



Canadian Natural Resources Ltd.

Application for a Well Licence, a Facility Licence, and
Two Pipeline Licences
Bentley Field

October 28, 2008

ENERGY RESOURCES CONSERVATION BOARD

Decision 2008-102: Canadian Natural Resources Ltd., Application for a Well Licence, a Facility Licence, and Two Pipeline Licences, Bentley Field

October 28, 2008

Published by

Energy Resources Conservation Board
640 – 5 Avenue SW
Calgary, Alberta
T2P 3G4

Telephone: 403-297-8311
Fax: 403-297-7040
E-mail: Publications@ercb.ca
Web site: www.ercb.ca

CONTENTS

Decision	1
Examiner Report	3
1 Recommendation	3
2 Introduction.....	3
2.1 Applications.....	3
2.2 Interventions.....	4
2.3 Hearing	4
3 Issues.....	4
4 Consultation and Communication Between Parties.....	5
4.1 Views of the Applicant.....	5
4.2 Views of the Interveners.....	5
4.3 Findings of the Examiners.....	6
5 Need for the Well and Multiwell Battery and Location	8
5.1 Views of the Applicant.....	8
5.2 Views of the Interveners.....	9
5.3 Findings of the Examiners.....	9
6 Need for the Pipelines.....	10
6.1 Views of the Applicant.....	10
6.2 Views of the Interveners.....	10
6.3 Findings of the Examiners.....	11
7 Routing of the Proposed Pipelines.....	11
7.1 Views of the Applicant.....	11
7.2 Views of the Interveners.....	12
7.3 Findings of the Examiners.....	13
8 Conclusion	13
Appendix 1 Hearing Participants.....	15
Figure 1 Map of CNRL’s Proposed Pipeline Routes, Well Site, and Multiwell Battery Location and Alternative Routes Submitted by the Interveners	16

ENERGY RESOURCES CONSERVATION BOARD

Calgary Alberta

**CANADIAN NATURAL RESOURCES LTD.
APPLICATION FOR A WELL LICENCE,
A FACILITY LICENCE,
AND TWO PIPELINE LICENCES
BENTLEY FIELD**

**Decision 2008-102
Applications No. 1518483,
1525506, 1525527, and 1525629**

DECISION

The Energy Resources Conservation Board, having considered the findings and recommendations set out in the following examiner report, adopts the recommendations and directs that Applications No. 1518483, 1525506, and 1525629 be approved, that line three of Application No. 1525527 be denied, and that the remainder of Application No. 1525527 be approved.

Dated in Calgary, Alberta, on October 28, 2008.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

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

ENERGY RESOURCES CONSERVATION BOARD

Calgary Alberta

**EXAMINER REPORT RESPECTING
CANADIAN NATURAL RESOURCES LTD.
APPLICATIONS FOR A WELL LICENCE,
A FACILITY LICENCE,
AND TWO PIPELINE LICENCES
BENTLEY FIELD**

**Decision 2008-102
Applications No. 1518483,
1525506, 1525527, and 1525629**

1 RECOMMENDATION

Having carefully considered all of the evidence, the examiners recommend that the Energy Resources Conservation Board (ERCB/Board)

- approve Application No. 1518483,
- approve Application No. 1525506,
- approve Application No. 1525629, and
- deny line three of Application No. 1525527 from Legal Subdivision (LSD) 11, Section 27, Township 58, Range 7, West of the 4th Meridian, to LSD 6-27-58-7W4M and approve the remainder of the application.

2 INTRODUCTION

2.1 Applications

Application No. 1518483

Canadian Natural Resources Ltd. (CNRL) submitted an application in accordance with Part 4 of the *Pipeline Act* for approval to construct and operate a pipeline for the purpose of transporting natural gas containing no hydrogen sulphide (H₂S) from an existing well at LSD 10-33-58-7W4M to an existing tie-in point at LSD 7-33-58-7W4M. The proposed pipeline would be about 0.53 kilometres (km) in length, with a maximum outside diameter of 114.3 millimetres (mm).

Application No. 1525506

CNRL submitted an application in accordance with Section 2.020 of the *Oil and Gas Conservation Regulations (OGCR)* for a licence to drill a well from a surface location at LSD 4-34-58-7W4M. The purpose of the well would be to obtain crude oil containing no H₂S from the Upper Mannville Formation.

