



Rocky River Petroleum Ltd.

Application for a Common Carrier Order
Flat Field

July 22, 2008

ENERGY RESOURCES CONSERVATION BOARD

Decision 2008-053: Rocky River Petroleum Ltd., Application for a Common Carrier Order, Flat Field

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ENERGY RESOURCES CONSERVATION BOARD

Calgary Alberta

**ROCKY RIVER PETROLEUM LTD.
APPLICATION FOR A COMMON CARRIER ORDER
FLAT FIELD**

**Decision 2008-053
Application No. 1527313**

DECISION

The Energy Resources Conservation Board has considered the findings and recommendation set out in the following examiner report, adopts the recommendation, and directs that Application No. 1527313 be denied.

Dated in Calgary, Alberta, on July 21, 2008.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

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

ENERGY RESOURCES CONSERVATION BOARD

Calgary Alberta

EXAMINER REPORT RESPECTING ROCKY RIVER PETROLEUM LTD. APPLICATION FOR A COMMON CARRIER ORDER FLAT FIELD

**Decision 2008-053
Application No. 1527313**

1 RECOMMENDATION

Having considered all of the evidence, the examiners recommend that Application No. 1527313 be denied for the reasons noted in this report.

2 INTRODUCTION

2.1 Application

Rocky River Petroleum Ltd. (Rocky River) applied to the Energy Resources Conservation Board (ERCB/Board)

- under Section 48(1) of the *Oil and Gas Conservation Act (OGCA)* for an order declaring Canadian Natural Resources Limited (CNRL) as a common carrier of gas from the Flat Mannville NN pool (the NN pool) through a pipeline extending from Legal Subdivision (LSD) 9, Section 2, Township 66, Range 20, West of the 4th Meridian (LSD 9-2-66-20W4M) (the 9-2 tie-in), to a tie-in point located at LSD 15-7-66-20W4M, including through compression and metering facilities located at LSD 13-12-66-20W4M (the 13-12 location);
- under Section 48(4)(a) of the *OGCA* for the ERCB to designate the 9-2 tie-in as the point at which the common carrier shall take delivery of the gas to be transported under common carrier order; and
- under Section 48(4)(b) of the *OGCA* for the ERCB to allocate a minimum of 14.0 thousand cubic metres per day ($10^3 \text{ m}^3/\text{d}$) of production to CNRL from the Rocky River well in LSD 13-35-65-20W4M (the 13-35 well).

2.2 Intervention

CNRL filed an intervention opposing the application.

2.3 Hearing

The Board held a public hearing in Calgary, Alberta, which commenced on May 6, 2008, and concluded on May 7, 2008, before Board-appointed examiners F. Rahnama, Ph.D., (Presiding Member), T. A. Dibus, P.Geol., and W. A. Warren, P.Eng. Those who appeared at the hearing are listed in Appendix 1.

3 BACKGROUND

In conjunction with proceeding to establish a hearing date on this matter, the ERCB encouraged the parties to engage in appropriate dispute resolution to continue discussing issues of interest. The parties met several times between November 2007 and immediately prior to the start of the hearing, but were unable to reach an agreement.

The panel heard evidence that the subject pipeline and related facilities in the area of application are operated by CNRL, which is also the operator of the Flat Lake Gas Unit (the Unit) (see Figure 1). There are currently 23 wells with 40 event sequences producing gas from the Wabamun, Wabiskaw, and Colony Formations. In November 2007, one of the two sales compressors in the gas gathering system was shut down. The CNRL well located in LSD 6-10-66-20W4M (the 6-10 well) was drilled in 1997, produced from the NN Pool for 11 months, and was then abandoned due to water production. The well produced a total of $3844.6 \times 10^3 \text{ m}^3$ of gas prior to abandonment.

The 13-35 well was drilled in 1993 by Apache Canada Ltd. which continues to be a joint owner of the well. In 2006, Rocky River conducted a gas test on the Colony sand, defined as the interval from 415 to 419 metres above sea level (mKB), and earned its interest in the well; the absolute open flow rate indicated in the test was $53.9 \times 10^3 \text{ m}^3/\text{d}$. The well remains shut in.

