

**CONOCOPHILLIPS CANADA RESOURCES CORP.
APPLICATIONS FOR A SOUR GAS WELL,
BATTERY, AND ASSOCIATED PIPELINES
SINCLAIR FIELD**

**Decision 2003-009
Applications No. 1252461 and 1272754**

1 DECISION

Having carefully considered all of the evidence, the Alberta Energy and Utilities Board (EUB/Board) hereby approves Applications No. 1252461 and 1272754 subject to the condition set out in the appendix.

2 INTRODUCTION

2.1 Application 1252461

ConocoPhillips Canada Resources Corp. (ConocoPhillips) applied on December 21, 2001, to the EUB pursuant to Section 2.020 of the Oil and Gas Conservation Regulations (OGCR), for a well licence (Application No. 1252461) to drill one vertical sour gas well from a surface location in Legal Subdivision (LSD) 13, Section 21, Township 74, Range 12, West of the 6th Meridian (13-21 well).

ConocoPhillips indicated that the application for the 13-21 well was filed for the purpose of obtaining gas production from the Montney Formation. The well would be a level-2 sour gas well with a maximum hydrogen sulphide (H₂S) content of 71.1 moles per kilomole (mol/kmol) (7.11 per cent), an estimated potential drilling release rate of 1.096 cubic metres per second (m³/s), and a drilling emergency planning zone (EPZ) of 2.45 kilometres (km).

2.2 Application 1272754

ConocoPhillips applied on June 24, 2002 (Application No. 1272754), pursuant to Section 7.001 of the OGCR, to construct and operate an associated sour gas battery and, pursuant to Part 4 of the Pipeline Act, to construct and operate the associated pipelines. The battery would be located at LSD 13-21-74-12W6M (13-21 battery).

The 13-21 battery would be designed for a sulphur inlet of 0.81 tonnes per day, handle sour natural gas with a maximum H₂S content of 9.9 mol/kmol (0.99 per cent), and be designed for approximately 60.0 thousand cubic metres per day (10³ m³/d) of raw gas, 1.0 m³/d of oil/condensate, and 1.0 m³/d of water. The 13-21 battery will be operated as a level-1 sour gas facility.

The associated pipelines would be licensed to carry sour natural gas and fuel gas. The sour natural gas pipeline would transport gas from the 13-21 battery to an existing EnCana Oil & Gas

Co. Ltd. (EnCana) compressor station at LSD 14-22-74-12W6M (14-22 compressor). The pipeline would be approximately 2.2 km in length, with a maximum outside diameter of 88.9 millimetres (mm), and would transport sour natural gas with a maximum H₂S content of 9.9 mol/kmol (0.99 per cent).

The fuel gas line would also be approximately 2.2 km in length, with a maximum outside diameter of 60.3 mm, and would transport sweet natural gas from the EnCana compressor station to the 13-21 battery. This pipeline will be constructed in the same right-of-way (ROW) as the 88.9 mm sour natural gas pipeline. The ROW for these pipelines will be immediately north of and adjacent to the ROW of existing EnCana pipelines.

2.3 Intervention

ConocoPhillips advised the EUB of outstanding objections from Irmgard Tiesenhausen and Peter von Tiesenhausen, a mother and son living in separate residences within the EPZ for the 13-21 well. On January 4, 2002, and on January 9 and 14, 2002, the EUB received objections from Ms. Tiesenhausen and Mr. von Tiesenhausen respectively. Both interveners' concerns were primarily health related. Mr. von Tiesenhausen also raised concerns about odours, noise, light, quiet enjoyment of his lands, and an excess of development in the area. He also expressed the view that this industrial activity compromised the integrity of his art, which was inextricably linked to and created from his land.

The attached figure shows the location of the proposed well, the associated battery and pipelines, and Mr. von Tiesenhausen's residence and property. Andy von Tiesenhausen, Mr. von Tiesenhausen's brother, now occupies Ms. Tiesenhausen's residence, as she has moved to Beaverlodge. As Ms. Tiesenhausen and Mr. Peter von Tiesenhausen were persons who may be adversely affected by approval of the project, the Board directed that a public hearing be held to consider the application and the interveners' concerns.

A public hearing was held on December 10, 2002, in Grande Prairie, Alberta. The Board panel consisted of J. R. Nichol, P.Eng. (Presiding Member), J. I. Douglas, FCA (Board Member), and Acting Board Member M. H. Hommy. Those who appeared at the hearing and abbreviations used in this report are listed in the following table.

THOSE WHO APPEARED AT THE HEARING

Principals and Representatives
(Abbreviations Used in Report)

Witnesses

ConocoPhillips Canada Resources
Corp. (ConocoPhillips)
B. J. Roth, Esq.

D. Steele
J. Gouw
J. Delsing, P.Eng.
L. Marchesin, P.Eng.
M. Rippe, P.Eng.
W. Heikkinen
R. Unrau, P.Eng.

(continued)

THOSE WHO APPEARED AT THE HEARING (continued)

Principals and Representatives
(Abbreviations Used in Report)

Witnesses

P. von Tiesenhausen (Mr. von Tiesenhausen)

P. von Tiesenhausen
T. von Tiesenhausen

Alberta Energy and Utilities Board staff

D. Larder, Board Counsel

G. McLean, C.E.T.

K. Eastlick, P.Eng.

S. Etifier

J. Smith

3 ISSUES

The Board considers the issues respecting the applications to be

- need for the proposed well, battery, and pipelines,
- location of the facilities,
- public consultation,
- emergency response planning, and
- impacts.

4 NEED FOR THE PROPOSED WELL, BATTERY, AND PIPELINES

4.1 Views of the Applicant

ConocoPhillips stated that it acquired the mineral rights to Sections 21 and 28 in Township 74-12W6M based on seismic data and its experience with prior drilling and production in the area. The applicant indicated that 3-D seismic data showed an anomaly in the Montney Formation, which it felt would likely require one well to recover the gas reserves.

ConocoPhillips estimated that the Montney Formation could produce approximately 0.12 billion (10^9) m³ over 12 to 14 years (4.4×10^9 cubic feet).

