

**NORTHROCK RESOURCES LTD.  
COMPULSORY POOLING  
GILBY FIELD**

**Examiner Report 2000-3  
Application No. 1051067**

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## **1 RECOMMENDATION**

The examiners have considered the evidence and recommend that

- the Board, with the approval of the Lieutenant Governor in Council, issue an order under section 72 of the Oil and Gas Conservation Act (the Act) designating that all tracts within Section 6 of Township 42, Range 2, West of the 5th Meridian (Section 6), be operated as a unit for the production of gas from the Nordegg Member, through a well to be drilled in Legal Subdivision (Lsd) 12 of the section (the 12-6 well),
- the order allocate the costs and revenues for each tract on a disproportionate basis as applied for, with a 20 per cent allocation to the east half of the section, and an 80 per cent allocation to the west half of the section,
- the order specify that a penalty equal to two times the unpaid amount be applied against a tract owner's share of the actual costs of drilling and completing the well if that owner fails to pay such costs within 30 days of the later of the pooling order being issued, the owner being given notice in writing of its share of costs, and the well having commenced production, and
- the order designate Ionic Energy Inc. (Ionic) as the operator of the well to be drilled.

## **2 INTRODUCTION**

### **2.1 Application, Intervention, and Hearing**

Northrock Resources Ltd. (Northrock) applied under section 72 of the Act for an order prescribing that all tracts within the drilling spacing unit comprising Section 6 be operated as a unit for the production of gas from the Nordegg Member, through a well to be drilled in Lsd 12 of the section.

Beau Canada Exploration Ltd. (Beau) filed a submission opposing the application.

The application was considered at a public hearing on March 21, 2000, by Board-appointed examiners C. A. Langlo, P. Geol., C. Hill, and B. C. Hubbard, P. Eng.

At the hearing, Northrock advised that Ionic, a partner with itself and Crestar Energy Inc. (Crestar) in the west half of Section 6, would present evidence and argument in support of the application.

The following lists the participants at the hearing and abbreviations used in the report:

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

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

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#### Witnesses

Ionic Energy Inc. (Ionic)  
D. S. Cymbalisty, P.Eng.

D. S. Cymbalisty, P.Eng.  
B. Gwalko  
A. L. Smith  
of Northrock  
B. Robertson  
G. J. Yeo, P.Geo.,

Beau Canada Exploration Ltd. (Beau)  
B. J. Roth

D. G. Erickson, P.Eng.

Alberta Energy and Utilities Board staff  
A. A. Beken, P.Eng., P.Geol.  
K. Fisher  
J. P. Mousseau

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## **2.2 Preliminary Matters**

At the opening of the hearing, Beau objected to the admission of geophysical information filed by Ionic on the day prior to the opening of the hearing. Beau submitted that Ionic provided no justification for the late filing and that no leave had been granted by the Board pursuant to section 16 of the Board's Rules of Practice (Alberta Regulation 149/71). Beau argued that it had not been afforded sufficient opportunity to review the new material, and prepare cross-examination in that regard. Beau therefore suggested that the new evidence was not appropriate for consideration at the hearing. Beau also confirmed that it did not want to delay the hearing in order to review the material. It submitted that if the examiners believed the material would be useful, they consider the degree to which the material was tested in affording it any weight.

Ionic stated that the information provided was not new to Beau, which had reviewed the material at Ionic's offices in June 1999.

The examiners weighed the advantages of admitting the new evidence with the potential prejudice to Beau, and found that the decision making process would best be served by the admission of the additional information. The hearing therefore proceeded as scheduled.

### **3 ISSUES**

The examiners consider the issues respecting the application to be

- the need for a pooling order, and
- the provisions of a pooling order if issued, and in particular, the basis for the allocation of costs and revenues.