4 ISSUES

The examiners consider the issues respecting the application to be

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

In reaching the recommendation, the examiners considered all relevant materials constituting the record of this proceeding, including the evidence and arguments provided by each party.

Accordingly, references in this examiner 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.

5 POOL DELINEATION

5.1 Views of Rocky River and CNRL

Rocky River interpreted the abandoned 6-10 well and the 13-35 well to be in the NN pool (see Figure 1) and included Section 35-65-20W4M and Sections 2, 3, and 10 of Township 66-20W4M in its pool boundary. Rocky River estimated that the 13-35 well had $10.121 \times 10^6 \text{ m}^3$ of remaining marketable gas in place, using an acreage-based volumetric approach. CNRL did not submit its interpretation of the pool; however, it agreed with Rocky River that the 13-35 and 6-10 wells were in the same pool and took no issue with the reservoir estimates provided. Both parties agreed that there was little opportunity for expansion of the pool as mapped.

5.2 Findings of the Examiners

The ERCB presently designates the NN pool in a Colony sand penetrated by the 6-10 well, in which a gas/water contact has been identified by open-hole log evaluation at 178.7 mKB. The examiners note that the 13-35 well also encountered a Colony sand; however, no gas/water contact was evident on the well logs. The examiners also note the stratigraphic and structural complexity of the geology of the sands within the Colony Formation and are not prepared to recommend that the NN pool boundary be revised to include the 13-35 well without additional infill drilling in Section 2-66-20W4M to provide an indication of reservoir continuity between the 6-10 and 13-35 wells. The examiners note that the applicant stated that the potential does exist for the NN pool and the 13-35 well to be separate accumulations. The Colony sand in the 13-35 well will be recognized on the ERCB record as a single-well pool.

6 NEED FOR A COMMON CARRIER ORDER AND, IF ISSUED, THE DETAILS OF THE ORDER

6.1 Basis for Consideration

The Board has indicated in previous decision reports that a successful applicant for a common carrier order 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 that is proposed to be transported by the common carrier operation,
- reasonable arrangements for use of the existing pipeline could not be agreed on by the parties, and
- the proposed common carrier order represents the only economically feasible way, the most practical way, or the environmentally superior way to transport the gas in question.

6.2 Views of the Applicant

Rocky River submitted that producible reserves were available for transportation from the 13-35 well and that it had an agreement with BP Canada Energy Company to purchase the produced gas. The applicant conceded that its reserves were not being drained at the present time by any well, as the CNRL 6-10 well is abandoned and the 13-35 well remains shut in. It speculated that possible future wells could potentially result in competitive drainage from the NN pool. Rocky River submitted, however, that drainage was not a requirement for a successful common carrier application.

Rocky River stated that a common carrier order was required since it was unable to make reasonable arrangements to use the existing pipeline currently shared by the Flat Lake Gas Unit. It did not accept the offer made by CNRL of $5 \times 10^3 \text{ m}^3/\text{d}$ on a best-efforts basis, with backout fees, because it anticipated water production and its calculations indicated that $14 \times 10^3 \text{ m}^3/\text{d}$ was the minimum rate required to lift liquids in the wellbore. In addition, Rocky River had concerns that delivery on a best efforts basis could result in a shut-in of its reserves, and consequently it could be forced to sell the 13-35 well to CNRL for whatever amount Rocky River could get for the well.

The applicant reviewed four possible tie-in scenarios for the 13-35 well (see Figure 1).

- 1) The applicant's preferred tie-in option for the 13-35 well was to construct a 3-inch (76 millimetre) pipeline from the well to the 9-2 tie-in, flow gas through the existing CNRL pipeline from the 9-2 tie-in to LSD 11-12-66-20W4M (the 11-12 location), and construct a pipeline from the 11-12 location to the CNRL booster compressor inlet located at the 13-12 location. This tie-in alternative offered the highest rate of return to Rocky River. The applicant also submitted that this tie-in option was environmentally superior as it required minimal construction of additional pipelines and was the most economical, with minimal impact to CNRL and Unit gas owners.

