 10<sup>3</sup> m<sup>3</sup>/d to 40 10<sup>3</sup> m<sup>3</sup>/d. The rate increase solved the hydrate problem, and the well produced with virtually no downtime and no operator intervention from June to October 2008. New North asserted that a common carrier order that restricted rates dramatically for both the 14-9 and 3-16 wells would result in operational difficulties and increased costs, which would significantly reduce the economic viability of either well, potentially to the point that neither well could be produced economically.

New North stated there was no spare capacity in the pipeline system because of the limited availability of sweet gas for blending the sour gas, and it did not expect additional sweet gas to be available from EnCana in the foreseeable future. New North had attempted, without success, to obtain additional sweet gas from other suppliers in the area. It noted that the average production rate calculated by TykeWest for the 14-9 well was for the period from the start of production to August 2008, which included the three-month period when the well was shut in while the blending facility was constructed and the period during which New North experienced substantial operating problems with hydrates. New North stated that the production data it provided for the 14-9 well for the period June to October 2008 showed that there was no surplus capacity in the pipeline system. New North stated that the 14-9 well was capable of producing up to 80 10<sup>3</sup> m<sup>3</sup>/d of gas, so all incremental sweet gas for blending would be used to increase production from the 14-9 well, thereby keeping the pipeline and blending facility at capacity. New North argued that the availability of spare capacity was a relevant and perhaps even determining factor in deciding whether a common carrier order should be issued.

New North submitted that the proposed common carrier pipeline was not the only economical option available to TykeWest and that a direct tie-in of the 3-16 well to EnCana's gathering system offered the most practical alternative to the proposed common carrier, since New North would suffer an adverse effect if rate restrictions were imposed.

#### **7.4 Findings of the Examiners**

The examiners agree with TykeWest that producible reserves are available from the 3-16 well and accept that there is a reasonable expectation of a market for the gas that could be produced from the well.

The purposes of the *OGCA* include affording each owner the opportunity to obtain its share of the production of oil or gas from any pool and providing for economical, orderly, and efficient development of Alberta's oil and gas resources in the public interest. The examiners believe these purposes need to be considered in addressing the application.

The examiners observe that there is no dispute that the JJ Pool gas reserves associated with the 3-16 well are being drained by production from the 14-9 well. The examiners accept that such drainage has occurred and find that it continues to take place in an inequitable manner.

The examiners note that while the 1990 CAPL Operating Procedure was provided as evidence at the hearing, the Subparticipation Agreement and the amendments to the 1990 CAPL Operating Procedure were not. As a result, the complete contract between the parties was not available for the examiners to evaluate. In their review of the 1990 CAPL Operating Procedure, the examiners did not find a clause that directly addressed the matter of drainage in the context of the equitable recovery of reserves. In addition, although New North argued that the 1990 CAPL Operating

Procedure addressed drainage in a peripheral manner, both parties confirmed that the operating procedure did not contain a specific clause with regard to handling a situation where one of the signatories' reserves were being drained.

With respect to *Decision 2006-021*, the examiners recognize that the Board stated that it believed that as a general rule, a common carrier order should not override a contract into which parties have freely entered. However, the examiners believe that the specific set of circumstances in each application must be examined in order to determine whether this general rule should apply. Unlike the evidence heard by the examiners for the subject application, drainage was not identified as an issue in *Decision 2006-021*. As a result of the different circumstance, specifically that drainage is occurring, the examiners are of the view that the general rule should not apply to the subject application.

The examiners find that the contract between the parties does not provide a reasonable arrangement for TykeWest to use the applied-for common carrier operation, because it does not directly address the issue of drainage and therefore does not allow TykeWest to recover its share of the pool reserves.

Although it is not the only economical option, the examiners find that construction of the proposed 0.19 km pipeline to tie directly into the pipeline from the 14-9 well to the H<sub>2</sub>S analyzer and blending facility located in LSD 13-15 provides the most practical and environmentally superior option for transporting the 3-16 gas. It does not result in proliferation of sour gas facilities and it offers the timeliest way to address drainage of the Section 16 gas reserves. The examiners believe that the formation of hydrates within the wellbores that may result from production at reduced rates can be addressed operationally, albeit at additional cost.

