



Ketch Resources Ltd.

Review of Well Licence No. 0313083 and
Application for Associated Battery and Pipeline

Pembina Field

December 1, 2005

ALBERTA ENERGY AND UTILITIES BOARD

Decision 2005-129: Ketch Resources Ltd., Review of Well Licence No. 0313083 and Application for Associated Battery and Pipeline, Pembina Field

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CONTENTS

1	Decision	1
2	Introduction.....	1
2.1	Proceeding/Application	1
2.2	Prehearing Meeting	2
2.3	Hearing	2
3	Corporate Structure.....	2
4	Well Licence No. 0313083	3
5	Battery.....	4
6	Pipeline	5
7	Future Development in the Battle Lake Watershed Area	7
8	Conclusions.....	9
	Appendix 1Hearing Participants	12
	Figure 1 Ketch 1-27 Well, Proposed Battery and Proposed Pipeline Routes.....	13

ALBERTA ENERGY AND UTILITIES BOARD

Calgary Alberta

**KETCH RESOURCES LTD.
REVIEW OF WELL LICENCE NO. 0313083 AND
APPLICATION FOR ASSOCIATED
BATTERY AND PIPELINE
PEMBINA FIELD**

**Decision 2005-129
Proceeding No. 1397909 and
Application No. 1407749**

1 DECISION

Having carefully considered all of the evidence, the Alberta Energy and Utilities Board (EUB/Board) hereby confirms that Well Licence No. 0313083 remains in good standing and approves the associated battery described in Application No. 1407749. The Board denies, without prejudice, the associated pipeline and the subsequent amendments described in Application No. 1407749.

2 INTRODUCTION

2.1 Proceeding/Application

Background

On August 10, 2004, the EUB approved Application No. 1349162 and issued Well Licence No. 0313083 to drill a directional well to obtain natural gas with an anticipated hydrogen sulphide (H₂S) content of 4.4 moles per kilomole (mol/kmol) (0.44 per cent). The application was for a level-1 sour gas well, with a corresponding calculated emergency planning zone (EPZ) of 0.14 kilometres (km), to be drilled from a surface location in Legal Subdivision (LSD) 1 of Section 27, Township 46, Range 2, West of the 5th Meridian (1-27 well) to a bottomhole location in LSD 13-23-46-2W5M. To address public protection measures, a site-specific emergency response plan (ERP) for the drilling and completion operations to be completed at the 1-27 well was submitted to the EUB on September 20, 2004, and was approved on October 13, 2004.

Nature of Proceeding No. 1397909

On August 12, August 20, and September 2, 2004, the EUB received review and variance applications from potentially affected parties requesting that the Board conduct a review hearing relating to Well Licence No. 0313083, pursuant to Section 40 of the *Energy Resources Conservation Act*. On April 11, 2005, the Board granted the requests for a review hearing. The Board registered the review hearing as Proceeding No. 1397909.

Nature of Application No. 1407749

Ketch Resources Ltd. (Ketch) submitted an application on June 28, 2005, in accordance with Section 7.001 of the *Oil and Gas Conservation Regulations*, requesting approval to construct and operate a single-well gas battery at LSD 1-27-46-2W5M. The battery would consist of a separator, instrument air compressor, corrosion inhibitor tank, propane tank, methanol tank, flare

knockout drum, and flare stack. The battery would be licensed for a maximum H₂S content of 2.50 mol/kmol (0.25 per cent). The purpose of the battery would be to separate and measure production from the 1-27 well.

Ketch also applied on June 28, 2005, in accordance with Part 4 of the *Pipeline Act*, for approval to construct and operate a pipeline for the purpose of transporting natural gas from the well at LSD 1-27-46-2W5M to a pipeline tie-in point at LSD 8-26-46-2W5M. On August 15, 2005, Ketch amended its original application to add two alternative pipeline routes to be considered at the hearing. The amendments to the original application to include these two alternative pipeline routes did not alter the start and end points of the pipeline. The approximate length of the proposed north pipeline route is 2.86 km. The lengths of the alternative south route would be about 2.04 km and the alternative east route about 1.67 km. The pipeline would have an outside diameter of 168.3 millimetres (mm). The proposed pipeline would transport natural gas with a maximum H₂S concentration of 3.50 mol/kmol (0.35 per cent), with a corresponding calculated EPZ of 25 m, and would encompass the battery at 1-27-46-2W5M. The proposed pipeline has no associated setback distance. To address public protection measures, the battery and pipeline would be included in the existing production ERP for the area.

