

**BELAIR ENERGY CORPORATION  
APPLICATION FOR A WELL LICENCE  
LOCHEND FIELD**

**Decision 2003-057  
Application No. 1275405**

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**1 DECISION**

Having carefully considered all of the evidence, the Alberta Energy and Utilities Board (EUB/Board) hereby approves Application No. 1275405.

**2 INTRODUCTION**

**2.1 Application No. 1275405**

BelAir Energy Corporation (BelAir) applied to the Board, pursuant to Section 2.020 of the Oil and Gas Conservation Regulations, for a licence to drill a vertical well at a surface location in Legal Subdivision (LSD) 2, Section 29, Township 29, Range 3 West of the 5th Meridian (2-29 location). The purpose of the proposed well is to obtain sour gas production from the Elkton-Shunda Formation. BelAir's calculated emergency planning zone (EPZ) radius of 1.4 kilometres (km) for the well is based on a drilling release rate of 0.481 cubic metres per second ( $m^3/s$ ) and a maximum hydrogen sulphide ( $H_2S$ ) content of 39 moles per kilomole (mol/kmol) (3.9 per cent). The nearest urban centre is Cremona, 8 km northwest of the proposed well location.

**2.2 Interventions**

The area landowners who submitted interventions to Application No. 1275405 and their proximity to the proposed well at the 2-29 location are Mr. Trent Soper, landowner of a 40 acre parcel of land in the northeast (NE) 20-29-3W5M, with his residence located approximately 760 m from the proposed well; Mark and Shelia Kasepchuk, landowners of a 10 acre parcel of land in the NE 20-29-3W5M, with their residence located approximately 1100 m from the proposed well; and Mike and Dale (Edith) Stoesser, landowners of a 6 acre parcel in the southeast (SE) 28-29-3W5M, with their residence located approximately 1600 m from the proposed well. Mr. Soper and the Kasepchuks are within the EPZ and the Stoessers are outside of the EPZ but within the emergency awareness zone (EAZ).

These area landowners (the interveners) submitted their objections to Application No. 1275405 as a group, and their concerns regarding the proposed well at the 2-29 location are generalized as follows: health and safety; emissions ( $H_2S$  and sulphur dioxide [ $SO_2$ ]); animal evacuation and compensation for animal losses; environmental impacts to birds, fish, wildlife, and the habitat of Dogpound Creek; use and enjoyment of property; visual impacts; property value; future subdivision planning; contamination and depletion of aquifer; dust; noise; traffic; and future oil and gas development.

Mr. and Mrs. Kasepchuk and Mr. Soper had concerns regarding the emergency response plan (ERP) for the proposed well at the 2-29 location. The Kasepchuks live at the end of a dead-end road, and in the case of an emergency at the 2-29 location, they would need to evacuate towards the well for a relatively short distance. Mr. Soper indicated that he has chronic asthma and therefore he may not be able to evacuate on his own and may require medical assistance in the event of an emergency.

Although the interveners were not in favour of a well licence approval, they stated that if the Board decided to approve the application, the interveners would want the Board to place certain conditions on the well licence in addition to the commitments made by BelAir. The conditions requested by the interveners are found throughout this document.

Additional statements were made by other area landowners at the hearing; however, direct evidence was not provided, and these landowners did not cross-examine the applicant or make closing statements. A statement was given by Mrs. Reid, a landowner within the EPZ. Statements were also given by landowners within the EAZ: Ms. Galowitz, Mr. Tatomir, and Ms. Van Arnam, who spoke on behalf of her parents. All statements are in the transcripts for this proceeding. Copies may be viewed through Information Services at the Alberta Energy and Utilities Board's Calgary office.

### 2.3 Hearing

The application and interventions were considered at a public hearing in Cremona, Alberta, on April 22-24, 2003, before Board Members T. M. McGee (Presiding Member), G. J. Miller, and R. G. Lock, P.Eng.

The Board panel and staff viewed the site and the general area of the proposed well at the 2-29 location on April 22, 2003, prior to the hearing. The attached map illustrates the location of the proposed well, existing golf course development, and the residences of interveners that participated in the hearing, along with the residences and lands of the landowners who made statements at the hearing. Those who appeared at the hearing are set out in the table below.

#### **THOSE WHO APPEARED AT THE HEARING**

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Principals and Representatives  
(Abbreviations Used in Report)

Witnesses

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BelAir Energy Corporation (BelAir)  
L. H. Olthafer  
R. Liam

A. Burnett  
J. Charuk  
S. Smithinsky, P.Eng.  
K. B. Strom,  
of AXYS Environmental Consulting Ltd.  
D. V. Janko,  
of Kermod Environmental Services Ltd.  
D. Milne,  
of United Resources Safety Ltd.

(continued)

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## **THOSE WHO APPEARED AT THE HEARING (continued)**

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### Principals and Representatives (Abbreviations Used in Report)

### Witnesses

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Interveners  
G. Fitch

M. Kasepchuk  
S. Kasepchuk  
T. Soper  
M. Stoesser  
D. Stoesser  
R. Wrigley,  
of Brown & Associates Planning Group  
A. Holcroft Weerstra, P.Biol.,  
of Biota Consultants  
K. Brewin,  
of Trutta Environments and Management

Landowner statements

J. Van Arnam  
M. Galowitz  
J. Tatomir  
S. Reid

Alberta Energy and Utilities Board staff  
R. McKee, Board Counsel  
D. Schafer  
K. Giesbrecht, C.E.T.  
S. Etifier  
P. Geis, P.Geol.  
K. Geekie

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### **3 ISSUES**

The Board considers the issues respecting this application to be

- need for the well
- well location
- environmental concerns
- impacts: use, enjoyment, property value
- ERP – health and public safety
- water well issues
- consultation and future development
- sale of the company

### **4 NEED FOR THE WELL**

BelAir proposed to drill a vertical well reaching a total depth of about 2780 m targeting the Mississippian age Elkton Formation for the purpose of sour gas production. The H<sub>2</sub>S content of

the gas is expected to be less than 39 mol/kmol, or 3.9 per cent. The well would terminate in the Shunda Formation.

#### **4.1 Views of the Applicant**

BelAir said it had obtained the Crown mineral rights for the intended purpose of the well. The geological information indicated that the zone of interest could be targeted from the surface location in LSD 2-29-29-3W5M. BelAir estimated that the gas reserves for the proposed well would range from 2.9 billion cubic feet (Bcf) to 15.8 Bcf (81.7 million  $[10^6]$  m<sup>3</sup> to 445.1  $10^6$  m<sup>3</sup>). BelAir anticipated an initial production rate of between 2 million cubic feet per day (mmcf/d) and 10 mmcf/d, or 56.6 thousand  $[10^3]$  m<sup>3</sup>/d to 283  $10^3$  m<sup>3</sup>/d, for the proposed well.

#### **4.2 Views of the Interveners**

The interveners did not dispute BelAir's geological interpretation supporting the need for the well at the applied-for bottomhole location. They did, however, oppose the well based on its surface location.

