

ALBERTA ENERGY AND UTILITIES BOARD

Calgary Alberta

**PENN WEST PETROLEUM LTD.
APPLICATIONS FOR PIPELINES AND
MODIFICATIONS TO A BATTERY
PEMBINA FIELD**

**Decision 2002-046
Applications No. 1240343, 1240344,
1240345, and 1240346**

1 DECISION

Having carefully considered all of the evidence, the Alberta Energy and Utilities Board (EUB/Board) hereby approves Applications No. 1240343, 1240344, 1240345, and 1240346 subject to the conditions listed in Appendix A.

2 INTRODUCTION

2.1 Applications

Penn West Petroleum Limited (Penn West) applied to the EUB for several pipelines to transport oil well effluent, salt water, and fresh water to and from various wells and an existing battery facility to be modified in the Pembina area in Township 48, Range 4, West of the 5th Meridian. The applications provide infrastructure to implement a waterflood project approved by the EUB on July 26, 2000. Penn West's pipelines and facility modification applications were received by the EUB on July 23, 2001, and were submitted, noting that concerns had been expressed by an adjacent landowner and remain unresolved, although attempts at resolution had been made.

Application No. 1240343 is for the construction and operation of produced water pipelines and was filed pursuant to Part 4 of the Pipeline Act. The proposed 17.45 kilometres (km) of 60.3 millimetre (mm), 88.9 mm, and 114.3 mm outside diameter (OD) pipelines would transport produced water for injection to eight existing disposal wells, all located within Township 48, Range 4, West of the 5th Meridian.

Application No. 1240344 is for the construction and operation of oil well effluent pipelines and was filed pursuant to Part 4 of the Pipeline Act. The proposed 13.67 km of 88.9 mm to 114.3 mm OD pipelines would transport oil well effluent from eight wells to Penn West's existing Keystone battery, located at Legal Subdivision 5, Section 35, Township 48, Range 4, West of the 5th Meridian (LSD 5-35-48-4W5M) (5-35 battery site).

Application No. 1240345 is for the construction and operation of freshwater pipelines, filed pursuant to Part 4 of the Pipeline Act. Approximately 4.46 km of 160.8 mm OD pipeline would be built to transport fresh water from an existing pipeline at LSD 8-31-48-3W5M to the proposed injection facilities at the 5-35 battery site.

Application No. 1240346 is for the installation of water treating and injection facilities and was filed pursuant to Section 7.001 of the Oil and Gas Conservation Regulations. The facilities would be installed at the existing 5-35 battery site.

2.2 Intervention

Mr. Heinrich is the owner of lands adjacent to the Keystone battery and gas plant site and resides in SW35-48-4W5M, approximately 250 m south of the facilities (see Figure 1). Mr. Heinrich originally signed a letter indicating he had no objection to Penn West's proposed pipeline and facility modification on August 29, 2001; however, he subsequently withdrew that consent and filed an objection with the EUB on September 6, 2001. In his objection, Mr. Heinrich stated he had lived adjacent to the existing facilities for more than 30 years and held various concerns about impacts he had experienced from the operation of the existing facilities. As a result, he was not in favour of further modifications to the facilities proposed by Penn West. As the Board determined that Mr. Heinrich was a party who may be directly affected by a decision related to these applications, the Board directed that a public hearing be held.

2.3 Hearing

The Board scheduled a public hearing to be held in Drayton Valley, Alberta, on January 9, 2002. On January 7, 2002, the Board received a request to adjourn the hearing and granted that request. Subsequently, the Board rescheduled and held a public hearing commencing on March 13, 2002, before Board Member T. M. McGee (Presiding Member) and Acting Board Members D. D. Waisman and M. H. Hommy. In addition, the Board and its staff visited Penn West's battery site and gas plant and viewed the surrounding area on March 13, 2002. Those who appeared at the hearing and a list of abbreviations used in this decision are set out in the following table.

THOSE WHO APPEARED AT THE HEARING

Principals and Representatives (Abbreviations used in report)

Witnesses

Penn West Petroleum Limited (Penn West)
B. K. O'Ferrall, Q.C.

D. Middleton, P.Eng.
W. Ross
L. DePauw
R. S. Simmons, P.Eng.
J. T. Barlow, P.Eng.
J. G. Farquharson, C.E.T.,
of Faszler Farquharson and Assoc. Ltd.

A. Heinrich
R. Secord

A. Heinrich

Alberta Energy and Utilities Board staff
G. Perkins, Board Counsel
L. Wilson-Temple
S. Cartwright
T. Boyler

3 BACKGROUND

3.1 Waterflood

Penn West received approval from the EUB for a waterflood project in the Pembina area on July 26, 2000. The waterflood project was designed to increase the oil recovery from a nearby conventional oil pool by some 556 527 cubic metres (m³) (3 500 000 barrels) through water injection into the reservoir. Penn West secured a supply of fresh water from Talisman Energy, which holds an Alberta Environment (AENV) permit for water diversion from the North Saskatchewan River. Penn West noted that the amount of freshwater being diverted from the North Saskatchewan River for injection purposes for its waterflood project would ultimately decrease. It estimated that it would start up with 100 per cent of the water required for its waterflood being obtained from the North Saskatchewan River through its arrangement with Talisman. Penn West confirmed that its freshwater needs would reduce to approximately 30 per cent fresh water at three years after start-up, and further to 10 per cent at ten years. The remaining water needed to support the waterflood would be obtained by recycling produced water through the proposed Penn West facilities, the subject of these applications.

Penn West indicated that enhanced recovery by water injection was a widespread oilfield practice and that the overall recovery of both oil and gas would likely increase as a result of implementation of the waterflood, as evaluated and considered in the approval of that application in July 2000.

3.2 Appropriate Dispute Resolution

In conjunction with setting a hearing date on this matter, the EUB encouraged the parties to engage in Appropriate Dispute Resolution (ADR) to continue discussing issues of interest. The parties met several times between December 2001 and March 2002. Immediately prior to the start of the hearing the parties executed an agreement, the provisions of which are restated as Appendix B to this report. As a result of this agreement, the hearing focused on clarifying details of the agreement and on items outstanding between the parties.