Application No. 1525629

CNRL submitted an application in accordance with Section 7.001 of the *OGCR* requesting approval to construct and operate a multiwell oil battery at LSD 4-34-58-7W4M for the purpose of storing produced crude bitumen.

Application No. 1525527

CNRL submitted an application in accordance with Part 4 of the *Pipeline Act* for approval to construct and operate three pipelines for the purpose of transporting fuel gas containing no H₂S from an existing tie-in point at LSD 13-27-58-7W4M to an existing well at LSD 4-34-58-7W4M, from an existing tie-in point at LSD 14-27-58-7W4M to an existing well at LSD 11-27-58-7W4M, and from an existing tie-in point at LSD 11-27-58-7W4M to an existing well at LSD 6-27-58-7W4M. The proposed pipelines would be about 0.27, 0.30, and 0.38 km in length respectively, with a maximum outside diameter of 88.9 mm.

The proposed well, multiwell oil battery, and pipelines form a project and would be located about 16 km northwest of the town of Elk Point.

2.2 Interventions

David Zarowny filed an objection with the ERCB to the applications on behalf of the Zarownys. Their concerns included cumulative impacts, future land development, initial consultation, and noise in the area. Barbara Smereka also filed an objection to the applications with the ERCB. Ms. Smereka's concerns included noise, traffic, and oil and gas development in the area. The respective concerns were expressed during CNRL's public consultation and notification process and through the ERCB process leading up to the hearing.

2.3 Hearing

The Board-appointed examiners held a public hearing in St. Paul, Alberta, which commenced on July 31, 2008, and concluded the same day. The examiners were D. K. Boyler, P.Eng. (Presiding Member), T. J. Pesta, P.Eng., and R. W. Kennedy. A site visit was conducted by the examiners and staff the morning of July 31, 2008. Those who appeared at the hearing are listed in Appendix 1.

3 ISSUES

The examiners consider the issues respecting the applications to be

- consultation and communication between parties,
- need for the well and multiwell battery and location,
- need for the pipelines, and
- routing of the proposed pipelines.

In reaching the determinations in this decision, the examiners have considered all relevant materials constituting the record of this proceeding, including the evidence and argument provided by each party. Accordingly, references in this decision 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.

4 CONSULTATION AND COMMUNICATION BETWEEN PARTIES

4.1 Views of the Applicant

CNRL submitted that it had complied with all *Directive 056: Energy Development Applications and Schedules* requirements regarding notification and consultation for this project. It argued that it had made numerous attempts to meet with the Zarownys in order to determine the basis of their objection and to explore possible resolutions. CNRL stated that late in 2007 Mr. Zarowny declined to discuss his concerns any further with representative of CNRL. Mr. Zarowny later agreed to mediation, but CNRL subsequently refused mediation as Mr. Zarowny requested unreasonable payment for time spent up to and including mediation.

CNRL stated that it had hired third-party mediators, who also attempted to schedule a meeting to facilitate mediation with assistance from the ERCB. However, this was again refused by Mr. Zarowny, as the issue of payment for his time remained unresolved. CNRL commented that it was surprised that in his June 30, 2008, submission, Mr. Zarowny suggested alternative pipeline routes, because at no time prior to the submission had he suggested alternative pipeline routes. CNRL stressed that Mr. Zarowny had at no time made any attempt to engage in discussions to resolve the issues in his objection.

CNRL submitted that it was very aware of Ms. Smereka's concerns regarding noise and traffic and believed that those issues had been resolved. CNRL stated that it would follow the requirements set out in ERCB *Directive 038: Noise Control*, Section 4, and complete a comprehensive noise survey following completion of the applied-for multiwell battery to verify the results of its noise impact assessment. CNRL stated that it had installed an additional muffler on the compressor station at LSD 16-28-58-7W4M, despite already meeting ERCB requirements. With respect to traffic, CNRL stated that it had tried to route truck traffic away from the Smereka residence. It argued that concerns expressed by Ms. Smereka related more to traffic that was on the roads generally. Further, for CNRL to apply or administer dust suppression, it stated that it must work with the municipal authority. With respect to environmental concerns, CNRL stated that it was currently meeting prescribed guidelines, as it had discussed with Ms. Smereka during initial consultation.

