



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 03-0289456

THE APPLICATION OF BALLARD EXPLORATION COMPANY, INC. TO CONSOLIDATE THE VARIOUS MYKAWA FIELDS INTO THE PROPOSED MYKAWA (CONS.) FIELD AND FOR DESIGNATION OF THE PROPOSED MYKAWA (CONS.) FIELD AS A PIERCEMENT TYPE SALT DOME FIELD, HARRIS COUNTY, TEXAS

HEARD BY: Brian Fancher, P.G. – Technical Examiner
Terry Johnson – Legal Examiner

REVIEWED BY: Laura Miles-Valdez – Legal Examiner

APPEARANCES: **REPRESENTING:**

APPLICANT:

David Gross
Thomas Binig
Dale Miller

Ballard Exploration Co.

PROCEDURAL HISTORY

Request for Hearing:	May 28, 2014
Application Filed:	May 30, 2014
Notice of Hearing:	July 8, July 11, & July 17, 2014
Date of Hearing:	July 30, 2014
Record Closed:	March 9, 2015
Transcript Received:	March 9, 2015
Proposal For Decision Issued:	November 4, 2015

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

This is a case of first impression. Ballard Petroleum Co., Inc. ("Ballard") seeks to consolidate 28 Commission-designated fields, as well as any Wildcat Miocene, Marginulina, Frio, Vicksburg, and Yegua reservoirs, into the proposed Mykawa (Cons.) Field, and designate

the Mykawa (Cons.) Field as a piercement-type salt dome field, pursuant to Statewide Rule (“SWR”) 37(l) [16 Tex. Admin. Code §3.37(l)].¹

The hearing took place on July 30, 2014. Following the hearing, on July 31, 2014, the Examiners issued a letter to Ballard seeking further clarification of its application. On August 4, 2014, Ballard submitted its response to the Examiners’ July 31st letter. Ballard’s August 4th correspondence included a three-page cover letter and late-filed Exhibit Nos. 22 through 25.

On September 18, 2014, Ballard independently submitted further correspondence that included an eight-page cover letter and late-filed Exhibit Nos. 26 and 27. In its September 18th correspondence, Ballard indicated that it would consider any recommendation made by the Examiners which did not include Ballard’s full requested relief as adverse.

After full consideration of the record evidence, and in response to Ballard’s September 18th correspondence, the Examiners issued a letter to Ballard on February 12, 2015, stating the Examiners will prepare an adverse recommendation to be presented to the Commissioners. The Examiners also requested that Ballard provide a transcript of the hearing, pursuant to 16 Tex. Admin. Code §1.129.

On March 9, 2015, the transcript of the July 30th hearing was submitted and the record was effectively closed.

The Examiners recommend the application be denied primarily because Ballard failed to meet the conjunctive requirements of Statewide Rule 37(l)(1)(A). Furthermore, the Examiners believe that Ballard did not to provide sufficient probative evidence to meet the requirements of SWRs 37(l)(1)(B) and 37(l)(1)(C).

DISCUSSION OF THE EVIDENCE

Governing Rules and Policies

Effective May 7, 1982, Statewide Rule 37(l)(1)² states:

The provisions of this section shall not apply to certain approved salt dome oil or gas fields. An application for classification as a salt dome oil or gas field shall include the following:

- (A) Geological evidence proving that an oil or gas field is a piercement-type salt dome, that faulting has caused the producing formation to be at a 45 angle or greater, and that each well is likely to be completed in a separate reservoir;
- (B) Establishment, by plat or otherwise, of the probably productive limits of the salt dome area;

¹ July 8, 2014, Notice of Hearing.

² 16 Tex. Admin. Code §3.37(l)(1).

(C) Certification that notice of the application for salt dome classification with evidence included has been given to all operators in the field or, if a new field, in accordance with subsection (a)(2) of this section; and

(D) A list of persons notified and the date notice was mailed.