4 ISSUES

The Board considers the issues respecting the applications to be

- need for the facilities, site selection, and pipeline routing
- impacts
- communications

5 NEED FOR THE FACILITIES, SITE SELECTION, AND PIPELINE ROUTING

5.1 Views of the Applicant

Penn West said it acquired the 5-35 Keystone battery facility in 1998, which was constructed in 1990 alongside the Keystone Gas Plant (gas plant). It emphasized that it required the applied-for facility modifications and pipelines in order to implement its approved waterflood scheme in the

area. Penn West summarized its proposed modification to the existing 5-35 battery site as including a freshwater pipeline, water injection pipelines, multiphase gathering pipelines, and water treating and injection facilities. New equipment would include three electric-drive pumps, four tanks, deaerator and chlorination packages, a utility heater, piping and electrical equipment, and a free-water knockout vessel.

In proposing to modify its 5-35 battery site by installing the above equipment, Penn West maintained that its proposed location was the most preferable, as there was existing infrastructure, including flares, pipelines, and power services. Modifying the existing battery would limit proliferation of facilities in this area. Penn West said that since the proposed location was central within the waterflood project area, pipeline costs would be minimized, especially should an expansion be contemplated in the future. Penn West also believed that this location was more desirable than any other because it was a secure location adjacent to the gas plant, which was manned nine hours a day, seven days a week.

In responding to Mr. Heinrich's concerns, Penn West said it evaluated alternative locations for its activities. Penn West considered moving the modifications some 1.6 km from the proposed site to another existing battery site at LSD 11-27-48-4W5M (11-27 site). Penn West maintained that the alternative site would result in increased costs of \$1.3 million. It stated that the 11-27 site would require installation of gas compression, a flare stack, an upgrade of its electrical service, an expansion to the surface lease area, and an additional 8 km of water, oil, and gas pipelines in order to be suitable for use for Penn West's waterflood project.

Penn West noted Mr. Heinrich's suggestion that the gas production in the area be processed at a nearby Anderson facility, which the Board understands to be the facility at LSD 5-30-49-3W5M. Penn West confirmed that the facility was being operated at two-thirds of its approved capacity, but stated it did not have enough capacity to absorb throughput from the Keystone plant.

In justifying its proposed pipeline routes, Penn West stated that its alignments were superior, based on the fact that the majority of the routes paralleled existing pipelines and significantly limited the number of other pipeline, road, and buried cable crossings. It also stated that its preferred routes were 1.137 km less in overall length and between \$50 000 and \$200 000 less costly than alternatives proposed by Mr. Heinrich. In making this claim, Penn West relied on a cost analysis it submitted comparing its preferred route and Mr. Heinrich's proposed routing alternatives.

Penn West argued that Mr. Heinrich's suggestion that the pipeline applications should be denied because they would negatively impact his operations was not legitimate, as he could be compensated for impacts from pipeline rights-of-way.

5.2 Views of the Intervener

Mr. Heinrich suggested that Penn West should conduct its operations at a location other than the 5-35 battery site. For example, Mr. Heinrich believed processing capacity at the nearby Anderson facility should be assessed in order to minimize or eliminate the impact of activities at Penn West's Keystone facility on his operations.

In his submission, Mr. Heinrich proposed alternative pipeline routes, indicated on Figure 1 to this report. Mr. Heinrich emphasized that his preferred pipeline routes were designed to limit the impact pipeline rights-of-way would have on his cattle and farming operations and the requisite fencing involved in those operations. Mr. Heinrich's concerns regarding fencing impacts are discussed in detail in Section 6.4.2. In proposing these alternatives, Mr. Heinrich confirmed he had not discussed the alternative routes with the other landowners whom those routes would potentially impact, adding that, in his opinion, Penn West had the responsibility to speak to the neighbouring landowners. In response to Penn West's cost analysis of the various pipeline routes investigated, Mr. Heinrich indicated that his preferred pipeline route would lessen the negative impact on his operations and that the incremental cost to Penn West would therefore be justified.

Mr. Heinrich reminded the Board that its mandate was to look at the interests of Albertans, and as he is one of those Albertans, he should not have to contend with further inconvenience resulting from Penn West's operations.

5.3 Views of the Board

The Board believes that the waterflood project and its attendant facilities will result in recovery of additional oil and gas, which the Board considers to be in the public interest for the benefit of all Albertans. The Board must weigh these benefits and the ability to mitigate against potential impacts on individuals.

The Board further notes that Penn West has substantial pre-existing development at its Keystone battery and gas plant. It accepts that the applied-for modifications and pipelines are required to implement its waterflood project and accepts Penn West's evidence related to the factors it considered in selecting the 5-35 battery site as the preferred site for those modifications.

The Board is not convinced that the 11-27 site is a viable alternative to the 5-35 battery site. The Board believes that substantial upgrade to the equipment and services at the 11-27 site would have to be made to consider it at least comparable to the facilities at the 5-35 battery site. As well, the Board believes that the additional infrastructure required to use the 11-27 site would create similar or greater impacts elsewhere on other individuals. The Board accepts the principle of making use of existing facilities and sites where possible in order to limit proliferation of facilities. In addition, the Board accepts Penn West's argument that the Anderson facility has insufficient capacity to accept the gas from the Keystone facilities.

With regard to the pipeline routes evaluated and discussed by both parties, the Board agrees that cost, while important, is only one factor in determining the most preferable route. The Board is of the view that other impacts, such as overall length, crossings, and environmental issues, are equally important in evaluating options. Having regard for all of these factors, the Board accepts the pipeline routing proposed by Penn West, as it believes the alternative routes evaluated offer no significant advantage.

The Board concludes that there is a need for the facilities as applied for and that the modifications proposed for the 5-35 battery site and Penn West's proposed pipeline routes are acceptable.

6 IMPACTS

6.1 Life Expectancy of the Facility

6.1.1 Views of the Applicant

Penn West stated that the gas plant was built in 1966 and that it, along with the 5-35 battery site, was located on a separate 20-acre parcel of land purchased from Mr. Heinrich's father. It said that the 5-35 battery site was constructed by another operator in 1990 and that it acquired both properties and became the operator of the facilities in 1998.