The examiners note that the evidence provided in the hearing indicates that currently there is likely no spare capacity on the subject pipeline system because of the limited availability of sweet gas for blending. The examiners consider the average production rate calculated by TykeWest for the 14-9 well to be too low, because it did not account for the shut-in of the well when the blending facility was being constructed, nor did it account for the operating problems the well encountered. The production data provided by New North for June to October 2008 for the 14-9 well indicate that the available capacity is likely being used by the 14-9 well. However, the examiners note that the relevant legislation does not state that a successful applicant for a common carrier pipeline must demonstrate that spare capacity is available on the pipeline.

For the reasons provided above, the examiners believe there is a need for a common carrier order and recommend that an order be issued.

## **8 DETAILS OF THE COMMON CARRIER ORDER**

### **8.1 Views of TykeWest**

TykeWest argued that the H<sub>2</sub>S analyzer and blending facility should be considered part of the common carrier pipeline. TykeWest stated the facility and analyzer did not fit the definition of a common processor. It maintained that in order to achieve its objective of getting its gas to market, they should be considered incidental to the operation of the pipeline. In TykeWest's view, it would offend the intent of ERCB legislation if the blending facility did not fit the definition of a common carrier pipeline or a common processor.

As summarized in Table 1, TykeWest calculated a production allocation of 53.24 and 46.76 per cent for the 3-16 and 14-9 wells respectively, based on its mapping of the JJ Pool, and 46.63 and 53.37 per cent for the 3-16 and 14-9 wells respectively, based on the validated area and hydrocarbon pore volume method recommended in *Directive 065*. It then proposed an allocation of 50/50. TykeWest's mapping was taken from seismic mapping done by Devon, but TykeWest said that it could not provide the details of Devon's seismic mapping because it was confidential. TykeWest believed that the volumetric gas reserves estimated from mapping correlated well with the reserves estimated from material balance calculations. With respect to the 3-16 well, TykeWest noted that the logging company indicated the porosity logs were suspect, since the logging tools were unstable and thus the porosity values were considered to be conservative. Rather than using the main pass, TykeWest used a repeat pass that had better control. TykeWest disagreed with the allocation of 30/70 for the 3-16 and 14-9 wells proposed by New North, since it believed that pay values estimated for the 14-9 well were exaggerated by up to 25 per cent. With respect to the 3-16 well, TykeWest noted that New North used the main pass rather than the repeat pass.

Initially at the hearing, TykeWest requested that September 30, 2007, be set as the effective date of the common carrier order. This was when TykeWest had tested the 3-16 well and although it had a 40 per cent interest in the pipeline, it was forced to flare gas during the test and thereby forego any revenue because it was not able to tie into the pipeline. TykeWest considered this to be an unusual situation, which could warrant the Board departing from its usual practice of not making a common carrier order effective before the date of the application. However, TykeWest later acknowledged that Section 56 of the *OGCA* did not provide the Board with the authority to set an effective date earlier than the date of the application, and so TykeWest accepted an effective date of December 24, 2007.

TykeWest did not request a minimum rate for the wells that would be subject to the common carrier order, nor did it request a specific timeframe to balance the allocated production from the pool.

## 8.2 Views of New North

Although New North submitted that TykeWest's application for a common carrier order should be dismissed, in the event that the Board decided to issue an order, New North addressed the details of such an order.

New North believed that the H<sub>2</sub>S analyzer and blending facility should not be considered part of the pipeline, since they had been licensed as a separate facility and did not fit the definition of a pipeline under the *OGCA*. New North submitted that if the Board were to include them as part of the common carrier order, TykeWest should be required to obtain its own source of sweet gas for blending the sour gas.

With respect to its determination of allocation factors, New North acknowledged that it used the main log pass to determine the wellbore parameters for the 3-16 well. However, New North had compared all runs of the logs and concluded that the variations in the log runs were within acceptable limits. New North interpreted the logs of the two wells using both 4 and 6 per cent porosity cutoffs. Using the validated area and hydrocarbon pore volume approach, it calculated allocations of 32.5/67.5 and 28/72 respectively for the 3-16 and 14-9 wells, as shown in Table 1, and then it proposed an allocation of 30/70 for the 3-16 and 14-9 wells. New North stated there

was very little well control with which to define the boundaries of the JJ Pool. Although it had been able to view Devon's seismic data, it was not able to conduct its own analysis of the data, and so it concluded that it did not have enough information to map the JJ Pool.