Miller's Supporting Testimony

Dale Miller, a consulting Petroleum Engineer, testified as an expert witness on behalf of Ballard.³

Application Background

On May 20, 2014, Ballard's counsel submitted a written request for hearing on the subject application. Ballard did not pursue designation of the proposed Mykawa (Cons.) Field as piercement-type salt dome field through the Oil & Gas Division, pursuant to SWRs 37(1)(2)⁴ and 37(1)(3).⁵

Ballard's May 20th letter indicated that it sought relief as follows:

(1) Consolidation of 28 existing Commission-designated fields, as well as any New and/or Wildcat Miocene, Marginulina, Frio, Vicksburg, and Yegua-age reservoirs ("Subject Fields") into the proposed Mykawa (Cons.) Field;

(2) Designation of the proposed Mykawa (Cons.) Field as a piercement-type salt dome field; and

(3) To define the proposed Mykawa (Cons.) Field as the correlative interval from 2,200 feet to 6,800 feet as shown on the log of the Gulf Oil Corporation's E.G. Siadous Lease, Well No. 1, Wm. J. Lovett Survey (A-526), Harris County, Texas; and from 6,800 feet to 10,720 feet as shown on the log of the Gulf Oil Corporation, Katie Ward Lease, Well No. 1, Harris County, Texas.

The combined total designated correlative interval proposed is 2,200 feet to 10,720 feet. The existing 28 Commission-designated fields ("Existing Fields") include:⁶

<u>Field Name</u>	<u>Field Type</u>	<u>Discovery Date</u>
1. Mykawa	Oil / Gas*	00-00-1929 / 04-19-1984
2. Mykawa New	Oil / Gas*	00-00-1934 / 09-15-1977

³ Transcript, Pg. 14, L. 13.

⁴ 16 Tex. Admin. Code §3.37(1)(2) states: The director of the Oil and Gas Division, or the director's delegate, may administratively grant an application for salt dome classification if the evidence proves that the oil or gas field is a salt dome.

⁵ 16 Tex. Admin. Code §3.37(1)(3) states: The operator may request a hearing if the director of the Oil and Gas Division, or the director's delegate, declines to approve an application...

⁶ Ballard Exh. Nos. 7 and 8. The (*) above in the Field Type column indicates that the respective field is recognized as a piercement-type salt dome field.

3. Mykawa (Marginluina 4600)	Gas	08-23-1961
4. Mykawa New (Mio. 2200)	Gas	01-06-1964
5. Mykawa New (Mio. 2950)	Gas	01-06-1964
6. Mykawa New (Mio. 4000)	Gas	04-21-1964
7. Mykawa New (Mio. 3100)	Gas	05-21-1964
8. Mykawa New (Mio. 3625)	Gas	09-04-1964
9. Mykawa New (Mio. 2600)	Gas	03-31-1965
10. Mykawa New (Mio. 3470)	Gas	04-28-1966
11. Mykawa (Miocene 3300)	Gas	04-19-1968
12. Mykawa (Miocene 2900)	Gas	07-14-1970
13. Mykawa (Miocene 3700)	Gas	08-20-1971
14. Mykawa (Miocene 2800)	Gas	06-15-1973
15. Mykawa New (Mio. 3850)	Gas	03-12-1975
16. Mykawa New (Mio. 3200)	Gas	01-23-1978
17. Mykawa (Miocene 3000)	Gas	10-16-1978
18. Mykawa (Miocene 3225)	Gas	03-23-1980
19. Mykawa (Frio 4875)	Oil	12-28-1980
20. Mykawa New (Mio. 3450)	Gas	11-21-1981
21. Mykawa, New (Frio 4450)	Oil	06-18-1982
22. Mykawa, East (Vicksburg)	Gas	04-19-1984
23. Mykawa (Vicksburg "E" Sand)	Gas	06-06-1984
24. Mykawa, East (Miocene)	Gas*	09-23-1985
25. Mykawa, S (Frio)	Gas	09-29-2012
26. Mykawa New (Vicksburg 8500)	Gas	unknown
27. Mykawa New (Vicksburg 8600)	Gas	unknown
28. Mykawa New (Mio. 3625)	Oil	unknown