### **4 CONSIDERATION OF THE APPLICATION**

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

Ionic, Northrock, and Crestar hold the Crown natural gas rights for the Nordegg Member underlying the west half of Section 6 with undivided interests of 30, 50, and 20 per cent, respectively. Beau holds the rights for Nordegg gas in the east half of the section

Ionic stated that the tract owners with an interest in the Nordegg gas underlying Section 6 had been attempting for over a year to reach a mutually acceptable pooling agreement. At one stage during these discussions, in order to expedite an agreement, Ionic had proposed a pooling agreement with allocation of costs and revenues on a tract area basis. This proposed pooling was agreeable to Beau; however, Ionic's partners Northrock and Crestar had not agreed with the arrangement, and it was not executed. Ionic indicated that as the pool continued to be produced through the offsetting well in Lsd 7-1-42-3 W5M (the 7-1 well), the declining volume of recoverable gas from Section 6 required a more equitable, disproportionate allocation favouring the west half of the section to justify drilling the 12-6 well. Ionic concluded that since negotiations with Beau to pool on a disproportionate basis have been unsuccessful, a pooling order is required to allow the drilling and production of the 12-6 well.

The applicant also submitted that it did not want to take all the risks associated with drilling the well without knowing what its final working interest would be, and therefore pooling should occur prior to the drilling of the 12-6 well. Ionic disagreed with Beau's argument that drilling the 12-6 well would yield useful information to better determine the allocation between the east and west halves of the section.

Ionic proposed an allocation of costs and revenues for Nordegg gas production under the proposed pooling order of 80 per cent for the west half of Section 6, and 20 per cent for the east half. In support of its proposal, Ionic presented a net pay isopach map of the Nordegg pool in the area of interest (see attached figure) showing that much of the east half of Section 6 was not underlain by the Nordegg pool. Ionic's mapping was based on data from the three wells drilled in Section 6 and offsetting wells, as well as geophysical data, from which it interpreted the edge of the Nordegg pool. It noted that the Nordegg Member is absent in the well in Lsd 16 (the 16-6 well). Further, it submitted that the Nordegg porosity in the wells located in Lsd 2 and 6 of the section (the 2-6 and 6-6 wells, respectively) is not effective, and that neither well is productive from the Nordegg Member. Ionic indicated that seismic data identified areas of favourable Nordegg porosity and suggested potential reserves lying between the 7-1 well and the proposed 12-6 well. The applicant noted that the pool maps submitted by Beau did not match Ionic's geological interpretation of the pool and were not supported by the available seismic data.

Ionic proposed an allocation of 20 per cent for the east half of the section to recognize the porosity in the 2-6 well, and as a means to resolve the dispute. However, the applicant noted that its mapping indicated that the allocation of reserves for the east half section would be less than the 20 per cent it has proposed, although it had not calculated the actual allocation. It also indicated that mapping based on effective porosity would suggest an allocation of 0 per cent for the east half of the section.

Finally, Ionic requested that it be named the operator of the proposed well under the pooling order, and that the maximum penalty allowed under the Act be applied to a tract owner's share of drilling and completion costs if those costs were not paid within the time frame specified in the pooling order. In Ionic's opinion, the maximum penalty is justified as it is consistent with standard industry penalties for non-participation in development wells. The applicant agreed that the penalty should be applied if a tract owner failed to pay its share of drilling and completion costs within 30 days of the later of the pooling order being issued, the tract owner being notified in writing of its share of costs, and the well commencing production.

#### **4.2 Views of Beau**

Beau submitted that it had agreed with Ionic's initial proposal to pool on a tract area basis. The intervener noted that the parties with whom Ionic could not agree were its partners Northrock and Crestar. Beau concluded that there is no need for a pooling order, as Ionic could have pooled on reasonable terms with Beau on the basis of the previous proposal.

Beau argued that Ionic should drill the proposed well and pooling should then be negotiated if the well is successful. This would provide the parties with additional data to use in negotiating a pooling arrangement. If the well were unsuccessful, pooling would not be an issue. The intervener argued that it would be prejudiced by the issuance of a pooling order prior to drilling, because a determination of pooling would have been made without the information gained by drilling the 12-6 well. Beau also submitted that the purpose of a pooling order was not to give comfort to a party as to what its working interest would be in advance of a well being drilled. The intervener concluded that a pooling order should not be issued at this time.

