



Response Energy Corporation

Application for Compulsory Pooling
Kakwa Field

and

Paramount Resources Ltd.

Application for Special Gas Well Spacing
Kakwa Field

September 2, 2008

ENERGY RESOURCES CONSERVATION BOARD

Decision 2008-080: Response Energy Corporation, Application for Compulsory Pooling, and
Paramount Resources Ltd. Application for Special Gas Well Spacing, Kakwa Field

September 2, 2008

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ENERGY RESOURCES CONSERVATION BOARD

Calgary Alberta

**RESPONSE ENERGY CORPORATION
APPLICATION FOR COMPULSORY POOLING**

PARAMOUNT RESOURCES LTD.

APPLICATION FOR SPECIAL GAS WELL SPACING

KAKWA FIELD

Decision 2008-080

Applications No. 1546012 and 1565074

DECISION

The Energy Resources Conservation Board (ERCB/Board) has considered the findings and recommendations set out in the following examiner report, adopts the recommendations, and directs that Application No. 1546012 be approved and that Application No. 1565074 be denied.

Dated in Calgary, Alberta, on September 2, 2008.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

Dan McFadyen
Chairman

ENERGY RESOURCES CONSERVATION BOARD

Calgary Alberta

EXAMINER REPORT RESPECTING RESPONSE ENERGY CORPORATION APPLICATION FOR COMPULSORY POOLING

PARAMOUNT RESOURCES LTD.

APPLICATION FOR SPECIAL GAS WELL SPACING

KAKWA FIELD

Decision 2008-080

Applications No. 1546012 and 1565074

1 RECOMMENDATION

Having considered all of the evidence, the examiners recommend that Application No. 1546012, for compulsory pooling of gas from the Falher Member and the Gething Formation in Section 22, be granted, with the inclusion of the Dunvegan Formation, and the terms and conditions noted herein, subject to the approval of the Lieutenant Governor in Council and that Application No. 1565074, for half-section drilling spacing units in Section 22, Township 63, Range 4, West of the 6th Meridian (Section 22) be denied.

1.1 Application No. 1546012

Response Energy Corporation (Response) applied to the ERCB, pursuant to Section 80 of the *Oil and Gas Conservation Act (OGCA)*, for an order prescribing that all tracts within the drilling spacing unit constituting Section 22 be operated as a unit for the production of gas from the Falher Member and Gething Formation through the well with the unique identifier of 00/13-22-063-04W6 (13-22 well).

Response requested, among other things, that costs and revenues under the compulsory pooling order be allocated on a tract area basis, that it be named the operator of the well to be produced, and that the ERCB use a discount factor when determining the appropriate equalization of costs for drilling and completing the well in the subject formations. In addition, Response requested that the maximum penalty allowed under the *OGCA* be applied to a tract owner's share of the costs of drilling and completing the well in the formations named in the order if the tract owner does not pay its share of the costs within 30 days of the later of the order being issued, the tract owner being notified in writing of its share of the actual costs, or the well commencing production.

1.2 Application No. 1565074

Paramount Resources Ltd. (Paramount) applied to the ERCB, pursuant to Section 4.040 of the *Oil and Gas Conservation Regulations (OGCR)*, for an order prescribing half-section drilling spacing units, being either the south half or the north half of the section, with the target areas being within each drilling spacing unit, having sides 200 metres (m) from and parallel to the sides of the drilling spacing unit, for the production of gas from all zones to the base of the Bluesky-Bullhead Group in Section 22.

In the event that the spacing application was denied, Paramount requested that the Dunvegan Formation be included in the pooling consideration.

1.3 Interventions

Response and Paramount filed interventions in opposition to each other's application.

1.4 Hearing

The Board held a public hearing to consider both applications in Calgary, Alberta, which commenced on May 21, 2008, before Board-appointed examiners K. G. Sharp, P.Eng. (Presiding Member), H. W. Knox, P.Eng., and R. J. Willard, P.Eng. Those who appeared at the hearing are listed in Appendix 1. The hearing was adjourned on May 22, pending the receipt of Response's undertaking and any cross-examination on that undertaking by ERCB staff and Paramount. The ERCB received Response's materials in fulfillment of its undertaking on June 10. On June 12, ERCB staff informed the parties that it had no questions about the materials. Paramount's counsel, in a letter dated June 13, 2008, submitted that it did not have any cross-examination. The ERCB instructed the parties by letter that the presiding member had declared the hearing closed on June 16.