ConocoPhillips indicated that the single well would be tied into the existing 14-22 compressor after it was perforated, fracture stimulated, and evaluated for its production capability.

ConocoPhillips said that although there were existing pipelines in the area, none was of a low-pressure gathering system nature, which was required in this instance. The facilities would include a wellhead emergency shutdown valve, a line heater, a separator package, an emergency flare stack, and a flare knockout drum. ConocoPhillips defined this project as a closed system.

ConocoPhillips submitted that it had adhered to regulatory requirements, which ensured safe and efficient practices in the drilling and operations for the production of oil and gas. Therefore, it

asserted that its applications were in the public interest and consistent with efficient and orderly development of the province's energy resources.

4.2 Views of the Intervener

Mr. von Tiesenhausen did not contest the evidence presented by ConocoPhillips regarding the proposed need for the well. However, he did question the timing of the construction of the well and the certainty of production. He emphasized that he was not arguing against the need for the well, rather the need for the well at this present time. Mr. von Tiesenhausen argued that ConocoPhillips should wait until it was sure that an economic and marketable reserve existed.

4.3 Views of the Board

The Board notes that ConocoPhillips has acquired the appropriate petroleum and natural gas rights and is satisfied that there is a need for a well to allow ConocoPhillips an opportunity to exploit the mineral rights that it holds. It follows that should the well be found to be capable of commercial production, a battery and associated pipelines would be required to produce the reserves underlying Section 21.

5 LOCATION OF THE FACILITIES

5.1 Views of the Applicant

ConocoPhillips stated that it had evaluated alternative locations for the well; however, the 500 m setback around Updike Lake that was imposed by Alberta Environment, combined with the information provided by the seismic data, restricted the location of the well. ConocoPhillips indicated that the current proposed location for the well is 287 m south of the original bottomhole location that it wanted to drill. It testified that it was not feasible to locate the well farther north because of the lake, the seismic information, and the geologic interpretation of the pool size based on the surrounding well control. ConocoPhillips also indicated that if the proposed well confirmed its current geologic interpretation of the area, it might be found that the pool extended to the north into Section 28. The 500 m setback from Updike Lake would necessitate drilling a directional well. However, ConocoPhillips also stated that there was only a slim possibility that a second well would be required to drain the reserves under Section 28.

ConocoPhillips acknowledged that Mr. von Tiesenhausen desired a 3 km radius around his residence in which further oil and gas development would be restricted. ConocoPhillips confirmed that it had considered this request but found that would require a directional drill of approximately 1.1 km, which would be more expensive than the proposed vertical drill and would require longer pipelines to tie in the well. ConocoPhillips also explained that relocating the well to another site other than to the north would result in the proposed facility being in closer proximity to a number of other concerned residents. It rejected the relocation for these reasons. The 13-21 well and battery are located about 1.8 km from Mr. von Tiesenhausen's home.

ConocoPhillips noted that it also considered alternative routing for the proposed pipelines. It stated that another tie-in point was the EnCana Hythe Brainard gas plant (EnCana gas plant) in LSD 14-18-74-12W6M. After further evaluation, ConocoPhillips decided that the proposed route to the 14-22 compressor was preferable because it was a shorter, more direct route and was adjacent to an existing pipeline ROW, thereby minimizing environmental impacts.

5.2 Views of the Intervener

Mr. von Tiesenhausen testified that he wanted a 2.45 km radius around his residence to be protected from further development, not the 3 km radius referred to by ConocoPhillips. Mr. von Tiesenhausen indicated that he chose a 2.45 km radius, which did not include the EnCana gas plant, as it would be difficult to control development in that area. He objected to the location of the proposed facility on the basis that there was a proliferation of oil and gas activity in his immediate area, which created a number of unacceptable impacts on the lives and health of his family and his lands. Mr. von Tiesenhausen believed that he and his children had suffered serious health problems, which he felt were caused by emissions from existing sour gas processing facilities, and said that they were not prepared to accept increasing numbers of these sites in close proximity to their lands. He also described the negative intrusion of other impacts, such as noise, odour, and light, on the integrity of his art, which he created on and from the natural elements of his land. Mr. von Tiesenhausen established that he was a serious artist with an international reputation whose livelihood was dependent upon his artwork. He invoked the protection afforded to his artistic work by the law of copyright in arguing that the proposed location was unacceptable.

5.3 Views of the Board

The Board notes that a number of criteria, including geological, engineering, landowners' concerns, and environmental considerations, must be considered when determining a suitable location for wells and pipelines. The Board believes that ConocoPhillips has made an effort to minimize surface disturbance by using existing infrastructure and paralleling an existing pipeline ROW. The Board also acknowledges ConocoPhillips's consideration of concerned residents in the area when determining an appropriate surface location.

The Board accepts that ConocoPhillips has adequately reviewed other locations based on all considerations and believes the proposed locations of the well, battery, and pipelines are acceptable, provided that there are no significant impacts associated with the drilling and production of the proposed well and associated facilities. The possible impacts related to these applications are discussed in later sections of this report, as is the issue of Mr. von Tiesenhausen's copyright protection of his lands.

6 PUBLIC CONSULTATION

6.1 Views of the Applicant

ConocoPhillips stated that its public consultation program began in November 2001 and at that time it was unable to contact Mr. von Tiesenhausen directly on several occasions. ConocoPhillips stated that only after the notification package was left at the intervener's

residence did it hear from Mrs. T. von Tiesenhausen, who indicated that they would be objecting to the 13-21 well. ConocoPhillips explained that the interveners were once again difficult to contact; however, a meeting was finally arranged for February 1, 2002. ConocoPhillips said that during the meeting the parties discussed fugitive emissions, vandalism, Mr. von Tiesenhausen's artwork and copyright on his lands, and his family's health concerns, as well as the possibility of initiating third-party appropriate dispute resolution (ADR). ConocoPhillips stated that Mr. von Tiesenhausen immediately declined ADR because he wanted the well moved or not drilled at all.