#### **4.3 Views of the Board**

The Board accepts that there is a need for the well to allow BelAir an opportunity to exploit the mineral rights it holds. Additionally, the Board notes that no evidence was presented disputing BelAir's interpretation of the geology.

### **5 WELL LOCATION**

BelAir selected the well's surface location based on its interpretation of the geological information, costs, and minimal environmental impact. During consultation, Mr. Soper had suggested two alternative locations, a location 500 m to the north-northwest of the proposed well in LSD 6-29-29-3W5M (6-29 location) and a location 800 m west of the proposed well in LSD 4-29-29-3W5M (4-29 location).

Many of the interveners indicated that they had chosen their land based on the absence of oil and gas development. As such, the proposed surface location of the well has raised many issues with the interveners that are expanded on later in this report.

#### **5.1 Views of the Applicant**

BelAir indicated that the primary purpose of the proposed well was to explore for gas trapped within an erosional-trap-style, 3D seismically defined Elkton outlier. BelAir decided that a vertical well would be the most effective method of targeting this type of reservoir. Based on the interpretation of the 3D seismic data, BelAir's structure map supported the 2-29 location as the ideal position to target the highest structural location within the subject Elkton outlier.

With respect to the two alternative surface locations proposed by Mr. Soper at 4-29 and in 6-29, BelAir indicated that drilling a directional well from the 4-29 location to the 2-29 bottomhole would present drilling difficulties, as the wellbore would need to pass through a fault and need to

be deviated 800 m. For those reasons, BelAir said the 4-29 location was not an option.

In reference to the 6-29 location, BelAir initially believed this location would present drilling difficulties as well. However, upon further review, BelAir concluded that there was no apparent fault between the 6-29 location and the 2-29 bottomhole location. It would, therefore, be technically possible to drill an S-bend well from the 6-29 surface location to the 2-29 target, entering the Elkton-Shunda Formation vertically. BelAir indicated that a well drilled from the 6-29 location would increase the cost of the well by about 30 per cent, cause the EPZ to change, encompassing three new residences and part of a golf course, and introduce additional challenges regarding evacuation.

BelAir pointed out that the 6-29 surface location would not be hidden from view by a grove of trees. Furthermore, the 6-29 surface location would present additional impacts, as a longer access road would need to be built and there were natural springs in the treed area which would be in close proximity to that location. BelAir also stated that wildlife in the treed area could be affected by the 6-29 location and, as such, the 2-29 location would be superior, as the area had already been previously disturbed by agricultural activities.

## **5.2 Views of the Interveners**

Mr. Soper indicated that he was initially told that it was not technically feasible to drill a deviated well from the 4-29 or 6-29 locations to the 2-29 bottomhole location.

The interveners stated that they had received an update by BelAir a few weeks prior to the hearing indicating that the well could technically be drilled from the 6-29 surface location. However, it also stated that this would be more expensive and would shift the EPZ to include three additional residences and a part of the Tooth of the Dogpound Golf Course, and therefore would not be a more suitable location. The interveners expressed disappointment in that BelAir appeared to base its decision on costs and convenience rather than trying to address their concerns directly.

The interveners did not comment on the additional impacts that may have been associated with the 6-29 location with respect to wildlife within the treed area or the natural springs. They did, however, mention that a well at the 6-29 location would be farther from the Dogpound Creek than the 2-29 location.

## **5.3 Views of the Board**

The Board accepts BelAir's decision to disregard the 4-29 location, noting difficulties related to the drilling of a well through a fault in conjunction with the difficulty of drilling a well with a 800 m deviation.

The Board acknowledges the differing views brought forth by both parties in terms of impact. The Board notes that the 6-29 location may offer a slight advantage with respect to the aesthetics from the interveners' residences' line of sight; however, this benefit must be weighed against the additional impact.

The Board notes that the 2-29 location is on previously disturbed land. By comparison, the Board acknowledges that the 6-29 location would impose additional impacts, such as a longer

access road and potential sensory and physical disturbance to the wildlife, wildlife habitat, and natural springs within a treed area adjacent to the alternative site.

The Board considered the evidence and has concluded that the impacts presented by the 6-29 location would be greater than the impacts of the 2-29 location. The additional cost of the well and the change in the EPZ were not factors affecting the Board's decision on this matter.

## **6 ENVIRONMENTAL CONCERNS**

There was significant discussion surrounding the balance between the mineral rights holders and the surface landowners with respect to environmental protection. The interveners' concerns were based on the protection and preservation of the area's wildlife and wildlife habitat, including the Dogpound Creek. The interveners were quite concerned regarding aesthetics. At the time of the proceeding, the area appeared to be visibly free of oil and gas development from the position of the interveners' homes.

### **6.1 Views of the Applicant**

In response to interveners' concerns, BelAir hired a third-party consultant, ISM Integrated Site Management Corporation (ISM), to perform a presite assessment of the area and prepare a report. A large number of bird, fish, and wildlife species were identified in this report. A particular bird species, the Sprague's pipit, a provincial "Species of Special Concern," was identified in the area. ISM noted that a singing male Sprague's pipit was spotted within 200 m and 500 m of the proposed well site, an indication of it setting up to defend a nest site or part of its mating behaviour.

BelAir stated that it would observe the Alberta Sustainable Resource Development (SRD) avoidance zones specific to the Sprague's pipit and restrict drilling outside of the May 15 to July 15 time frame if a Sprague's pipit's nest was found within a 100 m radius of the proposed well. This was a requirement stated in the ISM report and is consistent with SRD guidelines.

BelAir committed to the completion of a third-party preclearing wildlife assessment, if the well were approved, to identify important wildlife and nesting areas that require the observance of appropriate avoidance zones prior to proceeding with drilling operations. Avoidance of "fly-bys" or seasonal use species would not be observed.

Additional environmental issues were brought forth, such as land spreading and the potential disturbance of the Dogpound Creek from a future pipeline. BelAir stated that it planned to land spread the drilling materials in accordance with EUB *Guide 50: Drilling Waste Management*, giving the landowner of the 2-29 location the first opportunity to accept the materials for spreading. BelAir also committed to having a qualified environmental specialist on site on an as-needed basis for environmental protection and mitigation measures. As for the pipeline, the conceptual development plan offered as part of BelAir's submission proposed the routing to cross Dogpound Creek. As a precaution to minimize the physical disturbance, BelAir proposed to install the pipeline using the horizontal directional drill (HDD) method, if technically feasible, under the riparian zone (the area of or on a riverbank) to reduce disturbance or potential damage to the Dogpound Creek.

In response to intervenor concerns respecting the time spent on the one-day site visit for the ISM report, BelAir defended the ISM report stating that the number of species identified during that time period was substantial. Additionally, BelAir, understanding the interveners' concerns for wildlife losses in the event of a spill or gas release, indicated that they would attempt to prevent losses by following mitigative measures listed in the ISM report.