Penn West discussed both the current and extended life expectancy of its 5-35 battery site. It indicated that without the waterflood or any subsequent modification to the battery, the life expectancy of the battery, based on its latest economic forecast, would be approximately 16 additional years. With the applied-for modifications, Penn West stated that the expected life of the waterflood scheme and facilities could extend to 30 additional years of economic activity.

6.1.2 Views of the Intervener

Mr. Heinrich stated that he had lived continuously on the SW 35-48-4W5 since 1963, when his father, Leonard Heinrich, purchased the land. He said that he currently owned and farmed the SW 35 and had leased the NE and SE 35-48-4W5 since 1970, when he started farming on a full-time basis.

Mr. Heinrich said that his father had subdivided 20 acres and sold them to Canada-Cities Service Petroleum Corporation in 1965, where the Keystone gas plant and battery site were eventually built. Mr. Heinrich believed that the facility was now 36 years old and had served its purpose. He was concerned that if the proposed waterflood were successful, the life of the battery could be extended an additional 22 years, according to one engineering report he reviewed. He stated that while he would like to see the gas plant and battery site decommissioned, at the very least he did not want any activities occurring at the site that would extend the life of either facility.

Mr. Heinrich believed that he had contended with the adjacent facilities for long enough and asked the Board to deny Penn West's applications.

6.1.3 Views of the Board

The Board recognizes the significant length of time that the intervener has coexisted with the Penn West Keystone gas plant and battery site and has experienced firsthand impacts associated with being a neighbour to such a facility. The Board understands that Penn West's proposed modifications to the battery will result in a further extension to the useful life of these facilities and notes Penn West's attempt to establish a relationship with Mr. Heinrich through the ADR process.

Generally speaking, the Board encourages operators to make use of existing facilities and infrastructure in order to reduce the impacts and potential for proliferation of redundant facilities in the province. In this instance, the Board believes Penn West's proposal to modify its existing 5-35 battery site is reasonable and that with appropriate mitigative measures in place, the coexistence of Mr. Heinrich and the facilities should be able to continue.

6.2 Environment

6.2.1 Views of the Applicant

Penn West said that it and former operators had taken a number of steps to ensure the protection of groundwater, surface water, and soils and to contain surface runoff on both the gas plant and the 5-35 battery site. As evidence of its commitment to preserve the environment, Penn West put forward a list of some 14 technical reports that it or previous plant operators commissioned that related to baseline soil monitoring, annual groundwater monitoring, and geophysical investigations of potential groundwater contamination on the gas plant and battery site.

With regard to the groundwater-monitoring program for the gas plant site, Penn West confirmed that the initial program commenced in 1988, with annual reports filed since 1994. Penn West acknowledged that the gas plant operated under an AENV Code of Practice, which required groundwater monitoring. It commented that this monitoring was not required for the battery site; however, monitoring had been implemented at that site because of the age of the facility, its proximity to the gas plant, and due diligence on the part of Penn West. Penn West committed to adopting all the recommendations relating to future environmental work in its 2001 groundwater reports for the gas plant and battery site.

In response to concerns expressed by Mr. Heinrich, Penn West committed to performing tests on water samples from Mr. Heinrich's residence and dugout to determine if trichloroethylene (TCE) contamination was present, and if so, to what extent. Penn West said it agreed to do this sampling as a precaution, as it was uncertain as to whether degreasers containing TCEs had ever been used on the site. Penn West also said it would undertake to advise Mr. Heinrich whether it was feasible to collect and test soil samples for TCEs.

With regard to surface runoff, Penn West acknowledged that not all surface runoff from the gas plant was currently directed to the retention pond located on the northern edge of the site. Specifically, water collected from the area of the plant site south of the propane tanks runs off to the south towards Mr. Heinrich's land and southeast towards the existing battery site (Figure 2). Penn West noted that in the past there had been intentional releases of water from the retention pond onto Mr. Heinrich's property, but insisted that the water had been tested and met the required standards prior to its release. As a result of recent discussions with Mr. Heinrich, Penn West committed to constructing a new retention pond on the battery site and to take measures, including constructing some drainage ditches, to ensure that all surface runoff water from the gas plant or battery site would be diverted to one of the two ponds. In addition, Penn West agreed to construct a berm around the battery site to ensure that all surface runoff was contained on site. Also by way of agreement with Mr. Heinrich, Penn West confirmed that it intended to use the surface water from the retention ponds in its waterflood project, rather than rely on releasing it to nearby pasturelands, as it had done in the past. Penn West was uncertain as to the volume of

surface runoff water it may recover from the ponds, but indicated that whatever the volume, it would further lessen the amount of fresh water required to be drawn from the North Saskatchewan River in its waterflood project.

Penn West committed to dike a biocide tank it said would be required for the waterflood implementation. It explained that the biocide would be required to treat the water from the retention ponds prior to use in the waterflood project.

Penn West acknowledged that it was still remediating an area on the north end of the battery site as a result of a hydrocarbon spill that occurred in 1997. It stated that hydrocarbon stained soils had been excavated, including a small portion on Mr. Heinrich's lands, and it was now cultivating the affected area four times per year and applying fertilizer, as recommended by its environmental consultant. Although the specific area of contamination was somewhat imprecise, Penn West stated it would not be constructing any portion of the facility modifications on the contaminated soils. In addition, it said it would continue with its soil-monitoring program to ensure that the site was fully remediated.

6.2.2 Views of the Intervener

Mr. Heinrich cited a number of significant events that occurred with previous operators of the gas plant and battery site, as well as instances of impact from nuisances. Specifically, he indicated that in the past he had experienced loss of livestock due to a nitrate spill and contamination of a hay crop when the flare stack malfunctioned, allowing oil to spray out of the stack undetected by the operator. While acknowledging he was compensated for his losses, he indicated he became mistrustful about methods for detecting and reporting contamination. As to his general impact concerns, he also cited instances when gates were left open, occasional odours were emitted from the facility, and traffic to and from the gas plant and battery site increased.