New North argued that the effective date of the common carrier order should be no earlier than March 20, 2008, which was the date that the application record was complete.

With respect to a minimum rate, New North stated that it could not produce very economically below a rate of  $36 \times 10^3 \text{ m}^3/\text{d}$ . It stated that a one-year period to balance the allocated production from the JJ Pool seemed reasonable.

### 8.3 Findings of the Examiners

With respect to whether the common carrier order should include the H<sub>2</sub>S analyzer and blending facility, the examiners note that the *OGCA* defines a pipeline as follows:

“pipeline” means any pipe or any system or arrangement of pipes wholly within Alberta and whereby oil, gas or synthetic crude oil or water incidental to the drilling for or production of oil, gas or synthetic crude oil is conveyed, and (i) includes all property of any kind used for the purpose of, or in connection with, or incidental to, the operation of a pipeline in the gathering, transporting, handling and delivery of oil, gas, synthetic crude oil or water....

The examiners believe that a common carrier order that does not include the H<sub>2</sub>S analyzer and blending facility would not ensure that TykeWest has access to all the facilities needed to transport, handle, and deliver the gas produced from its 3-16 well into EnCana's system. As a result, the examiners conclude that the H<sub>2</sub>S analyzer and blending facility should be considered to be incidental to the operation of the pipeline and thereby considered to be within the definition of a pipeline under the *OGCA*. Therefore, the examiners recommend that the 14-9 pipeline and 13-15 H<sub>2</sub>S analyzer and blending facility constitute the common carrier pipeline. The examiners also recommend the 3-16 tie-in location as the point at which the common carrier should take delivery of the gas to be transported under the common carrier order.

The examiners understand that the constraining factor in the 14-9 pipeline system is the availability of sweet gas for blending. With respect to New North's submission that TykeWest should be required to obtain its own source of sweet gas if the H<sub>2</sub>S analyzer and blending facility are to be part of the common carrier order, based on the evidence presented at the hearing the examiners believe that TykeWest would likely be unable to secure additional supplies of sweet gas from EnCana or from other operators in the area. Because such a requirement could result in the 3-16 well not being able to produce, which in turn could result in the 14-9 well not being able to produce because of the need to satisfy the required allocation between the two wells, the examiners are not prepared to recommend this. The examiners note that New North would be obligated under Sections 48(2) and 48(3) of the *OGCA* to ensure that it does not directly or indirectly make or cause to be made any discrimination between any of the persons for whom any gas is gathered, transported, handled, or delivered by means of the common carrier pipeline and that it not discriminate in favour of its own gas.

With respect to the determination of allocation factors, since there are no data to support the mapping presented by TykeWest and a reserves-based allocation, the examiners find that a production allocation based on validated area and hydrocarbon pore volume is appropriate. Regarding the issue of the instability of the porosity logs for the 3-16 well, the examiners note



that there was very little difference in the porosity values interpreted by TykeWest and New North, even though TykeWest used the repeat pass while New North used the main pass. With respect to the porosity cutoff used by both parties, the examiners are of the view that there was no substantive evidence provided to support the use of either a 4 or a 6 per cent porosity cutoff. Consequently, the examiners find no reason to deviate from the ERCB's established use of a 5 per cent porosity cutoff for Halfway pools in Alberta. As shown in Table 1, the examiners calculate a production allocation of 33.7 and 66.3 per cent for the 3-16 and 14-9 wells respectively and recommend a rounded allocation of 34 and 66 per cent for the 3-16 and 14-9 wells respectively.

The examiners believe that a retroactive order is justified, due to ongoing drainage of the gas reserves in Section 16. The examiners note that TykeWest is responsible for part of the time taken to process its application because it filed an incomplete application, which was not completed until March 20, 2008. Therefore the examiners recommend that the effective date of the order be March 20, 2008, which is the date the application record was complete.

Since the applicant did not propose a minimum rate and the rate suggested by New North would not be practical, considering the current limitation of the pipeline system, the examiners do not recommend a minimum rate. The examiners recommend that the retroactive portion of the production from the JJ Pool be balanced by December 31, 2009, and that commencing January 1, 2010, the production be balanced annually, since annual balancing has been a common practice in other common carrier orders.

Dated in Calgary, Alberta, on February 5, 2009.