The well site, proposed pipeline, and battery would be located about 20 km northwest of Westeros, Alberta.

2.2 Prehearing Meeting

The Board held a prehearing meeting in Pigeon Lake, Alberta, on July 11, 2005, to discuss the scope and purpose of the hearing, relevant issues to be examined, whether the new Ketch applications and an application for a well proposed by ConocoPhillips Canada Resources Corp. (ConocoPhillips) in close proximity to the Ketch 1-27 well should be heard concurrently or consecutively, timing and location of the hearing, procedures, and roles of the participants. The Board conducted a site visit at the 1-27 well on July 11, 2005, prior to holding the prehearing meeting and issued EUB *Decision 2005-088* on August 3, 2005, with its findings.

2.3 Hearing

The Board held a public hearing in Westeros, Alberta, which commenced on October 5 and concluded on October 7, 2005, before Board Members J. R. Nichol, P.Eng. (Presiding Member) and T. M. McGee and Acting Board Member D. K. Boyler, P.Eng. Those who appeared at the hearing are listed in Appendix 1. The Board determines the close of hearing to be October 7, 2005.

Board Member T. M. McGee was not in attendance to hear closing arguments but read the transcripts for this portion of the hearing following the close of the hearing. The parties did not object to continuing with closing arguments in his absence.

3 CORPORATE STRUCTURE

Ketch is the corporate successor to Bear Creek Energy Ltd. (Bear Creek) through the plan of arrangement of January 18, 2005, between Bear Creek and Ketch and through the plan of

arrangement of July 24, 2003, between Crossfield Gas Corp. and Millenium Energy Inc. Crossfield was a wholly owned subsidiary of Bear Creek. Ketch holds all properties, is 100 per cent owned by, and is the manager for Ketch Resources Trust, which is a public entity. Ketch is responsible and accountable for all legal and business matters for all activities of the predecessor companies, including regulatory proceedings, approvals, and compliance.

4 WELL LICENCE NO. 0313083

Ketch said that it originally had consulted with D. Haut and B. Haut (the Hauts) about drilling its well on their land, but due to concerns expressed by the Hauts and other area landowners, it eventually settled on the 1-27 site and obtained a surface lease agreement. That surface location did not assuage the concerns of the area residents, resulting in objections being filed against the 1-27 well site that were dismissed by the Board prior to issuing the licence in August 2004. Ketch stated that it had drilled and completed the well in October and November 2004 and acknowledged that several residents had filed review applications, which the Board granted in early 2005 based on egress issues related to the ERP.

Ketch explained that in order to address concerns raised by area residents, it had made a number of commitments respecting the proposed location on the Hauts' land that related to location, safety, the ERP, and the impact on the community in general. It added that these commitments had been fulfilled. Ketch clarified that due to the change in surface location off of the Hauts' land, commitments made to allay their specific concerns were not pursued, since the surface location no longer impacted their land. Ketch maintained that the commitments made to the area residents also addressed environmental mitigation measures, and it emphasized that all EUB and Alberta Environment requirements were met. Ketch further explained that while its allowed lease size was 2.99 acres, to minimize tree removal it had only cleared 1.7 acres.

Ketch confirmed that it had set surface casing at 400 m, which exceeded the required depth of 285 m. This provided additional protection for the groundwater aquifers and also enhanced well control capability. Well integrity was confirmed through a successful cementing operation on all casing strings. Ketch also confirmed that it did not experience any incidents such as lost circulation or gas or liquid influx problems while drilling the well. It explained that continuous H₂S monitoring was conducted during all sour operations and confirmed that there were no H₂S emissions during the drilling, completion, and abbreviated cleanup and testing of the well.

Ketch recognized that it may have misinterpreted existing regulations when it initially had concluded that a site-specific ERP for the drilling and completion operation was not required, as the EPZ intersected only a portion of the intersection to the southeast of the 1-27 well and, therefore, egress was not an issue. Regardless of this preliminary assessment, Ketch fulfilled its commitment to the residents to prepare a site-specific ERP. Ketch stated that it had accurately identified the health sensitivities of the area residents and evacuation restrictions. To mitigate the identified issues, Ketch's ERP addressed early evacuation and sheltering criteria.