Mr. Heinrich said runoff water from both the gas plant and the 5-35 battery site had either been permitted to drain or deliberately discharged onto his land. He was concerned that the runoff water may be contaminated, which could result in adverse health effects for his cattle. Mr. Heinrich was concerned about TCE contamination on his land due to the possible use of degreasers on the 5-35 site in the past. He acknowledged that he had reached an agreement with Penn West to conduct tests for such a product. Mr. Heinrich confirmed that he had negotiated a second retention pond to be added to the battery site, complementing the one on the gas plant site, to contain surface runoff from both sites.

Mr. Heinrich expressed concerns that in the past contaminated soils were removed from his property north of the battery without his knowledge or consent. He suggested that the Board does not know enough about the condition of this site to allow Penn West to build where previous contamination occurred and had not been fully cleaned up. Mr. Heinrich asked the Board to determine, and require Penn West to implement, an appropriate soil sampling program to identify any contamination on his lands to ensure they remained safe for his cattle and crops.

Mr. Heinrich raised concerns about biocides being used at the Keystone location, specifically that there would be a potential for more poisons to get onto his lands, as he had had runoff issues in the past.

Mr. Heinrich requested that the recommendations in the groundwater monitoring reports for both the gas plant and the battery site be implemented. Additionally, Mr. Heinrich believed that Penn West should have to disclose all contamination issues on this site if he wanted to sell his land in the future.

Mr. Heinrich questioned whether or not Penn West was currently in compliance with AENV's Code of Practice, specifically whether the gas plant retention pond was collecting all runoff water at the gas plant site

6.2.3 Views of the Board

The Board notes that Penn West is committed to implementing all the recommendations in the groundwater monitoring reports for the gas plant and battery site. The Board expects Penn West to honour that commitment and accepts the program as outlined is sufficient to identify any potential groundwater issues.

With regard to the issue of surface runoff, the Board is concerned that Penn West, and previous operators, may not have exercised due diligence to ensure runoff from the gas plant site onto adjacent lands did not occur. The retention pond on the gas plant site should be designed to be the main collection point for all surface runoff from that site and Penn West's own evidence and topographical maps suggest that this did not occur in the past. The Board expects Penn West to remedy this situation and ensure it meets AENV's standards in that regard. The Board also expects the new retention pond to be constructed on the battery site so that in combination with the existing retention pond, all surface runoff water from the battery and gas plant is intercepted. This includes complete diking of the gas plant and battery site. The Board notes Penn West has entered into an agreement with Mr. Heinrich to use the collected surface water in its waterflood project. The Board will expect Penn West to acquire any other approvals necessary to permit the use of water from this source in the waterflood project.

The Board is satisfied with Penn West's proposed handling of biocides, as the biocide tank will be properly diked in accordance with EUB *Guide 55: Storage Requirements for the Upstream Petroleum Industry*.

With regard to the issue of the soil-sampling program requested by Mr. Heinrich, the Board encourages Penn West to continue to sample and monitor soil at this location, and believes the program currently followed by Penn West to be sufficient. The Board expects Penn West to continue to remediate the spill-affected soils, and to not build on top of contaminated soils, consistent with AENV requirements.

6.3 Noise

6.3.1 Views of the Applicant

Penn West maintained that the majority of the noise from the 5-35 site emanated from the gas plant, not the battery. It said that because the Keystone gas plant was constructed prior to 1988 and there was no record of noise complaints having been made, its facility could operate above

the levels dictated by EUB *Interim Directive (ID) 99-8: Noise Control Directive*. It stated that under *Guide 38: Noise Control Directive User Guide*, facilities could not exceed a noise level of 50 dBA during the day and 40 dBA at night.

Penn West said it had conducted a noise assessment in January 2002 but was unable to take an actual baseline measurement, as facility operations prevented that from occurring. Penn West stated that in order to obtain an actual representative noise level reading, all five-compressor units would have to be operating with a normal load on them and under suitable weather/wind conditions. Absent of those specific conditions, Penn West said it modelled from measurements taken at the facility site to determine the impact on the community, calculating a current sound level of 51.6 dBA at Mr. Heinrich's residence. Penn West stated that *Guide 38* permits either modelling or monitoring to establish a facility sound level, so it intended to rely on the modelled sound level at this time.

Penn West said that the addition of the new equipment proposed as a result of these applications would increase the current sound level from 51.6 to 51.8 dBA and reflected that was, in terms of acoustics, a very small increase.

Penn West explained that it intended to reduce the noise from the facility using a two-phase approach. In its agreement with Mr. Heinrich, Penn West committed to achieving a target noise level of 45 dBA at the end of the second phase in 2003. Penn West said it expected to achieve the noise reduction by making a number of equipment changes and addressing certain key noise sources. It detailed changes to its gas plant site, including raising the stack height and changing some fans and mufflers, as examples. Penn West confirmed it would be taking an actual survey at the end of phase two to determine whether it had met the 45 dBA target. In response to questioning about what Penn West might do should it not realize the desired reduction, it stated it had other potential changes it could undertake and would reassess the situation at that time.

6.3.2 Views of the Intervener

Mr. Heinrich said that he was aware of noise and the hum from the motors and fans from the existing gas plant and battery site. He stated that his lack of complaints should not be construed in any way as acceptance of this intrusion or the impact it had on his lifestyle. Mr. Heinrich stated that he did not want an increase in the noise levels to occur as a result of the proposal to modify the facility.

6.3.3 Views of the Board

The Board acknowledges that the Keystone gas plant was constructed and operating prior to issuance of *Interim Directive (ID) 99-8* and, as such, is operating in compliance with the methodology noted in *Guide 38* for determining the permissible sound level (PSL). The Board notes that Penn West's modelling establishes a current PSL of 51.6 dBA and that the addition of new equipment required for the waterflood project as proposed in the applications under consideration is expected to increase the PSL by 0.2 dBA, to 51.8 dBA.