4.2 Views of the Interveners

Mr. Zarowny advised that at the time of original negotiations in 2005, CNRL had indicated to him that it wanted to drill several wells on his property, specifically at LSDs 4-34 and 11-27 and that these wells would be drilled vertically. He contended that he was unaware that the first well at LSD 4-34 was drilled directionally to LSD 3-34 and that the bottomhole location of 3-34 was in fact the preferred surface location that he had initially proposed. Mr. Zarowny argued that if he had been aware that the 4-34 well was drilled directionally, he would have opposed the development at the time. Mr. Zarowny submitted that this change in drilling practice, which he was unaware of, was a breach of faith, resulting in a lack of trust in CNRL and a reversal of what was originally communicated to him.

Mr. Zarowny asserted that at the time of original negotiations in 2005 he indicated to the land agents working for CNRL that at no time would he approve any pipelines on his property. He contended that the land agents explicitly stated that there would be no pipelines developed on his property, nor were there any long-term plans for pipeline construction. Mr. Zarowny argued that CNRL's land agents led him to believe that the ERCB (then the Alberta Energy and Utilities Board) was directing CNRL to conserve solution gas, which resulted in the need for the pipelines. He stated at no time was he made aware that the pipelines were needed to conserve gas to fuel equipment at other existing well sites.

Mr. Zarowny advised that he had several discussions with CNRL's land agents regarding noise in the area and use of local contractors for construction. He asserted that the land agents informed him that there were no issues with noise and that local contractors might be considered in the bidding process for construction.

Ms. Smereka submitted that she had attempted to consult with CNRL regarding the issue of noise in the area. She stated that she called CNRL several times but was never provided the opportunity to meet with anyone from CNRL to discuss the issue. Ms. Smereka stated that she was informed by CNRL that it would conduct some testing around her home; however, to her knowledge, this never happened while she was at home. She argued that at no time had CNRL engaged with her or made any attempt to help resolve existing noise problems in the area.

Mr. Zarowny submitted that the addition of facilities on LSD 4-34 would create more noise for Ms. Smereka and compound existing noise concerns in the area. Ms. Smereka submitted that any addition to the 4-34 site would only intensify already existing problems and that noise levels had never been resolved. Ms. Smereka indicated that she was informed by CNRL that noise levels would be controlled at each site and at the AltaGas-owned and CNRL-operated site at LSD 16-28. Ms. Smereka also indicated that she had contacted CNRL several times regarding the issue of noise and that this consultation did not result in any significant change. Ms. Smereka also submitted that dust resulting from traffic in the area was a significant concern. Ms. Smereka indicated that the area was once a peaceful and quiet area with little or no traffic. Development in the area had significantly increased the volume of vehicles on area roads and the resulting dust. Ms. Smereka believed that this had created a significant safety hazard. Ms. Smereka stated that consultation with CNRL had resulted in significant changes to their access routes and road use policy at significant expense to CNRL but had not completely eliminated her traffic and dust concerns.

4.3 Findings of the Examiners

The overall intent of the public consultation requirements, as set out in *Directive 056* is to ensure that an applicant discloses its project to interested and potentially adversely affected parties. It allows the parties an opportunity to understand the proposed project, identify and discuss concerns, discuss potential mitigation measures, and narrow down unresolved issue areas. The applicant in turn is provided an opportunity to build relationships with landowners by negotiating mitigation measures, including agreeing to measures that may go beyond the minimum requirements of *Directive 056*. One of the objectives of the exercise is to build trust and constructive future relationships between the operator and landowners.

The examiners note that CNRL's efforts in providing information about its oil and gas development plans in the area could be improved. Although the initial consultation and notification conducted by CNRL about this project met the requirements of *Directive 056*, further communication and consultation with respect to the project as a whole, including its development plans, could have taken place. The examiners find there was a lack of effort on the part of CNRL in identifying alternative well site locations and pipeline routes to foster a mutually agreeable solution with the interested parties or at the very least to exhaust all other possible options to ensure the best possible route. The examiners do recognize that the Zarownys would not discuss possible alternative pipelines routes with CNRL during consultation.

The examiners find that CNRL did not fully discuss the type of drilling operations proposed with the landowners and that the landowners were not fully informed about the processes used by CNRL.

