

ALBERTA ENERGY AND UTILITIES BOARD

Calgary Alberta

**BONTERRA ENERGY CORP.
APPLICATION FOR A WELL LICENCE
PEMBINA AREA**

**Decision 2003-008
Application No. 1259219**

1 DECISION

Having carefully considered all of the evidence, the Alberta Energy and Utilities Board (EUB/Board) hereby approves Application No. 1259219. The well licence will be issued in due course.

2 INTRODUCTION

2.1 Application

In accordance with Section 2.020 of the Oil and Gas Conservation Regulations, Bonterra Energy Corp. (Bonterra) submitted Application No. 1259219 to the EUB for approval to drill a directional well from a surface location in Legal Subdivision (LSD) 9, Section 13, Township 48, Range 7, West of the 5th Meridian (9-13 location) to a bottomhole location in LSD 8-13-48-7W5M. The purpose of the proposed well is to obtain sweet gas production from the Edmonton formation.

2.2 Intervention

The adjacent landowner, Ms. Bordeleau, raised concerns regarding the proposed well location, the potential impacts to her son's health, groundwater protection issues as they relate to her domestic water wells, and general concerns with Bonterra personnel's ability to answer questions in a clear, concise, and consistent manner. Ms. Bordeleau is the landowner and resident in the southeast (SE) quarter of Section 13-48-7W5M and her lands would be directly affected by the proposed well's 100 metre (m) setback.

2.3 Hearing

The application and intervention were considered at a public hearing in Drayton Valley, Alberta, on November 6 and 7, 2002, before Board Members T. M. McGee (Presiding Board Member), and J. I. Douglas, FCA, and Acting Board Member J. B. Railton, Ph.D., P.Biol.

The Board and its staff visited and viewed the site and the general area of the proposed well on November 6, 2002, prior to the hearing. The attached Figures 1 and 2 illustrate the location of

the proposed well and the existing area development. Those who appeared at the hearing and the 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

Bonterra Energy Corp. (Bonterra)
G. Fink

G. Fink
R. Varty
J. Jeffcott

Paula Bordeleau (Ms. Bordeleau)
K. Zajes

P. Bordeleau
K. Zajes
R. Anderson
Dr. M. Peyton

Alberta Energy and Utilities Board staff
R. McKee, Board Counsel
D. Schafer
K. Giesbrecht, C.E.T.

3 ISSUES

The Board considers the issues respecting this application to be

- need for the well,
- intervener's concerns regarding health and well location,
- groundwater protection,
- designation of a public facility, and
- relationship between the parties.

4 NEED FOR THE WELL

The purpose of the proposed well is to obtain sweet gas from the Edmonton Formation. Bonterra has obtained the mineral rights for the intended purpose of the well. The geological information indicates that the zone of interest can be targeted from the proposed 9-13 location. Bonterra indicated that the expected production rate of this well would be approximately 7 to 10 thousand cubic metres (10^3 m^3) (approximately 200 to 300 thousand cubic feet) per day of sweet natural gas. Bonterra said that the well would have a producing life of 5 to 10 years.

The Board agrees that there is a need for the well and it acknowledges that the intervener did not contest the need for the well.

5 INTERVENER'S CONCERNS

Ms. Bordeleau made it clear that her overriding concern in this matter was the possibility that this development might have a deleterious effect on her son's health. While conceding that no well would be the best result, she recognized the need for energy development and focused her submission on Bonterra's well site location. She suggested that an alternative location to the south on her property would pose a significantly reduced health risk to her son.

5.1 General Health Concerns

Ms. Bordeleau said that her six-year-old son, Coleman Bordeleau, suffered from asthma and related conditions, including spasmodic croup, reflux, and reactive lower airway disease.

5.1.1 Views of the Applicant

Bonterra did not question the fact or the severity of Ms. Bordeleau's son's illness. It took the position, however, that the proposed development would not pose a substantial health-related risk or danger for her son.

Bonterra said the following:

- The gas it targeted in the Edmonton Formation had been analyzed at an offset well and was found to be 96 per cent methane with a zero hydrogen sulphide (H₂S) content.
- The gas was 56 per cent the weight of air and would therefore rise in the event of a leak.
- The proposed site would allow for in-line testing, with no requirement for flaring gas.
- It would relocate the Bordeleau family during the construction and drilling phases.
- It would complete drilling operations in the winter, which would reduce the impact on the interveners as the ground would be frozen and less dust would be created.
- The proposed well's production system would be closed with no flaring.

Bonterra further noted that there was no conclusive evidence linking the son's condition to hydrocarbon emissions of any kind. In its submission, Bonterra provided information that identified various possible triggers for asthma and suggested that these triggers were as likely to harm the son as any possible emission created by the proposed well. Some of the triggers identified were environmental factors such as animal hairs, dust, dust mites; fugitive emissions from a domestic furnace; household cleaners; smoking; and nitrous oxide from soil containing animal excrement.

Bonterra made a correlation between the gas used in the furnace and hot water heater of the average home to the gas that would be produced from the proposed well. It questioned Ms. Bordeleau's lack of concern over possible leaks or emissions and exhaust from an in-house source and it further pointed out the potential danger of gas in an enclosed area.