## **ENERGY RESOURCES CONSERVATION BOARD**

*<original signed by>*

G. W. Dilay, P.Eng.  
Presiding Member

*<original signed by>*

C. A. Crowfoot  
Examiner

*<original signed by>*

J. R. MacGillivray, P.Geol.  
Examiner

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**APPENDIX 1 HEARING PARTICIPANTS**

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**Principals and Representatives  
(Abbreviations used in report)****Witnesses**

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TykeWest Limited (TykeWest)  
J. R. McKee

T. Tycholis, P.Eng.  
R. Swanson, P.Eng, C.E.T.,  
of Fekete Associates Inc.  
L. Dean, B.Sc., P.Geol.,  
of Fekete Associates Inc.

New North Resources Ltd. (New North)  
D. C. Edie, Q. C.

H. Thompson, C.A.  
M. Zaoral, P.Geol.,  
of GLJ Petroleum Consultants  
J. Werth, P.Eng.,  
of GLJ Petroleum Consultants

Energy Resources Conservation Board staff  
B. Kapel Holden, Board Counsel  
K. Fisher  
K. Jors  
C. Tamblyn  
L. Wallace

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**APPENDIX 2 FORM OF ORDER TO BE ISSUED**

Order No. MISC #

**FORM OF ORDER\***

WHEREAS the Lieutenant Governor in Council, by Order in Council numbered O.C. # and dated #, hereto attached as Appendix A, has authorized the granting of this order.

The Energy Resources Conservation Board, pursuant to the *Oil and Gas Conservation Act*, chapter O-6 of the *Revised Statutes of Alberta*, 2000, orders as follows:

- 1) New North Resources Ltd. is a common carrier of gas produced from the Knopcik Halfway JJ Pool, through the pipeline extending from Legal Subdivision (LSD) 3, Section 16 of Township 74, Range 11, West of the 6th Meridian (LSD 3-16-74-11W6M) to LSD 13-15-74-11W6M, including the H<sub>2</sub>S analyzer and blending facility at LSD 13-15-74-11W6M.
- 2) The point at which the common carrier is to take delivery of the gas to be transported on the pipeline subject to this order must be at a tie-in point in LSD 3-16-74-11W6M.
- 3) For the period commencing on March 20, 2008, and ending December 31, 2009, and in each annual calendar year thereafter, gas production from the Knopcik Halfway JJ Pool must be distributed between the wells with the unique identifiers of 00/14-09-074-11W6/0 and 00/03-16-074-11W6/0 in the proportion of 66 and 34 per cent respectively.
- 4) This order is effective on March 20, 2008.

END OF DOCUMENT

\* This is only a form of order. The order, when issued, may have minor variations from that set out here.