While the Board is encouraged by Penn West's commitment to embark on a two-phase program to achieve a more substantial reduction, it will expect Penn West to institute appropriate noise

control measures to ensure that the current sound level does not exceed 51.6 dBA. Prior to the installation of any new equipment at the 5-35 site, the Board will require Penn West to reduce current sound levels by at least 0.2 dBA to offset the expected increase, thereby maintaining the no net increase in sound level requirement set out in *Guide 38*.

The Board also notes that once Penn West's commitment to Mr. Heinrich to reduce the noise level from this facility to 45 dBA by year-end 2003 is achieved, the new PSL for the Keystone facility will become 45 dBA Level Equivalent (L_{eq}) nighttime. The Board will require Penn West to conduct another noise impact assessment at that time to ensure compliance with the new PSL. Should Penn West fail to meet the new target PSL of 45 dBA L_{eq} , the EUB will undertake appropriate enforcement action.

6.4 Locating Pipelines before Ground Disturbance Occurs

6.4.1 Views of the Applicant

Penn West said that Mr. Heinrich had expressed concerns with the directions outlined in EUB *Guide 30: Guidelines for Safe Construction Near Pipelines*. It understood that Mr. Heinrich had been inconvenienced when he needed to repair fences and had to wait for a pipeline company to locate and mark its pipelines. Penn West said it responded promptly to any requests to locate and mark its pipelines, and while it was willing to consider constructing its pipeline deeper than normal, it believed that might not fully address Mr. Heinrich's concern, as his land already had many pipelines on it set to lesser depths of cover. Penn West noted that it was aware of 14 pipelines currently crossing Mr. Heinrich's property in the SW quarter section of 35 and would not want him to assume a consistent burial depth for all the pipelines. It worried that Mr. Heinrich might get a false sense of security and that, as a result, he might not have the pipelines located before commencing ground disturbance.

Penn West agreed with the intervener that *Guide 30* should be re-examined. It indicated that the *Guide 30* issue is something for industry as a whole to address, as any solution proposed with respect to Mr. Heinrich's land would have to be suitable for all other operators, and it asked if the Board could look at this issue.

6.4.2 Views of the Intervener

Mr. Heinrich explained that he could not wait for a pipeline company to locate and mark its pipelines when he was working to repair a broken fence. Mr. Heinrich indicated that expecting landowners to give companies two days' notice to locate their pipelines before landowners could fix a broken fence was an inconvenience. He pointed out that with 14 pipelines crossing his property, it was a significant impact on his operations to stop work and call to locate pipelines. He also suggested that if pipelines were buried deep enough, there should be, in his opinion, no way that he could hit them by putting a fence post down approximately 0.6 m (2 feet). Mr. Heinrich suggested that *Guide 30* should be re-examined, as it placed an onerous and unfair imposition on the farming and ranching industry.

6.4.3 Views of the Board

The Board notes that *Guide 30* was developed to provide a concise summary of the requirements regarding ground disturbance contained in the Pipeline Regulation, which is mandatory through enacted legislation. The intent of both the Pipeline Regulation and *Guide 30* is to help reduce the occurrence of third-party pipeline damage and ensure public safety when ground disturbances are occurring in proximity to established pipelines. The Pipeline Regulation requires pipeline owners to provide to landowners all reasonable assistance in locating and marking pipelines without cost, so as to not deter their seeking assistance.

The Board notes that the ground disturbance regulations are not new and have been in place since the early 1980s, following the 1979 Edmonton Mill Woods incident in which a rupture occurred on a propane pipeline that had been previously damaged by third-party excavation. That incident resulted in a major injury and the evacuation of more than 19 000 people. The Board is aware that in Alberta, nearly 50 per cent of all pipeline ruptures are caused by ground disturbance activities. Consequently, the EUB remains strongly committed to the necessity and practicality of the existing ground disturbance requirements.

Pipelines are generally buried to a depth of 80 cm (2.6 feet) or greater. However, the Board is aware that in some instances older pipelines may in fact have less cover. This is due to different construction standards that were in effect at the time of construction and the potential actions of erosion, land subsidence, or unauthorized recontouring that may have occurred over time. The Board therefore concludes that the act of installing fence posts has serious potential to threaten buried pipelines and the safety of the public, and that proper precautionary measures must be taken.

The Pipeline Regulation provides some possible alternative measures to hand exposure. One method allows for a pipeline to be first hand exposed and then permanently marked or flagged as to its location and depth, such as by signage, thereby eliminating the necessity of further hand exposures. Notification must still be given to the pipeline operator, and discretion must be exercised in this practice to consider any changes in pipeline cover that may have resulted over time due to natural erosion or other causes and to ensure that points of dimensional reference (e.g., placement of signs) have not been altered.

The Board therefore believes that the existing requirements for ground disturbance as detailed in the Pipeline Regulation, and the summary of them as found in *Guide 30*, are necessary, appropriate, and prudent. The Board is currently in the process of reviewing the Pipeline Regulation and will consider changes to the requirements for ground disturbance, particularly in regards to improving the responsiveness of companies to landowners when livestock are involved.

One of the Board's mandates is to ensure public safety, which is a responsibility it takes very seriously. While the Board appreciates the extra time and effort Mr. Heinrich must take to contact a company prior to disturbing ground in the vicinity of pipelines, it emphasizes the importance of Mr. Heinrich continuing to do so. This is required to ensure Mr. Heinrich's safety, as well as the safety of the pipeline and of the general public. The Board suggests that Mr. Heinrich consider employing measures such as using portable fence posts or temporary fencing until the pipeline company has been properly contacted and has located its lines. To assist Mr.

Heinrich, the Board will require Penn West to mark its pipelines at each existing fence line on Mr. Heinrich's property. Penn West must also provide Mr. Heinrich with an accurate drawing of its rights-of-way and pipeline locations on his land.

7 COMMUNICATIONS

7.1 View of the Applicant

Penn West acknowledged that it first met Mr. Heinrich in 1999, shortly after purchasing the Keystone property. While some of Penn West's local staff had previous interaction with Mr. Heinrich, it learned little of his specific concerns from the files forwarded by previous operators. After speaking with Mr. Heinrich directly, Penn West said it found he had a number of concerns about operations at the site. Penn West confirmed that its conversations with Mr. Heinrich revealed some past issues that might impact future dealings with Penn West.