Bonterra suggested that the emissions from vehicle traffic, dust kicked up by Ms. Bordeleau's horses, or possible food allergies could also contribute to her son's condition.

Bonterra noted that very high levels of oil and gas development already existed in the area, pointing out that the son was currently exposed to emissions from such activities. Bonterra

suggested that if the son's condition were ever shown to be linked to hydrocarbon emissions, one possible result would be Ms. Bordeleau leaving the area whether the proposed well existed or not.

5.1.2 Views of the Intervener

Ms. Bordeleau said that her son had shown symptoms of asthma since he was six to eight months old. The son's doctor since birth, Dr. Peyton, testified that the child had been seen by a number of specialists and had had some 25 incidents requiring medical attention. The most severe incident occurred in September 2002, when the child had to be evacuated via Stars Air Ambulance to Edmonton. Dr. Peyton indicated that this incident was life threatening and was unprecedented in its severity in the child's previous medical history.

Dr. Peyton testified further that recent tests conducted by specialists had ruled out the normal environmental triggers for asthma, such as dust, dust mites, and animals. He admitted that despite the tests, they were still unable to pinpoint the specific triggers for Ms. Bordeleau's son's condition. The doctor could not say for certain that the well applied for would have a deleterious effect on the child's health; however, he recommended to Ms. Bordeleau that her son be kept away from all environments that may contain air pollutants and he focused on petroleum industry pollutants. Ms. Bordeleau stated that she paid special attention to temperature inversions, which could bring certain pollutants to ground level, and kept her son inside on days that seemed to pose a hazard. Dr. Peyton advised Ms. Bordeleau to oppose any additional development that could add further air pollution to her area.

Ms. Bordeleau advised that her son had been to see numerous specialists and all had directed her to oppose this well application. No medical reports or testimony were submitted from any of the other specialists that Ms. Bordeleau consulted.

Ms. Bordeleau further advised that her son would generally experience trouble breathing in significantly polluted environments; however, air particulates, such as dust, did not necessarily lead to an attack. As such, Ms. Bordeleau was concerned about her son being brought into contact with air pollutants.

On the advice of medical specialists, Ms. Bordeleau indicated that she was considering having her son undergo a series of tests to determine hydrocarbon sensitivity but said that these tests were quite invasive and she was, at the time of the hearing, undecided as to whether to subject her son to the tests.

In light of this, Ms. Bordeleau took the position that although she was prepared to live with the applicant's well in her general vicinity, she wanted it located on a site that posed, in her opinion, the least risk to her son. Ms. Bordeleau said that an alternative location to the south of the existing 8-13 well lease site on her property would pose less risk to her family than the proposed 9-13 location.

Ms. Bordeleau questioned the validity of Bonterra's reference to sweet gas being nonpolluting and disagreed with Bonterra's suggestion that the gas used in her home and the gas produced directly from the proposed well would be the same. The intervener also examined Bonterra's

knowledge of the gas analysis and made reference to the uncertainty of this information, as the well that had been applied for was to be the first well in a new pool. She also took offence to the questioning by Bonterra of her choice regarding her decision to live in an area with significant oil and gas development.

5.1.3 Views of the Board

The Board does not doubt that Ms Bordeleau's intervention in this matter is inspired solely by her concerns for her son's health. The Board further accepts that Coleman Bordeleau suffers from asthma and related conditions, including spasmodic croup, reflux, and reactive lower airway disease. Asthma is a condition found in both rural and urban Alberta with in some cases, such as this one, no conclusive evidence identifying the triggers. Ms. Bordeleau's son has had over 25 serious attacks, with the last one, in September 2002, being the most severe. The evidence of Dr. Peyton indicated that the identity of the particular trigger for the son's condition remains a mystery. The Board notes that the more common triggers have been ruled out but as yet no specific trigger has been identified. Dr. Peyton's evidence is equally clear that given Coleman's history of attacks, the trigger for his asthma already exists in his environment. The Board notes that these attacks have all occurred without the Bonterra well in place.

The Board notes that no evidence was presented that specifically identifies any possible emissions that would be introduced into the environment during normal drilling and production operations of the well, other than the short-term emissions created by trucks and drilling equipment. The Board notes Bonterra's commitment to remove Ms. Bordeleau and her family from the area during the construction and drilling phases if she wishes to do that. Moreover, the Board notes that no evidence has been introduced that positively links any of the activities of the applicant to an exacerbation of Coleman Bordeleau's condition.

The Board finds that Coleman Bordeleau's condition exists and is triggered by unknown factors currently present in his life. The drilling of the proposed well has not been shown to have the potential for affecting or worsening his condition and therefore cannot be said to adversely affect the intervener.

5.2 Well Location

Ms. Bordeleau made submissions in support of her position that the proposed 9-13 location would pose a significant risk to her son and that a better alternative location would be on her land some 100 feet (approximately 30.5 m) south of the existing 8-13 water injection well lease site.

5.2.1 Views of the Applicant

Bonterra stated that it had originally applied to drill the well from its existing lease on the 8-13 well site. It noted that this location had been opposed by the landowner, Ms. Bordeleau, and that the application had been withdrawn.