Some of the area residents stated that they had concerns regarding the location of the 1-27 well, including safety, ERP, environment, and the impact on the community. They stated that there were more suitable locations than the 1-27 well, including existing infrastructure that would have reduced the impacts this location imposed on the area.

Certain residents were concerned about egress issues that they believed were not accurately addressed in Ketch's ERP for the drilling and completion of the 1-27 well. During questioning, some of the residents stated that while they did not reside within the calculated EPZ, they were concerned about being isolated in the event of an incident and potentially being exposed to serious health hazards. The residents acknowledged that several conversations were held with Ketch's consultant regarding public protection measures, but they felt that there was still uncertainty with respect to evacuation protocols. Further, they were distressed by the fact that Ketch's ERP inaccurately stated that there were no outstanding resident concerns.

Some residents said their concerns relating to the environment were due to the 1-27 well site being located in a water recharge area for the Battle Lake Watershed. An expert witness who appeared on behalf of some of the residents explained the interrelationship between land-use planning and water management in the area. He discussed the importance and benefits of maintaining native tree cover and the impacts that tree removal would have on the watershed. A number of the residents expressed concerns that Ketch failed to demonstrate plans for protective measures in regard to the watershed, especially in light of their view of the impact that the oil and gas industry has had on the community.

The Board notes that no party presented evidence or contested the need to access the gas reserves targeted. The Board also notes that Ketch initially considered an alternative location on one of the concerned party's lands but subsequently moved the proposed location of the well to the 1-27 site, where it had acquired a surface lease. The Board acknowledges that there may have been other suitable locations for the well but believes that appropriate mitigative measures were put in place for the 1-27 well site.

Notwithstanding Ketch's initial assertion that a site-specific ERP was not needed, the Board is satisfied that an approved ERP was in place prior to commencement of drilling operations. As such, the Board finds that through Ketch's adherence to the regulations and requirements respecting the drilling and completion of the well, the well was in fact drilled and completed safely and without incident and the well does not pose a risk to the safety of the public or the environment. The Board also remains satisfied that the measures in the ERP approved for the drilling and completion operations were appropriate and would have provided appropriate protection for the public had a release of sour gas occurred during the actual drilling and completion of the well. Therefore, the Board confirms that Well Licence No. 0313083 remains in good standing.

5 BATTERY

With respect to its proposed single-well battery, Ketch stated that the battery would be a closed production system, with the gas and any liquids immediately sent to the pipeline following measurement of the well effluents. There would be no storage of produced fluids at the 1-27 well site. It stated that there would be a flare stack, knockout drum, and separator building on site and that the flare stack would only be used for emergency depressuring of the facility. Ketch explained that the separator building would contain an instrument air compressor. It further explained that the site would include propane, methanol, and corrosion inhibitor tanks. Ketch noted that the site would have ambient H₂S monitoring and separator building H₂S detection.

The primary concerns of the intervening parties with respect to the facility related to long-term flaring at this site, product storage, and the fact that Ketch had not used existing infrastructure for the well and facility.

The Board is satisfied that the battery application meets all applicable regulatory requirements and that any impacts on public safety and the environment have been adequately addressed. As the Board is willing to accept the current location for the 1-27 well, it is satisfied that the current location for the associated battery is also acceptable and, therefore, is prepared to approve the battery as applied for in Application No. 1407749.

6 PIPELINE

Ketch presented three alternative pipeline routes for the Board's consideration: a north, east, and south route. It explained that the three routes represented all the potentially feasible routes for the pipeline tie-in. Ketch stated that the start and finish points were fixed, with the pipeline starting at the 1-27 well and ending at the ConocoPhillips pipeline in LSD 8-26-46-2 W5M. Ketch explained that the ConocoPhillips pipeline was the only option for transporting gas containing H₂S out of the area. It described each of the three routes in terms of length, amount of tree removal, number of road and pipeline crossings, and number of residences impacted by the EPZ. Ketch stated that after taking each of these factors into account, the east route would have the least overall impact. Ketch did not present any detailed environmental evaluation for any of the proposed pipeline routes.

Ketch explained that the 1-27 well and associated pipeline would be operated by ConocoPhillips under a contractual agreement. Ketch stated that it had developed site-specific supplemental information to be included in its existing Crystal and Battle Lake production ERP. Ketch believed that it had consulted substantially with the community over an extended period of time, but acknowledged that it was unsuccessful in alleviating all of the concerns. Ketch stated that it had hired Gecko Management Consultants (Gecko) to conduct its public consultation relating to production. It confirmed that consultation was not completed, as some residents deferred the meetings pending the outcome of the hearing.