2 BACKGROUND

The 13-22 well was drilled by Dome Petroleum Limited (Dome) and its partners in February 1980 into the Fernie Group. Flow and buildup tests were conducted on the Gething Formation from July 29 to August 5, 1980, and the Falher C Member of the Spirit River Formation (Falher C) from October 22 to November 4, 1980. The Gething was flowed for 72 hours, followed by a 100-hour buildup period. The final gas rate during the flow was 26 thousand cubic metres per day ($10^3 \text{ m}^3/\text{d}$). The Falher C test consisted of two flow and buildup periods. The final flow lasted 75 hours, followed by a 229-hour buildup period. The final gas rate during the flow was $27.78 \times 10^3 \text{ m}^3/\text{d}$. Cumulative production from the Falher C during the final flow period was $64.93 \times 10^3 \text{ m}^3$. The volume of initial flow production was not recorded. With the exception of test production, the well has never produced.

Mineral ownership for the north half of the section has changed several times since 1980. Paramount acquired its interests from Summit Resources Limited in 2004. Paramount is currently the largest working interest owner in the north half of Section 22 and is the current licensee of the 13-22 well. The Petroleum and Natural Gas mineral rights for the south half of the section expired in 1993. The rights remained unleased until they were purchased by Response in a December 2006 Alberta Crown land sale. Shortly thereafter Paramount initiated discussions with regard to pooling the drilling spacing unit. The parties were unsuccessful in their negotiations to pool the mineral interests for Section 22, which led to the competing applications being filed.

In conjunction with proceeding to establish a hearing date on this matter, the ERCB encouraged the parties to engage in appropriate dispute resolution (ADR) to continue discussing issues of interest. The parties attended an initial meeting and agreed not to pursue ADR and to proceed directly to a hearing.

3 ISSUES

The examiners consider the issues respecting the applications to be

- the need for reduced gas well spacing, in particular, whether reduced gas well spacing would result in any unacceptable inequity;
- the need for the pooling order; and
- the provisions of the order if issued, in particular, allocation, equalization of costs for the existing wellbore, and the formations to be included in the order.

In reaching the recommendations in this decision, the examiners considered all relevant materials constituting the record of this proceeding, including the evidence and arguments provided by each party. Accordingly, references in this decision to specific parts of the record are intended to assist the reader in understanding the examiners' reasoning relating to a particular matter and should not be taken as an indication that the examiners did not consider all relevant portions of the record with respect to that matter.

4 CONSIDERATION OF PARAMOUNT APPLICATION NO. 1565074 FOR SPECIAL DRILLING SPACING UNITS

4.1 Basis for Consideration

Section 4.040(3) of the *OGCR* states that

The Board shall not grant an application for an order...that would reduce the size of drilling spacing units to less than the size of normal drilling spacing units unless the applicant shows that

- (a) improved recovery will be obtained,
- (b) additional wells are necessary to provide capacity to drain the pool at a reasonable rate that will not adversely affect recovery from the pool,
- (c) the drilling spacing units would be in a pool in a substantial part of which there are drilling spacing units of such reduced size, or
- (d) in a gas field, increased deliverability is desirable.

In addition to consideration of Section 4.040(3), one of the objectives of the *OGCA* is to afford each owner the opportunity to obtain its share of the production of the oil or gas from any pool. Therefore applications with respect to well spacing are also considered on the basis of equity.

4.2 Views of Paramount

Paramount submitted that if its application for reduced well spacing were granted, the application for pooling would not be required.

Gas production from the general area of application is commonly referred to as deep, tight gas. Paramount provided examples of approved and pending applications for increased well density for the production of gas from various horizons of Cretaceous age in the region. These examples, which included Section 15-63-4W6M adjacent to the area of application, had applied-for and approved well densities that ranged from two to four wells per pool per section. Paramount indicated that its plan for the area included the use of pad drilling to minimize the footprint of

activities and high-density development in targeted areas using existing infrastructure in order to reduce overall costs. It viewed the application to reduce the size of the drilling spacing unit as an alternative means to address the pooling issue. In the event that reduced spacing was approved, Paramount agreed that there would be a distinct difference between Response's obligation to drill a well in the south half of Section 22 to maintain its mineral lease and recover reserves and the flexibility and timing of additional wells within established holdings elsewhere in the Kakwa area.