BelAir took issue with portions of the interveners' Terrestrial Wildlife Assessment report completed by Biota Consultants. BelAir questioned Biota Consultants' reasoning for using avoidance zone recommendations from the Scobie and Faminow 2000 report commissioned by Environment Canada's Canadian Wildlife Service, rather than the regulations specific to Alberta. BelAir felt that the SRD guidelines would be better suited to the type of climate and terrain found in Alberta, as the Biota report's restrictions were broad based and may not have taken into account conditions or breeding time frames specific to the western provinces.

## **6.2 Views of the Interveners**

The interveners considered the Dogpound Creek to be a pristine area, and the natural surroundings were an issue of great importance to them. As part of their submission, the interveners commissioned the Biota report to obtain information on the area's wildlife and provide an expert's opinion on the ISM report. The Biota report identified the Sprague's pipit, which was considered sensitive and threatened under guidelines set out by SRD and by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) respectively, as potentially having a nest between 200 m and 500 m from the proposed well site.

The Biota report suggested that a large number of species of bird, fish, and wildlife occupied the general area within a 10 km radius of the Dogpound Creek. Biota Consultants stated that it compiled the information for the Biota report based on ISM's presite assessment report, Mr. Soper's observations, government databases, and a site visit performed on April 1, 2003.

The interveners supported BelAir's commitment to complete a preclearing wildlife assessment prior to drilling. However, they stated that they would like the avoidance zones to be extended to restrict drilling outside of the April 21 – August 31 time frame if a Sprague's pipit nest were found within a 200 m radius of the proposed well. This recommendation had been made by the Biota report and was supported by a Scobie and Faminow 2000 report. The interveners suggested that if the application is approved, a condition of the licence be that a preclearance wildlife assessment be conducted by a third party for a period of one week. The interveners also suggested as part of that condition that they be consulted when BelAir select the third-party contractor.

The interveners expressed concern regarding the potential losses to the Dogpound Creek's wildlife and their habitat should an accidental gas release or spill occur. The interveners questioned BelAir's ability to assess such losses and remained sceptical about how impacts would be mitigated.

The interveners were also very concerned about potential contamination of the Dogpound Creek from a torrential rainfall and runoff if the drilling mud were land spread in the area surrounding the Dogpound Creek. The interveners were against land spreading the drilling mud near the Dogpound Creek.

The interveners expressed concerns about the protection of the species of fish in the Dogpound Creek and they noted the fly-fishing that occurred in the area. The interveners stated that they would have liked confirmation that the future pipeline would be installed using the HDD method under the Dogpound Creek and beyond the riparian zone, as the stream was a popular fly-fishing area and a spawning area for brown trout. They recommended this as a well licence condition if the Board approved the application.

### **6.3 Views of the Board**

The Board acknowledges BelAir's commitment to have a qualified third-party contractor conduct an environmental preclearing wildlife assessment to be done under optimal weather conditions and timed to ensure that the vast majority of bird species present are observed. The Board notes that the preclearing assessment would be the appropriate action to take in order to identify the species in the area that require specific avoidance zones and restricted drilling dates.

The Board considers *Guide 50* as the normal requirement to be followed for disposal of drilling fluids. However, all guidelines cannot consider all possible scenarios where unique circumstances might require variance from those guidelines. In this instance, the Board considers the Dogpound Creek to have unique attributes that deserve extra consideration. Accordingly, the Board requires that BelAir follow its own consultant's mitigation recommendations found in the ISM report, specifically, the use of benign drilling fluids, a closed mud circulation system, and the disposal of all drilling fluids at an approved facility, in accordance with *Guide 50*.

In addition, as under "Mitigation Recommendations—Vegetation Communities" of the ISM report, the Board expects BelAir to follow the recommendation to ensure that all construction vehicles and equipment used to construct and reclaim the surface lease will arrive on site clean and free of dirt and vegetative material. The Board directs BelAir to develop and submit details of its program to ensure that the above-mentioned issues are addressed.

The Board notes that although a pipeline application was not heard, should the well be successful, the Board would expect BelAir to honor its commitment to use the HDD method underneath the Dogpound Creek for the pipeline installation to reduce environmental impacts. If it were determined that HDD would not be technically feasible, BelAir would be required to provide an explanation in its pipeline application as to why it could not be done.

## **7 IMPACTS: USE, ENJOYMENT, PROPERTY VALUE**

In this section, the topics of aesthetics, property value, future development plans by the interveners, and general use and enjoyment of the interveners' land were raised.

## **7.1 Views of the Applicant**

BelAir submitted that there was no evidence suggesting that the well would in any way decrease the value of the properties owned by the interveners. However, BelAir suggested that the existence of a well generally increased the value of land upon which it was situated by providing revenue from the oil and gas development.

With respect to the aesthetic concerns expressed by the interveners, BelAir committed to reduce the visual impact of the well site from view by the use of trees and berms or by the construction of faux farm buildings to house the well and surrounding equipment. BelAir explained that these buildings would have a false front and sides of a barn or farmhouse to create an image of a normal farmland type setting. BelAir expressed a preference to use the buildings to mask the well site equipment, as they were concerned with the upkeep of trees that would be necessary if the trees were used to screen the well site. BelAir committed, however, to go with the interveners' preferred option of planting coniferous trees.

In order to minimize dust and noise, BelAir stated that it would commit to accessing the well site from the nearest main road to the west and to add noise suppression measures as required during the drilling operations.

BelAir stated that it understood the future plans described by both Mr. Soper and the Kasepchucks for subdivision and development, but noted that neither party had taken any concrete steps to move their plans forward. As well, BelAir submitted that the evidence provided by the interveners' expert from Brown & Associates Planning Group (Brown & Associates), both at the hearing and within the Brown & Associates report entitled "Subdivision Potential of Lands in the County of Mountainview, Northeast Quarter of Section 20-29-3-W5M," simply dealt with the probability of obtaining rezoning should such applications be made prior to oil and gas development. However, BelAir said that the Brown report offered no opinion on the effect the proposed well might have on a subdivision application.

In regard to the use and enjoyment of the Dogpound Creek area, BelAir stated that it was confident that none of the proposed activities would have a deleterious effect on the natural setting of the creek and surrounding area. While it acknowledged that a pipeline would be dealt with by way of a future application, BelAir committed that any future pipeline would be installed in a way that would be least intrusive to the creek.

## **7.2 Views of the Intervenors**

The Stoessers expressed their concerns that the proposed well would threaten them, their children, and their grandchildren's use and enjoyment of the unspoiled wilderness of the Dogpound Creek and surrounding area. Mr. Stoesser testified that he felt fortunate to have been given the opportunity six years ago by his son to purchase an acreage in this area. He spoke of his regular walks through the unspoiled wilderness of the creek area and the various birds and other animals that live there. He expressed his fear that the existence of this well would ruin both the natural environment and make it hard for him to feel safe while enjoying the natural beauty of the area.