The examiners believe that the efforts made by the intervening parties regarding possible relocation of the well site and alternative routes for the pipelines were unhelpful. The examiners are concerned that the apparent entrenched positions of the intervening parties prevented productive discussions aimed at identifying and addressing concerns specifically related to the proposed project. The examiners note that previous consultations between CNRL and the landowners, when interested parties fully engaged in discussions and issues were clearly identified and discussed, did result in significant changes to specific developments in the area, particularly access routes to existing well sites. The examiners find that communication needs to reflect the responsibility of the intervening parties to adjust expectations where possible. Further, the intervening parties need to engage in timely and consistent communication. The examiners encourage the intervening parties to engage in effective communication and believe it will facilitate coexistence between these surface and mineral rights holders.

The examiners note that the landowners and intervening parties did not effectively use local authorities and ERCB field staff to gain a greater understanding of regulations and processes related to planning and completing energy development, specifically appropriate dispute resolution, ERCB processes, and field processes.

The examiners find that CNRL has taken significant steps to mitigate noise levels from the current lease sites. The addition of noise suppression equipment to existing lease sites, including the compressor station at LSD 16-28, has proven to control noise levels in the area. The examiners note that CNRL has undertaken a noise impact assessment of the area, which includes ambient noise levels. The assessment shows that current facilities are operating in accordance with requirements set out in *Directive 038*. The proposed well site at LSD 4-34 formed part of the modelling system used to predict overall sounds levels. The examiners note that CNRL is required to conduct further noise surveys once the multiwell facility at LSD 4-34 is completed and to communicate these results to all parties.

The changes to access roads have facilitated the diversion of traffic away from Ms. Smereka's residence. Consultation with Ms. Smereka regarding safety on the roads in proximity to her residence encouraged and enabled CNRL to redesign its access route. Speed controls and signage have been put in place to control operator and contractor traffic and dust emanating from this

traffic. The examiners find that CNRL has been responsive to identified concerns and that early consultation regarding these issues facilitated an effective solution between parties.

5 NEED FOR THE WELL AND MULTIWELL BATTERY AND LOCATION

5.1 Views of the Applicant

CNRL stated that the well at LSD 4-34-58-7W4M was necessary to produce heavy oil from the lower Colony Formation. CNRL contended that it had invested significant time and capital into the acquisition of mineral leases for these sections and had proven through previous drilling that the heavy oil reservoir was productive. CNRL stated that the proposed well location was part of its plans for development of its mineral interest in the area and that the development of these additional resources would support the viability of existing regional facilities in the area. It pointed out that the productivity of the heavy oil reservoir in the lower Colony channel system in this area had already been proven by production from the existing wells in the area; the oil reserves from the 4-34 well had been independently evaluated to be 68 000 barrels; and the solution gas that would be conserved had been independently evaluated to be 24.4 million cubic feet. It added that wells producing from the Colony Formation in the immediate area had a solution-gas-to-oil ratio of about 117 standard cubic feet per barrel. CNRL argued that the benefits, specifically royalties, to Alberta from this well and the pipelines would be substantial and would benefit all Albertans. CNRL submitted that if the applications were not approved, royalties from the 4-34 well would not be paid to Alberta and the existing production of solution gas would not be conserved. It maintained that production of these resources would benefit the regional economy by creating jobs in the drilling, development, operation, and maintenance of the wells and pipelines. CNRL claimed that it was in the public's interest to produce these resources and to conserve the solution gas that would otherwise be vented.

CNRL submitted that it had selected the most appropriate location for the well in LSD 4-34-58-7W4M and the most appropriate drilling technique. Considering the costs of constructing a new location, the availability of the existing access road, and the land use that would be involved, CNRL argued that it was more practical to select the current well site location, as opposed to directionally drilling a well from another surface location, specifically at LSD 3-34-58-7W4M.

CNRL advised that to directionally drill the 4-34 well from any location other than the existing well site would create unnecessary surface disturbance and additional and unnecessary cost. Further, it would be inconsistent with the long-recognized practice of minimizing surface impact through the use of multiwell pad sites. CNRL pointed out that it was not economical to locate the well at another location other than LSD 4-34 due to the cost of constructing a new well lease site.

CNRL submitted that the multiwell battery was required, as there would be two oil wells on the lease, each having associated storage tanks and motorized equipment. CNRL indicated that in accordance with ERCB regulations, a multiwell facility licence was required when proposing such a development.

5.2 Views of the Interveners

Mr. Zarowny and Ms. Smereka did not dispute the need for the well to obtain heavy oil production from the lower Colony Formation.