For Section 22 specifically, Paramount pointed out that it would not deem a second well to be economic but believed Response had options to drill its own well now or wait until economics were more favourable. With respect to the latter, it suggested that Response may have an opportunity to request a continuation of the Crown mineral lease for the south half of Section 22 based on the 13-22 well.

Paramount mapped the Falher C as a low-velocity meander belt channel deposit, trending in a northeast/southwest direction, and about one section wide. Paramount believed that the Falher C was not a higher-energy straight channel system, as suggested by Response, because of the greater degree of shale present within the sand. For the 13-22 well, Paramount described the lower interval of the Falher C as an overbank or splay sand deposited during flood stage, the upper part as a point bar sand deposited within the channel, and the muds, silts, and coals as deposited within the interchannel floodplain. Paramount believed that there would likely be reservoir quality variations in this type of meandering channel system, which could result in areas of high productivity being directly adjacent to areas of low productivity within a reservoir. Paramount stated that given the drilling density and data available, it was not possible to accurately predict the areal extent, geometry, and orientation of the Falher reservoir. While Paramount's evidence focused on the Falher C, it submitted log sections showing that multiple Falher sands were present in sequence both above and below the Falher C.

Paramount indicated that when good-quality pressure-time-rate data existed, pressure transient analysis (PTA) could be used to make reasonable production forecasts. Paramount showed that the data from the 1980 test at the 13-22 well could accommodate several different models, resulting in more than one forecast. Using these forecasts, its production estimates for the Falher C in the 13-22 well ranged from 0.079 billion cubic feet (Bcf), (2.2 million cubic metres [10^6 m³]) to 0.636 Bcf (18.0 10^6 m³). Paramount estimated the drainage areas would likely range from 10 to 59 hectares, with the 10 hectares result closer to that determined for nearby analog wells. These areas were based on PTA models that Paramount believed most closely extrapolated to the current static reservoir pressure, being the radial composite model and the U-shaped boundary closed model.

Paramount also provided evidence, based on production decline analysis and a third-party reserves report of analog Falher producers in the area, that drainage areas for the Falher reservoirs were 13 hectares or less. It contended that additional wells would be required to drain the reserves in these sections.

Based on these estimated drainage areas, Paramount believed the 13-22 well would access minimal, if any, reserves in the south half of Section 22, even though it believed reserves likely were present throughout the section.

Paramount submitted that there were reservoir sands within the Gething in the subject well, which had also been deposited in a fluvial environment. Paramount indicated that the size, geometry, and orientation of the Gething reservoir could not be determined accurately given the well control in the area. It noted that the PTA analysis of the 1980 Gething test indicated very poor reservoir conditions close to the 13-22 wellbore. Based on offset wells, Paramount estimated recoverable reserves of the Gething to be between 0.1 Bcf ($2.8 \times 10^6 \text{ m}^3$) and 0.3 Bcf ($8.5 \times 10^6 \text{ m}^3$).

Paramount did not submit a geological evaluation of the areal extent of the Dunvegan. However, based on a comparison of the log response of the 13-22 well with a completed Dunvegan horizon in its well at 8-15-63-4W6M (8-15 well), Paramount determined that the Dunvegan in the 13-22 well was potentially a better reservoir. Paramount estimated recoverable reserves for the Dunvegan to be between 0.1 Bcf ($2.8 \times 10^6 \text{ m}^3$) and 0.3 Bcf ($8.5 \times 10^6 \text{ m}^3$) based on its review of log data and offset wells.

Paramount alleged that there was sufficient evidence to conclude that wells in the area would have limited drainage areas and that additional wells were required to drain the reserves in a section. It claimed that the reserves associated with the 13-22 well belonged to mineral interest owners in the north half of the section and maintained that approval of the pooling application would result in an inequitable drainage of its reserves.

4.3 Views of Response

Response submitted that there were two possible interpretations of the depositional environment of the Falher C in the 13-22 well. One interpretation was that of deposition in a braided stream environment, characterized by longitudinal and medial bars, with very large linear features oriented parallel to the channel edges. Its alternative interpretation was that of deposition in a meandering fluvial system characterized by migrating point bar sands. Response explained that this type of channel system would have a very complex sand/shale network with intricate porosity and permeability relationships and would be interconnected when the point bar sand content exceeded 50 per cent. Response believed that the meandering fluvial system was the primary depositional environment of the Falher C, but did not rule out longitudinal or braided stream deposits.