The Kasepchucks described their search that led them to their “one of a kind” property. They made it clear that one of the main criteria that attracted them to the area was the visible absence of oil and gas development. They said that in the future it was their desire to develop a bed-and-breakfast house and a fly-fishing camp on their property. They expressed fear that these plans may be threatened by the oil and gas development both by making the necessary rezoning impossible and the area less attractive for future potential guests. In their view, the proposed project would diminish their enjoyment of their property by removing the security they felt when using the creek for swimming, skating, or picnicking in the valley. They were concerned that the view from their home would also be impacted by the ever-present well site clearly visible from their window and deck.

The Kasepchucks believed that the well, if approved, would result in a decline in the value of their property.

In considering possible mitigation of their concerns regarding the spoiling of their view, the Kasepchucks expressed a preference for the planting of coniferous trees rather than construction of buildings to hide the well site equipment. The interveners suggested that BelAir be required to plant mature coniferous trees as a condition of the well licence, if approved, in order to mitigate visual impacts. The interveners also voiced concerns regarding the additional traffic and noise during the drilling of the well affecting their use and enjoyment of the area.

Mr. Soper described in detail the search that led him to purchase his lands in the Dogpound area. He said he spent a great deal of time waiting to find an undisturbed wilderness area far removed from oil and gas development and, in locating his property, he believed he had found a place where he could eventually retire and which he could enjoy for the foreseeable future. He described his enjoyment of the wildlife that frequented the area, his many years as a fly fisherman, and his hobby of horse breeding, all of which he believed would be threatened by the proposed well.

Mr. Soper made it clear that his greatest concern was with his own health and what effects the drilling and well operations might have on his asthma. Mr. Soper said that he had been under a physician’s care for asthma for a number of years but as yet had not identified the “triggers” responsible for his asthma attacks. Mr. Soper did not provide evidence as to whether he would be sensitive to any emissions that might be associated with a well. The interveners recommended, as a condition of the licence if approved, that BelAir should not vent any gas regardless of the H<sub>2</sub>S content.

Like the Kasepchucks, Mr. Soper said he had future plans for the rezoning and subdivision of his property. He stated that he intended to build another residence on a separate acreage taken from his property for the purpose of resale. Mr. Soper relied on the expert evidence of Brown & Associates, as described below. Mr. Soper acknowledged that he had taken no steps to further his plan and admitted that it was in the future. He stated that he was concerned about the diminution of property values and the spoiling of the view from his home. He also indicated he preferred the use of trees to hide the well site and rejected the concerns of BelAir regarding the upkeep of trees, stating that in a conversation with a nursery, he was advised that mature coniferous trees would not require permanent irrigation and would only have to be watered for a short period of time after planting. Mr. Soper expressed concern that future pipeline routes would seriously jeopardize the riparian zone of the Dogpound Creek.

Expert evidence was presented by Brown & Associates that both the Kasepchucks and Mr. Soper stood an excellent chance of obtaining the necessary rezoning and subdivision approval from the Municipal Division of Mountainview (MD) to facilitate their plans for future development. Brown & Associates indicated that its opinion was only in relation to the property as it currently existed and expressed no opinion as to any effect that the proposed well may have on the Kasepchucks' chances for rezoning, other than to note that the proximity to a sour gas facility was a factor the MD may take into consideration. Mr. Kasepchuck admitted that he had taken no steps towards the realization of their plan and that it was not their intention to proceed in the near future.

In final submissions, counsel for the interveners conceded that the concerns of his clients with respect to loss of enjoyment, property values, etc., were not in and of themselves sufficient to require the Board to deny this application but should be taken into consideration by the Board in the context of the numerous other aspects of the interveners' objections.

### **7.3 Views of the Board**

The Board acknowledges that all of the interveners have a strong emotional attachment to their land and that they are understandably concerned that it not be disturbed and they be allowed the freedom to enjoy the area's natural amenities in the future as they have in the past. The Board is satisfied that this can be achieved by adoption of the commitments made by BelAir throughout the hearing process, as listed in Appendix 2.

In regard to the loss of property value, the Board heard no evidence at this proceeding from which it could conclude that property values would be diminished by approval of the application. Similarly, there is no evidence to support the argument that the existence of the proposed well would prevent the necessary rezoning and subdivision required by the Kasepchucks and Mr. Soper should they proceed with their plans in the future.

The Board notes that the concerns expressed respecting the visual impact of the well site would seem to be resolvable by BelAir's commitment to plant coniferous trees of sufficient size and number to screen the well site from the view of the interveners. Should the well be successful, the Board directs that the trees are to be planted within one year of the well being cased for production. The Board suggests that BelAir contact a local nursery or landscaper to design and install an appropriately hardy vegetative screen for the 2-29 well site.

The Board acknowledges BelAir's commitment to use a mobile incinerator as a mitigative measure to control emissions for the drilling and completion of the well. The Board also notes BelAir's commitment to install a closed system for any future production operations and to meet any of its instrument or fuel gas requirements with sweet gas from the local gas co-op, regardless of the H<sub>2</sub>S content of the gas from the 2-29 well.

Many of the interveners' concerns regarding the future use of the Dogpound Creek area are more directly related to a potential pipeline route. Although a pipeline application is not linked to the subject well application, the Board notes BelAir's commitment to install the pipeline using the HDD method if technically feasible, thereby avoiding disturbance to the Dogpound Creek and its riparian zone.

## 8 ERP—HEALTH AND PUBLIC SAFETY

### 8.1 Views of the Applicant

BelAir developed a site-specific ERP for the proposed well at the 2-29 location and based its EPZ of 1.4 km on a cumulative release rate of 0.481 m<sup>3</sup>/s. To further mitigate the perceived risks to the interveners, BelAir stated that it was prepared to go beyond current emergency response planning requirements. Given that an ERP is a living document, BelAir recognized that during the normal course of actions, the ERP would be updated well in advance of commencement of operations. BelAir stated that the updates would include verification of emergency phone numbers for the public, as well as any internal and external service providers. In addition, BelAir said it would ensure that any commitments made to the public and conditions that may be levied by the Board were executed prior to any operations taking place.

BelAir stated that while the requirement of EUB *Guide 56: Energy Development Applications and Schedules* was only to consult members of the public within its calculated EPZ, it did in some cases exceed that requirement. BelAir's ERP expert contacted residents within and immediately adjacent to the 1.4 km EPZ regarding the proposed project. Parallel to this effort, the land company notified all stakeholders in the area surrounding the proposed well between the 1.4 km radius and up to a 2.8 km radius from the 2-29 location, referred to as the EAZ. The EPZ and EAZ are illustrated on the attached map.