Bonterra further stated that the proposed 9-13 location was chosen in recognition of Ms. Bordeleau's original concerns as it understood them. However, Ms. Bordeleau was not in agreement that the 9-13 location was an alternative location that resolved her issues.

Bonterra rejected the proposed site to the south, suggested by Ms. Bordeleau, as it believed that site did not address Ms. Bordeleau's concerns as effectively as the proposed 9-13 location. Specifically, Bonterra noted the following:

- The proposed 9-13 location was farther from Ms. Bordeleau's residence.
- There would be a buffer of trees some 10 m high and 5 m wide between the 9-13 location and Ms. Bordeleau's land.
- The well would be north-northwest of her residence and should not be upwind from her residence, since Bonterra believed that the prevailing winds were from the west and southwest.
- The proposed location was flat and would allow for drilling with a minimum disturbance of soil. This combined with the buffer of trees would allow drilling and production operations to be carried out with minimal dust, noise, and extra traffic.
- There is an existing pipeline that ran through the proposed 9-13 location that would allow the well to be in-line tested into this pipeline with no flaring of gas.
- There would be no disturbance of Ms. Bordeleau's equestrian training business or the quiet enjoyment of her land, as daily trips to the well by Bonterra's operator would be out of sight and the noise and any dust would be dampened by the buffer of trees.
- The proposed location was farther from Ms. Bordeleau's water wells than the original 8-13 proposal, and the proposed well's surface and production casing would be cemented full length.
- The proposed well's production system would be closed with no flaring. It would consist of a meter run, flow control, and emergency shutdown equipment, and possibly a methanol tank.

Bonterra underscored its position with respect to wind direction by providing evidence derived from a wind survey conducted by the West Central Air Shed Society at its Violet Grove station 16 km west of Ms. Bordeleau's residence. In the view of Bonterra, these data supported its position that the proposed location would not be upwind of Ms. Bordeleau's residence the majority of the time. It suggested that the site preferred by Ms. Bordeleau would in fact be upwind more often than the proposed site.

Bonterra maintained that the site proposed by Ms. Bordeleau would be more costly and presented certain geological challenges not present in the proposed location. Bonterra said that in order to drill at Ms. Bordeleau's suggested site, it would need to consult with other government agencies, as this would cause an additional footprint on the land, trees would need to be removed, and the land levelled. Additionally, Bonterra said it would need to negotiate a surface lease and build a pipeline. The company was concerned about having to deal with Ms. Bordeleau

on a continuous basis due to the existing level of strain in their relationship. Bonterra also had concerns about accessing the reservoir, as there was a tight zone from the south, and reaching the desired target would be much more difficult.

Bonterra did admit, however, that despite the geological and financial concerns, it would consider drilling at the site proposed by Ms. Bordeleau if the relationship with Ms. Bordeleau could be repaired. Bonterra would also require that Ms. Bordeleau provide it with sufficient indemnities protecting it from any repercussions should the son's health be affected by the well, given Bonterra's view that Ms. Bordeleau's proposed site was less desirable from the point of view of impacts.

5.2.2 Views of the Intervener

Ms. Bordeleau took issue with Bonterra's position on well location, stating that the proposed location was upwind from her residence, putting her son in a direct path of any emissions that may be coming from the well site.

Ms. Bordeleau offered her own experience as a landowner, observing that the wind blew predominantly from the northwest. She bolstered her observations by describing the typical shed configurations on lands in the area and the behaviour of livestock. As further evidence of a predominately northwest wind direction, Ms. Bordeleau indicated that trees on her property leaned and fell to the southeast. A neighbour, Mr. Anderson, provided evidence similar to Ms. Bordeleau's that, in his experience, the winds came from the northwest. Mr. Anderson made particular reference to a flag on his land and observations that he made while working his fields.

Ms. Bordeleau also questioned the accuracy of Bonterra's data on wind direction, since the Violet Grove station was 16 km west of her residence. She also noted that the station was across the North Saskatchewan River and the topography may have an impact on the wind direction. Ms. Bordeleau said that a neighbour who lived across the river from her experienced different weather patterns than she did at her residence.

Ms. Bordeleau's main issue was the health of her son and the possibility of an asthma attack occurring as a result of a release at the well during drilling or production operations. Bonterra's previous drilling reports came under review as to the number of times severe loss of circulation at differing depths had occurred and as to the ability of the company to fully control the well during the drilling phase. Ms. Bordeleau also questioned Bonterra on the potential emissions from pipeline leaks at the well. Ms. Bordeleau expressed a fear that she would not be able to protect her son in the event of a leak from the well in the middle of the night. She noted that she sleeps in the northeast corner of the house and was concerned that she would not be alerted before a release affected her son, who sleeps in the northwest corner.

Ms. Bordeleau acknowledged that oil and gas development was a fact of life in Alberta and did not oppose it; however, she favoured the location south of the existing 8-13 lease site as, in her view, it would be downwind the majority of the time from her residence and would therefore present less of a danger to her son's health.