ConocoPhillips indicated that it regretted not having the opportunity to engage in a formal ADR process with Mr. von Tiesenhausen. ConocoPhillips explained that in the past it had had many successes by engaging in this process and it felt that some of Mr. von Tiesenhausen's concerns could have been addressed in this manner. ConocoPhillips believed that the intervener's concerns would have ultimately led to a hearing but that ADR may have focused the issues that needed to be presented before the Board. The applicant also believed that Mr. von Tiesenhausen had a duty to participate in meaningful consultation, as did all citizens who exercised their rights under EUB legislation to have their concerns heard and addressed.

6.2 Views of the Intervener

Mr. von Tiesenhausen stated that he believed that the public consultation process conducted by ConocoPhillips was adequate and he explained that he did not want to enter into ADR because he felt it would not resolve his issues.

However, Mr. von Tiesenhausen expressed a degree of exasperation with the frequent and time-consuming requests from resource companies, in general, that wanted to discuss potential projects on or near his lands. He explained that meetings were often scheduled at times convenient for industry with little consideration for his own work schedule or his family's time and scheduled activities. Mr. von Tiesenhausen was also of the view that insufficient time was given to residents to properly consider the projects presented to them.

Mr. von Tiesenhausen endorsed the concept of an industry/public group that could address local and regional issues on an ongoing basis. He believed that such an organization would reduce proliferation of facilities in the area and reduce the imposition on landowners' time and resources resulting from the current practice of individual energy companies conducting their individual public consultation by encouraging industry to work together in addressing residents' concerns and area development.

6.3 Views of the Board

The Board finds that the public consultation conducted by ConocoPhillips was adequate. However, the Board encourages ConocoPhillips to continue working with other area operators to find a more effective approach in conducting public consultation respecting new facilities, existing operations, and emergency response planning and updates. The Board also agrees with ConocoPhillips that additional meetings between the applicant and interveners may not have negated the need for a hearing but may have narrowed the scope of some issues and assisted in a greater focus on the remaining concerns before the Board.

The Board is a strong proponent of local industry/landowner groups that bring together residents and companies with a view to discussing and attempting to resolve the many issues arising from oil and gas operations. The Board notes that the Peace Arch Operators Group is an organization in the Grande Prairie area that may provide a forum for the matters that Mr. von Tiesenhausen has raised. The Board encourages such synergy groups and their members to ensure that their existence is widely known among the general public so that individual affected landowners may take advantage of the opportunities they offer for resolution of outstanding matters. Information about these groups may also be obtained from the EUB's Field Centres throughout the province. A complete list of EUB Field Centres is available on the EUB Web site at <www.eub.gov.ab.ca>.

7 EMERGENCY RESPONSE PLANNING

7.1 Views of the Applicant

ConocoPhillips stated that it had considerable experience in handling and operating sour gas facilities such as those proposed for the 13-21 well, highlighting its loss control programs as support for this position. According to ConocoPhillips, this program ensured that its facilities and wells were inspected on a scheduled basis and that its staff were properly trained. It explained that its operators would visit the proposed facilities every other day and that it had preventive maintenance programs in place to ensure that safety devices on its facilities were regularly serviced and operational.

ConocoPhillips asserted that it was a responsible operator in the many parts of the world where it operated and that it had a good long-term track record with respect to its compliance with regulations and guidelines.

With respect to its emergency response plan (ERP), ConocoPhillips testified that a consulting company prepared the ERP for the drilling and completions phase of this operation. ConocoPhillips stated that it provided the consultant with a standard outline of procedures that met company format and expectations. Further, the applicant ensured that any special considerations with respect to the public were clearly identified and that its staff reviewed them prior to implementation. It explained that the drilling operations group ultimately took responsibility for ensuring that procedures within the ERP were being met and that a drilling rig contractor who had experience in the drilling of sour wells and the operation of ERPs was hired to drill the well.

In conducting its public contact program for the development of the ERP, ConocoPhillips indicated that it had identified a few concerns from area residents with respect to public safety and had addressed these issues in its plan. In response to concerns about evacuation in the event of an emergency, ConocoPhillips stated that it had offered to pay for reasonable relocation costs should a party wish to be relocated during the period the rig was drilling through the sour zones and while the well was being tested and completed. As well, ConocoPhillips said it would undertake to provide a cell phone, pager, or two-way radio should the intervener request it. The applicant explained that the plan currently included procedures to notify the intervener for evacuation purposes at a level-1 alert. For additional support, ConocoPhillips noted that a

helicopter equipped to carry passengers would be dispatched at a level-2 emergency. It submitted that if contact could not be made with the residents via telephone, rover personnel would be dispatched to scout the area.

ConocoPhillips also stated that during consultation the intervener received an ERP package detailing response actions. It recognized that should helicopter evacuation be required, it would ensure that one was available. ConocoPhillips had provided the area residents with a 24-hour 1-800 emergency telephone number tied to its answering service to initiate response actions. ConocoPhillips further explained that it used the Emergency Link Centre, a service provided through Stars Air Ambulance designed to direct callers to the closest medical facility based on the type of emergency situation. It confirmed that the service was available for use by the public.

ConocoPhillips testified that it had procedures in place to ensure that its drilling and completions staff reviewed the plan to gain a higher level of understanding prior to sour drilling operations and to ensure that resources were available for response. It did not propose to conduct an on-site exercise but stated that a tabletop ERP exercise was scheduled on December 18, 2002, for its Wembley gas plant located 52 km southeast of the proposed 13-21 well in LSD 6-19-73-8W6M.

ConocoPhillips explained that upon completion, the well would be tied into the EnCana gas plant. However, the well and associated facilities would be operated by ConocoPhillips staff and managed by its Wembley District ERP. For the production operations of these facilities, ConocoPhillips proposed the use of a 352 m planning zone for the well and adopted a 100 m planning zone for the pipeline, neither of which contained residents. ConocoPhillips stated that the production EPZ was reduced to 352 m, compared to the drilling EPZ of 2.45 km, as the drilling rate was a cumulative rate of all sour zones that could be open during drilling. It explained that during production it would only produce from the Montney Formation, which had a considerably lower release rate.

Due to the intervener's concerns regarding previous operations in the area associated with other operators, ConocoPhillips believed it made a proactive decision to maintain operatorship and include the well and pipeline in its Wembley District ERP. It further testified that it considered the Board's *Decision 2002-041* in the planning of this application and, as such, believed that the operator was responsible for including its well and associated facilities into its own ERP. ConocoPhillips stated that it had had discussions with EnCana regarding operatorship of the proposed 13-21 well, but believed that by maintaining the well itself, that it might alleviate some of Mr. von Tiesenhausen's concerns.