Response noted under cross-examination that the Falher C was within the deep basin system and that the sands would be expected to be gas charged, with no associated water downdip. It interpreted the channel scour itself to run in a north/south direction and the reservoir width within the channel scour to be an average of 800 m, based on the ratio of thickness of the channel deposits to expected channel width. Response indicated that porosity development within the channel system was complex and within the reservoir there could be areas of high productivity directly adjacent to areas of poorer productivity. In its opinion, there had not been enough production from the Falher C in the 13-22 well to determine the actual potential of the reservoir. It further argued there was not enough well performance information in the general area to permit a statistical approach to pool sizing.

Response interpreted most of the gas pool to lie primarily to the south of the 13-22 well, based on its net pay values map, which showed the Falher C to be tight to the north in Section 29-63-4W6M and the proven porosity to be found in wells to the south of Section 22. The Response evidence was focused on the Falher C; however, log sections submitted of other wells in the area

showed perforations and potential in the Falher sands deposited both above and below the Falher C.

Response argued that a five-year production life forecast was too short to estimate recoverable reserves and the associated drainage areas. Response submitted logs from some of the better wells in the area to support its case. It used a reservoir model with a well near two boundaries at right angles in an otherwise large reservoir; however, it admitted that there were many plausible models that could be derived from the test data. Response noted that the extent of the reservoir could not be determined from pressure transient analysis of the 1980 Falher C well test. It noted that mechanical recorders, known to have limited accuracy, were used to measure pressures and that the initial pressure of the Falher was unknown.

Response did not submit a geological interpretation of the extent or trend of the Gething reservoir encountered by the 13-22 well. However, it stated that additional flow and pressure data provided by Paramount in its letter to the ERCB dated December 21, 2007, supported pooling and producing the Gething in Section 22-63-4W6M.

Response did not believe that the Dunvegan was capable of producing any appreciable amount of natural gas. It stated that log analysis on the Upper Dunvegan (Dunvegan A2) indicated it was wet and added that there were no productive Dunvegan wells in the area to support completing the Dunvegan in the 13-22 well. Response reviewed the flow test of the Dunvegan C sand in the 8-15 well wherein the well flowed at an initial rate of $25 \times 10^3 \text{ m}^3/\text{d}$ at a 1755 kilopascal (kPa) flowing pressure, declining to $3.0 \times 10^3 \text{ m}^3/\text{d}$ at a 280 kPa flowing pressure after 8.5 hours. It was the opinion of Response that there had been no sign of stabilization in either rate or flow during this test and that the Dunvegan C sand in the 8-15 well would have continued to decline if the well had been allowed to flow for a longer time. Response believed that the flow test indicated the Dunvegan C was uneconomic in the 8-15 well, and that similar results would be expected if the same sand were completed in the 13-22 wellbore.

Response alleged that it would be uneconomic to drill a second well in Section 22 and noted that it had purchased the south half of the section at the land sale with the understanding that pooling would likely occur. It contended that the application for reduced well spacing was premature due to the lack of production data and geological information in the area. It submitted that only production from the 13-22 well would provide the basis to determine the amount of recoverable reserves in the section to support a future application for increased well density.

4.4 Findings of the Examiners

The examiners note the application for reduced drilling spacing units was not filed on behalf of all mineral interest owners in the section and that it was submitted after the parties reached an impasse regarding pooling of mineral interests in Section 22.

Holdings have been established in the Kakwa and Musreau fields that allow production from between two and four wells per pool per section. In a holding, all parties in the section share production revenue from all wells, whereas in reduced spacing each party acts on its own and receives production revenue from wells on its respective portion of the section. Although the applied-for increased well density has been approved in the area, there are few examples to date of instances where second wells have been drilled in a section, resulting in a lack of data with regard to long-term field performance. The examiners are concerned that the limited

development in the area to date precludes a detailed performance assessment of the conservation and equity aspects of the proposed changes in Section 22. This absence of direct evidence is considered very important in cases where one party proposes to split a drilled section and remove a party from sharing in the existing well production, as is the expected premise in one-section drilling spacing units.