Three of the concerned parties—the Phippens, the Neilson/Snider Families, and the Hauts—own lands on which portions of the proposed pipeline routes were to be located. The Phippens collectively own the north half of Section 26-46-2W5M, where a portion of the north route was proposed to be located. The Phippens stated that they did not want the proposed pipeline located on their land. They expressed concerns relating to limited use of existing rights-of-way, safety, the amount of tree removal involved, and the impact on the swamp.

The Neilson/Snider Families collectively own the southwest quarter of Section 26-46-2W5M, where a portion of the east route was proposed. They requested that of the proposed routes, the Board select the northern route, as a significant portion of this route was located within the boundaries of an existing ConocoPhillips pipeline right-of-way. They expressed concerns with respect to the impact the east route would have on their registered subdivision plans.

The Hauts own the majority the northwest quarter of Section 23-46-2W5M, where a portion of the south route was proposed to be located, and they expressed concerns relating to health and safety. They explained that they did not want the pipeline on their land, but that if one of the

three pipeline routes had to be selected, the south route would be the best route from an ecological perspective.

The Battle Lake Natural Area Preservation Society, a special-interest group active in the region, recommended that selection of any pipeline route should be based on minimizing the impact on the watershed.

Some of the area residents felt that had Ketch used the existing infrastructure for the well in the first instance, there would have been better opportunities to use existing pipeline rights-of-way to tie in the new well. In their view, this would have resulted in less overall disturbance to the environment and the community.

The concerned area residents stated that while they may have had discussions with Ketch's ERP representatives, they did not have a clear understanding of the public safety measures associated with the production of the well and the proposed pipeline. Further, they felt uncomfortable with the notion that sheltering was proposed as the primary means of public protection for the area.

The Board notes that pipeline corridors provide the advantage of combining linear developments and thereby concentrating land-use impacts and avoiding proliferation over many areas. There are two broad approaches to pipeline corridors: the first involves the pre-establishment of a corridor to accommodate future pipeline developments and facilitate land-use planning. The second is more local in nature and derives from a practice recommended by the EUB by placing new pipeline rights-of-way adjacent to existing ones or in existing rights-of-way where feasible—that is, the joint use of rights-of-way (i.e., as set out in *Informational Letter [IL] 80-11*) where feasible or appropriate. This second approach assists in reducing the land-use impacts but does not constitute establishment of a dedicated corridor. However, the Board recognizes that should this second approach be adopted, some landowners may have to accept more activities and impacts on their lands as a consequence of minimizing the impacts on the overall land base and the local community. Although this may be in the overall public interest, it may not be readily accepted by those landowners who bear the direct impacts of this joint use. Consequently, rather than imposing a firm requirement respecting the joint use of facility sites and rights-of-way, the Board believes that it would be more appropriate for all of the affected parties to work together outside of the formal regulatory process to find the solution that has the greatest benefits to the community and the least impact on the environment in any given area, such as the one defined by the Battle River Watershed Management Area.

The Board acknowledges that Ketch assessed the three proposed pipeline routes using the following criteria: length, amount of tree removal, number of road and pipeline crossings, and number of residences impacted by the EPZ. However, the Board is concerned that Ketch did not provide specific qualitative information on each route, which would have assisted the Board in comparing the real impacts and benefits of each route evaluated.

Given the obvious environmental sensitivity of the area, the specific concerns expressed by the Battle Lake Natural Area Preservation Society, and the criteria outlined in the Battle Lake Watershed By-law, the Board would have expected to see an environmental evaluation that included, as a minimum, the following for each proposed route:

- the specific amount of tree and vegetation removal, as this can affect watershed management within the Battle Lake Watershed and wildlife habitat through direct disturbance, habit alteration, and increases in habitat fragmentation;
- the sensitivity of the lands to be encountered during the construction of the pipeline, including areas of wet or steep terrain, presence of watercourses and water bodies, critical or unique wildlife habitats, and areas with high potential to support rare vegetation and unique vegetation communities, such as old growth forest;
- reclamation potential or assessment, including identification of various soils that will be encountered, implications for soil handling, the need for clearing required for soil storage and temporary workspace, and the ability to reclaim disturbances; and
- presence of historical resources.