The applicant proposed a firm service arrangement with a gas rate of $14 \times 10^3 \text{ m}^3/\text{d}$ to accommodate anticipated liquid lift issues in the wellbore. Based on the water production from the 6-10 well, Rocky River was certain that liquids would eventually be encountered in the life of the 13-35 well, although it could not predict when this would occur.

Rocky River agreed to pay a fair price to compensate Unit owners for any backed-out production, even though its gas deliverability study forecasted that unit production would decline and there would be no back out of unit gas by November 2008.

- 2) Another option was to construct a 3-inch pipeline from the well to the 9-2 tie-in, flow gas through the existing CNRL pipeline from the 9-2 tie-in to the 11-12 location, and then construct a pipeline to tie directly into the sales compressor decommissioned by CNRL in late 2007. In this scenario, the Rocky River gas would bypass the booster compressor inlet located at the same site. Using the idled sales compressor would require an overhaul of the compressor, installation of an additional separator, and installation of in-plant facility piping.

Rocky River projected an economic 66.6 per cent rate of return at $14 \times 10^3 \text{ m}^3/\text{d}$ for this alternative; however, it did not take fuel gas usage for the start-up and operation of the 1100 horsepower compressor into account. Under cross-examination it agreed that there would be no rate limitation for this scenario. In addition to the lower rate of return, Rocky River believed that there would be environmental impacts and conservation issues associated with the extra equipment required, the emissions, and the volume of gas used to run the compressor.

- 3) Rocky River also evaluated a case that would require the construction of about 9 kilometres (km) of pipeline from the 13-35 well southwest to an Apache Canada Limited tie-in at LSD 10-7-65-20W4M. It stated that this tie-in was uneconomic and unfavorable due to environmental concerns associated with the length of pipeline and the surface disruption involved.
- 4) The applicant evaluated the option to tie directly into the TransCanada Pipeline/Nova transmission line at LSD 7-13-66-20W4M. It stated that this option was also uneconomic and would have environmental impacts associated with building about 5 km of pipeline to the tie-in.

6.3 Views of the Intervener

CNRL did not dispute Rocky River's reserve estimates, presented both volumetrically and by material balance. It did not dispute the market availability for Rocky River's produced gas. CNRL agreed with Rocky River that drainage was not occurring and stated that it had no present plans to farm out the lands or drill a well for production of the NN pool reserves. CNRL maintained that Rocky River would be able to produce the NN pool reserves without competitive drainage.

CNRL submitted that its standing offer of $5 \times 10^3 \text{ m}^3/\text{d}$ would provide Rocky River a fair and economic opportunity to transport gas from the 13-35 well. Using remaining recoverable reserves for all reserves tied into the Unit as an allocation method to prorate the existing facility capacity of $170 \times 10^3 \text{ m}^3/\text{d}$, CNRL calculated that Rocky River would only be allowed to produce $1.9 \times 10^3 \text{ m}^3/\text{d}$. The majority of gas flowing through CNRL's subject pipeline and related facilities in the area of application was Unit gas and there was a small amount of third-party gas. CNRL further submitted that it had an interruptible service arrangement with Sutton Energy Limited (Sutton) to transport third-party gas. CNRL explained that under this arrangement it had provided a consistent level of service to Sutton of between 2 and $5 \times 10^3 \text{ m}^3/\text{d}$. Further, CNRL committed to provide Rocky River $5 \times 10^3 \text{ m}^3/\text{d}$ on a best-efforts basis, subject to applicable backout fees.¹ It confirmed that an interruption in service would be unlikely. CNRL agreed that if its attempts to increase production from the Unit proved unsuccessful, there could be potential for additional capacity in the future.

CNRL reviewed the same four possible tie-in scenarios as Rocky River and considered all cases to be economic.