The main evidence before the examiners are the calculated drainage areas derived from the limited initial well tests conducted in 1980 and model forecasts of production, as well as decline analysis of a few analog wells. The predictions depend on the PTA models used and the inputs of pool size, pool shape, and geological parameters. The models lack calibration from production. The examiners note that several different PTA models have been shown to fit the well test data, resulting in a range of drainage area forecasts based on some well-defined and other less well-defined reservoir parameters. The examiners accept that predicted drainage areas using a five-year production forecast may be small. However, the evidence of pool delineation that controls drainage area shape and orientation is not conclusive, and these areas may cross half-section lines. The examiners find the evidence not compelling in determining to a high degree of certainty that reduced spacing and resulting total separation in equity within the section is the appropriate recovery strategy for reserves underlying Section 22 at this time.

The examiners conclude that the application to establish reduced drilling spacing units is premature and unsupported by development in the area. Therefore, the examiners recommend that Application No. 1565074 be denied. Given the evidence presented at the hearing and the examiners' findings below, the examiners view pooling, with the possibility of future applications to increase well density, as the appropriate means to address recovery of the reserves in Section 22.

5 CONSIDERATION OF RESPONSE APPLICATION NO. 1546012 FOR COMPULSORY POOLING

5.1 Need for a Compulsory Pooling Order

5.1.1 Views of the Parties

Response purchased the Petroleum and Natural Gas rights from surface to base Bluesky-Bullhead for the south half of Section 22-63-4W6M at the December 13, 2006, Crown land sale. Paramount approached Response on March 15, 2007, and proposed pooling of the Dunvegan, Falher, and Gething. A series of meetings was held, but Response and Paramount could not come to an agreement. Response submitted that negotiations to complete a voluntary pooling agreement had failed and that an order was required to allow pooling of production from the 13-22 well. In the absence of a reduced spacing approval, Paramount also concurred that a pooling order was necessary.

5.1.2 Findings of the Examiners

The examiners accept that reasonable attempts were made to reach a pooling agreement for production of the reserves underlying Section 22 and understand that an impasse between Response and Paramount resulted primarily over significant differences in approaches to account for the equalization of drilling costs for the 13-22 well. The examiners agree that a compulsory

pooling order provided for by Section 80 of the *OGCA* is an appropriate recourse to resolve the matter.

5.2 Provisions of the Order

5.2.1 Views of Response

Response believed that the Falher C would provide the majority of gas produced from the well and proposed that the order include the Falher Member and Gething Formation, which had been previously perforated, stimulated, and suspended. It did not include the Dunvegan, as it believed it would be unproductive and it was concerned that the fracture stimulation required for completion could result in potential damage to the relative permeability of the Falher C and to wellbore integrity.

Response submitted that pooling should proceed with a tract allocation of 50/50 based on the mineral ownership of the north and south halves of the section. It pointed out that PTA analysis could not determine the reservoir size, orientation, geometry, or maximum drainage area of the 13-22 wellbore. It also stated that no well control or other data were available to determine these reservoir properties.

Response submitted that it should be appointed operator because, with an acreage-based allocation, it would be the single largest working interest owner in the pool. It agreed that appointing it operator would somewhat add complexity because Paramount was the current licensee of the well. However, Response was concerned that Paramount might not seek the most equitable operating conditions for the well and preferentially produce its other wells in the area.

Response requested that if the Board appointed Paramount the operator, it instruct Paramount to leave the well in a suspended state pending a vote by all mineral interest owners regarding operatorship. Response proposed that an operating agreement be attached to the order and proposed a 1990 Canadian Association of Petroleum Landmen (1990 CAPL) agreement with a 1996 Petroleum Accountants Society of Canada (1996 PASC) accounting agreement in this regard.

With regard to equalization, Response stated that several transfers in mineral ownership of the 13-22 well had occurred since it was drilled in 1980 and none of the current mineral interest owners had incurred drilling costs. Because the well was 27 years old, it believed that there may be additional costs at abandonment associated with the base of groundwater protection and site reclamation. Based on its research of the Board's past decisions, Response submitted that it would be fair that the original drilling costs to the base of the Gething Formation should be discounted by 75 per cent and then shared by the parties.

In the event that the Board determined that a penalty provision was appropriate, Response indicated that the penalty should be the maximum allowed by the *OGCA*, as normal. Response agreed that the penalty would be applied if the tract owner did not pay its share of the cost within 30 days of the later of the order being issued, the tract owner being notified in writing of its share of costs, or the well commencing production.