BelAir stated that it held an open house at the Dogpound Community Hall on March 14, 2002, and invited potentially interested parties to attend. Although BelAir believed that it was not required to personally notify each resident within the EAZ, it stated that it did extend written invitations to the open house. BelAir indicated that 40 of the 109 invitees attended the meeting. BelAir also stated that it included residents in its ERP that resided in the EAZ if they expressed interest in being included in the ERP, as well as those that resided downwind of the proposed well site. Furthermore, BelAir believed that it went above and beyond the guidelines in that it notified residents based on the more stringent guideline designed for critical sour wells rather than for noncritical sour wells. BelAir understood that it was the company's responsibility to have a certain level of awareness of the public and the activities in the area of the EAZ. BelAir further summarized that it had addressed evacuation beyond the planning zone in conjunction with the local municipal disaster services in the site-specific ERP.

Due to the concerns raised by the interveners, BelAir offered special precautionary measures, such as pagers, daily notification of milestone events, and level-1 notification for voluntary evacuation. It was BelAir's opinion that this operation could be conducted safely and it did not expect to relocate residents, as it believed that would be inconvenient for them and could affect their daily activities. BelAir added that it was confident that evacuation would take place prior to any emergency situations. Furthermore, BelAir conceded that it was prepared to incur reasonable relocation costs for the interveners if they so desired during drilling, completion, and testing of the sour zone. BelAir acknowledged the interveners' concerns regarding evacuation of pets and livestock; it stated, however, that despite numerous attempts to discuss the issue, it had not yet been resolved. BelAir was amenable to continue negotiations in that regard and include the particulars in its ERP.

BelAir explained that while its preference was to evacuate residents away from the well site, in this instance it was not possible, as the trail to the south, marked as a wildlife corridor on the attached map, could be impassable under certain weather conditions. As such, BelAir had included the level-1 notification and outlined sheltering procedures for the public within their own homes. BelAir stated that sheltering was only a short-term option that would be considered in the unlikely event that there was an immediate threat to the residents' safety from potential exposure to H<sub>2</sub>S or SO<sub>2</sub>. BelAir said it had not considered upgrading the south trail due to resident opposition and instead had provided increased safety precautions outlined in the ERP. BelAir said that it had conducted training exercises on previous projects and was comfortable with its communications structure to activate additional response resources to properly execute its ERP.

## **8.2 Views of the Interveners**

The interveners raised general concerns with respect to BelAir's ERP and maintained that they had no confidence in the company's ability to execute the plan. The interveners stated that they believed that the information originally presented to them during the public consultation program was incomplete. They believed that the information should not have been distributed to the public without first being verified. Mrs. Kasepчук stated that she and Mr. Gray had spent over 14 hours visiting residents within the EPZ and EAZ and had identified 9 residents that had been overlooked and were therefore omitted from the ERP/EAZ map. The interveners said they became concerned when they contacted BelAir regarding the deficiency, only to find themselves being questioned on the exact locations of the missing residents.

Mr. Stoesser, a resident in the EAZ, said that he and his family would be greatly affected by the proposed operation, as he frequently used the area inside the EPZ for fishing and generally observing nature. He also expressed concern about learning for the first time during the proceeding that the evacuation centre would be located in Carstairs, and not Crossfield, as he had originally been advised.

The Kasepчуks and Mr. Soper believed that it would be extremely difficult to carry out an effective evacuation given that they lived on a dead-end road and would have to egress towards the well, potentially increasing the risk to their health. The level-1 notification did nothing to increase their confidence, as they stated they might not be reachable when they were outside using their property recreationally. They said that their faith in BelAir's ability to carry out safe evacuation was seriously diminished due to what they believed was the applicant's disorderly approach to completing required documentation.

The interveners believed that the use of rovers to clear the creek valley would be impossible, as it was choked with willows, and the amount of time required to ensure complete evacuation would be extensive. Further, the interveners were sceptical about BelAir's ability to obtain a helicopter in a timely matter, recognizing that the use of a helicopter was weather-dependent. In response to BelAir's offer of relocation, Mr. Stoesser and Mr. Kasepчук refused, while Mrs. Kasepчук indicated she would be interested in the offer. Mr. Soper expressed concerns regarding evacuation due to his health. He said that exposure to H<sub>2</sub>S or SO<sub>2</sub> might trigger an asthma attack that could render him unable to self-evacuate; therefore, he might require

assistance. Mr. Soper stated that due to his health, he would consider the offer to relocate should the application be approved.

The interveners were strongly opposed to upgrading the southern trail to facilitate an alternative egress route, as they felt that it would allow for increased vehicular traffic. The interveners added that the trail acted as a wildlife corridor and therefore should be left undisturbed.

The interveners emphasized that they considered their pets family and were concerned that no provisions had been included in the ERP for their safe evacuation. Mr. Soper stated he was disappointed that BelAir did not recognize his five horses as livestock and stated that should the applicant develop an effective evacuation strategy for the horses, it must be prepared to oversee the situation, as most likely he would not be available to assist due to his employment commitments. The interveners suggested that as a condition of the licence, should the Board decide to approve it, the ERP should include the requirement to evacuate pets and livestock to the satisfaction of the interveners. Additionally, the interveners suggested a condition be applied to BelAir whereby it should be required to compensate the landowners if livestock or pets were injured or killed. The interveners also expressed interest in participating in the development of the plan and suggested that be included as a condition.

The interveners felt that their lack of confidence was further enhanced by BelAir's ERP expert's inability to clearly explain the implementation philosophy of a worst-case scenario. They expressed concerns that its responses under cross-examination seemed to be contradictory, evasive, and noncommittal. The interveners questioned why the ERP contained evacuation criteria for beyond the EPZ when BelAir did not personally advise each resident within that zone of the potential risk.

Under cross-examination, Mrs. Kasepчук stated that she felt that a practice run of the ERP would substantiate BelAir's claim that a safe evacuation was possible.

### **8.3 Views of the Board**

The Board notes that BelAir prepared a site-specific ERP for the drilling and completion of the proposed well at the 2-29 location using a 1.4 km EPZ containing five occupied residences. The Board expects industry to respond to public concerns by adjusting the size and configuration of the EPZ and, as such, recognizes that BelAir included a number of additional residents located beyond the planning zone in its ERP. The Board expects that the additional residents identified be afforded the same level of response protocols as those that reside within the EPZ.

Although the Board believes that the protocols presented in the ERP are complete and meet current requirements, the Board expects BelAir to update its ERP. The updates must include all pertinent information resulting from the recent issuance of EUB *Guide 71: Emergency Preparedness and Response Requirements for the Upstream Petroleum Industry* prior to resubmission for review and approval. The Board also expects that the ERP will address specific issues, such as communication protocols during milestone events, rover duties for the creek valley, special evacuation and notification protocols for health-sensitive residents that may be restricted from self-evacuation, and animal evacuation.

It was apparent to the Board that BelAir's ERP expert was not prepared to address the philosophies of emergency response protocols and, in fact, may have quite possibly caused further damage to the interveners' expressed lack of confidence. The Board directs BelAir to revisit residents identified in the ERP and clearly explain emergency response actions, including, but not limited to, levels of alert, evacuation, shelter, and communication protocols. These visits will provide the opportunity for all parties to strengthen their relationships and work towards creative solutions to the issues raised during the proceeding.