On July 8, 2014, Notice of Hearing was served by U.S. mail to the Service List provided by Ballard. The July 8th Service List was composed of the operators of record in the named 28 Commission-designated fields, as of July 3, 2014. The Examiners note that Ballard is not a named operator in 27 of the 28 Existing Fields.

The Existing Fields resulted from the upward intrusion of the Mykawa Salt Dome ("Mykawa Dome"), which is geographically near the William P. Hobby Airport and South Sam Houston Tollway in Houston, Texas.⁷ Mr. Miller testified that Ballard intends to focus its developmental efforts of the Subject Fields near the southwest corner of the airport.⁸ He testified that four other salt domes surround the Mykawa Dome and that Ballard's area of interest includes a high population density.⁹

Ballard seeks to develop the proposed Mykawa (Cons.) Field through vertical drilling because horizontal completions are not economical due to the highly faulted nature which defines the Subject Fields.¹⁰ At one time, 130 wells existed throughout the proposed correlative interval for the proposed Mykawa (Cons.) Field. Ballard's State Lease 110735 Unit, Well No. 1

⁷ Tr., Pg. 20, L. 11 compared with Ballard Exh. No. 1. Area Map

⁸ Tr., Pg. 15, L. 22.

⁹ Tr., Pg. 18, L. 1.

¹⁰ Tr., Pg. 16, L. 18 – Pg 17. L. 5.

(“Ballard Well”) is the only producing well in the proposed Mykawa (Cons.) Field. The Ballard well is completed in the Mykawa, S (Frio) Field.¹¹

Mr. Miller testified regarding depletion stating that “each Subject Field is separate and distinct because each field only lasts for roughly two years, then its gone”.¹² Only 3 of the 28 Existing Fields are recognized as piercement-type salt dome fields. In other words, 25 of the Existing Fields are not designated as piercement-type salt dome fields. The Existing Fields’ combined cumulative production is roughly 7,671,898 barrels of oil and 10.5 billion cubic feet of gas.¹³

The Mykawa and Mykawa New Fields were administratively designated as piercement-type salt dome fields on May 19, 1954.¹⁴ Ballard’s Exh. No. 4 indicates that the Mykawa and Mykawa New Fields result from the salt intrusion of the Mykawa Dome, and reside at dip angles ranging from 13 degrees to 20 degrees. On July 9, 1986, the Commission administratively designated the Mykawa, East (Miocene) Field as a piercement-type salt dome field.¹⁵

Ballard submitted a graph for individual leases that existed throughout the Subject Fields at one time to show the production history of each lease and field.¹⁶ In summary, Mr. Miller testified:¹⁷

It’s just showing how fast these reservoirs were encountered and depleted...I mean, there – there’s some very significant reserves that were produced out of these wells, but it was done rapidly.

In conclusion, Mr. Miller, Ballard’s Engineer, testified the subject application meets the requirements of Statewide Rule 37(l) because “we have highly dipping beds, and we’re showing that, basically, all these reservoirs are producing from a single individual feature...”¹⁸

Binig’s Supporting Testimony

Thomas Binig, a staff Geologist employed at Ballard, testified as an expert in Geology and Geophysics on behalf of Ballard.

Effective April 1, 2014, the City of Houston granted Ordinance No. 2014-225 – An Ordinance Amending City of Houston Ordinance No. 59-1887 to Update the Description of Oil Drilling Units within the Mykawa Field Located within the City of Houston, Texas.¹⁹

¹¹ Tr., Pg. 24, L. 5

¹² Tr., Pg. 19, L. 11 & Pg. 28, L. 15.