5.2.2 Views of Paramount

Paramount believed that potential reserves existed in the Dunvegan and requested that the ERCB direct the parties to complete the Dunvegan, in addition to the Falher and Gething. It proposed to run a cement bond log prior to completion activities to evaluate the integrity of the well casing. Paramount would proceed with the Dunvegan completion only if it had confirmed cement behind casing. In addition, its program included using compatible completion fluids to minimize the risk to current permeability of the formations. Paramount believed that reactivation of the Gething and completion of the Dunvegan posed an equal, but minimal, risk of damage to the Falher C. Paramount noted that the 8-15 well had loaded with liquid during the production test, causing the rates to fall off. Despite the poor test results for the 8-15 well, Paramount believed that with commingled production, the Dunvegan completion would clean up and overall productivity in wellbore would increase over time. Paramount indicated that additional completion costs would make segregation of the Dunvegan within the wellbore uneconomic.

Paramount believed that the well test results, which showed that the 13-22 well would access minimal, if any, reserves from the south half of the section, negated the need for an understanding of the geological environment or pool orientation to allocate production. Based on its calculations of the wellbore drainage area, it proposed an allocation of 97.97 per cent to Paramount and other working interest owners and 0.03 per cent to Response. Paramount noted that the most generous allocation based on its analysis would be 85/15 in favour of the north half of the section.

Paramount stated that the Kakwa field was one of its core operating areas. Besides being licensee of the well, it also held the surface lease; therefore, it sought to be named operator. It proposed that the 13-22 well could tie into one of the facilities it operated in the area and noted that gas produced from the well would have priority over third-party gas. Paramount confirmed that there was capacity for all produced gas from the 13-22 well in the existing gathering system, regardless of its rate. Paramount concurred that 1990 CAPL operating and 1996 PASC accounting agreements should be attached to the order.

Paramount submitted that equalization of drilling costs meant the actual drilling costs regardless of when the well was drilled or who participated in drilling. It referred to Section 80(4)(d) of the *OGCA*, which specifies: “An order made under subsection 3 shall provide for the following matters: (d) for the payment of the actual cost of the drilling of the well drilled before or after the making of the order.” Paramount disagreed with previous decisions of the Board where the cost of an older well was discounted, and it submitted that the Board had erred in not using actual costs, as explicitly specified in the *OGCA*.

Paramount provided evidence that Talisman Energy Inc.’s (Talisman’s) predecessor was a partner with Dome, but the predecessor had opted not to participate in drilling the 13-22 well. As a result, Talisman had an outstanding obligation to pay its portion of the original drilling costs and a penalty on those costs prior to regaining its working interest in the wellbore. For this reason, Paramount believed it would be inequitable for Response to obtain ownership in the well based on any amount other than the original drilling costs. Paramount proposed the drilling costs be set at \$1 919 949.00, which included the actual drilling costs to the base of the Gething, the completion of the Falher C and Gething in 1980, and the suspension of the Falher in 2007.

In the event that the Board determined that a penalty provision was appropriate, Paramount agreed that the penalty should be the maximum allowed by the *OGCA*, as normal.

5.2.3 Findings of the Examiners

Based on the evidence heard at the hearing, the examiners are satisfied that the completion of the Dunvegan poses no unacceptable risk of damage to the Falher C or to wellbore integrity. Therefore, the examiners recommend that the order include the Falher Member and the Dunvegan and Gething Formations. The examiners are not prepared to recommend that the Dunvegan must be completed, as such operational matters are best governed by joint mineral interest owners of a well. Further, the examiners note that matters related to whether production is commingled or segregated within the wellbore is not a consideration of a compulsory pooling application and order.

Section 80(4)(c) of the *OGCA* states that allocation shall be on an area basis unless it is shown that this would be inequitable. In the examiners' view, this establishes a benchmark, whereby an alternative reserves-based allocation requires clear and definitive evidence to show that it would be inequitable to allocate otherwise. The examiners do not believe assumptions of drainage area based on limited pressure transient analysis and five-year production forecasts are sufficient evidence to convince the panel, as they do not substitute for or eliminate the need for the requisite understanding of the size, shape, and orientation of the reservoir in determining reserve allocation under the drilling spacing unit. Response and Paramount agreed that these reservoir properties are unknown. The examiners conclude that the distribution of gas reserves underlying each tract cannot be reasonably determined for any of the potential zones; therefore, pooling of tracts on a reserve or wellbore drainage area basis would be inappropriate. The examiners recommend that the production be allocated on a tract ownership basis, which would equate to 50 per cent of production for mineral owners in the north half of Section 22 and 50 per cent of production for mineral owners in the south half of the section.

