

# **ALBERTA ENERGY AND UTILITIES BOARD**

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**Calgary Alberta**

## **APPLICATION FOR A WELL LICENCE**

**WELL LICENCE NO. 0182282**

**JORDAN PETROLEUM LIMITED**

**WIZARD LAKE AREA**

**Examiner Report E 96-6**

**Application No. 960100**

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## **1 INTRODUCTION**

### **1.1 Application and Intervention**

On 26 October 1995, Jordan Petroleum Limited (Jordan) applied to the Alberta Energy and Utilities Board (Board) pursuant to section 2.020 of the Oil and Gas Conservation Regulations for a licence to drill a well in Legal Subdivision 13 of Section 33, Township 48, Range 27, West of the 4th Meridian (Lsd 13-33). The purpose of the well, JORDAN PCP WIZARD LAKE 13-33-48-27 (13-33 well) is to obtain production from the Basal Quartz Formation.

On 21 November 1995, the Board issued Well Licence No. 0182282 to Jordan on the understanding that there were no outstanding issues relating to the Board's jurisdiction.

On 15 December 1995, the Board received a submission from Herman and Adeline Hammermeister requesting that the well licence be rescinded. The Hammermeisters are the surface landowners and residents on the quarter section where the well is proposed to be drilled. In their intervention, the Hammermeisters expressed their concerns about: the location of the well, the orientation and use of the access road, the shared use of an existing approach, cleaning of equipment entering their lands, and Jordan's sour-gas emergency response plan.

Although Jordan maintained that the only unresolved issue was compensation, the Board was satisfied that the Hammermeisters' concerns were issues within its jurisdiction and that a hearing under Section 43 of the Energy Resources Conservation Act was appropriate.

### **1.2 Hearing**

A public hearing to review the application was convened on 8 March 1996 in Leduc, Alberta before examiners appointed by the Board. The examiner panel consisted of H. O. Lillo, P.Eng., G. C. Dunn, P.Eng., and F. G. Sorenson. Those who appeared at the hearing and abbreviations used in the report are listed in the following table.

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

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Principals and Representatives  
(Abbreviations Used in Report)

Witnesses

Jordan Petroleum Limited (Jordan)  
G. Wagner, P.Eng.

D. Prefontaine  
M. Stilet  
A. Henkel

Herman and Adeline Hammermeister  
K. S. Zajes

Terry Hammermeister

Alberta Energy and Utilities Board staff  
V. J. Vogt  
L. D. Wilson

## 2 ISSUES

The examiners consider the issues respecting the application to be

- C the need for the well,
- C the surface location of the well and access road, and
- C safety and other impacts.

## 3 CONSIDERATION OF THE APPLICATION

### 3.1 Views of the Applicant

Jordan submitted that by virtue of freehold mineral agreements it has the right to drill for and produce oil and gas underlying Section 33 of Township 48, Range 27, West of the 4th Meridian (Section 33). Jordan indicated that it decided not to apply for approval of production facilities and/or pipelines at the time of the well licence application hearing preferring to wait and see if the well is successful, and if so, design the production facilities accordingly. Jordan is aware that additional applications would be required for further development at the site.

The applicant stated that from a geological standpoint, its preferred location was 40 metres east of the applied-for wellsite as shown in the figure, adding that it was restricted from drilling at that location because of an existing pipeline. As a result, Jordan indicated that it was necessary to locate the wellsite to the west and to orient the lease such that its eastern boundary was parallel to the pipeline right-of-way.

Jordan presented little geological evidence, but maintained that drilling a vertical well from the applied-for site was critical. Jordan stated that further movement away from the location in any direction would substantially increase the risk of drilling a dry hole. Jordan did a preliminary investigation into the possibility of directionally drilling the well from an alternate surface location across the road to the north on land which is also owned by the objecting surface owners, the Hammermeisters. Jordan estimated that drilling a deviated well from the alternate surface location to the bottom-hole target in Lsd 13-33 would add approximately \$90 000 to the

drilling cost of the well. It added that the additional cost of a deviated well may jeopardize the project and the well may not be drilled. Jordan also believed that the interveners considered the alternate location to be less attractive than the applied-for wellsite as the Hammermeisters believed that it was directly upwind from their farm buildings.

Jordan expressed the view that the applied-for access road is the most practical since it is the shortest and utilizes an existing approach from the paved road onto the Hammermeisters' property. Jordan stated that it had not seriously considered an alternate approach and access road adding that it was uncertain as to whether the municipal authority would approve a second approach from the north. In response to questioning, Jordan was unable to confirm whether a road from the west would be possible. It was uncertain as to whether the municipal authority would approve an approach from that direction and was not aware if the north-south road allowance was even developed. In response to questions, Jordan estimated that an access road from the west would cost an additional \$8 000. Jordan acknowledged that the Hammermeisters had expressed concerns about its plans to utilize the existing approach, and the angle of the access road, but added that it believed the Hammermeisters' position was unreasonable and that adequate compensation would alleviate their concerns.