¹³ Ballard Exh. No. 14, Pg. 11.

¹⁴ Ballard Exh. No. 4. Application of Jack W. Frazier for piercement type salt dome classification to apply to the Mykawa and Mykawa New Fields.

¹⁵ Ballard Exh. No. 27. Billy D. Thomas letter.

¹⁶ Ballard Exh. No. 11.

¹⁷ Tr., Pg. 71, L. 19.

¹⁸ Tr., Pg. 129, L. 11-25.

¹⁹ Ballard Exh. No. 17.

Mr. Binig testified that Ballard sought the above ordinance amendment to expand the drilling blocks (*i.e.* between well spacing restrictions) for the Mykawa Field because the City of Houston requires drilling permits within the city limits.²⁰

Geology

Ballard submitted a structure map based on 3-D seismic to show the top of the salt strata interface as it occurs in the subsurface for the Mykawa Dome.²¹ The structure map indicates the west side of the dome includes a dip angle of about 75 degrees, while the northeast and southwest flanks dip at angles of 60 degrees and 45 degrees, respectively.²²

Mr. Binig also testified, however, that while the structure map depicts those dip angles for the face of the dome, it does not indicate the dip angles of the “producing formations” of the Subject Fields.²³ He testified that “a lot of the producing formations dip at 45 degrees or more, but not all of them.”²⁴ Mr. Binig did not distinguish which of the Subject Fields produce at dip angles of 45 degrees or greater, he merely claimed it.

Ballard submitted a map (“3-D Seismic Composite”) to show the base of the Miocene Formation, which occurs at roughly 3,500 feet below ground surface.²⁵ In other words, Ballard’s Exh. No. 19 is a map based on sound waves to show three-dimensional images of the Miocene Formation in the subsurface. The “peak” events are represented in the color blue and the “trough” events are represented in red. Mr. Binig testified that the top of the Mykawa Dome occurs at roughly 7,500 feet.

The purpose of the 3-D Seismic Composite is to show that as the Mykawa Dome intruded upwards it resulted in many intersecting faults (*i.e.*, a broken windshield effect).²⁶ Mr. Binig stated that the three Subject Fields currently designated as piercement-type salt dome fields are roughly 4,000 feet above the top of the Mykawa Dome.²⁷

The size of the fault blocks shown on the 3-D Seismic Composite range from 1 to 8-acres.²⁸ Based on the 3-D Seismic Composite, Mr. Binig also testified that no two fault blocks are the same.²⁹ That is, in his opinion the Miocene Formation at 3,500 feet below ground surface is highly faulted, that no two fault blocks are the same size or shape, and that the fault blocks are not in communication with one another.

²⁰ Tr., Pg. 100. The Examiners note that the 84th Legislature successfully passed House Bill 40, which grants exclusive jurisdiction an express preemption of oil and gas regulation in Texas to the State.

²¹ Ballard Exh. No. 18.

²² Tr., Pg. 106, L. 4.

²³ Statewide Rule 37(l)(1)(A) requires “...that faulting has caused the producing formation to be at a 45 angle or greater...”

²⁴ Tr., Pg. 107, L. 16-24.

²⁵ Ballard Exh. No. 19.

²⁶ Tr., Pg. 110, L. 20.

²⁷ Tr., Pg. 111, L. 15.

²⁸ Tr., Pg. 112, L. 5-7.

²⁹ Tr., Pg. 108, L. 1.

Further, Mr. Binig testified in his opinion the faulting shown on Ballard Exh. No. 19 also exists through the entire vertical extent of its proposed correlative interval, but the faulting also changes its shape throughout the Existing Fields.³⁰

Lastly, Ballard submitted structural cross sections that traverse north to south and east to west, respectively.³¹ Each cross section indicates the highly faulted nature of the geologic formations affected by the Mykawa Dome's upward intrusion. From shallowest to deepest, the geologic formations depicted on those cross sections sequentially include the Miocene, Frio, Vicksburg, and Yegua Formations, respectively. The Examiners note that the cross sections do not distinguish the Marginulina Formation.