If Ketch had provided this detailed environmental information, in addition to qualitative comparative information and consideration of cost and potential impacts on future residential and other surface developments, it would have allowed the Board to make a sound and informed decision with respect to the most appropriate pipeline route.

The Board is of the opinion that Ketch's evaluation failed to provide sufficient comparative data in order for the Board to determine which of the proposed routes should be selected. The Board finds that in this situation additional comprehensive information could have been provided to the residents and the Board with regard to routing alternatives and the route selection process. The Board notes that Ketch's decision to provide limited information has resulted in uncertainty. As such, the Board is not prepared to approve any of the applied-for routes in the absence of information that would allow it to make a reasoned and informed decision respecting the merits of the proposals before it and therefore must deny all the proposed routes associated with the pipeline as described in Application No. 1407749, without prejudice, to any future application Ketch may file with the Board.

The Board would like all parties to be aware that once reserves are discovered, it is in the public interest to ensure that they are produced in an orderly and efficient manner. In denying the associated pipeline application, it is not the Board's intention to strand the reserves found in the 1-27 well. The Board expects all the affected parties to make reasonable efforts to work together to come up with a suitable pipeline route to tie in the 1-27 well where the impacts of each route have been fully evaluated, which may include evaluating the use of existing infrastructure and rights-of-way.

7 FUTURE DEVELOPMENT IN THE BATTLE LAKE WATERSHED AREA

In determining if a proposed energy development or energy project is in the public interest, the Board takes into account such factors as landowners' concerns, relative impact on existing and future development, environmental impact, and technical and economic considerations. Accordingly, evidence needs to be presented that allows the Board to reach a conclusion on site-specific impacts and issues, as well as cumulative effects.

In circumstances like this, where various alternatives to a proposed energy project exist that may differ in potential impacts and benefits, the Board expects that an applicant will undertake and

provide an evaluation of all reasonable alternatives. Applicants must address, among other things, issues related to environmentally sensitive areas, proliferation, and competitive projects by other operators, providing complete and credible alternatives for consideration by the local community, affected residents, and the Board. In the Board's experience, collaboration among all parties results in the selection of the best alternative for a project. Similarly, where applicants claim that a proposed course of action will provide significant benefit over another, the Board expects substantiating evidence. In making decisions based on such information, it is not necessarily the option with the least surface impact or greatest economic value that will be viewed by the Board as in the public interest.

The Board recognizes that the planning of well sites, pipelines, and any necessary facilities are not independent of each other. EUB *Directive 056: Energy Development Applications and Schedules* (formerly known as *Guide 56*; revised and reissued as *Directive 056*) states that applicants are expected to assess existing infrastructure whenever possible. The Board supports minimizing new disturbance. As such, applicants are expected to consider potential environmental and surface development impacts of the overall project during project planning, as the location of a well site affects potential routing of subsequent pipelines and the siting of facilities. By taking into consideration the overall project when determining well site locations, alternative sites that may provide more suitable pipeline routing options and could reduce potential impacts may be available. The Board is of the opinion that the sites and routes evaluated through an overall project planning approach could result in a better use of existing infrastructure rather than creating new disturbance.

The EUB's requirements and recommended practices for planning a participant involvement program (including whom to include) are set out in Section 2.2 of *Directive 056*. As part of its participant involvement program, the applicant is expected, among other things, to minimize the cumulative impacts of energy development and to show that they have applied good planning practices with respect to the public and the environment. The proponent of a project must show clear evidence that it has adhered to this regulatory expectation by demonstrating that it has met the special needs of local authorities. In this instance, the special need would be the protection of the Battle Lake Watershed. As noted in *Directive 056*, regulatory expectations represent recommended best practices or guidelines. Accordingly, the Board's view is that recommended best practices or guidelines should be followed unless an applicant can give compelling reasons why it is inappropriate to do so in particular circumstances.