It said that informal agreements existed with other operators in the area, including EnCana. Also, ConocoPhillips testified that it was an active member of the Peace Arch Operators Group. It suggested that it would endeavour to increase its mutual aid relationship with EnCana to further enhance response times and made a commitment to have further discussions with EnCana regarding operatorship of the 13-21 well. If EnCana becomes the operator, ConocoPhillips said the facility would likely be included in EnCana's ERP for initial response, with ConocoPhillips staff responding immediately thereafter.

Recognizing the intervener's concern regarding on-site security, ConocoPhillips testified that the site would be fenced, with intruder alarms on the buildings and H₂S monitors on location. As well, it described in detail its intention to install a supervisory control and data acquisition (SCADA) remote monitoring system. ConocoPhillips further explained that SCADA was a radio system that would transmit data to two operating centres, the Wembley and EnCana gas plants, and allow for remote shutdown capability at both locations. ConocoPhillips confirmed that it had yet to determine the protocol for sharing flow control between the two facilities. Also, it proposed to install a safety valve on the wellhead to stop the flow in the event of a failure of the pipeline or other surface equipment.

ConocoPhillips explained that in the event that the plant received an alarm from the proposed facilities, its field staff's response time would be about 23 minutes. It stated that it was common practice that other operators assist as required. However, ConocoPhillips indicated it had 10 staff available to respond during the day and a number of other staff on call, should they be required. ConocoPhillips explained that it had two night operators, one stationed in the Wembley gas plant and one in the field. It said the role of the nighttime field operator was to respond to trouble and/or callouts, which essentially made him a night watchman, rather than an operator, who would be checking sites on a regular basis.

7.2 Views of the Intervener

The intervener did not outline specific objections to the content of the drilling and completions ERP, but he expressed concern about the logistics of locating his family while they were enjoying recreational activities on his land. Given the unpredictable weather and road conditions, he believed it would be problematic to locate his family. Mr. von Tiesenhausen also believed that employing a helicopter to assist with search and evacuation of the area would be difficult due to response time, unless a helicopter was stationed on site during the drilling and completion of the sour zones. Mr. von Tiesenhausen said he had had previous experience with a helicopter attempting to locate him that had proved unsuccessful.

In response to the company's proposal to relocate Mr. von Tiesenhausen's family during the critical drilling operations, Mr. von Tiesenhausen observed that moving temporarily would be an imposition, as any time spent away from his land would compromise his ongoing art projects, which he built on various places on his lands.

Mr. von Tiesenhausen believed that his land was already located within the planning zones of 9 or 10 production facilities, and as such he expressed concern about being able to accurately identify which company to contact should he identify a problem. He was not confident that one night watchman was sufficient to manage such a large production area.

Mr. von Tiesenhausen suggested that the proposed facility be managed by the staff at the EnCana gas plant, due to its close proximity and its previously established response times to public concerns.

7.3 Views of the Board

The Board is satisfied that the site-specific ERP for the 13-21 well, based on a 2.45 km planning zone, meets EUB requirements and, subject to a few minor revisions detailed later in this section, is appropriate for the drilling and completion of a level-2 noncritical sour well. The Board does, however, have some concerns respecting the implementation of the plan and, therefore, as specified later, will be requiring an on-site exercise.

While the Board agrees that ConocoPhillips is ultimately responsible and liable for operations and actions at the proposed facilities, it further recognizes the intervener's concerns regarding response times from the Wembley gas plant versus the EnCana gas plant. The Board also acknowledges Mr. Von Tiesenhausen's concerns about identifying the appropriate company's representative to contact in the event he notices a problem or detects an odour. The Board believes that both of these issues could be more adequately addressed if the 13-21 well and associated facilities were incorporated into the ERP for the EnCana gas plant. The Board acknowledges ConocoPhillips's commitment to complete discussions with EnCana respecting the incorporation of the 13-21 well and facilities into the ERP for the EnCana gas plant and fully expects ConocoPhillips to do so.

The Board encourages industry to review previously issued Board decisions when filing new applications, as it believes that they may contain valuable information for future projects of similar nature. However, the Board advises ConocoPhillips that each application is considered on its own merits, based on the material contained in the application, evidence presented, and concerns raised by all parties at the hearing. In this particular case, the Board finds that it is warranted to expect the 13-21 well and facilities to be incorporated into EnCana's ERP for the area.

ConocoPhillips believed that its drilling and completions ERP would only be activated while conducting operations in the sour zone. This is not a correct assumption on its part. The reason the EUB requires that an approved ERP be in place prior to the spudding of a well is that it may be necessary to implement the plan, in whole or in part, at any time during the drilling or completion of the well. Consequently, ConocoPhillips is reminded that it must be ready to activate all or the appropriate portion of its ERP at any time. The Board expects that this information will be provided to the appropriate ConocoPhillips staff.

The Board acknowledges Mr. von Tiesenhausen's concern with respect to his family's health issues and the applicant's ability to locate the family members when they are outdoors on their land. ConocoPhillips did offer relocation to the intervener, and while the Board understands the imposition this may cause, the Board suggests that this would be an effective means of mitigating any risk that the von Tiesenhausens may perceive to be associated with the subject drilling operation. The Board also encourages the intervener and ConocoPhillips to initiate a discussion respecting the possibility of drilling the well during a time when the von Tiesenhausens will be away from their residence on business or vacation. A successful conclusion of this discussion could address Mr. von Tiesenhausen's concerns about compromising his work and the health of his family.

The Board understands that that Mr. von Tiesenhausen may be interested in further negotiations with ConocoPhillips and encourages the two to continue communications to alleviate any outstanding concerns regarding the ERP.