The Board notes the interveners' concerns regarding the challenges of completing an evacuation of the creek valley. For effective evacuation, the public activities must be monitored and recorded on a daily basis to ensure the support needed is readily available. The Board accepts that the use of rovers would be effective in regard to the public's use of the area, as explained in the ERP, and that additional resources will be provided as local conditions dictate. Regarding the interveners' concerns about egressing towards the well site, the Board acknowledges their opposition to upgrade the south trail for a second egress route. The Board agrees that while egress away from the source is desirable, there are several cases across the province where this does not exist and operators have effectively addressed such matters through other procedures. The Board further notes that egress for the Soper and Kasepchuk residences is north towards the proposed well for a short distance, then directly east to exit the planning zone. As such, the situation should be able to be managed through early notification and evacuation, as stated in the ERP.

Although the Board believes it is essential to develop a clear and concise document that meets and/or exceeds current ERP requirements, it also believes it is imperative to ensure that responders are adequately trained, confident in their roles, and fully prepared to implement immediate response actions. As such, if the application is approved, the Board requires BelAir to conduct an exercise of its ERP prior to entering the sour formation. BelAir is expected to test all key components, focusing on public notification, evacuation procedures, isolation of the area, and ignition protocols. BelAir is directed to notify residents with respect to the timing of the exercise and discuss their potential role during the simulation. EUB staff will be assigned to assess the exercise and must be satisfied that the exercise was successfully carried out prior to entering the sour formation of the proposed well at the 2-29 location.

## **9 WATER WELL ISSUES**

### **9.1 Views of the Applicant**

BelAir indicated that the base of the groundwater for this area is at a depth of 525 m. As an extra measure of protection, BelAir committed to extend the surface casing from the calculated 480 m to 525 m to cover the base of the groundwater.

BelAir committed to provide water well testing for quality and quantity by a third party to all residences within a 1000 m radius of the proposed well at the 2-29 location before and after drilling. BelAir stated that it would not include other residents unless so directed by the Board. When questioned on the determination of potential damage to water wells and resulting compensation, BelAir contended that it would be responsible to drill a new water well or compensate the owner if it could be proven that BelAir's activities caused the damage. The predrilling water well testing, according to BelAir, would establish a baseline for quality and quantity and could be compared to the postdrill test for differences. BelAir agreed that it would be up to the landowner's discretion as to when the postdrill water well testing would be performed. BelAir said that seasonal conditions could have an effect on water well test results.

BelAir initially stated that it was its intention to drill a water well at the 2-29 location for the purpose of providing a water source for the drilling operation. The ownership of the water well would then be transferred to the landowner after it was no longer needed by BelAir. After discussions regarding the water well position, BelAir realized that the well would need to be off lease to be accessible to the landowner. Therefore, in consideration for the interveners' concerns, BelAir agreed to haul water to the site rather than drill a water well at the 2-29 location.

## **9.2 Views of the Intervenors**

The intervenors expressed concerns regarding the quality and quantity of the water in their aquifers, as over the past few years they had faced drought conditions that had put a great strain on their water supply. The intervenors said they had concerns that their aquifer and water wells would be affected as a result of drilling activities associated with the proposed gas well. The intervenors stated that they used well water to sustain their everyday living and also for domestic and livestock purposes. They indicated that area water wells seemed to access the same aquifer. Specifically, Mr. Soper noted that he had a horse breeding operation that required a clean and consistent water supply. The intervenors were also strongly opposed to BelAir drilling a water well at the 2-29 location, as they believed it could potentially deplete the water supply. The intervenors suggested, as a condition of the licence if approved, that BelAir should not drill a water well on the 2-29 location for the purpose of drilling operations, but should be required to haul water on site instead. They were also concerned that the drilling activities for the gas well could cause damage to their aquifer.

The intervenors suggested, as a condition of the licence should the Board approve the application, that BelAir should be unconditionally accountable for any changes to their water supply for one year following the drilling of the gas well.

The intervenors believed that BelAir should extend the offer of water well testing to the Stoessers. The Stoessers stated that they would like to have their water well tested, as damage to their aquifer and water well was one of their concerns.

## **9.3 Views of the Board**

The Board believes that BelAir's commitment to test water wells for quality and quantity in a 1000 m radius of the proposed gas well is appropriate. The Board expects BelAir's residential water well testing program to be extended to the Stoessers. The Board encourages BelAir to consult with the landowners with regard to the timing of the predrilling water well testing prior to a rig moving onto the site. The Board expects the postdrilling operations water well testing program to be conducted within one year of the well being drilled at the request of the landowner.

The Board acknowledges BelAir's commitment to haul water to the site rather than drill a water well at the 2-29 location for the purpose of drilling operations, in response to the interveners' concerns.

## **10 CONSULTATION AND FUTURE DEVELOPMENT**

A fair amount of concern was expressed with regard to the consultation process. The concern arose when the conceptual development plan was introduced and further investigation using BelAir's Web site revealed future development plans for the area. The potential success of the applied-for well could not be determined, as it would be drilled as an exploration well, with increased risk because of the uncertainty of reserves. Therefore, future development plans, such as facilities and a pipeline, were only addressed by the applicant in general terms. Similarly, additional wells would also depend on the success of the proposed well at the 2-29 location and, as such, future development in the area would be subject to a large amount of speculation.

### **10.1 Views of the Applicant**

BelAir maintained that the public consultation program undertaken for the proposed well at the 2-29 location was above and beyond the minimum requirements set out by *Guide 56*. Also, as the application was for an exploration category well, which meant that there was a higher risk that the well may not be successful, additional applications or future plans were not brought forth for discussion with the interveners at the time of consultation. The invitation to the open house meeting on March 14, 2002, was extended to everyone identified within the EPZ and EAZ, which BelAir believed to exceed current EUB requirements in terms of consultation.

BelAir acknowledged that EUB staff suggested that it consider submitting additional applications associated with the well, but BelAir instead opted to submit a conceptual development plan. BelAir explained that the pipeline routing could change, as it was dependent on the H<sub>2</sub>S content of the gas once the well was completed. BelAir stated that if the gas was greater than 1 per cent H<sub>2</sub>S, the gas would be routed to the Bonavista sour gas processing facility located in LSD 3-3-30-3W5M, which would require a pipeline routing east-northeast of the proposed well. However, if the H<sub>2</sub>S content of the gas was less than 1 per cent, BelAir stated that a pipeline would be proposed to the southeast to be connected to the upstream side of the Direct Energy compressor station. It would then subsequently be processed at the Direct Energy gas plant located in LSD 5-22-29-3W5M. BelAir confirmed that in this case, well site compression would not be required for the life of the well, as the Direct Energy compressor delivery conditions were satisfactory to fully produce the well. In order to submit a pipeline application, BelAir said it would have needed to secure a pipeline right-of-way with the landowners without knowing if the well would be successful and without knowing the pipeline routing, thereby

incurring significant additional costs.