Beau submitted that in the event an order is issued, costs and revenues under the pooling order should be allocated on a tract area basis. It argued that a number of different pool interpretations are possible using the available data that would suggest significantly different allocations between the tracts. Based on this lack of certainty, Beau argued that it could not be proven that allocation by tract area would be inequitable, and in such circumstances, the Act would require that allocation be on a tract area basis. In support of this argument, it submitted two different interpretations of the Nordegg pool underlying Section 6 and nearby sections (see attached figure). Beau also argued that the thicker Nordegg gas pay of 1.5 metre (m) in the 2-6 well showed there is greater potential there than in the area of the 6-6 well which has an interpreted net pay of only 0.1 m. It agreed, however, that although it had interpreted net pay in the 2-6 and 6-6 wells, the reservoir was not proven productive at those wells. It speculated that the lack of Nordegg gas production from the 2-6 well could be a result of an unsuccessful fracture-stimulation.

Finally, if a pooling order is issued, Beau did not object to the proposed penalty for failure to pay drilling and completion costs under a pooling order, the timing for the penalty to come into effect, or to the request that Ionic be named the operator of the proposed well.

### 4.3 Views of the Examiners

The examiners note that the tract owners have been unable to reach a mutually satisfactory pooling arrangement for Section 6, and conclude that there is a need for a pooling order. Section 72 of the Act clearly allows for the issuance of a pooling order prior to the drilling of a well, and the examiners believe the Board has an obligation to consider the subject application on the basis of the evidence available at the time such an order is requested.

Section 72(4)(c) of the Act states that allocation of production under a pooling order “shall be on an area basis unless it can be shown to the Board that that basis is inequitable”. There is agreement among the parties that the Nordegg Member is not present at the 16-6 well, and that the Nordegg porosity encountered by the 2-6 and 6-6 wells is ineffective and the wells are not productive. On this basis, the examiners conclude that it would be inequitable to allocate on an area basis as a significant portion of the east half of the section has no potential for Nordegg gas production.

The examiners next considered whether pooling should be based on a specific map of the pool. The examiners note that, although there are several wells which indicate potential porosity within the Nordegg Member, the only proven pay is in the producing 7-1 well. The isopach mapping of both the applicant and intervener reflect Nordegg pay in a number of wells based on observed porosity, notwithstanding that the wells are non-productive. The examiners do not believe the maps presented are useful to allocate reserves in Section 6 because they clearly include area that is non-productive. The examiners further note that neither the applicant nor the intervener proposed using mapping to determine tract factors. Therefore, the examiners are not prepared to use mapping as a basis on which to allocate production.

The examiners conclude that the allocation should be based on information obtained from the wells drilled in Section 6. Based on the lack of productive Nordegg reservoir in any of these wells, the examiners believe that there is a low probability of recoverable Nordegg gas reserves being present in the northeast, southeast, or southwest quarters of the section. The examiners conclude that the most likely probability of encountering any recoverable reserves is within the northwest quarter of Section 6. This conclusion is based on the close proximity of the quarter to the 7-1 producer and positive porosity indications interpreted from the seismic data. The examiners note that on this basis, the allocation could be as much as 100 per cent to the northwest quarter. However, given that the applicant has proposed an allocation of 80 per cent for the west half and 20 per cent for the east half of section 6, the examiners conclude that the applied-for allocation is acceptable.

The examiners note that there was no dispute among the parties respecting the proposed penalty for failure to pay drilling and completion costs under a pooling order, the timing for the penalty to come into effect, or the request that Ionic be named the operator of the proposed well, and recommend that the pooling order reflect these conditions.

DATED at Calgary, Alberta, on May 11, 2000.