5.2.3 Views of the Board

With respect to dealing with the issue of well location and the potential impacts associated with this type of well, the Board feels that it is important to comment on the nature of the well that has been applied for. The Board notes that Bonterra has applied for a sweet gas well that would not contain any H₂S and it accepts that Bonterra has based its submission on a good representative gas analysis from an offset well that produces from the Edmonton Formation.

The Board further notes that this well is relatively shallow, with a projected total depth of approximately 826 m, and that Bonterra has estimated the drilling time to be two to three days. The Board accepts Bonterra's evidence that the gas production from this well would be primarily made up of sweet natural gas (methane) and that Bonterra does not anticipate water production to be a problem in this well.

In dealing with the issue of well location, the Board acknowledges the differing views between the parties with respect to prevailing wind directions in this area and how each party had related that back to well location preferences and potential impacts.

The Board is of the view that neither party provided compelling evidence with respect to prevailing wind directions in the immediate area. On the one hand, the Board notes that Bonterra provided a graph of its interpretation of the year 2001 data from the Violet Grove station. However, the Board notes that the data may not be representative of the area in question and that Bonterra did not provide any further technical evidence that may be more site specific. On the other hand, the Board notes that Ms. Bordeleau provided anecdotal evidence on wind direction on her lands and that that information was not based on any science or technical measurements of wind direction. Therefore, the Board is unable to establish conclusively the direction of the prevailing winds.

The Board will therefore focus more specifically on Ms. Bordeleau's concerns with respect to potential impacts, such as emissions from the proposed well that may impact her or her family. First, the Board notes that there is already considerable oil and gas development in the immediate vicinity of Ms. Bordeleau's lands and that it is fair to say that there are already hydrocarbon emission sources in the area generated by both the industry and by activities associated with the general public. Second, the Board notes that in evaluating emissions with respect to this well, one must consider what the potential sources of emissions are associated both with the short-term drilling operations and with the longer-term production operations. Third, because Coleman Bordeleau has had his attacks prior to the drilling and production of the proposed well, the asthma triggers must already be present. The triggers of any future attacks with the proposed well present would be difficult to identify.

The Board acknowledges that there would be emissions created by trucks and drilling equipment associated with the short-term construction and drilling operations. However, the Board does not feel that these emissions would likely impact Ms. Bordeleau's son's condition, provided that all parties exercise normal precautions. In addition, the Board notes Bonterra's commitment to do in-line testing of the well upon its completion and to relocate Ms. Bordeleau and her family during these activities should she desire to do that. The Board finds that this is acceptable and notes that in-line testing would conserve the produced gas and eliminate the emission source.

In terms of the production operations, the Board notes Bonterra's submission that it would use a closed system that contains a meter run, flow control, and emergency shutdown equipment, and possibly a methanol tank, if pipeline freezing became a problem in winter months. Given this scenario, the Board accepts that there would be no long-term sources of continuous emissions associated directly with these production facilities that would have an impact on Ms. Bordeleau and her family or the general public. In terms of the potential for an accidental release at this well, the Board notes that while Bonterra did not provide any guarantees, it did say that it does not anticipate there being a problem and noted that the well would be fitted with emergency shutdown equipment and that the site would be visited daily by its operator. In addition, as noted in Section 8 of this report, Bonterra would provide Ms. Bordeleau with a copy of the public protection measures outlined in its corporate emergency response plan (ERP), so that in the event of an emergency condition during drilling or production operations, Ms. Bordeleau would understand the procedure to follow.

With respect to some of the other potential impacts, such as noise and dust, the Board accepts that the 9-13 location would not disturb Ms. Bordeleau's equestrian training business or the quiet enjoyment of her land, as daily trips to the well by Bonterra's operator would be out of sight and the noise and any dust would be dampened by the buffer of trees.

The Board believes that a denial of the proposed 9-13 location would need to be based on inappropriate or unacceptable levels of impacts from the proposed location or the existence of a clearly superior location for the well. The Board finds that the impacts associated with the 9-13 location are acceptable and can be properly addressed by Bonterra. In addition, the Board has carefully considered Ms. Bordeleau's evidence regarding her proposed location, and the Board is not persuaded that it would be superior to the 9-13 location.

6 GROUNDWATER PROTECTION

6.1 Views of the Applicant

Bonterra indicated that it would have an independent contractor that specialized in water well testing test the intervener's water wells for quality and quantity prior to drilling the well at the 9-13 location. Bonterra also said that it would set surface casing to 70 m and cement both the surface and production casing to surface in order to protect the groundwater aquifer in the area. Bonterra said that it would be using more cement than usual to provide additional groundwater protection.

Bonterra further noted that one of the three water wells that the intervener listed as hers and on her property was actually owned by Bonterra and had been properly abandoned. It also noted that the proposed well at the 9-13 location would be approximately 285 m from one of Ms. Bordeleau's water wells and approximately 330 m from her other water well.

6.2 Views of the Intervener

Ms. Bordeleau said that she had three water wells and one spring-fed pond in the SE quarter of

Section 13. She expressed concern for the quality and quantity of her water supply for her family and their animals.