Penn West confirmed that it had seven landmen discuss issues with Mr. Heinrich. While acknowledging that this was unusual, it explained that several of the landmen were believed by Mr. Heinrich to be ineffective in addressing his concerns. Therefore, Penn West sent different individuals in an attempt to address Mr. Heinrich's concern. Penn West said Mr. Heinrich initially signed a letter of consent to the project, but when an individual asked to reschedule a meeting, Mr. Heinrich withdrew his consent and filed an objection to the project.

Penn West said it was able to re-establish a dialogue with Mr. Heinrich in December 2001 through a mediator and the use of ADR. Penn West said that its vice president of production actively participated in the ADR sessions between December 2001 and the March 2002 hearing date. As a result, it believed it had a better appreciation of Mr. Heinrich's concerns and a clearer picture of the history of this site.

Penn West said that it signed an agreement with Mr. Heinrich that set out how the project would be conducted and monitored. Penn West viewed the signed mediation agreement as contractually binding and the list of commitments as enforceable by the EUB. Penn West felt that the points of the agreement should be included in the decision on its applications as an attachment.

Penn West discussed a communication protocol distributed to its staff in May 2001. The protocol was developed to convey to its staff the fact that Penn West viewed itself as a guest when operating on private lands and the importance of good community relations. It emphasized that it was the responsibility of each Penn West employee and contractor to comply with landowner requests, such as closing gates and moderating vehicle speeds, and that it expected its staff to be courteous and considerate to the landowners.

Penn West stated that it also developed a communication protocol for use between itself and Mr. Heinrich. This was intended to ensure consistency, minimize the number of Penn West contacts, and streamline communication between the parties. Penn West said it was committed to maintaining an ongoing and respectful dialogue with Mr. Heinrich.

7.2 Views of the Intervener

Mr. Heinrich stated that he had dealt with four different operators of the Keystone plant over the years and that no particular company stood out as a star in its dealings with him. He said he had expressed his concerns to Penn West and its predecessors usually through telephone calls and had only some success in resolving his issues. Mr. Heinrich acknowledged that Penn West put forward the view that he could expect a better relationship and efforts to deal with his issues, as it maintained it was different from other companies. He emphasized that he had yet to experience that.

Mr. Heinrich acknowledged having signed consent to the project initially but said he withdrew that consent when he believed Penn West was not being truthful with him about the reason for rescheduling a meeting.

Mr. Heinrich said he was doubtful about what could be accomplished at mediation but credited the encouragement of his counsel with convincing him to participate. He said he put his whole effort into seeing what could be resolved and was concerned that some may not see the ADR process as successful simply because he did not withdraw his objection. Mr. Heinrich said he expected the Board to enforce the agreement arrived at, since the EUB encouraged the ADR process. Mr. Heinrich said that if he had known the EUB could not enforce all agreements reached in the ADR process, he would not have participated. Mr. Heinrich was concerned about what recourse was available to him if Penn West did not honour the commitments it had made.

Mr. Heinrich indicated that while mediation presented a valuable opportunity to resolve some issues, in his view more structure by the mediator might result in an improved process. Mr. Heinrich felt that the ADR process still needed some fine-tuning.

Mr. Heinrich emphasized that he wished to be treated like a neighbour and would work together with Penn West to address issues. While Mr. Heinrich welcomed the communication protocol that was developed, he emphasized that Penn West must do what it said it would do. He indicated that it was those kinds of positive actions that would assist him in viewing his neighbours differently.

He expressed frustration at being told by company representatives what would happen on his land. His view was that the company representatives were not always sincere and that in the past there was a failure by companies to own up to their responsibilities when incidents occurred. Mr. Heinrich indicated that not all landmen were treating landowners with the respect he felt they deserved.

7.3 Views of the Board

The Board notes the development of a communications protocol between the parties that clarifies whom to address concerns to and how Penn West will manage them. The Board expects these protocols to result in prompt identification and communication of concerns but emphasizes the importance of actually responding to and resolving issues to the satisfaction of all parties. The Board recognizes that the protocol sets out the responsibilities of both Penn West and Mr.

Heinrich to address issues. The EUB expects that all communications between the two parties will be courteous and respectful. The Board believes a history of responsiveness and cooperation will build on the good work and goodwill that has been started between these parties.

The Board is gratified to hear of the success both parties realized in the ADR process. It is clear to the Board that there was significant commitment by Mr. Heinrich to participate in the ADR and also to collaborate on solutions resulting in an agreement on many matters. The Board also notes the dedication of Penn West's vice president of production and the corporate commitment of Penn West to have its senior staff at the table, which contributed to a mediated resolution to many of their issues. These considerable efforts resulted in the Board conducting a shorter and more focused hearing.

The Board restates in Appendix B the provisions of the agreement executed and submitted by Penn West and Mr. Heinrich. The Board believes the document stands on its own, as both parties negotiated this agreement in good faith, and the Board expects it to be honoured. The Board notes that when companies make commitments and agreements 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 EUB expects the applicant, having made the commitments, to fully carry out the undertakings or advise the EUB if, for whatever reasons, it cannot fulfill a commitment. It is at that time that the EUB will assess whether the circumstances of the failed commitment may be sufficient to trigger a review of the original approval. The affected party also has the right to ask the EUB to review an approval if commitments made by an applicant remain unfulfilled.

8 CONCLUSION

The Board concludes that Applications No. 1240343, 1240344, 1240345, and 1240346, for modifications to an existing battery and pipelines, are in the public interest. The Board believes there is a need for the facilities to implement a waterflood project, the project is proposed at a suitable site, and the pipelines have been proposed on acceptable routes. In consideration of the agreement on specific issues reached by the parties and other evidence presented to the Board at the hearing, the Board also accepts that the projects' impacts have been satisfactorily mitigated.

Dated at Calgary, Alberta, on May 10, 2002.