With respect to the applicant's commitment to conduct an exercise at its Wembley plant, the Board believes that such an exercise is an effective test for plant personnel under a production scenario but that it is inadequate to test the response capabilities of drilling and completions personnel. There may also be criteria and requirements in the site-specific drilling and completions ERP that are different from those included in the plant/facility ERP. These site-specific matters can only be addressed through an on-site exercise. The Board also has some concerns about the transfer of the site-specific ERP details from the staff who developed the plan to the on-site staff who will be responsible for the actual implementation of the plan. The Board therefore directs ConocoPhillips to conduct an on-site exercise of the plan prior to drilling into the sour zone. EUB staff will be in attendance to monitor the exercise. It is necessary to test all procedures detailed in the plan to ensure that response personnel are adequately trained and capable of carrying out responsibilities. The Board notes that no evidence was presented to suggest that ConocoPhillips would not be capable of responding to an emergency; however, it is difficult to assess rover capabilities without testing the plan. ConocoPhillips must therefore test all key components of its ERP, including but not limited to chain of command, communications equipment and linkages, and including outside services, to satisfy EUB staff that the systems are in order for appropriate response.

With respect to Mr. von Tiesenhausen's concern about his residence being located within more than one planning zone, it is not uncommon for sour wells with overlapping planning zones to be drilled in the same area. The Board is confident that regardless of which company is contacted by a resident, industry, under its mutual aid agreements, would respond accordingly. The Board acknowledges the disruption caused by numerous visits from various operators but believes this is an essential component of establishing and maintaining effective ERPs. Emergency response protocols rely on the public being informed and understanding of procedures put in place for their protection.

The Board is satisfied that the safety measures proposed by ConocoPhillips for the subject facilities will provide an adequate level of protection for area residents. The Board further notes that connecting the 13-21 well site facilities to a SCADA system is an important feature that would allow for the prompt detection of any release and the shutting-in of the well. The Board expects that ConocoPhillips will be vigilant in its preventive maintenance and loss control programs for its operations.

The Board expects ConocoPhillips to review the details in its drilling and completion ERP and amend all information, including but not limited to resident information, emergency contacts, protocol for enlisting outside services, including assistance from other operators, and details regarding the expected use of a helicopter. ConocoPhillips is required to submit the final plan to the Board for review and approval prior to the spudding of the 13-21 well. In addition, ConocoPhillips is directed to include in its ERP specific procedures for locating the von Tiesenhausen family if it is required during the drilling, completions, and testing of the 13-21 well.

8 IMPACTS

8.1 Views of the Applicant

Flaring/Odours

ConocoPhillips testified that 1 to 1.5 days of flaring would be required during the fracture stimulation and the cleanup of the well. It stated that if initial results were good, it would proceed to tie in the 13-21 well and conduct further tests in-line. It acknowledged, however, that 2 to 3 days of additional production testing with flaring may be needed if initial results did not confirm the productive capability of the well. ConocoPhillips argued against in-line testing because there would be a significant land disturbance and cost to install the pipeline before it was determined whether the well would be capable of commercial production. The applicant also indicated that any liquid production associated with the cleanup and testing of the well would be contained in closed tanks, with all gases vented to the flare system.

Once fully operational, ConocoPhillips stated that the flare stack for the proposed well site facility would be used only for the emergency depressurizing of equipment. It said that the flare would be equipped with a continuous pilot, an electronic ignition system, and flame failure detection. ConocoPhillips noted that there would be a small flame from the pilot and that it might look at installing a shroud to hide this flame. Under normal operations, ConocoPhillips said that flaring might occur twice a year at the well site for maintenance and that the duration of flaring would be a matter of minutes.

ConocoPhillips explained that its proposed well site line heater, separator, and metering facilities were designed as a closed system. It said that chemical pumps would be electrically powered. Sweet fuel gas would be used for firing the line heater and for powering instruments. ConocoPhillips noted that it intended to vent the sweet gas used to power instruments to the atmosphere.

ConocoPhillips planned to address fugitive emissions management by installing H₂S detectors and conducting on-site operator checks about every second day. It said that odour complaints could be directed to its corporate 1-800 number or to the Wembley gas plant. It noted that the well site facility would be remotely monitored and could be shut down from both the EnCana and Wembley gas plants. It described the geographical range of its field operators in the Wembley area and believed that a field operator would respond to problems or complaints related to the well site from a distance of not more than 56 km (35 miles).

Noise/Vibrations

ConocoPhillips stated that under EUB regulations it was not required to conduct a noise assessment for the drilling of the 13-21 well, as the drilling and completions was considered a temporary operation. ConocoPhillips indicated that it would not be engaging any special noise reduction because it had very low-noise generating equipment and the site was heavily forested. However, ConocoPhillips indicated that it would respond to any noise complaint and initiate the appropriate actions to address the source of any noise-related concern.

Security

ConocoPhillips stated that during drilling operations, security would be on site 24 hours per day. However, during production, ConocoPhillips indicated that there would not be any on-site security but the location would be fenced off and equipped with intruder alarms, H₂S monitors, and a SCADA system. ConocoPhillips said that it typically installed lights over the doorways to the line heater, separator, and SCADA buildings.

With respect to trespass on Mr. von Tiesenhausen's lands, ConocoPhillips testified that its policy for employees and contractors was to respect the rights of landowners and to keep to the access road and lease site. It explained that disregard for corporate directions and expectations would be a factor in renewing contracts with service companies and continuing tenure for employees.

Environmental Impacts

ConocoPhillips stated that no wilderness studies were completed for this particular project. However, it outlined many ways in which it would strive to minimize its impact on the environment. ConocoPhillips explained that it was aware of trumpeter swans in the area and of the high-water mark of Updike Lake—thus the reason for the well being constructed 500 m from the lake, as directed by Alberta Environment. ConocoPhillips also indicated that during the surveying, a consultant completed a presite assessment of the area.

ConocoPhillips explained that environmental impacts due to the pipelines would be minimized, as they would be constructed adjacent to an existing pipeline ROW and consequently would be using an existing pipeline corridor.

ConocoPhillips stated that weed control was also a responsibility it would undertake. ConocoPhillips explained that the surface lease agreement contained a clause about weed control that required ConocoPhillips to pick or spray any weeds introduced on the surface as a result of its operations. ConocoPhillips also indicated that it required the equipment operators to wash their equipment before entering the site. If any weed problems or other negative environmental impacts occurred, ConocoPhillips said it would work with an Alberta Environment inspector to address the problem.