Ms. Bordeleau explained that she operated an equestrian training business on her lands. She said that she may be working with about 20 horses at any given time, which were reliant on a fresh and continuous supply of water.

Ms. Bordeleau also stated that the quality of her water was the best that she has ever had from any well and she did not want it jeopardized by the proposed well. She emphasized that groundwater protection was an important issue, as it would affect her livelihood.

6.3 Views of the Board

The Board accepts that the drilling, cementing, and casing plans for the well proposed at the 9-13 location will provide the appropriate measure of protection for the groundwater in the area. The Board notes the commitments made by Bonterra to have Ms. Bordeleau's water wells tested for quality and quantity prior to the drilling of the well as a way of establishing a baseline. Bonterra also committed to cementing the well's production casing to surface in order to provide the necessary assurance that the groundwater would be adequately protected.

7 DESIGNATION OF A PUBLIC FACILITY

Ms. Bordeleau's lands would be impacted by the 100 m setback associated with the well proposed at the 9-13 location. Ms. Bordeleau took the position that this would hamper her current equestrian business operations and her future development plans for her business. She believed that her business and the associated activities on her lands would constitute designation as a public facility. The 100 m setback distance from a well to a surface improvement is outlined in Section 2.110 of the Oil and Gas Conservation Regulations.

7.1 Views of the Applicant

Bonterra was of the view that the existence of the well proposed at the 9-13 location and the required surface lease would not disturb Ms. Bordeleau's business or the quiet enjoyment of her land.

7.2 Views of the Intervener

Ms. Bordeleau testified that she derived her living as an independent horse trainer and acknowledged that her business was not registered as a formal company nor did she have any employees at this point. To date, she said she had an outdoor two-plank arena and holding pens

and fences. She also said that in the past year she had held three horse-training clinics on her land, giving lessons to groups of people and their horses.

Ms. Bordeleau was concerned that the existence of the well in the proposed 9-13 location would hamper her ability to develop her property for the purposes of expanding her horse training business. She felt that the 9-13 location would cause a surface development restriction on her land, given that her lands would be impacted by the 100 m setback associated with the 9-13 location. Ms. Bordeleau said that her future business development plans involved the construction of two outdoor arenas for riding lessons and the construction of a new barn that would have ten stalls for training horses. She noted that this new development would be built in a field to the northwest of her residence and it would be in line with the prevailing winds and downwind of the proposed well site. Ms. Bordeleau indicated that she did have some of the materials for a small arena, more corrals, and a new shelter, but conceded that she did not have the materials for her other development plans.

7.3 Views of the Board

The Board notes that in *Guide 56: Energy Development Application Guide* a public facility is defined as a public building such as a hospital, rural school, or a major recreational facility situated outside of an urban centre. For the purposes of applying the requirements of EUB *Interim Directive (ID) 97-6: Sour Well Licensing and Drilling Requirements*, it also includes other developments that the EUB, after consultation with appropriate interested parties, may designate as a public facility based on the complexity of the evacuation and taking into consideration the number of people using the facility and the frequency and duration of their use.

It is the Board's view that Ms. Bordeleau's current operation does not meet the definition of a public facility. A public facility would need to be open to the public, including a varied population that would be dependent on others for evacuation, and have a high frequency and long duration of use, including year-round activities.

However, the well would impose a setback on Ms. Bordeleau's land in terms of surface development. The conceptual future development plans described by Ms. Bordeleau include the construction of a new horse barn, arenas, shelters, and corrals on her lands northwest of her residence. She was concerned these plans may be impeded by approximately 75 m of her land involved in the setback from the 9-13 location. EUB policy adopts Section 10 (1) of Part 2 of the Municipal Government Act, Subdivision and Development Regulations (AR 212/95), which states that unless the building is an occupied dwelling in which a person or persons are in the dwelling over a 24-hour period, encroachment rules do not apply. A relaxation may be considered by the planning authorities in conjunction with the EUB and the licensee in accordance with the local municipal district's land-use planning guidelines.

8 RELATIONSHIP BETWEEN THE PARTIES

Ms. Bordeleau and Bonterra candidly admit that their relationship has been strained as a result of past history and miscommunication. This surrounds an accidental break on a pipeline operated

by Bonterra that spilled produced water on Ms. Bordeleau's land on June 14, 2001, and the subsequent events surrounding her attempts to notify Bonterra and her inability to reach Bonterra personnel at their emergency numbers. This has been compounded by her experience in attempting to deal with Bonterra in regard to this application.

8.1 Views of the Applicant

Bonterra did not dispute that the pipeline break occurred. However, Bonterra stated that it needed to receive reports on soil testing from an independent contractor in order to clean up the site in an appropriate manner. The applicant stated that it wanted to do another pipeline cleanup operation in conjunction with Ms. Bordeleau's and would have had to wait until the crop had been removed from the land in order to minimize impact on the neighbouring farming operation. The soil had been treated with calcium and the second step was to remove the contaminated soil. When asked if the applicant would fence the contaminated area, the applicant initially stated that it did not feel that was necessary.