## **10.2 Views of the Interveners**

Some of the interveners expressed disappointment with a perceived lack of professionalism when BelAir conducted its public consultation for the project. They stated their concerns related to the inconsideration regarding their time, as appointments were not made or, if made, not adhered to. Some examples given were that BelAir's representative arrived at 9 a.m. for a noon appointment or arrived at 8 p.m. without previously making an appointment. The interveners said that their impression of the consultation material and presentation left them suspicious of the company, and they felt that consultation was designed to achieve a nonobjection rather than genuinely listen to their concerns. In one case, the interveners stated that BelAir's representative asked them to sign a letter of nonobjection without allowing time for the interveners to review project material.

In terms of consultation content, the interveners stated that they felt they were misled regarding future development, such as the pipeline routing and additional wells. Also, they stated they were initially told that BelAir would be unable to drill from the 6-29 location, as proposed by Mr. Soper, due to drilling difficulties associated with crossing a fault. Much later, the interveners received an update stating that BelAir had re-examined the possibility of drilling the well from the 6-29 surface location and recognized that technically it was possible, but that the cost would be about 30 per cent higher. The interveners expressed doubt that this information was new to BelAir and felt that they had been misled.

Specific concerns were brought forth by Mr. and Mrs. Stoesser regarding the routing of the associated pipeline. They said that they were told that the pipeline route would go either north or south, then east. They were surprised to find that the pipeline route on the conceptual development plan went east, potentially crossing their land. Mr. and Mrs. Stoesser stated that they were opposed to any pipeline crossing their land.

All of the interveners echoed the same concerns with regard to oil and gas development. They maintained that they chose their property based on the absence of oil and gas development in the area. The interveners claimed that when BelAir was questioned with regard to future developments during the open house on March 14, 2002, its answers were elusive and did not address the topic directly.

The area landowners who made statements at the hearing said they might have formally objected to the project had they received information on BelAir's project and future development. They said that they might have made alternative personal decisions with regard to the development of their land had they been aware of this development potential.

## **10.3 Views of the Board**

The Board acknowledges that a complete and comprehensive public notification and consultation program would be required pursuant to *Guide 56* should additional applications be submitted for future developments. The Board understands BelAir's business decision not to file an application for the pipeline due to the uncertainty of the well's success.

The Board notes that if the well were drilled in a development setting rather than as an exploration well, there would have been a greater certainty in the success of the well, potentially enabling BelAir to make an informed decision as to the entire project and share this information with the area landowners. The Board notes that under *Guide 56* any future applications for oil and gas development would fall under the same scrutiny, notification, and opportunity for public input as the subject application. The Board notes that pipelines, compressors, and other production facilities would need to be submitted as additional applications, which would provide an opportunity for public input. However, the Board confirms that the developments as described on BelAir's Web site were not submitted as applications at the time of the proceeding.

The Board notes that BelAir confirmed that if the well were successful, the pipeline, if approved, would be constructed in accordance with the current Canadian Standard Association (CSA) pipeline standards. The Board also accepts that BelAir will install the pipeline using the HDD method under the Dogpound Creek in order to protect the fish and wildlife habitat and avoid the riparian zone, if technically feasible.

## **11 SALE OF THE COMPANY**

The sale of the company was discussed briefly during the hearing, as the interveners were concerned that any commitments made by BelAir should be adhered to by its successor.

### **11.1 Views of the Applicant**

BelAir stated that it was currently exploring "strategic alternatives," which might include the sale or merger of the company. BelAir made it clear that whatever form such alternatives took, it would involve a share transfer that would see any purchaser assume all of the rights and obligations of BelAir, including all conditions and obligations associated with the licence being considered in this process.

BelAir advised that at the time of the hearing no sale or merger was imminent and that any prospective bids received by the deadline of May 9, 2003, would be considered by shareholders at the general meeting scheduled for June 21, 2003. BelAir advised that if the application were approved, any commitments made by BelAir or conditions imposed by the Board would be communicated to the company successor and adhered to in order to keep the licence in good standing.

### **11.2 Views of the Intervenors**

The intervenors took the position that given the status of BelAir, coupled with its reported losses from the previous year, the Board should consider suspending the issuance of the licence until such time as the future ownership of the applicant was made clear.

### **11.3 Views of the Board**

The Board acknowledges that sales and mergers are common in the oil and gas industry. The Board notes that any transfer of this or any other licence can only be accomplished with the

approval of the EUB. As such, any new operator that may acquire the licence being considered will be subject to the same eligibility requirements and enforcement regime as the applicant. As such, the Board is confident that should any matters of noncompliance arise in the future, whether by BelAir or by a subsequent owner of the proposed well, the issue will be promptly addressed by the EUB enforcement process.

The Board further notes BelAir's commitment that any potential new owner will be apprised well in advance of any conditions and commitments attached to this licence and that any such new owner will be made to understand that said conditions and commitments will be binding upon them as well. For these reasons, the Board does not believe it necessary to suspend the granting of the licence until the ownership question has been clarified.

## **12 CONCLUSION**

The Board concludes that Application No. 1275405 for a licence to drill a sour gas well at the 2-29 location 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 and therefore approves the application subject to BelAir meeting the conditions set out in Appendix 1.

DATED at Calgary, Alberta, on July 15, 2003.

### **ALBERTA ENERGY AND UTILITIES BOARD**

T. M. McGee  
Presiding Board Member

*[Original signed by]*

G. J. Miller  
Board Member

R. G. Lock, P.Eng.  
Board Member

## APPENDIX 1    CONDITIONS ATTACHED TO *DECISION 2003-057*

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

The following conditions apply to *Decision 2003-057*:

- 1) BelAir must notify all individuals identified within the ERP and conduct an exercise of its plan prior to entering the sour zone. It must also afford EUB staff the opportunity to participate in the exercise. To satisfy EUB staff that systems are in order for immediate implementation, the exercise must focus on evacuation, isolation of the area, and ignition protocols.
- 2) BelAir must conduct water testing prior to the drilling of the 2-29 well, and a postdrilling test must be conducted at the request of the interveners within one year of the well being drilled. BelAir must include the Stoessers' water well in the testing program.
- 3) BelAir must consult with a local horticultural nursery in choosing the appropriate type and number of trees to plant in order to provide sufficient coverage to screen the 2-29 well site. The planting of the vegetative screen must occur within one year of the well being cased for production.
- 4) BelAir must follow the mitigation recommendations found in the ISM report in that benign drilling fluids and a closed mud circulation system are to be used and all drilling fluids are to be disposed of at an approved facility, in accordance with *Guide 50*.
- 5) BelAir must provide details of its plan to the EUB and the interveners respecting how it will ensure that all vehicles and equipment used during construction of the surface 2-29 lease will arrive on site clean and free of dirt and vegetative material. The plan will be kept on file in the EUB's records on the well. BelAir must also notify the EUB Midnapore Field Centre prior to the movement of heavy equipment onto the well site.
- 6) BelAir must not drill a water well on the 2-29 well lease site for the purpose of accessing water for drilling operations.