Mr. Zarowny submitted that the proposed location of the well was not acceptable to him, as it would compound existing concerns in the area. He stated that he would prefer to have the proposed 4-34 well directionally drilled from an alternative location at LSD 3-34-58-7W4M, as stated in his submission of June 30, 2008. He advised that he had discussed an alternative surface location in LSD 3-34 with CNRL in relation to the drilling of the proposed well. His preference was to move the well to a location in a bush area away from arable land. The bush area would provide cover for the well site and the well site would be farther away from Ms. Smereka's land. Mr. Zarowny stated that he was not opposed to multiwell pads in principle, but in this case he stressed the importance of locating the proposed well at a separate location.

Ms. Smereka did not dispute the location of the well site at LSD 4-34.

Mr. Zarowny stated that he did not favour the location of the multiwell oil battery at LSD 4-34. He contended that there was no mention during original negotiations in 2006 that the existing lease at LSD 4-34 would become a multiwell and battery pad. He stated that CNRL's proposal to add another well to the existing lease would increase traffic to that lease and the adverse effect would be far in excess of what was originally discussed. Mr. Zarowny conceded the necessity of having a multiwell pad so as to reduce the footprint of the development and he did not have an overwhelming objection to directional drilling but maintained that there might be a better location for the entire facility. He proposed moving the surface location of the 4-34 multiwell battery to LSD 3-34, which would include a treed area. This relocation would reduce the impact of noise and odours from a multiwell oil battery at LSD 4-34 for the Smerekas and for Mr. Zarowny's brother, Daniel Zarowny, who planned to develop his land at LSD 8-34-58-7W4M.

Ms. Smereka submitted that any addition to the 4-34 site could only intensify already existing problems.

5.3 Findings of the Examiners

The examiners accept the need for the well to obtain heavy oil production from the lower Colony Formation. The examiners note that the current well location meets current industry practice by avoiding potential additional surface land-use impact and disturbance. There are significant benefits to locating the well on an existing lease site, as opposed to constructing a new lease. No unique circumstances have been raised that would support the need for a separate lease site. The examiners accept CNRL's claims as to the potential economic benefits that may be accrued from the proposed well.

The examiners find that a battery would be required to handle the production from the 4-34 well. Considering that the examiners found the location of the applied-for 4-34 well to be appropriate, the best alternative is to locate the associated battery at the same place. Furthermore, considering

the equipment required on site, a multiwell facility licence is necessary, in accordance with *Directive 056* requirements.

6 NEED FOR THE PIPELINES

6.1 Views of the Applicant

CNRL submitted that the applied-for pipelines would facilitate the conservation of solution gas from wells at LSDs 7-33-58-7W4M, 6-27-58-7W4M, 4-34-58-7W4M, and 11-27-58-7W4M. CNRL stated that in order to comply with ERCB *Directive 060: Upstream Petroleum Industry Flaring, Incinerating, and Venting*, the pipeline tie-ins to these wells would be required to conserve solution gas that would otherwise be vented. CNRL indicated that initially the solution gas would be used as fuel and any excess volumes would be delivered into the existing gathering system. It pointed out that as there were no existing pipelines associated with these wells, new pipelines would be required if the solution gas from these wells were to be conserved. It added that conservation of the gas was required to fuel equipment on other well sites operated by CNRL and to avoid unnecessary flaring or venting of the solution gas. Furthermore, it stated that these pipelines would minimize well-flowing pressures, which, in turn would maximize oil production rates. CNRL confirmed that propane would not be required to fuel the equipment once the pipelines were functional.

CNRL stated the viability of the well located at LSD 6-27-58-7W4M was not entirely certain and its future may be in question, as there was currently insufficient information to fully assess its viability.

6.2 Views of the Interveners

Mr. Zarowny contended that southwest of Section 34 and northwest of Section 27 had excellent future development potential. Further, he maintained that the pipelines would be on these sections of land for an indefinite period of time, as most oil and gas operators never made an application for a reclamation certificate for a pipeline. Mr. Zarowny stated that development potential would be limited and even decreased because of the pipelines and the consequent devaluation of the subject lands. He advised that he and Daniel Zarowny currently owned other properties where easements currently existed and they were experiencing difficulty in removing these easements from the land. Mr. Zarowny asserted that once a pipeline was discontinued, it was abandoned in place, with no requirement to remove it, leaving the landowner to contend with the easement that continued to exist. He stated that he did not need to have more land sterilized by pipeline rights-of-way. Mr. Zarowny asserted that he did consult with CNRL regarding placement of the routes closer to existing access roads or quarter-section lines, but this was not acceptable to CNRL due to costs. He also indicated that during consultation, CNRL informed him that the pipelines were necessary to conserve solution gas based on ERCB requirements. He argued that while he agreed with the reasoning, he disputed the need for the pipelines, considering that CNRL might not be able to conserve a sufficient amount of gas to support the equipment and might still require on-site fuel gas in the form of propane. He submitted that not only would there be new pipelines on his property, but the regular