The Board believes that counties and municipalities also share a responsibility to assess any potential impacts of a proposed energy development on their community and to engage the EUB processes as appropriate to present their assessment to the Board. During the hearing, the Board heard evidence from the West Central Planning Agency and the County of Wetaskiwin that certain bylaws of the County of Wetaskiwin have designated certain lands as part of a watershed protection district for the Battle Lake/River Watershed. The evidence indicates that these current bylaws, along with their predecessors, have been in place for about 30 years. Battle Lake and its watershed form the headwaters of the Battle River system. Evidence has been presented that demonstrates the value of these areas in maintaining water quality and supply on a regional basis. The Board recognizes the importance of watershed protection zones in municipal land-use plans. In the Battle Lake area, watershed protection is achieved through application of best management practices during municipal planning and subdivision approval, based largely on minimizing tree clearing and preventing disruption of surface water. The creation of a Watershed

Protection District by the County of Wetaskiwin demonstrates the commitment of area residents and their local government to place a priority on protection of surface and groundwater above other considerations. Although Section 619 of the *Municipal Government Act* provides that an EUB licence prevails over any land-use bylaw, the Board is of the view that applicants should be aware of municipal planning processes and bylaws and should incorporate them into development planning to the greatest extent possible, especially where special circumstances exist, such as the establishment of the watershed protection district.

The Board heard concerns expressed respecting the significant amount of new development that is planned for this area by other operators, such as Dominion Exploration Canada Ltd., EnCana Corporation, and ConocoPhillips, and that to the concerned citizens and local authorities there appears to be little effort by the operators to coordinate development, use existing infrastructure and rights-of-way, and provide the community with area development plans for the short or longer term. The evidence presented suggests that operators in the area have been taking some steps to work together to coordinate the use of existing rights-of-way, access roads, and facilities to minimize the footprint in the area, but that these efforts appear to have been on an ad hoc basis.

The Board is concerned that the spirit and intent of the area development expectations, as outlined on a pilot basis in *Bulletin 2004-08: Sour Gas Development Planning and Proliferation Assessment*, are not being followed. The Board notes that companies are aware of *Bulletin 2004-08* and the associated Industry Recommended Practices (IRP) on planning and proliferation assessments. The IRP was produced by industry and is endorsed by the Canadian Association of Petroleum Producers, the Canadian Association of Petroleum Landmen, and the Small Explorers and Producers Association for Canada for use by their members. The Board has accepted IRPs as the preferred approach to providing development planning information and proliferation assessment for areas such as the Battle Lake Watershed. The Board panel will discuss this matter further with the full Board and will recommend to them that a meeting be set up with representatives from the oil and gas industry, the Battle Lake Natural Area Preservation Society, the County of Wetaskiwin, the West Central Planning Agency, the newly established synergy group in the area, and interested members of the general public to discuss the possibility of setting up a pilot project to develop an area development plan for the Battle Lake Water Management Area. The initial focus of this pilot project would be to lay out the oil and gas development plan for the next year and to see how the joint use of facility sites, existing rights-of-way, and access roads could be incorporated into such a plan.

The Board recognizes that the concerns of the area residents are legitimate and is very aware that future energy projects could impact the Battle Lake Water Management Area, particularly if development is not planned and managed properly as the density of development continues to increase. As such, the Board is of the opinion that additional measures must be taken to ensure that future development continues to be conducted in an orderly, effective, and environmentally sensitive manner.

8 CONCLUSIONS

After weighing all of the evidence, the Board hereby confirms that Well Licence No. 0313083 remains in good standing and approves the associated battery as described in Application No.

1407749. The Board denies, without prejudice, the associated pipeline and the subsequent amendments as described in Application No. 14407749. Due to the recent revised edition of *Directive 056*, Ketch must resubmit its battery application as applied for in accordance with *Directive 056* prior to receiving Board approval. As a result, the battery will be approved under a different application number.

Dated in Calgary, Alberta, on December 1, 2005.

ALBERTA ENERGY AND UTILITIES BOARD

<original signed by>

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

<original signed by>

T. M. McGee
Board Member

<original signed by>

D. K. Boyler, P.Eng.
Acting Board Member

APPENDIX 1 HEARING PARTICIPANTS

Principals and Representatives (Abbreviations used in report)	Witnesses
Ketch Resources Ltd. (Ketch) K. Miller, Counsel	N. Bokenfohr, P.Eng. A. Mah, P.Eng. T. Wollen, C.E.T. J. Hemstock, R.E.T., of Gecko Management Consultants I. Dowsett, R.E.T., of RWDI Air Inc.
D. Haut and B. Haut (the Hauts)	D. Haut
H. Kwiatkowski (Kwiatkowski)	
T. Belec and B. Belec (Belec)	T. Belec B. Belec
M. Black and J. Black (Black) R. Secord, Counsel	M. Black R. Riddett, of West Central Planning Agency D. Blades, of County of Wetaskiwin
C. Neilson (Neilson) K. Zajes	C. Neilson
D. Snider (Snider) K. Zajes	W. Neilson, on behalf of D. Snider
Battle Lake Natural Area Preservation Society D. Doze	I. Heacock
V. and B. Phippen and M. and J. Phippen (The Phippens) P. Vasseur	V. Phippen B. Phippen
R. Lawson	
Alberta Energy and Utilities Board staff T. Bews, Board Counsel C. Giesbrecht E. Simpson S. Etifier	