With regard to the past history, Bonterra said it had remedied the apparent inadequacies in its emergency response system. It noted that its emergency number was now manned by Bonterra personnel and it had proceeded with the remediation of the area affected by the spill, as directed by Alberta Environment and upon the advice of its experts. As well, the remediation was timed to accommodate the land usage, such as the removal of crops.

Bonterra further acknowledged that it should have consulted with Ms. Bordeleau prior to the hearing with respect to its corporate emergency response plan (ERP) and had committed to reviewing the plan with her in the future.

8.2 Views of the Intervener

Ms. Bordeleau was extremely concerned by the fact that Bonterra had not detected the problem with its pipeline in the first place. Her concern was compounded by her inability to contact any Bonterra personnel when she called the emergency numbers given to her by Bonterra, and she expressed surprise at the rude treatment she received from the individuals who answered her calls.

Following the spill, the intervener waited several months before she was informed of soil testing results or cleanup recommendations. She waited over a year to receive a spill report from the independent contractor hired by Bonterra. In the meantime, Ms. Bordeleau noted that one of her colts was in the area of the spill and had gotten sick and failed to gain weight. The colt was examined by a veterinarian, who was unable to identify the problem, costing the intervener about \$500 in veterinarian fees. Ms. Bordeleau said that she then requested that the spill site be fenced to avoid any further damage to her animals. She was told on several occasions by the company president that "it was not necessary." Consequently, the spill area was not fenced until recently. The intervener was not satisfied with the cleanup efforts and claimed that the applicant's answer seemed to be that "the solution to pollution is dilution" by leaving the problem to take care of itself.

Ms. Bordeleau expressed concern over the delays in remediation and the reluctance of Bonterra

to fence the affected area in a timely manner. She indicated that she had never been advised of Bonterra's corporate ERP and found many of Bonterra's land agents difficult to deal with.

Ms. Bordeleau felt her trust in the applicant could be repaired if Bonterra would

- clean up the pipeline spill in an expeditious manner;
- sit down with her and carefully review its corporate ERP; and
- treat her with respect and not be presumptuous as to what was best for her son.

8.3 Views of the Board

Regarding the pipeline spill incident, the Board notes that it was reported to the Drayton Valley EUB Field Centre and the concern over the apparent failure of the emergency numbers was investigated. The Board notes that actions have been taken by Bonterra to rectify the emergency number situation, and the Board feels that this matter has been properly addressed.

With regard to the pipeline spill, the Board notes Bonterra's commitment to complete the pipeline spill cleanup and remediation on Ms. Bordeleau's land as per Alberta Environment's requirements. Additionally, the Board further notes that Alberta Environment is the governing body responsible for reclamation and remediation practices, and it is the Board's expectation that Bonterra will continue to consult with Alberta Environment in this regard.

Regarding ERPs, it is the Board's expectation that industry adhere to *Interim Directive (ID) 91-2: Corporate-Level Emergency Response Plans*. The Board wishes to emphasize the need to prepare for effective and timely communication among the company, the public, and the media during an emergency, as any event may attract considerable attention. In these communications, accuracy of information and properly trained personnel are paramount. Section 6.020 of the Oil and Gas Conservation Regulations clearly states that the company name, legal land description, and telephone number of the licensee or operator must be identified on the signage on the facility site. With that regulation comes the expectation that the emergency phone number listed is answered by the company representative, who will follow previously established protocol for directing and dealing with public concerns.

While the Board does not require corporate ERPs to be filed routinely, it does require that all energy companies develop and be prepared to implement a corporate level ERP. The plan must outline the procedures that would be implemented should an incident take place that could have the potential for negative impacts on the public or the environment. One of the key elements that are required to be addressed is appropriate public protection measures that would be taken at each level of emergency. This includes a description of procedures that are established to contact and maintain communications with directly impacted members of the public in order to keep them informed about the situation. Given the broad scope of a corporate ERP, the Board suggests that the parties focus on the public protection measures, as outlined in the plan, and relate that information to this application. Therefore, given the intervener's concerns, the Board notes Bonterra's commitment to provide Ms. Bordeleau with a copy of its corporate ERP and to discuss it with her.

9 CONCLUSION

The Board concludes that Application No. 1259219 for a licence to drill a sweet gas well is in the public interest. The Board believes that there is a need for the well and that the proposed surface location is acceptable. The Board also accepts that the project's impacts have been satisfactorily addressed and that the well can be drilled and produced safely. The Board acknowledges that Bonterra made commitments with respect to its project, which are listed in the appendix.

DATED at Calgary, Alberta, on January 24, 2003.