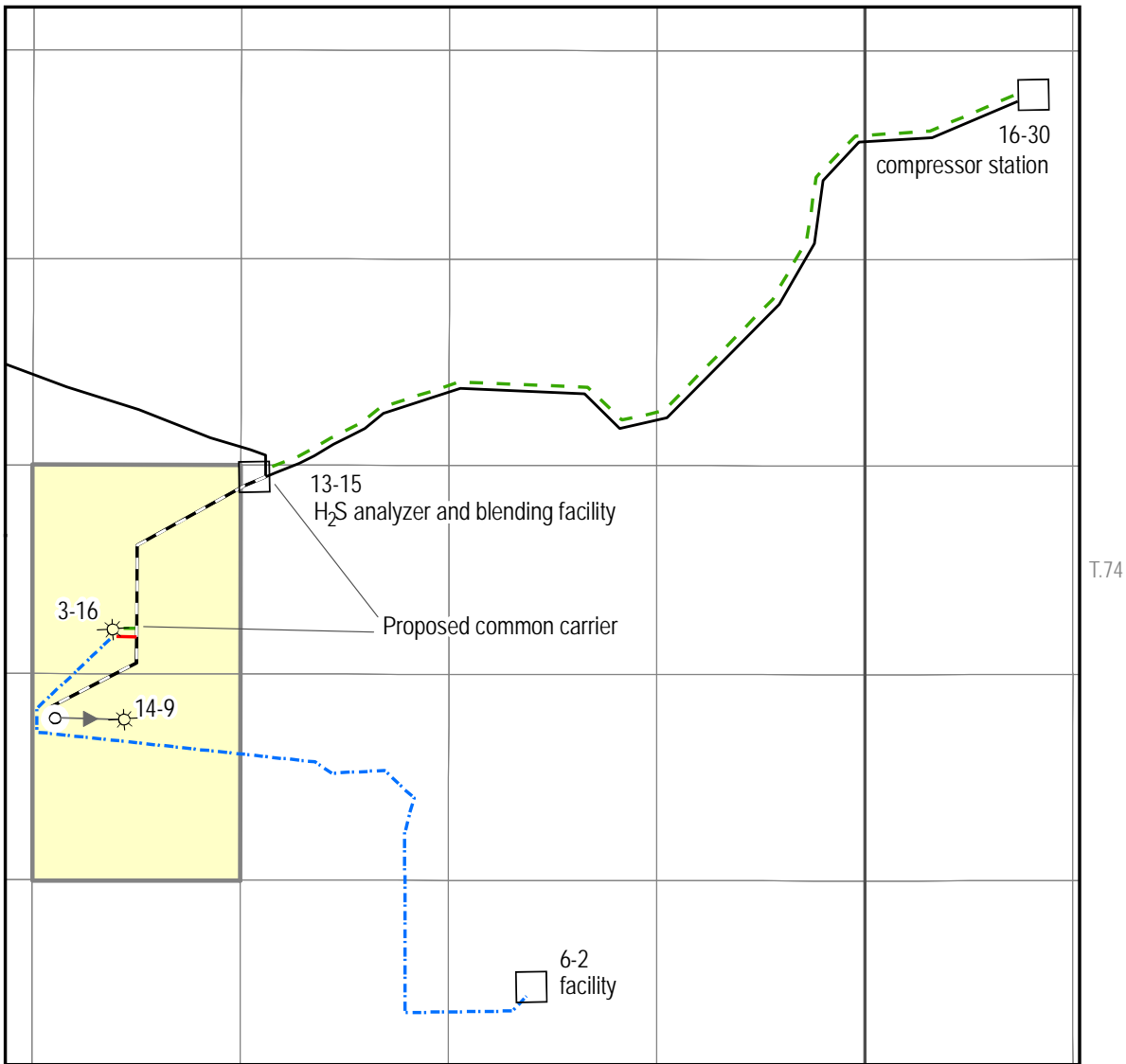
Table 1. Comparison of wellbore parameters and allocation calculation

	Net pay (m)		Porosity (fraction)		Water saturation (fraction)		Area (hectares)		Allocation* (%)	
	3-16	14-9	3-16	14-9	3-16	14-9	3-16	14-9	3-16	14-9
TykeWest **										
4% porosity cutoff	7.1	8.6	0.068	0.064	0.263	0.260	256	256	46.63	53.37
New North										
4% porosity cutoff	8.2	13.5	0.066	0.075	0.26	0.18	-	-	32.5	67.5
6% porosity cutoff	4.3	9.7	0.081	0.086	0.21	0.15	-	-	28.0	72.0
ERCB										
5% porosity cutoff	8.0	13.0	0.072	0.083	0.23	0.19	256	256	33.7	66.3

\*Calculated allocation is based on the following formula:

$$\text{Percentage of pool production for specific well} = \left[ \frac{\{\text{net pay} \times \text{porosity} \times (1 - \text{water saturation}) \times \text{validated area}\} \text{ for specific well}}{\text{sum of } \{\text{net pay} \times \text{porosity} \times (1 - \text{water saturation}) \times \text{validated area}\} \text{ for all wells}} \right] \times 100$$

\*\*TykeWest also provided an allocation of 53.24% for the 3-16 well and 46.76% for the 14-9 well based on mapping.



Legend

- ☀ Gas well
- ➔ Surface to bottomhole
- Facility
- Knopcik Halfway JJ Pool
- Existing EnCana pipeline
- - - Existing New North pipeline
- Option 1, 3-16 tied into proposed common carrier and to 13-15 H<sub>2</sub>S analyzer and blending facility
- · - · - Option 2, 3-16 tied into Talisman at 6-2
- · - · - Option 3, 3-16 tied into proposed common carrier, 13-15 H<sub>2</sub>S analyzer and blending facility bypassed, and tied into EnCana at 16-30

Figure 1. Location map