CNRL disagreed with Rocky River's contention that the 13-35 well would require a minimum rate of $14 \times 10^3 \text{ m}^3/\text{d}$ to lift liquids. It noted that no liquids were produced in the August 2006 absolute open flow test conducted on the 13-35 well, and there was no indication when or if liquid lift would be a concern for the well. CNRL submitted that in the event that liquids were encountered in production, Rocky River could install artificial lift to address the issue.

CNRL submitted that the booster compressor inlet was fully loaded, and its future drilling and completions plans would keep the compressor loaded for the foreseeable future. It argued that Rocky River's gas deliverability model did not accurately depict actual field operating conditions. It further argued that a common carrier order subject to the requested rate would create backout issues for the Unit and would interfere with its ability to further develop its reserves.

CNRL concluded that Rocky River had acceptable alternatives to transport gas from the 13-35 well to market and that no common carrier order was required. These alternatives included CNRL's standing offer to transport $5 \times 10^3 \text{ m}^3/\text{d}$ and its offer of the use of its idle sales compressor. With respect to the latter alternative, CNRL noted that Rocky River had calculated an economic 66.6 per cent rate of return at $14.0 \times 10^3 \text{ m}^3/\text{d}$. CNRL also noted that there would be no rate limitation, allowing Rocky River to increase its return if it chose to do so. CNRL believed that the environmental impact of this alternative was neutral. There would be no additional ground disturbance and a minimal increase in emissions and fuel usage.

¹ Hearing Transcript, page 297, line 25.

6.4 Findings of the Examiners

The examiners accept the evidence that Rocky River has reserves available for transportation, and that the applicant has a market for the gas. Further, the examiners note that there is no drainage occurring and concur with the applicant that drainage is not a requirement of a successful application for a common carrier order.

The examiners heard no compelling evidence that a common carrier order and a rate allocation of $14 \times 10^3 \text{ m}^3/\text{d}$ is required to address the issue of liquid loading within a wellbore. The examiners believe that possible future liquid loading issues in the 13-35 well can and should be addressed operationally.

Based on the evidence heard at the hearing, the examiners find that there are several alternatives to transport gas from the 13-35 well that are economic for Rocky River. The examiners note that one of the options, restarting the idle compressor, would not restrict production from the 13-35 well. In addition, the examiners believe that the option to tie directly into the idle sales compressor would not result in any unacceptable environmental impact. The examiners believe that CNRL's offer for access to the CNRL pipeline at $5 \times 10^3 \text{ m}^3/\text{d}$ is reasonable and note that similar volumes and service are offered to transport third-party gas for Sutton. If Rocky River should choose to accept this arrangement, the ERCB expects CNRL to uphold its commitment to accept a minimum of $5 \times 10^3 \text{ m}^3/\text{d}$ of gas from the 13-35 well on a best-efforts basis, subject to applicable fees. The examiners note that CNRL's evidence confirmed that such service would unlikely be interrupted. The examiners also note that in spite of additional tie-in and completion work, unit production has continued to decline over the past 11 years.

On the basis of the foregoing, the examiners consider that Rocky River has not met two of the requirements for a successful application, namely, that the applicant could not make reasonable arrangements to use the existing pipeline, and that the proposed common carrier order is the only economically feasible way, the most practical way, or the environmentally superior way to transport the gas in question. Therefore, the examiners are not prepared to recommend to the Board that the application for a common carrier order be approved.

As the examiners are not recommending that the application be approved, it is not necessary to address the details of the common carrier order, such as the tie-in point and the volume of gas to be produced from the 13-35 well.

Dated in Calgary, Alberta, on July 18, 2008.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

F. Rahnama, Ph.D.
Presiding Member

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T. A. Dibus, P.Geol.

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W. A. Warren, P.Eng.