In regard to the issue of operatorship of the 13-22 well, the examiners did not hear compelling evidence to depart from the normal ERCB practice, which is to designate the licensee of the well as operator. Although Response will be the largest working mineral interest owner in the section, Paramount is the licensee of the well and is the first party responsible for the well regardless of the operator designation. Therefore, the examiners recommend that Paramount be designated as operator in the order. Furthermore, the examiners find no reason to leave the well suspended pending a vote of all parties regarding this matter, as requested by Response.

The examiners note that both parties are agreeable to adopt 1990 CAPL and 1996 PASC agreements commonly used by industry. The examiners are of the view that it is not appropriate to attach these agreements to the compulsory pooling order, as the agreements are contractual in nature and are not within the ERCB's jurisdiction. If they so wish, parties may proceed with the subject agreements on their own accord.

In regard to the equalization of well costs, the examiners are of the view that the ERCB has the discretion under Section 83(2) of the *OGCA* to determine the actual costs of the drilling of the well to be paid under the pooling order. In determining the actual costs of drilling, the ERCB considers the unique circumstances of each case to arrive at a fair and equitable decision in keeping with the purpose of the legislation.

The examiners note that historically actual costs have been awarded based on two key principals: 1) equalization of wellbore costs is intended as a reimbursement of costs to parties who incurred the expense of drilling, and 2) original parties that took the exploration risk must be recognized, while ensuring that both initial and future parties are treated consistently. On occasion, original costs have been discounted, due to the age of the wellbore; however, if one or more original parties incurred the original drilling and completion costs, no discount has been applied.

The examiners note that Talisman, a current mineral interest owner in Section 22, has an interest in the 13-22 well as result of one of its predecessors having an interest in the 13-22 well and having elected to take on a penalty position. By so doing, the predecessor was obligated to pay its portion of the original drilling costs plus a penalty on those costs before participating in the well. Given that Talisman possesses all the rights and obligations of its predecessors, including the obligation to pay a portion of the original drilling costs plus a penalty on those costs in order to participate in the 13-22 well, the examiners find that, in effect, Talisman is an original party to the drilling and completion costs.

Furthermore, the evidence presented to the examiners indicates that all other current partners in the north half of Section 22 acquired their rights through select property acquisitions, in which the dollar amount paid for the 13-22 well was undetermined.

With one partner being recognized as an original party, the examiners believe that no discount should be applied and find it necessary that new parties be required to contribute their share of the original costs. The examiners accept the original drilling costs incurred to the base of the Gething, the costs for the completion of the Falher C and Gething in 1980, and the costs for the suspension of the Falher C in 2007 submitted by Paramount. For the purposes of this pooling order, the examiners find that the actual costs of the drilling and completion of the well to equal \$1 919 949.00. Therefore, the examiners recommend that Response be required to pay a 50 per cent share of this amount.

The examiners recommend that the order include the maximum penalty allowed by the *OGCA*, as normal. The penalty would be applied if the tract owner did not pay its share of the cost within 30 days of the later of the order being issued, the tract owner being notified in writing of its share of costs, or the well commencing production.

6 CONCLUSION

The examiners recommend that the Paramount application for reduced well spacing be denied and that a compulsory pooling order be issued, subject to the approval of the Lieutenant Governor in Council, in due course.

Dated in Calgary, Alberta, on August 27, 2008.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

K. G. Sharp, P.Eng.
Presiding Member

<original signed by>

H. W. Knox, P.Eng.
Examiner

<original signed by>

R. J. Willard, P.Eng.
Examiner

APPENDIX 1 HEARING PARTICIPANTS

Principals and Representatives (Abbreviations used in report)

Witnesses

Response Energy Corporation (Response)
M. B. Niven, Q.C.

M. Medwid, P.Eng., MBA
K. Bibault, P.Eng.
C. Hampton, P.Eng.
G. Parry, P.Geol.
L. Mattar, P.Eng.,
of Fekete Associates Ltd.

Paramount Energy Ltd.
G. Stapon, Q.C.

D. Purdy
W. Pike
Z. Jankovic, P.Geol.
D. Purdy, P.Eng.
D. Pridie, P.Eng.,
of Astech Incorporated
T. Leakos

Energy Resources Conservation Board staff
B. Kapel Holden, Board Counsel
D. Burns, Student-at-Law
K. Fisher
J. Rempel
R. Keeler, P.Eng., P.Geol.
K. Bieber, P.Geol.