In response to Mr. von Tiesenhausen's concern about ground subsidence, ConocoPhillips responded by saying it was unaware of any ground subsidence within Alberta that related to small reservoirs, such as the reservoir targetted in the proposed 13-21 well.

Copyright

ConocoPhillips submitted that the notion of copyright advanced by Mr. von Tiesenhausen was irrelevant to the authority of the EUB in considering its application. It argued that if, indeed, Mr. von Tiesenhausen's lands constituted the art, then numerous common law remedies existed to protect the land from unlawful incursions based on trespass, nuisance or other tort or statutory breaches. ConocoPhillips asserted that the proper forum in which to adjudicate these matters of pure copyright issues was the court, not the EUB, and that an approval or licence issued by the EUB was not an authorization to violate copyright or conduct any other unlawful activities. It

stated that Mr. von Tiesenhausen would be able to bring a copyright action regarding its project notwithstanding the Board's approval to construct and operate the facility.

8.2 Views of the Intervener

Flaring/Odours

Mr. von Tiesenhausen stated that there had been other wells drilled near his property, one of which flared at night. Both the light and the noise were a major disturbance, but he noted that the flaring was curtailed within minutes of his telephone complaint. He said that he would have a problem if the 13-21 well involved a similar flaring event. Mr. von Tiesenhausen stated that technology was available to avoid such a situation. He also indicated that ConocoPhillips would create less of a problem if it took a proactive approach to minimizing such situations.

Mr. von Tiesenhausen said that he was concerned about the cumulative effect of proliferation of petroleum industry facilities in the area. He noted that his family was promised that there would be no odours from the EnCana gas plant but they were affected by fugitive odours for some ten years before EnCana found a leaking valve that was the cause. The matter of flaring and odours, he explained, was a very serious concern to this family, as it was during this time that one of his sons faced and now continued to live with a life-threatening medical condition, the other son had developed respiratory problems, and Mr. von Tiesenhausen had been diagnosed with the onset of early osteoporosis. Mr. von Tiesenhausen attributed these medical conditions to the emissions, fugitive and otherwise, from the EnCana gas plant, which was located upwind of his property. He acknowledged that while he had no factual proof that these ailments were caused by the oil and gas industry, there was also no proof to the contrary.

Mr. von Tiesenhausen also said that such impacts as flaring and escaping odours would intrude on his lands and undermine the integrity and merit of his artwork. He explained through a slide presentation on the evolution and nature of his work that it was the purity of nature that informed his art and was essential to its creation and effect on the viewer. He showed that many of his pieces were installed on his lands, such as the lifeline, the 45-foot-high willow tower in the forest, the ice boats and trench in the pond, the hanging pods in the trees, and the willow boat in the hay field.

Noise/Vibrations

Mr. von Tiesenhausen chastised ConocoPhillips's witness panel for not visiting the 13-21 well. He said that if they had visited the site, they would know that the trees in the area had been clear cut and, therefore, the forest would provide little, if any, noise buffering effect, contrary to its belief. Mr. von Tiesenhausen reiterated his view concerning industrial impacts on his art and argued that the intrusion of noise from the drilling operations at the 13-21 well would negatively impact his artwork. However, he conceded that noise from the permanent facility would likely be of less concern, given that an electric methanol pump would be installed and that compression would be off site. He viewed night lighting and flaring as bigger problems.

Security

Mr. von Tiesenhausen pointed out that the area around his lands had been subjected to numerous incidents of vandalism over the past few years, including explosions, shootings, and holes being drilled into pipelines. New facilities would not necessarily be immune from such attacks, and he was concerned about the welfare of his family and neighbours in the event that such risks materialized. He testified that he was not convinced that ConocoPhillips's security measures were sufficient to prevent such acts of vandalism.

Mr. von Tiesenhausen described recent incidents where oilfield personnel blatantly ignored posted signs forbidding trespass, entered on his lands with their truck, destroyed trees, and caused damage to the land where his father was buried. He complained that the industry did not respect his property rights and questioned whether the applicant would act any differently. Mr. von Tiesenhausen explained that his vigilance concerning unauthorized incursions on his property was essentially rooted in his belief that life comes from the land, that the land nourishes and sustains humanity in all ways, and that its protection from a surfeit of industrial activities was a responsibility that he took and that society should take very seriously.

Environmental Impacts

Mr. von Tiesenhausen stated that the general encroachment by industry was compromising the land. He felt that presite assessments by environmental consultants were not always effective because they did not always notice the detrimental effects industry was having on the land, as they had not spent enough time in the area. Mr. von Tiesenhausen also expressed concerns about ConocoPhillips possibly stripping a bear's den or some other habitat it might be unaware of during construction. However, he indicated that the negative environmental impact could possibly be minimized if the drilling and construction of the proposed 13-21 well, battery, and pipeline were completed during the winter season. Mr. von Tiesenhausen also indicated that his family had had problems with weeds in the past and was concerned that weeds would continue to be a problem in this particular case as well.

Mr. von Tiesenhausen explained that his livelihood and that of his family was based on the land and their surroundings and he feared that the continued encroachment by industry would compromise his artwork, his family's quiet enjoyment of the land, and their pursuit of their livelihood.

Mr. von Tiesenhausen stated that industry was not taking enough time to look at the long-term and cumulative impacts it was having on the environment. He said that the proliferation of industry and its lack of consideration for sustainable development would ultimately lead to the degradation of our environment.

Copyright

Mr. von Tiesenhausen claimed copyright protection to his five quarter sections of land on the basis that his artistic work was inseparable from the land. He explained that his lands provided the inspiration, materials, and setting for his work and that, essentially, it was the relationship between the objects that he constructed and the natural setting that constituted his original

creative expression. Mr. von Tiesenhausen maintained that copyright, and in particular the moral rights associated with copyright, immunized his lands and the works of art installed on his lands from the noise, light, odours, emissions, flaring, and other intruding impacts created by oil and gas facilities situated on neighbouring lands. He argued that even though his copyright only extended to the borders of his own lands, industrial intrusions from adjacent lands would undermine the integrity of his art, invoking the protection of the moral rights afforded to him by copyright law. Mr. von Tiesenhausen recounted that it was the potential exercise of his moral rights that compelled the Alliance Pipeline, at significant expense, to reroute a section of the line off his lands. He confirmed that he had never had occasion to enforce such rights in court.