In response to the concerns raised by the Hammermeisters, Jordan agreed to test all five of their water wells prior to drilling. Emphasizing its excellent performance record in the area, Jordan also indicated it would follow proper soil conservation methods, erosion control, and restoration procedures. It would construct a low profile road to minimize the impact on the Hammermeisters' farming operation and ensure that natural drainage patterns were maintained. Jordan stated that it would consider an off-site sump only if the initial site preparation confirmed that soil conditions were unsuitable to support a sump. At the hearing, Jordan agreed it would clean the lease construction equipment prior to the equipment entering the lease to avoid the spread of noxious weeds. Jordan added that it would provide fencing and gates to meet the Hammermeisters' requirements. Jordan also indicated it would take reasonable measures to minimize the noise during drilling operations by restricting trucking to daylight hours as much as possible and orienting the rig such that the engine exhausts were pointed away from the Hammermeisters' residence and hog barns. If the drilling results were encouraging, Jordan indicated that it would conduct a short duration closed-chamber drill-stem test but added that a three to five day Absolute-Open-Flow test with gas flaring may be necessary if gas pay was encountered.

Jordan indicated that it believed that the Hammermeisters' concerns relating to damage to land, depreciated land value, and disruption of quiet enjoyment are adverse effects which are compensated under the terms of a surface lease or an order by the Surface Rights Board. In response to the '*Special Conditions Addendum*', drafted by the landowners' representative, Mr. Karl Zajes, and submitted by the landowners, Jordan stated that it objected to the use of any of the conditions on the well licence. Jordan believed that it had already committed to relevant items specific to the 13-33 well and would discuss the special conditions with the Hammermeisters, or, if necessary, before any Surface Rights Board hearing.

Jordan stated that it had contracted Codeco Consulting (1994) Inc. (Codeco) to prepare a site-specific sour-gas emergency response plan for the 13-33 well. It indicated that Codeco gathered

emergency response information from residents within the emergency-planning radius of 1.1 kilometres using a telephone survey questionnaire and a visit to the Hammermeisters' property. Jordan added that Codeco collected information relating to the number and age of residents, health problems, pets, and available transportation in the event that evacuation was necessary. Jordan acknowledged that the Hammermeisters were unaware of the specific contents of the emergency response plan as they had not yet been provided with a copy. Jordan indicated that the Hammermeisters would receive the plan, along with other residents in the planning area, one to two days prior to spudding the well. Jordan stated that it was satisfied that concerns regarding air quality, sour-gas control, and gas flaring were addressed in its emergency response plan.

Jordan believed that negotiations with the Hammermeisters failed because of compensation issues and that the other concerns were brought forward only as a result of Jordan's unwillingness to meet the Hammermeisters' compensation proposal.

### **3.2 Views of the Intervener**

The Hammermeisters did not directly dispute the need for the well or its location from a geological standpoint. The Hammermeisters added that an alternate surface location considered by Jordan on the north side of the road was also unacceptable, as it was in line with the prevailing winds from the north and north-west. They indicated, however, that they would agree to a well located in the extreme south-west corner of the quarter section which would place the well in

Lsd 12 rather than Lsd 13. This location would be much further away from their residence and hog barns and would therefore have less potential to be a problem.

The Hammermeisters indicated that they had experienced sour-gas odours in the general area and were concerned that it could occur on their property as a result of this well. The Hammermeisters believed that any odours or emissions from the well would be carried on the prevailing winds towards their home and hog barns. Therefore, they stressed that any surface location north to north-west of their residence would be unsuitable. They expressed concerns about the negative effect that gaseous emissions could have on their health indicating that the family's history of respiratory problems would be aggravated by Jordan's operations. The Hammermeisters submitted a letter from their family physician stating that the Hammermeisters should avoid contaminants as much as possible.

The Hammermeisters were concerned that they had not been provided with a copy of the emergency response plan or made aware of any details, including evacuation, that may be necessary in the event of a mishap. During a telephone contact with Codeco, the Hammermeisters questioned the caller about the evacuation of their pigs but were advised they would need to make their own arrangements in that regard.

The Hammermeisters stated that they objected to the construction of an on-site sump and the disposal of sump fluids on their lands. They indicated they believed the fluids to be toxic and were concerned that Jordan did not appear willing to address this concern. The Hammermeisters strongly objected to the route of the applied-for access road and the use of the existing approach which they indicated had been constructed by Herman Hammermeister.

The Hammermeisters stated that they wished to maintain exclusive use of the approach, and that joint use of the approach with Jordan could interrupt their farming operations. They also indicated that they were concerned that the dog-leg access road proposed by Jordan would cause drainage problems on their field and make turning of farm implements more difficult, if not impossible. The Hammermeisters indicated that they had little meaningful discussion with Jordan regarding an alternate approach or access road since Jordan insisted on utilizing the existing approach.