ALBERTA ENERGY AND UTILITIES BOARD

[Original signed by]

T. M. McGee
Presiding Board Member

[Original signed by]

J. I. Douglas, FCA
Board Member

[Original signed by]

J. B. Railton, Ph.D., P.Biol.
Acting Board Member

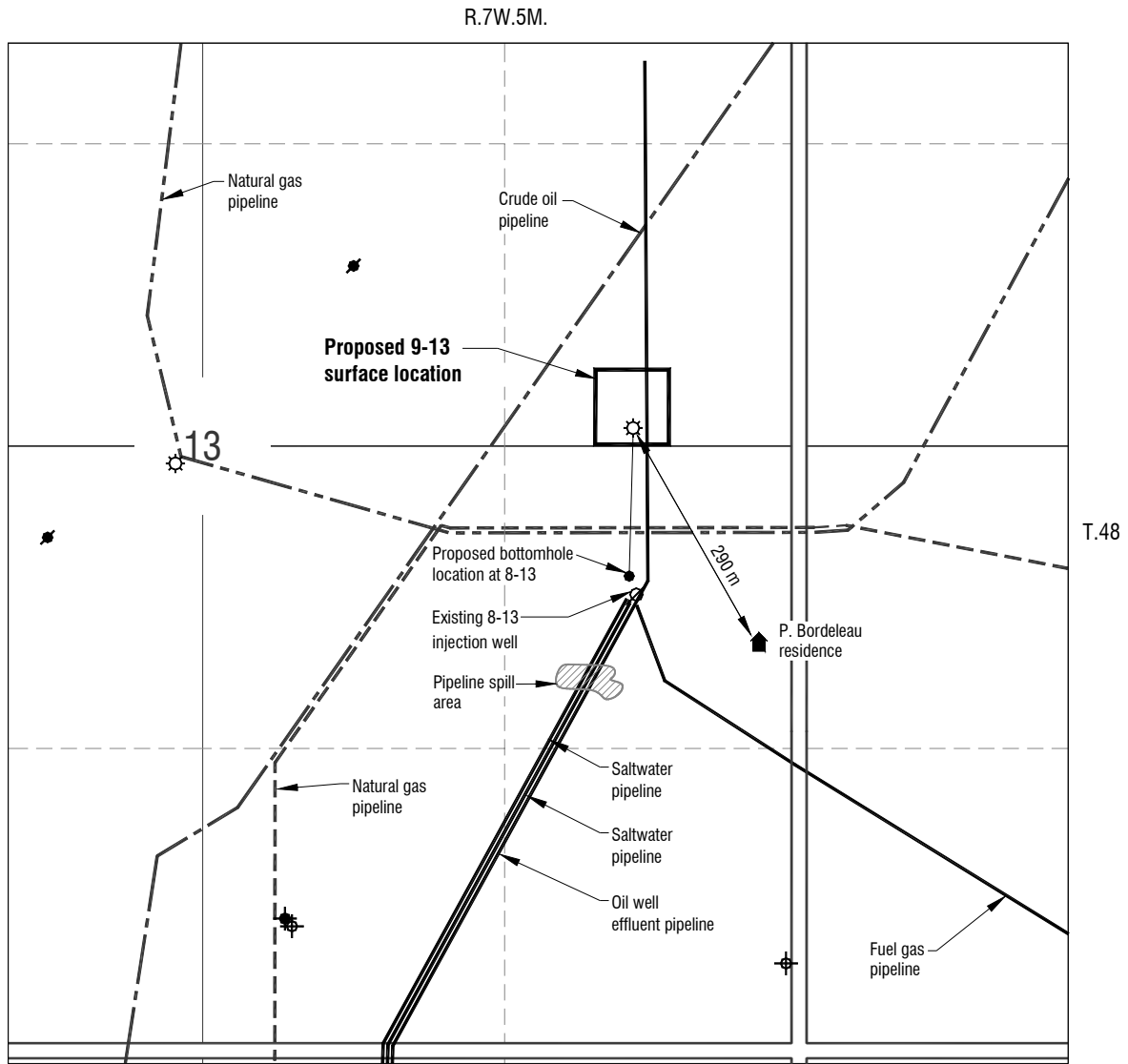
APPENDIX— COMMITMENTS MADE BY BONTERRA ENERGY CORP.

The Board notes that throughout the proceeding, Bonterra undertook to conduct certain activities in connection with its project that are not strictly required by the EUB's regulations.

Bonterra made the following commitments in its submissions to the hearing:

- Bonterra will provide a motel or hotel room for Ms. Bordeleau and her family during the construction and drilling phases and provide payment for all reasonable expenses during that time.
- Bonterra will use additional cement to ensure complete cement returns on both the surface casing and the production casing during the drilling phase.
- Bonterra will test Ms. Bordeleau's water wells for quality and quantity using an independent contractor prior to drilling the well at the 9-13 location.
- Bonterra will provide Ms. Bordeleau with its corporate ERP and discuss it with her.
- Bonterra will maintain a 10 m high and 5 m wide tree buffer between the 9-13 location and Ms. Bordeleau's land.
- Bonterra will in-line test the well at the 9-13 location with no gas flaring.
- Bonterra will complete the pipeline spill cleanup and remediation on Ms. Bordeleau's land in accordance with Alberta Environment's requirements.

It is the Board's view that when companies make commitments of this nature, they have satisfied themselves that the activities will benefit both the project and the public, and the Board takes these commitments into account when arriving at its decision. The Board expects an applicant, having made the commitments, to fully carry out the commitments or advise the Board if, for whatever reasons, it cannot fulfill a commitment. It is at that time the Board will assess whether the circumstances of the failed commitments may be sufficient to trigger a review of the original licence. Affected parties also have the right to request a review of the original licence if commitments made by the applicant remain unfulfilled.