ALBERTA ENERGY AND UTILITIES BOARD

<original signed by>

T. M. McGee
Presiding Member

<original signed by>

D. D. Waisman
Acting Board Member

<original signed by>

M. H. Hommy
Acting Board Member

APPENDIX A TO EUB DECISION 2002-046

Conditions

- Prior to the installation of new equipment for its waterflood project at the Keystone 5-35 facility, the Board requires Penn West to reduce current sound levels by at least 0.2 dBA to offset the expected increase in noise from the site. The Board also requires Penn West to conduct another noise impact assessment by year-end 2003 to ensure compliance with its new permissible sound level of 45 dBA at that time. Penn West will work with appropriate EUB staff to ensure that the noise impact assessment meets the Board's expectations in this regard.
- The Board requires Penn West to mark its pipeline locations at each existing fence line on Mr. Heinrich's property. It also requires Penn West to provide Mr. Heinrich with an accurate drawing depicting the Penn West rights-of-way and pipeline locations within those rights-of-way on his land. This work is to be complete by July 15, 2002.

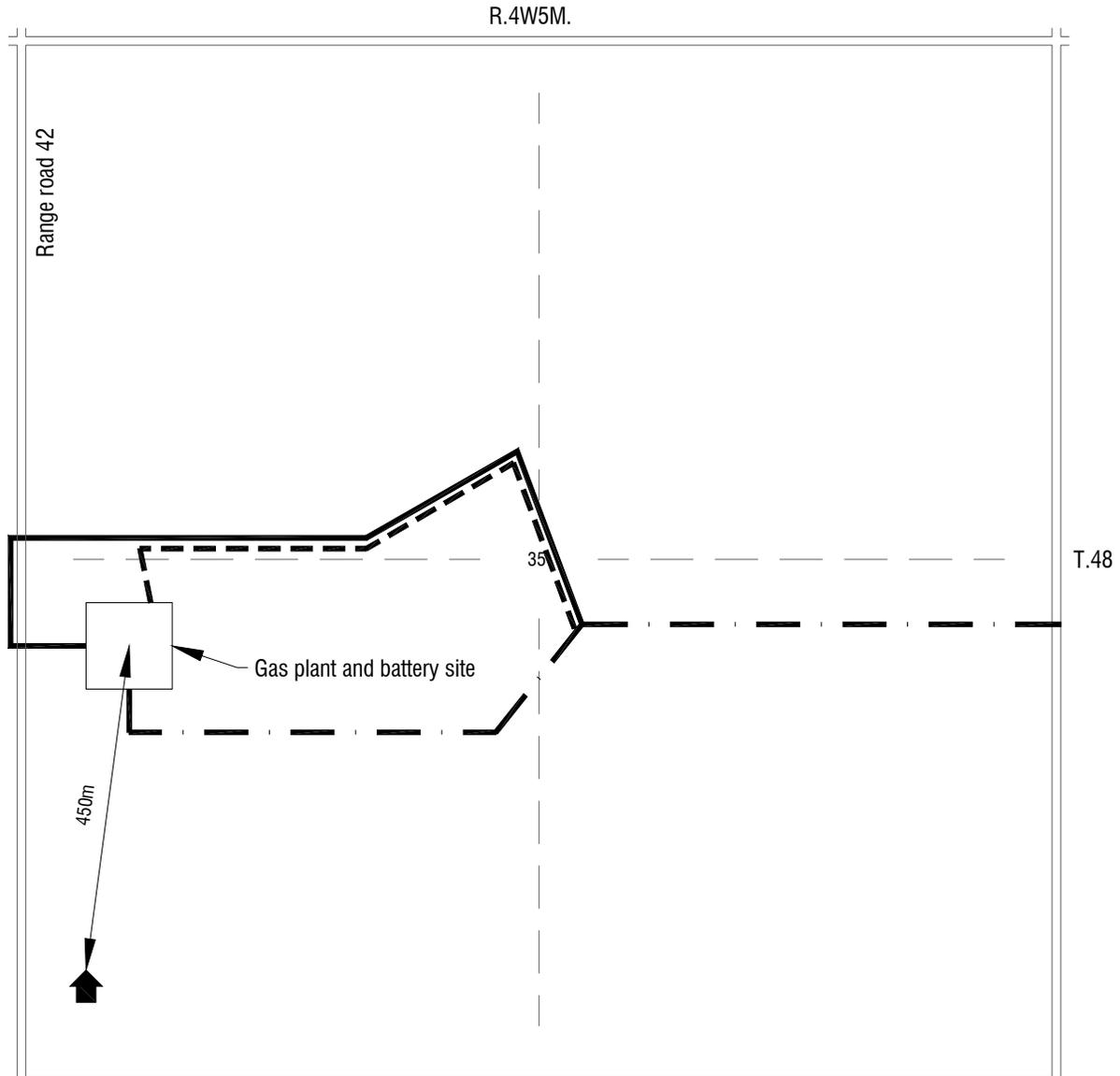
APPENDIX B TO EUB DECISION 2002-046

As a result of the preliminary ADR meeting held on December 18, 2001 and mediation sessions held on December 18, 2001; January 4, 2002; January 11, 2002; February 4, 2002; and February 22, 2002; the parties agree as follows:

- Penn West will dispose of the surface runoff water from the existing 5-35 Keystone gas plant and the new battery retention ponds into the waterflood in the event that the expansion is allowed to proceed at the existing Keystone 5-35 battery site and subject to approval from Alberta Environment.
- Penn West will construct a new retention pond on the northeast side of the Keystone 5-35 battery site and drainage ditches as shown in pencil on Focus Survey Drawing 203173-00-TP-0. In the event that the expansion is allowed to proceed at the existing Keystone 5-35 battery site, Penn West will dispose of the runoff water from the new retention pond into the waterflood.
- Penn West will be permitted to discharge clean water from the retention ponds in the event that extraordinary weather necessitates a release. Heinrich must be consulted first before any discharge of retention pond water takes place.
- Penn West will begin soil testing in 2002 at the 6-35 lease site, which will result in the reclamation of the old flare pit. If tests indicate no contamination at the old flare pit site, then no reclamation will be required.
- Penn West will implement the noise control measures at the Keystone 5-35 gas plant and battery site as set out in the February 22, 2002, letter from Faszar Farquharson & Associates Ltd. Phase 1 will be completed in 2002 and Phase 2 in 2003. The target noise level after Phase 2 will be 45 dBA.
- Penn West will raise the compressor exhaust stacks at the Keystone gas plant to a height of 12.0 metres above grade.
- In 2002 Penn West will take water samples from Heinrich residence and from the Heinrich dug out and test the sample for TCEs. The Heinrich dug out water will be tested in the spring of 2002. Penn West will also advise Heinrich whether it is feasible to collect and test soil samples for TCEs.
- Penn West will abandon the pipeline from 6-35 to 14-35.
- Penn West will remove approximately 100 feet of the 6-35 to 14-35 pipeline located nearest to the Heinrich dug out.
- Penn West will provide Heinrich with a current map showing the location of all Penn West pipelines in the future.

(continued)

- Penn West will notify Heinrich if there are any changes made to the location of the Penn West pipelines in the future.
- Penn West will repair the access road to the 6-35 lease in the spring of 2002 using soil from Heinrich's dug out. Compensation will be comparable to those in the area.
- Penn West and Heinrich will utilize the communications protocol developed for use between Penn West and Heinrich and Penn West will direct their employees to follow Penn West's existing policy as set out in a Memorandum dated May 22, 2001, concerning relations with landowners.
- Penn West will develop a binder containing the 36-year history of the 5-35 Keystone battery and gas plant site. The binder will list the issues which have been identified during the ADR process and the agreed upon solutions. The binder will remain confidential.
- Penn West will maintain a record of communications with Heinrich in the binder mentioned in paragraph 14 above and will provide Heinrich with a copy of the record on an ongoing basis.



Legend

-  Heinrich proposed pipeline routes
-  Proposed pipeline route (applied for)
-  Heinrich residence

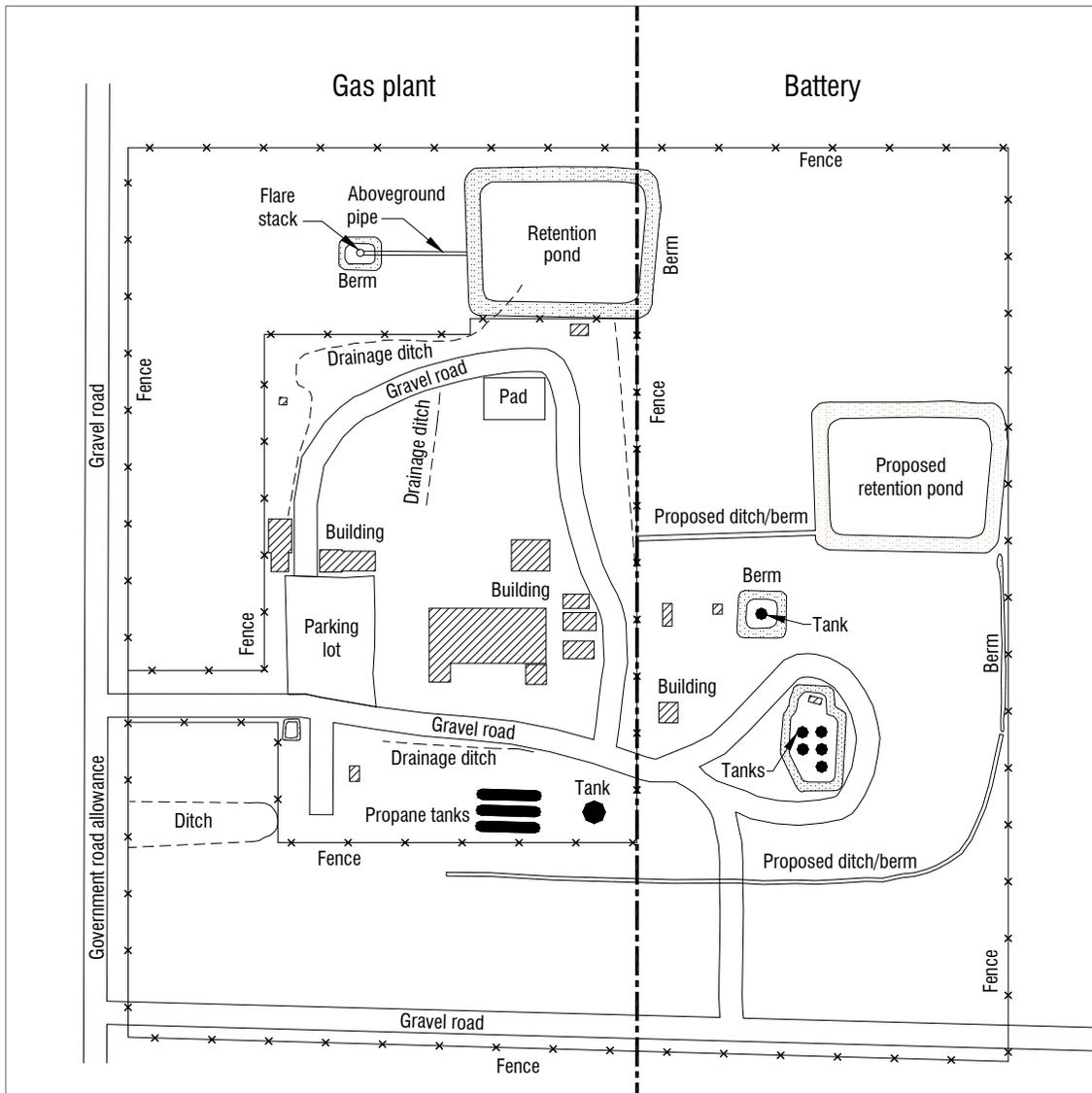
Figure 1. Keystone Area Alternative Pipeline Routes

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Penn West Petroleum Ltd.

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Figure 2. Keystone Area Gas Plant and Battery

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Penn West Petroleum Ltd.

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