maintenance of the well sites to refill propane tanks would not disappear. Mr. Zarowny argued that the reasoning provided by CNRL regarding transporting fuel gas was insufficient, as it would not completely eliminate the need for other sources of gas on the well sites. As such, he maintained that creating new pipelines could not be justified.

Ms. Smereka did not dispute the need for any of the pipelines.

6.3 Findings of the Examiners

The examiners find that there was insufficient information presented to them to conclude that the pipelines would result in significant impacts on future development on the lands. The examiners note that the interveners currently use the land for agricultural purposes, that there are no current formal plans for commercial or industrial rezoning of the lands, and that no formal rezoning applications have been filed. The examiners accept CNRL's statement that there is a need to conserve solution gas from existing well sites in order to fuel well-site equipment and to avoid flaring and venting of solution gas. The examiners note that the addition of fuel gas to these well sites would facilitate the removal of propane tanks from the well sites and subsequently reduce traffic and related noise caused by the servicing of fuel tanks at the well sites.

The examiners note that there is insufficient information available from CNRL to determine if there is a need for the applied-for pipeline from LSD 11-27 to 6-27, as the future of the well at LSD 6-27 is uncertain. The examiners find it is premature to construct infrastructure when production into the pipeline is in question. Having insufficient information in this regard, the examiners are not prepared to recommend approval of this pipeline.

7 ROUTING OF THE PROPOSED PIPELINES

7.1 Views of the Applicant

CNRL submitted that the pipeline routes were the preferred choice, as they were the shortest routes with the least impact, thereby minimizing capital cost, ground disturbance, and environmental disturbance. CNRL indicated that as gas conservation projects typically harvested marginal volumes of gas, the routes having the least length and therefore the lowest overall cost were critical to economic justification, as described in *Directive 060*. In the present case, low volumes of gas were captured at low pressures, so any increase in pipeline length might negatively impact the recovery of the solution gas, as greater length would increase pressure losses in the pipeline.

The principles used by CNRL in route selection were as follows:

- Pipeline route 10-33-58-7W4M to 7-33-58-7W4M—CNRL submitted that this pipeline route would allow the well at LSD 7-33 to be tied into CNRL's low-pressure system, where gas production could be optimized.
- Pipeline route 14-27-58-7W4M to 11-27-58-7W4M and 11-27-58-7W4M to 6-27-58-7W4M—CNRL submitted that the chosen route represented the most economically efficient

option, while minimizing ground disturbance. An alternative route east to the quarter-section line of Section 27 and then north to a tie-in point at LSD 10-27-58-7WM was evaluated, but extra costs associated with the installation of this route would render it uneconomical.

- Pipeline route 13-27-58-7W4M to 4-34-58-7W4M—CNRL submitted that the chosen route minimized ground and environmental disturbance and that no other routes would be economically viable.

CNRL did not dispute the alternative routes proposed by Mr. Zarowny and indicated that it would be open to exploring these routes if necessary. However, it did state that the proposed alternative routes would be greater in length, which would result in higher construction costs and greater surface disturbance. CNRL indicated that there were no objections to the pipeline route from LSD 7-33 to the point where the proposed pipeline tied into LSD 10-33. As such, no alternative routes were considered or explored.

7.2 Views of the Interveners

Mr. Zarowny stated that there were better alternatives for the CNRL pipeline routes than the ones proposed by CNRL. The principles employed by Mr. Zarowny for the alternatives were that

- the pipeline routes should follow quarter-section lines and existing road allowance within the quarter sections; and
- the pipeline routes should reduce the impacts on Mr. Zarowny's land—that is to say, minimize development restrictions in the future.