The Hammermeisters submitted two documents entitled '*Special Conditions Addendum*' into evidence. The addenda were authored by Mr. Karl Zajes who represented the Hammermeisters at the hearing. Mr. Zajes explained that he supplied the documents for use by his clients which contained substantial lists of general conditions for consideration in negotiating surface leases and pipeline right-of-ways. The Hammermeisters requested that the examiners review the list and apply some or all of the conditions to the well licence.

The Hammermeisters stated that they felt mistrustful about their dealings with Jordan and were very concerned at being asked to consent to operations with minimal information available from Jordan representatives. They also believed that by being asked to consent to operations in a piecemeal fashion, they are deprived of the opportunity of appraising the entire scope of the project and to assess what long-term impacts, if any, they could expect. The Hammermeisters indicated that Jordan had not explained the potential production scenarios to them and thus, were quite unaware of the company's plans should the proposed well prove successful.

### **3.3 Views of the Examiners**

The examiners are satisfied that Jordan holds valid mineral agreements to exploit reserves underlying Section 33.

The examiners heard considerable discussion to the effect that the location of the well was geologically sensitive. While Jordan indicated that the preferred site was in fact some 40 metres further east, the panel notes that Jordan believed that its geological objectives could still be met by drilling a vertical well from the proposed surface location. In response to questions however, the panel does not believe that Jordan adequately articulated the reasons behind the site selected based on the geological considerations. The examiners note that while Jordan did present an outline of the targeted Basal Quartz structural anomaly, they do not believe that Jordan representatives were able to adequately address the source information which was used to construct the map, or to provide any insight into the precision of the interpretation. The examiners surmise that Jordan expected all parties to accept at face value what the examiners considered sketchy information at best. In this case, the examiners are not convinced from the information presented that the well location is as critical as Jordan portrayed it at the hearing.

The examiners note that Jordan's skewed orientation of the lease site also presents problems. The examiners see no clear reason why the site is oriented north-west to south-east except to align with the existing pipeline right-of-way. The panel believes that an alternative site, for example in a north-south orientation, would still meet the setback distance requirements of the facility while being more affable to the Hammermeisters' farming operation. Moreover, the examiners maintain that the current lease positioning is further complicated by the proposed dog-

leg access road. The examiners heard evidence from the Hammermeisters about the difficulties they would face in conducting farming operations around the dog-leg road. If Jordan had been successful in negotiating use of the existing approach, the examiners note that a straight north-south oriented access road appears possible by accessing the lease on the extreme north-west corner. The examiners also believe that an access road from the west would have some advantage to the Hammermeisters' operations over the one proposed by Jordan. However, through questioning, it became obvious to the examiners that neither Jordan nor the Hammermeisters were prepared to accept a west access road to the lease site. In conclusion, the examiners believe that Jordan's proposal with regard to its access road could have been more accommodating to the Hammermeisters' farming operations even at the applied-for site, but there is little evidence to support that Jordan was willing to make any concessions in this regard. The examiners are concerned about the apparent lack of accommodation and negotiation by Jordan, and are left wondering if more meaningful discussions by Jordan with the landowners could have resulted in innovative solutions in which both parties' needs and concerns would have been satisfied. The examiners believe that this occurred because of Jordan's unwavering view that compensation was the only unresolved outstanding issue. The examiners were convinced that the evidence at the hearing clearly showed otherwise.

Finally, the examiners believe they heard overwhelming evidence that indicated that the public consultation process envisioned by the Board failed to take place. While the examiners are satisfied that Jordan's emergency response plan required for the drilling of the 13-33 well, and eventually approved by the Board, likely contained all necessary components, the examiners question the methods used to secure the information and subsequently, distribute it. The examiners believe that details of the type of well being drilled and the potential impacts should be provided in early discussions with affected residents so that they can understand the proposal, ask questions, and make informed decisions. The examiners believe that the process is meant to be interactive; that public input is sought and considered in formalizing the plan. While the examiners note that Jordan planned to provide copies of the emergency response plan to the land occupants prior to spudding the well, it appeared to the examiners that the plan itself had not been discussed with any of the affected residents. In short, from the evidence submitted, it appears to the examiners that Jordan did little more than attempt telephone contact with the affected residents and/or a casual contact to ask predetermined questions. Thus, the examiners conclude that the Board's expectations of public consultation were not met by Jordan.

Notwithstanding the above noted issues, the examiners have no reason to believe that the proposed well could not, under the right circumstances, be safely drilled and operated in such a way as to protect public safety and health and minimize the environmental impact. The examiners also have no reason to believe that a well-designed and well communicated emergency response plan would not adequately provide for public safety in the event of an accidental release of sour gas.

#### **4 RECOMMENDATION**

The examiners have carefully considered the evidence presented and recommend that Application No. 960100 be denied and that Well Licence No. 0182282 for JORDAN PCP

WIZARD LAKE 13-33-48-27 be cancelled.

DATED at Calgary, Alberta, on 17 May 1996.

*[Original signed by]*

H. O. Lillo, P.Eng.

*[Original signed by]*

G. C. Dunn, P.Eng.

*[Original signed by]*

F. G. Sorenson