## APPENDIX 2    COMMITMENTS MADE BY BELAIR

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

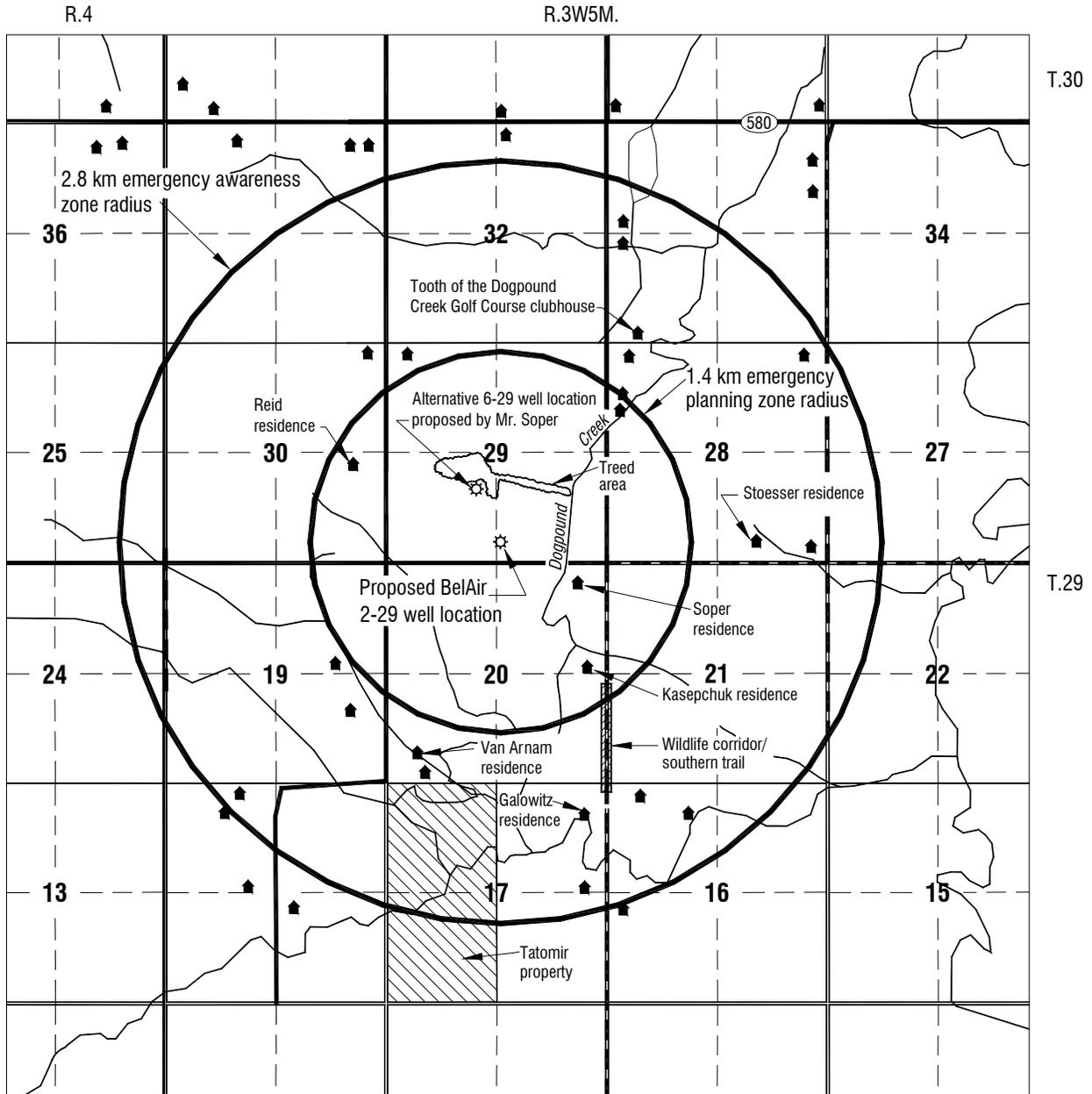
It is the Board's view that when companies make commitments of this nature, they have satisfied themselves that the activities will benefit both the project and the public, and the Board takes these commitments into account when arriving at its decision. The Board expects an applicant, having made the commitments, to fully carry out the commitments or advise the EUB if, for what ever reasons, it cannot fulfill a commitment. The EUB would then assess whether the circumstances regarding the failed commitment warrant a review of the original approval. The Board also notes that affected parties have the right to request a review of the original approval if commitments made by the applicant remain unfulfilled.

The Board acknowledges the following commitments made by BelAir:

- 1) BelAir will complete a preclearing wildlife assessment and comply with the avoidance zones for any special status species found in the area.
- 2) BelAir will comply with SRD's guidelines and not drill between May 15 and July 15 in order to observe the avoidance zone if a Sprague's pipit nest is found within 100 m of the proposed well during the presite clearing assessment.
- 3) BelAir will relocate and pay reasonable costs to the landowners within the EPZ, upon request, during the sour gas drilling phase, testing, and completions.
- 4) BelAir will plant an adequate number of mature coniferous trees in order to provide sufficient cover to substantially mitigate visual impacts to the southeast and east of the 2-29 location.
- 5) BelAir will use an incinerator for the drillstem testing and completion operations for the well.
- 6) BelAir will use only sweet gas for the pilot light on the incinerator.
- 7) BelAir will test the water wells within a 1000 m radius of the well for quality and quantity.
- 8) BelAir will use the service provider chosen by the interveners for the well testing as long as it is professionally reputable.
- 9) BelAir will not flare any gas and will design the future production equipment as a closed system.
- 10) If the well is successful and a pipeline is required, BelAir will install the pipeline under the Dogpound Creek, avoiding the riparian zone using HDD technology, if technically feasible.

- 11) BelAir will provide dust mitigation by accessing the well from the west so as not to drive past the interveners' homes.
- 12) BelAir will revise its ERP to include special communications, such as pagers and daily or milestone communications, as requested by the interveners. The ERP will include the specific instructions, as discussed by the interveners, for the evacuation of pets and livestock.
- 13) BelAir will provide a contractual agreement for any livestock or pet losses.
- 14) BelAir will update the ERP and redistribute copies to the landowners within the EPZ.
- 15) BelAir will ensure that all contractors' equipment will arrive on site clean and will be inspected by a site supervisor or environmental specialist prior to entering the well site during the drilling and completion phase.
- 16) BelAir will have a qualified environmental specialist on site on an as-needed basis for environmental protection and mitigation measure, such as topsoil clearing.
- 17) BelAir will haul water for use in its drilling operations, rather than drill a water well on the 2-29 location.





- Legend**
- ☼ Proposed gas well locations
  - 🏠 Residence
  - Highway or road
  - - - Gravel road

Location of Proposed 2-29-29-3W5M Well and Emergency Response Planning Zone  
 Application No. 1275405  
 BelAir Energy Corporation

Decision 2003-057