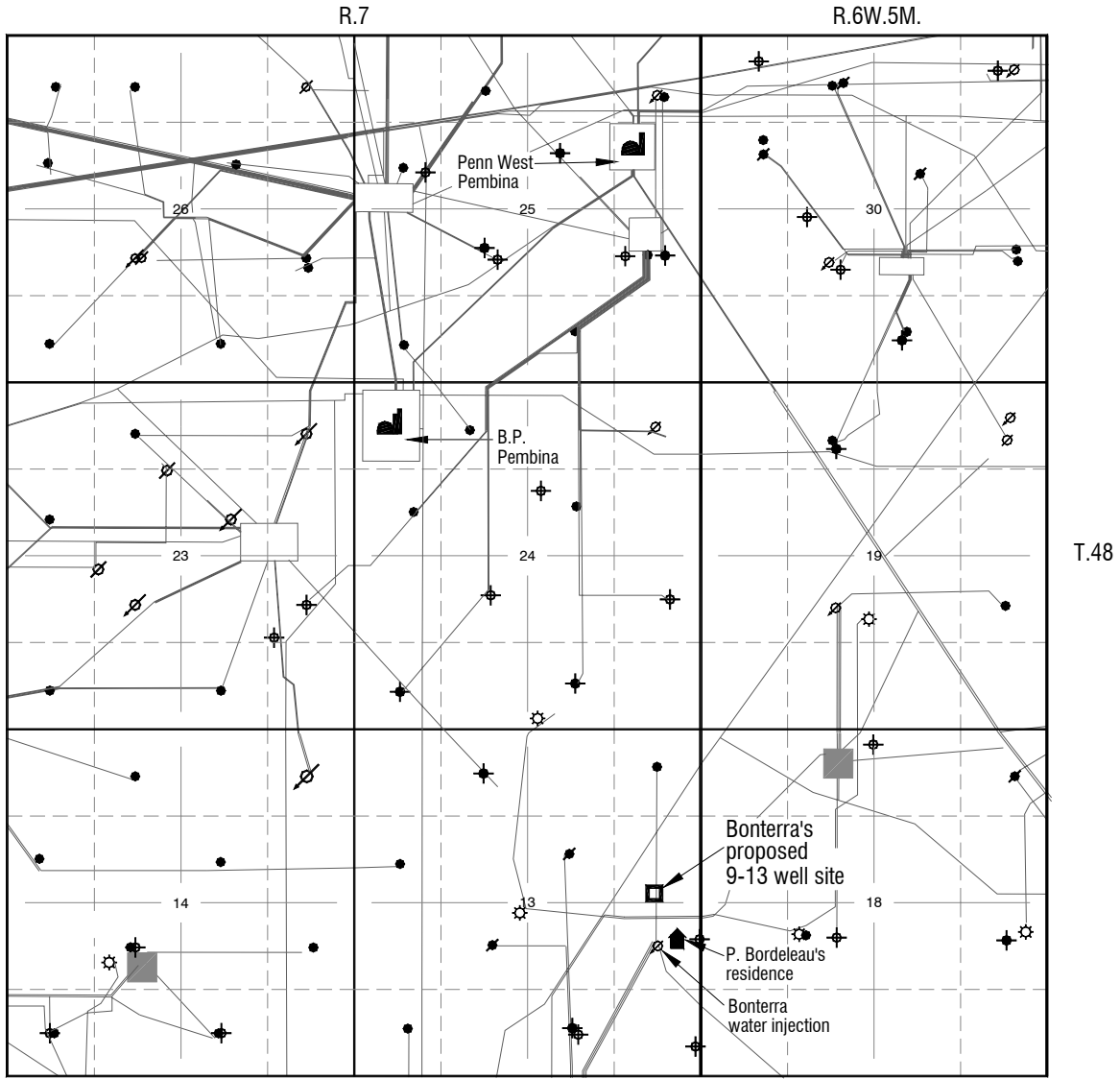
Legend

- | | |
|--|----------------------|
| — Bonterra Energy Corp. pipelines | ⊗ Injection well |
| - - - Pembina Pipeline Corp. pipelines | ⊙ Gas well |
| - - - Elkpoint Resources pipeline | ⊙ Suspended oil well |
| - - - Viking Energy Acquisitions Ltd. | ⊙ Abandoned oil well |
| | ⊙ Abandoned well |
| | ⊙ Residence |

NTS

Figure 1. Location of Proposed Well
 Application No. 1259219
 Bonterra Energy Corp.

Decision 2003-008



Legend

- | | | | |
|---|--------------------|---|------------------------------|
| ∅ | Injection well | — | Existing pipelines |
| ⊗ | Gas well | 🏠 | Residence |
| ⊘ | Suspended well | 🏭 | Existing fractionation plant |
| ● | Oil well | 🏭 | Existing gas plant |
| ⊕ | Abandoned oil well | | |
| ⊕ | Abandoned well | | |

NTS

Figure 2. Location of Proposed Well and Existing Area Development
 Application No. 1259219
 Bonterra Energy Corp.

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