When asked to comment on the effect of Highway 43, which was in close proximity to most of his lands, on his art making, Mr. von Tiesenhausen replied that the traffic was an encroachment and that it was a more complex issue because of the difference between resource extraction for private gain and the public benefit derived from the use of public highways.

Mr. von Tiesenhausen asked the Board to deny the application on the basis that the project would infringe the moral rights forming part of the copyright on his lands.

8.3 Views of the Board

Flaring/Odours

The Board is of the view that the well site facilities proposed by ConocoPhillips would minimize the impacts of ongoing operations. In particular, the Board notes that the facilities would not involve continuous flaring or venting of produced gas and that ConocoPhillips plans to use existing compression facilities in the area. The Board expects that the automated monitoring and remote shutdown system (SCADA system) would enable ConocoPhillips to detect and respond to problems so that gas releases and flaring are minimized.

The Board encourages licensees to evaluate new wells using in-line testing when practical. In this situation, the Board acknowledges the prudence of understanding the commercial capability of the well before costs and land disturbances associated with the tie-in pipeline are incurred. The Board believes that disturbances related to flaring should be minimal in this case and only involve sufficient volumes for initial cleanup and, if necessary, for a short test to determine the productive capability of the 13-21 well. The Board expects ConocoPhillips will keep the duration of flaring at this site to the shortest duration possible.

The Board encourages ConocoPhillips to implement measures that reduce the impacts of the well site facilities on the aesthetics of the area, including minimizing nighttime impacts of the flare pilot and facility lights.

The Board views that frequent operational flaring due to upsets and maintenance is unacceptable. Further, the Board requires that licensees control fugitive emissions to prevent off-lease odours. Good facility design, such as that proposed by ConocoPhillips, can engineer reliability into new installations so that upsets, frequent maintenance, and fugitive emissions are avoided. This must be complemented by proactive operating and leak detection—repair practices that maintain the integrity of the facility. In this case the Board looks to ConocoPhillips to ensure that the regular

site inspection and maintenance system for the 13-21 well provides for early detection and correction of reliability and fugitive emission problems.

Noise/Vibrations

The Board agrees with ConocoPhillips's statement that a noise impact assessment is not required for this project, as per EUB *Guide 38: Noise Control Directive User Guide*. As with any operation in the province, the Board expects ConocoPhillips to respond to a noise complaint in a timely and effective manner.

Security

The Board notes Mr. von Tiesenhausen's concerns about oilfield vandalism and trespassing. The Board further accepts ConocoPhillips's measures taken to ensure that an adequate level of security is placed on the project and that ConocoPhillips will appropriately manage its employees and contractors to avoid incidents of trespass.

Environmental Impacts

The Board finds that the proposed facility meets the environmental requirements pertaining to this type of development. Location of the site away from the nesting grounds of the trumpeter swan, the placement of the pipeline adjacent to an existing ROW so as to reduce the land disturbance, and a strict protocol respecting the importation of weeds are examples of ConocoPhillips's environmental mitigation. The existing environmental legislation does not require, for example, an environmental impact assessment, although the lease site is required to be constructed in a manner that allows for the ultimate reclamation of the site.

Notwithstanding the applicant's compliance with environmental regulations and guidelines, Mr. von Tiesenhausen makes a sound argument that resource companies should consider using the experience and knowledge of local residents when they are proposing activities in the area, especially when industry is aware of residents' concerns about specific environmental features of the proposed site. Consultation with long-term residents may well result in construction and operations that further minimize the impacts on the environment with no undue economic or operational consequence to the project. Mr. von Tiesenhausen indicated that he is available for this purpose. Certainly, the Board's experience is that the oil and gas industry is prepared to design projects that take local environmental concerns into account.

Copyright

The copyright argument presented by Mr. von Tiesenhausen is a unique one for the Board to consider. The submission goes beyond the usual stance of interveners who argue that the potential impacts of a proposed facility are unacceptable because of the significant risks to the personal health and safety of residents, to the well-being of the environment, and to the economic or property interests of citizens. This particular position of Mr. von Tiesenhausen arises under the Copyright Act,¹ which provides economic and artistic integrity or moral

¹ R. S. 1985, Ch. C-42.

protection to original intellectual and creative output of individuals. Mr. von Tiesenhausen submits that the moral right to his artwork, the pieces he creates, including the lands in which they are fixed or set, will be unduly compromised because of the industrial impacts on his lands from a sour gas well, battery, and associated pipelines located on neighbouring lands. Mr. von Tiesenhausen essentially argues that his works will be corrupted by such intrusions and lose their artistic integrity. He asserts that the moral rights afforded to him under the Copyright Act, prevent the Board from issuing an approval to ConocoPhillips to construct and operate the facility.

With respect, the Board disagrees with Mr. von Tiesenhausen's view regarding the applicability of copyright principles to the Board's statutory duties. Copyright law, its nature, scope, and enforcement, are governed by the Copyright Act, which provides for the economic and moral rights associated with original intellectual and creative work, as well as the remedies available for the infringement of these rights.² Under the provisions of Part IV of the Copyright Act, it is clear that the courts, both federal and provincial, are given the jurisdiction to determine copyright matters, including the existence of copyright, whether an infringement has taken place, and if so, the appropriate remedy. The Board agrees with the applicant in this regard.

The evidence before the Board is that no court action has been taken by Mr. von Tiesenhausen against ConocoPhillips relating to the copyright issue and, necessarily, it follows that there has been no judicial determination of the matter, including whether the proposed licensed activities of the applicant conducted on lands that are not occupied or owned by Mr. von Tiesenhausen will constitute an infringement of Mr. von Tiesenhausen's moral rights to this work. In these circumstances, it is the Board's view that its consideration of impacts should be directed to the assessment of the project in terms of whether the risks presented by the facility's operations are societally acceptable given provincial regulatory guidelines and requirements and any additional mitigation measures implemented by the applicant.