Alternative Route for Application No. 1525527: LSD 13-27-58-7W4M to 4-34-58-7W4M

Mr. Zarowny submitted that if the alternative well location were not favoured by the Board and LSD 4-34 were approved as the location for drilling the well, the proposed pipeline routing from the existing tie-in point at LSD 13-27 to LSD 4-34, as described in Application No. 1525527, should be rerouted such that the pipeline would travel west from LSD 4-34 north of the quarter-section line to the west boundary of southwest Section 34 and then south to the existing tie-in point at LSD 13-27. This route would use land contained in the existing CNRL well site at LSD 4-34 and run parallel to the associated access road, thereby minimizing the use of land owned by Mr. Zarowny.

Alternative Route for Application No. 1525527: LSD 14-27-58-7W4M to 11-27-58-7W4M

Mr. Zarowny submitted that in Application No. 1525527, pipeline routing was proposed for a pipeline to travel from a tie-in point in LSD 14-27 to an existing well at 11-27. The alternative pipeline route proposed by Mr. Zarowny would reroute this proposed pipeline such that a pipeline tie-in point would be on the eastern edge of the quarter-section line in LSD 11-27. The alternative route would run within the confines of the existing easement and would limit any further sterilization, contamination, and disturbance on the property.

Alternative Route for Application No. 1525527: LSD 11-27-58-7W4M to 6-27-58-7W4M

Mr. Zarowny submitted that in Application No. 1525527, pipeline routing was proposed for a pipeline to travel from an existing tie-in point at the well in LSD 11-27 to an existing well at LSD 6-27. The alternative route would start from the eastern tie-in point in LSD 11-27, travel south along an existing CNRL access road, and then travel west along another existing CNRL access road to the existing well at LSD 6-27. The alternative route would run within the confines of the existing easement and would limit any further sterilization, contamination, and disturbance on the property.

Mr. Zarowny stated his reasons for preferring the alternative pipelines routes as follows:

- The proposed CNRL pipeline routes would not run parallel to any existing quarter-section lines or existing road easements.
- CNRL failed to investigate reasonable pipeline routing options that would reduce the impacts on Mr. Zarowny's land and minimize development restrictions in the future.

7.3 Findings of the Examiners

In looking at the applied-for routes proposed by CNRL, the examiners note advantages and disadvantages as cited by CNRL. In addition, the examiners have considered the routes proposed by the interveners, which also have advantages and disadvantages. The examiners note that the current applied-for routes proposed by CNRL are the shortest and most direct routes available and as such would reduce ground disturbance and land usage. The length of time for construction, testing, and maintenance would also be reduced on the current proposed lines. The examiners acknowledge that the routes proposed by Mr. Zarowny may reduce land disturbance by following existing CNRL-owned access routes and quarter-section lines. However; the placement of these lines in the proposed alternative locations may pose safety and operational concerns for all parties.

The examiners are not prepared to accept the proposed alternative routes as viable options. The examiners also note that if further consultation among all parties during the initial planning stages of the project were carried out, an agreement on routes may have been reached. Given the short length of the proposed pipelines and the generally homogeneous topography, the examiners are satisfied that the applied-for routings are acceptable.

8 CONCLUSION

Having carefully considered all of the evidence, the examiners recommend that

- Application No. 1518483 be approved,
- Application No. 1525506 be approved,
- Application No. 1525629 be approved,
- Application 1525527 be partially approved; and

- line three of Application No. 1525527 from LSD 11-27-58-7W4M to LSD 6-27-58-7W4M be denied and removed from the application.