APPENDIX 1 HEARING PARTICIPANTS

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

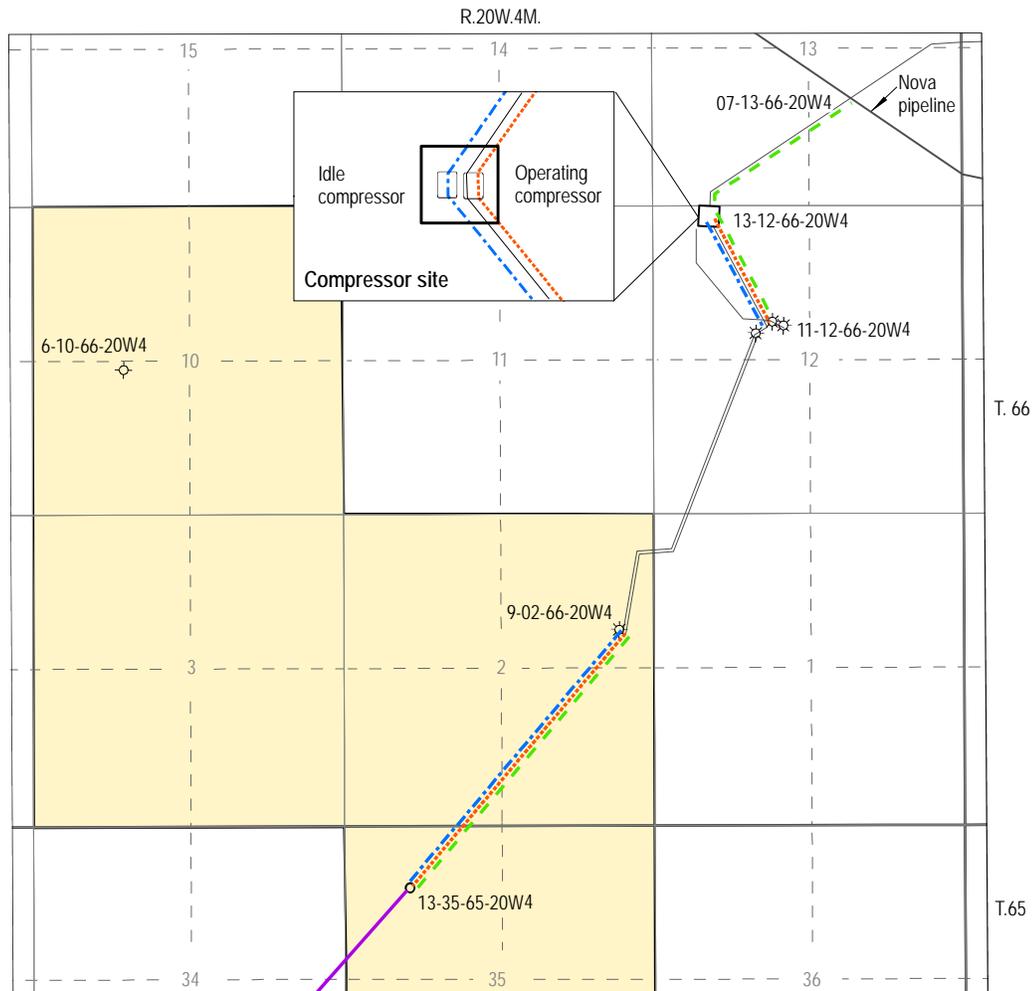
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K. Fisher
J. Rempel
C. Tamblyn



Legend

- Scenario 1 - 2.3 km, tie into 9-2, use idle compressor at 13-12
- Scenario 2 - 9.0 km, tie into Apache at 10-7
- Scenario 3 - 1.7 km, tie into 9-2, use existing compressor at 13-12
- Scenario 4 - 5.1 km, tie into TCPL/Nova transmission line at 7-13
- Existing pipelines

- Compressor
- ⊕ Abandoned gas
- Drilled and cased
- ⊛ Gas

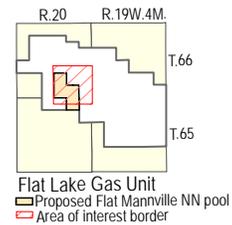


Figure 1. Application area