The Board also notes that the majority of the lands owned and occupied by the von Tiesenhausen family are separated from the proposed 13-21 well and facilities by Highway 43. The Board believes that this highway may well influence the extent or degree to which any of the impacts that might otherwise have been associated with the drilling and production of the proposed 13-21 well might be noticeable on the majority of the von Tiesenhausen lands.

Other Matters

During the testimony of the ConocoPhillips witness panel, it was apparent to the Board that while individual company witnesses were able to respond to questions regarding the technical aspects of the application, it did not appear to the Board that any of the company representatives were in senior enough positions or roles within the company to act as a senior policy witness. In the Board's view, an applicant that provides a senior policy witness for direct and cross-examination inevitably enhances the understanding and confidence of the Board, the intervener, and the public regarding its commitment to the policies and procedures being identified or to the mitigative measures being proposed to address the concerns raised. Failure to provide such a witness could compromise the approval of an application, especially where important policy

² Supra, Part IV.

matters remain unanswered or the panel cannot make commitments to additional or appropriate mitigative measures.

The Board also observes that none of the ConocoPhillips's technical witnesses attended the proposed site for a firsthand look at the land and surrounding features, making it difficult for them to answer questions that required such knowledge. In the Board's view, it is a fundamental underpinning of the credibility and cogency of an applicant's presentation that some member of the witness panel actually visits the site.

9 CONCLUSION

Having carefully considered all the evidence, the Board finds that ConocoPhillips has demonstrated the need for the proposed well, battery, and pipelines, which can be drilled, constructed, and operated in a safe and environmentally acceptable manner. The Board also finds that the associated impacts will be properly addressed and mitigated. As a result, the Board is of the view that the subject applications are in the public interest and, therefore, approves the applications, subject to ConocoPhillips meeting all the regulatory requirements, as well as the condition set out in the appendix.

DATED at Calgary, Alberta, on January 23, 2003.

ALBERTA ENERGY AND UTILITIES BOARD

[Original signed by]

J. R. Nichol, P.Eng.
Presiding Board Member

[Original signed by]

J. I. Douglas, FCA
Board Member

[Original signed by]

M. H. Hommy
Acting Board Member

APPENDIX TO DECISION 2003-009

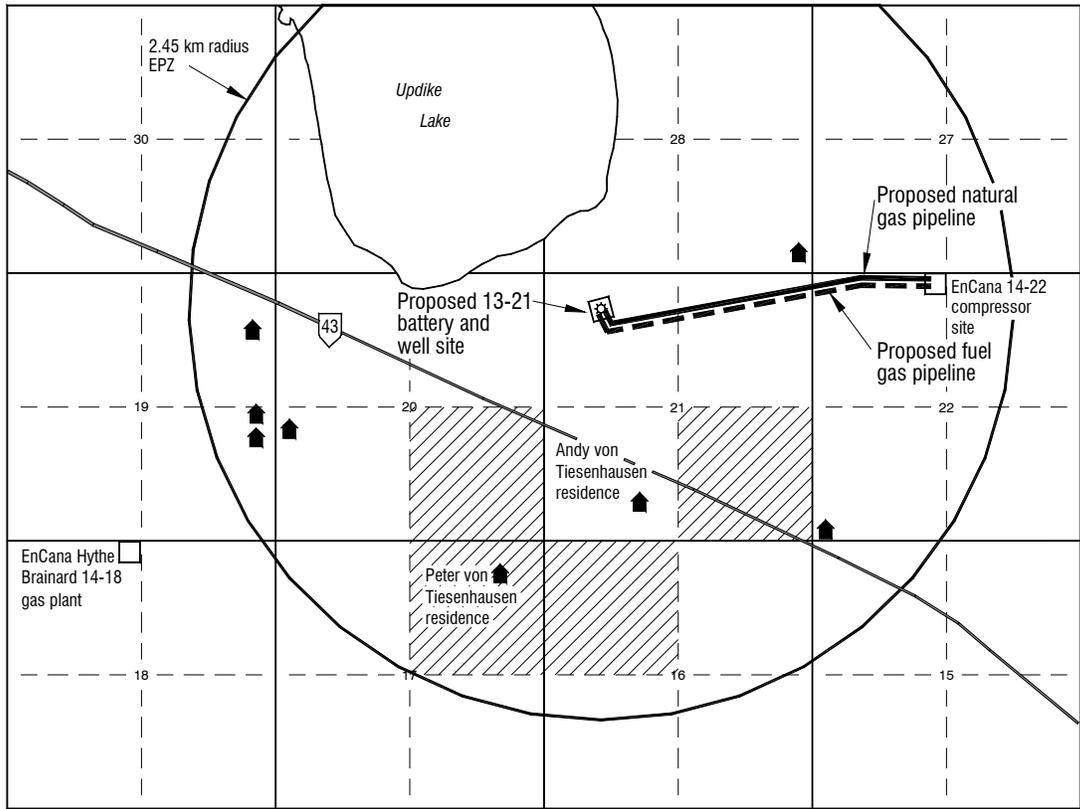
SUMMARY OF THE BOARD'S CONDITION

The licences are subject to the condition that the directions set out below are appropriately completed:

- The Board directs ConocoPhillips to conduct an exercise of its drilling and completions ERP prior to entering the sour zone. The Board further directs ConocoPhillips to afford EUB staff the opportunity to actively participate in this exercise. The Board directs ConocoPhillips to test all key components of its ERP, including chain of command, public notification, communications equipment, and linkages, including outside services, evacuation procedures, and ignition procedures, to satisfy EUB staff that the systems are in order for immediate implementation.

Conditions generally are requirements in addition to or otherwise expanding upon existing regulations and guidelines. An applicant must comply with conditions or it is in breach of its approval and subject to enforcement action by the EUB. Enforcement of an approval includes enforcement of the conditions attached to that licence. Sanctions imposed for the breach of such conditions may include the suspension of the approval, resulting in the shut-in of a facility.

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Legend

-  Lands owned by Peter von Tiesenhausen
-  Residence

Proposed ConocoPhillips Well, Battery, and Pipelines
Applications No. 1252461 and 1272754
ConocoPhillips Canada Resources Corp.

Decision 2003-009