*(Original signed by)*

C. A. Langlo, P. Geol.

*(Original signed by)*

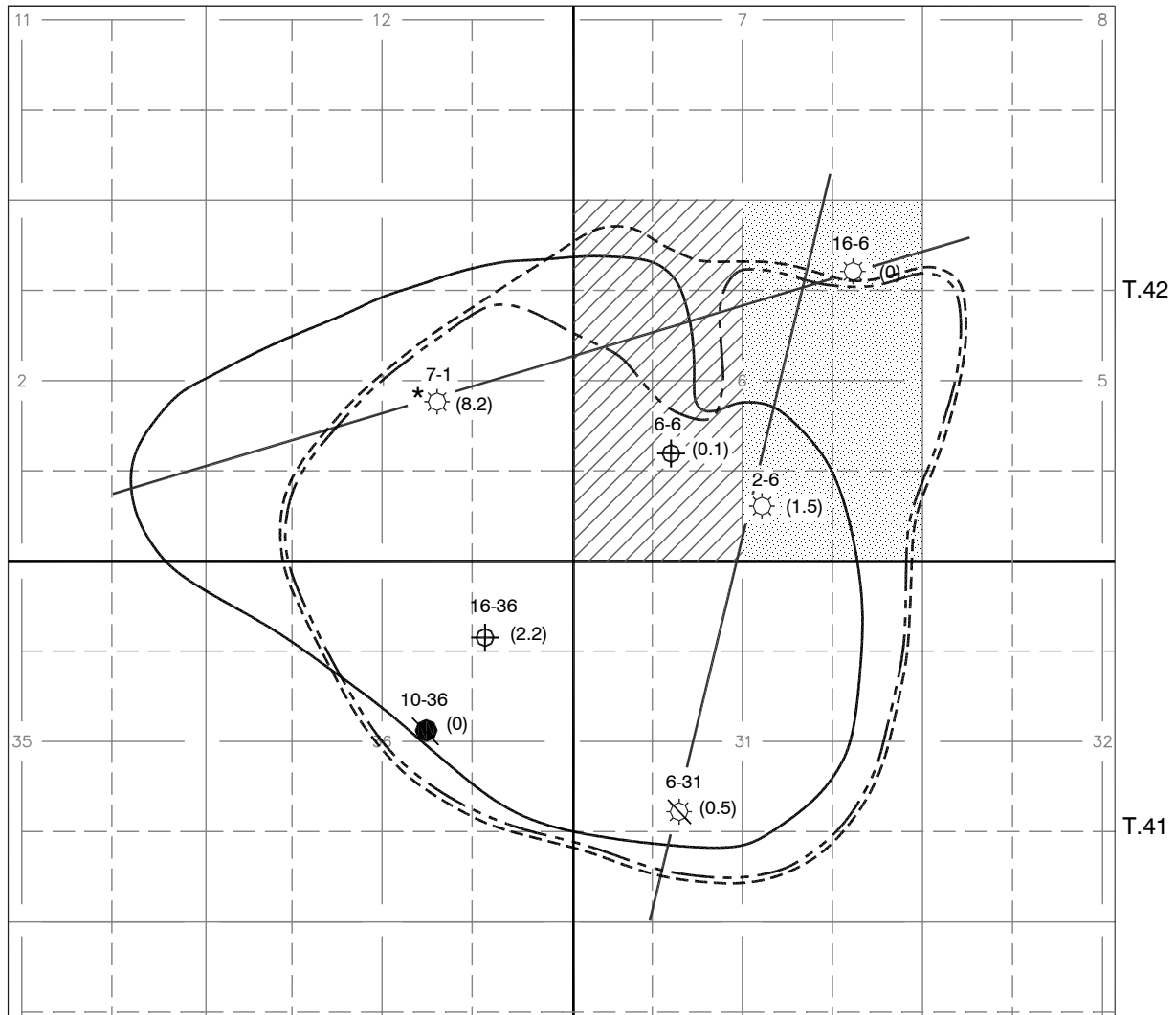
C. Hill

*(Original signed by)*

B. C. Hubbard, P.Eng.

R.3

R.2W.5M.



**Legend**

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|  | Flowing gas well from zones not involved in application                |  | Interests held by Beau (100%)                                    |
|  | Flowing gas well from Nordegg member                                   |  | Interests held by Ionic (30%), Northrock (50%) and Crestar (20%) |
|  | Suspended gas well   |  | Ionic's interpretation of pool boundary (approximate)            |
|  | Suspended oil well   |  | Beau's interpretations of pool boundaries (approximate)          |
|  | Abandoned well   |  | Ionic's seismic lines through area of interest (approximate)     |
|  | Nordegg net pay of well (metres), as agreed to by hearing participants |  |  |

Overview of Application Area/Gilby Field  
 Application No. 1051067  
 Northrock Resources Ltd.

Examiner Report 2000-3