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

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

D. K. Boyler, P.Eng.
Presiding Member

<original signed by>

T. J. Pesta, P.Eng.
Examiner

<original signed by>

R. W. Kennedy
Examiner

APPENDIX 1 HEARING PARTICIPANTS

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

Canadian Natural Resources Ltd. (CNRL)
P. J. McGovern

A. Gibson
D. Blake
J. Wiseman
R. Bretzlaff
G. Garton
B. Parker
N. Genge

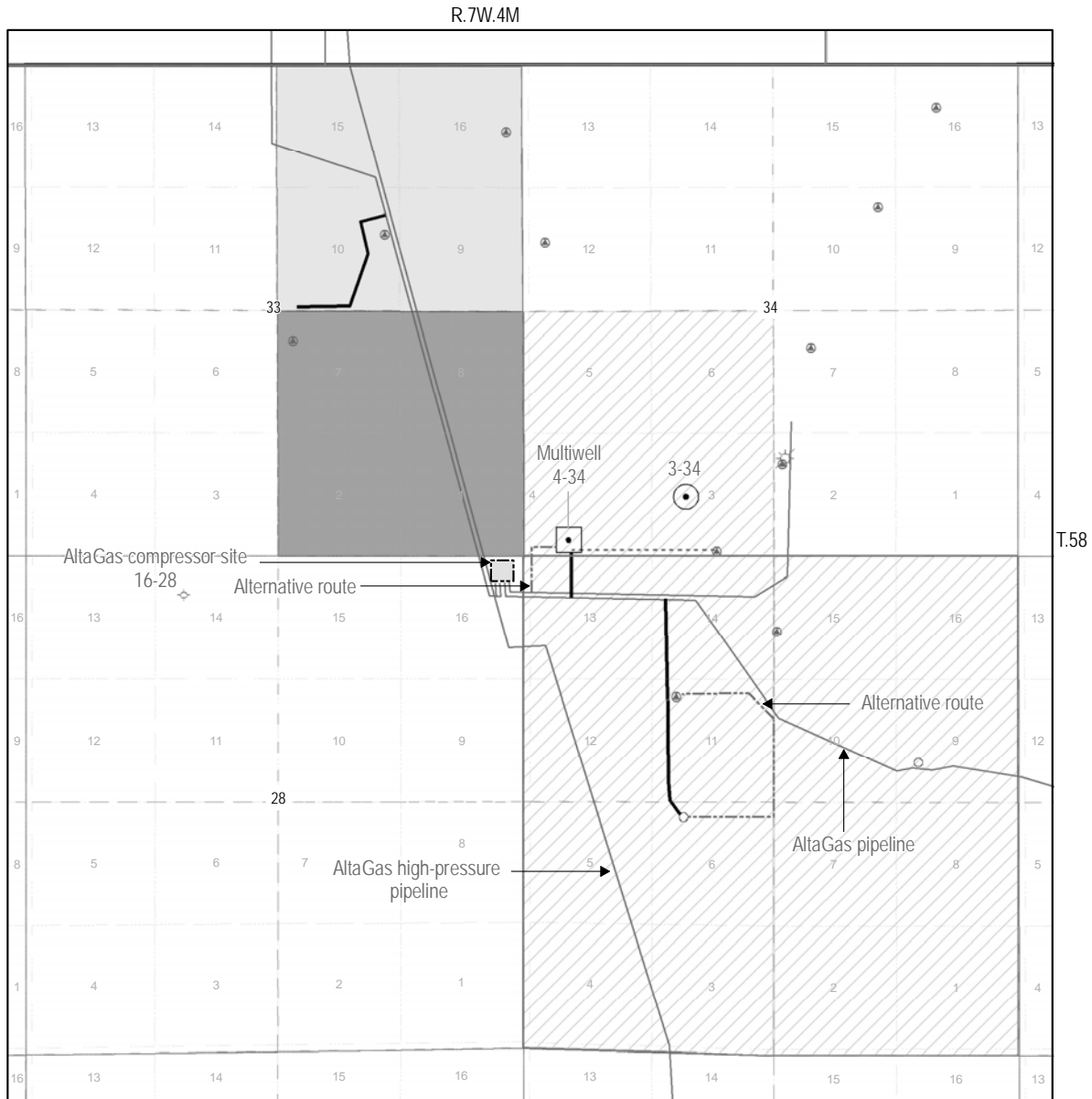
R. S. Secord
E. Chipiuk

D. Zarowny

B. Smereka

B. Smereka

Energy Resources Conservation Board staff
S. Damji, Board Counsel
K. Montgomery, Student at Law
D. Russell
R. Reid
R. Connery



Legend

- | | | |
|--|---------------------|--|
| — Existing pipeline | ◇ Abandoned | David Zarowny property |
| — Proposed pipeline | ⊙ Crude bitumen | Gordon and Darlene Smereka and Russell and Barb Smereka property |
| ⋯ Existing well 4-34 (bottomhole 3-34) | ○ Drilled and cased | Daniel Zarowny property |
| ⋯ Alternative pipeline | ⊛ Gas | |
| ⊙ Alternative well 4-34 location | | |

Figure 1. Map of CNRL's proposed pipeline routes, well site, and multiwell battery location and alternative routes submitted by the interveners