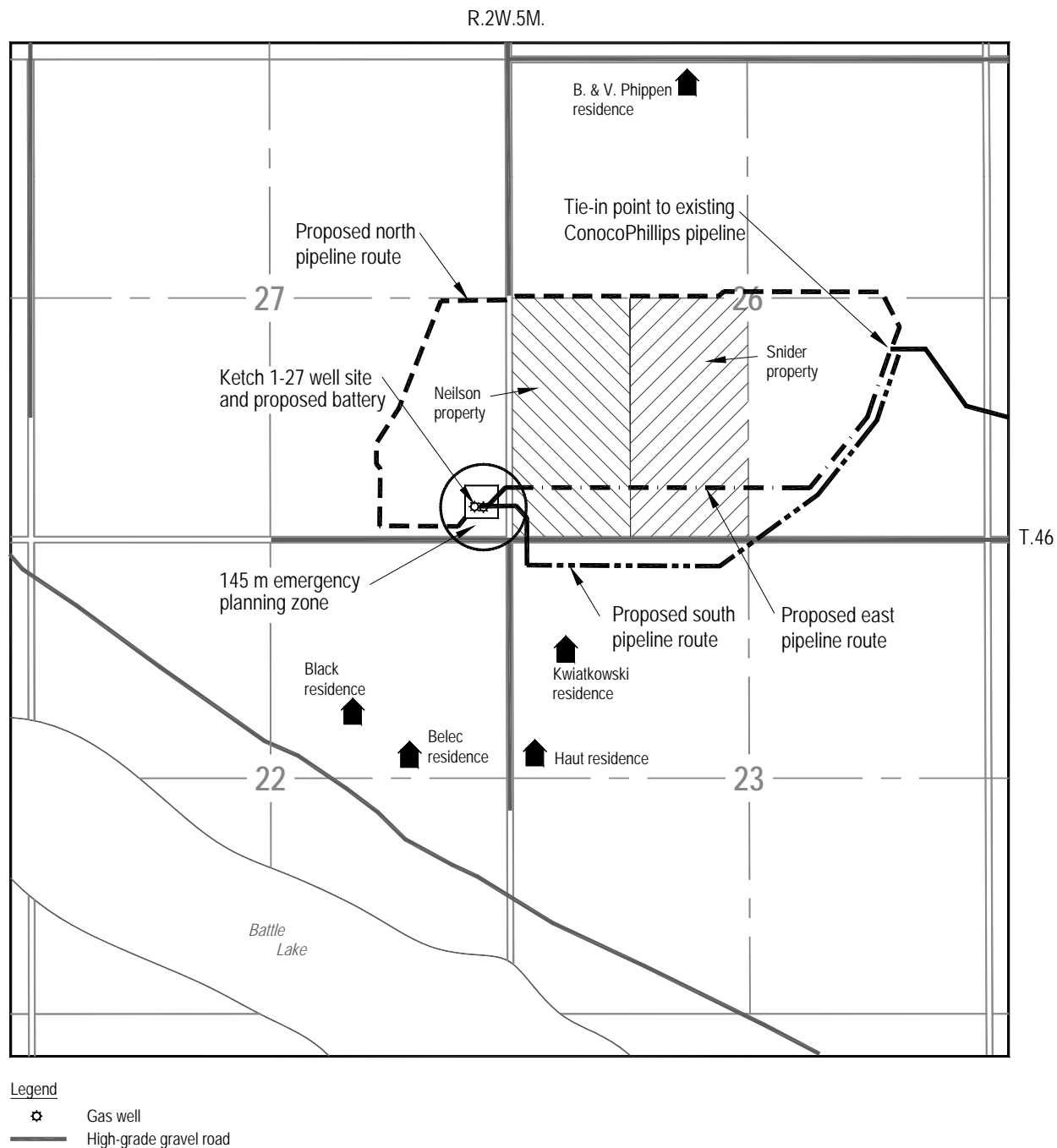


Figure 1. Ketch 1-27 well, proposed battery and proposed pipeline routes