With regard to Statewide Rule 37(l), Mr. Binig, Ballard's Geologist, opined that the subject application meets the minimum rule requirements. He testified that "the beds are highly dipping. Some of them are at 45 [degrees], some are at 35, some are at 22, some of them are – you know, there's no two fault blocks the same."³²

EXAMINERS' RECOMMENDATION AND PROPOSAL FOR DECISION

Summary

To the Examiners' knowledge, the Commission has never held a hearing to consider an application that includes the full relief sought in the immediate case. In fact, at the onset of the hearing Ballard acknowledged the novelty of its application.³³ Ballard's late-filed correspondence proposes circumstantially similar cases to the instant case. While the researched cases are topically similar, there are distinct differences between them and the subject application. Consequently, the Examiners believe that the instant application is precedential.

Statewide Rule 37 does not define a piercement-type salt dome field, nor does it define salt dome. Statewide Rule 37(l)(1)(A), however, provides conjunctive criteria necessary for designation as a piercement-type salt dome field. Therefore, the Examiners objectively rely on that criteria in the instant case.

Based on the record evidence, Ballard failed to meet its burden of proof in showing that its application concurs with the requirements of Statewide Rule 37(l)(1). Accordingly, the Examiners recommend that it be denied. Specifically, Ballard failed to meet the requirements of SWR 37(l)(1)(A), and Ballard did not to provide sufficient probative evidence to meet the requirements of SWRs 37(l)(1)(B) and 37(l)(1)(C).

The history of this case is as follows: (1) Ballard forwent an administrative application for designation of the Consolidated Field as a piercement-type salt dome field, and instead filed a hearing request; (2) Ballard initially argued at the hearing that its application meets the requirements of Statewide Rule 37(l), specifically the 45 or greater angle provision; (3) Later, Ballard's expert witness testified that some of the Subject Fields occur at a 45 angle or greater

³⁰ Tr., Pg. 121, L. 1.

³¹ Ballard Exh. Nos. 20 and 21.

³² Tr., Pg. 122, L. 23-25.

³³ Tr., Pg. 8, L. 1.

without further specificity; (4) After the hearing, Ballard submitted late-filed correspondence that argues the 45 degree or greater provision is not applicable in its application because its application is in the context of a hearing; and (5) Ballard states that if its full relief is not granted, then it considers any other recommendation as adverse.

Examiners' Opinion

Ballard's August 4, 2014, Correspondence

Ballard submitted a copy of the Examiners' Report and Recommendation and Final Order for Oil & Gas Docket No. 03-0259895: Application of Force 5 Energy, LLC to Consolidate Various Day and Day, South Fields into the Day Field, Madison County, Texas ("Day Case").³⁴

The Day Case was unopposed and involved Force 5 Energy, LLC's request to consolidate several fields into an existing piercement-type salt dome field (*i.e.*, the Day Field). The Commission approved the Day Case on January 15, 2009, resulting in the consolidation of multiple fields into the Day Field and continuation of the Day Field as a piercement-type salt dome field. The Day Case differs from the subject application by two unique facts.³⁵

First, the Commission concluded that the Day Case clearly showed the only way to economically produce the wells in its area was to downhole commingle production from multiple reservoirs (*i.e.* Finding of Fact No. 8). In the instant case, Mr. Binig testified each field is separate and distinct because "everything is so faulted up."³⁶ In other words, Ballard did not argue downhole commingling the Subject Fields is necessary because it is not economic to produce them individually. Instead, Ballard's argument centers on well placement flexibility.³⁷

Second, in the Day Case Force 5 Energy, LLC would be completing existing wells into additional zones and needed flexibility of downhole commingling to increase the economic viability of its wells (Finding of Fact No. 9). Ballard's argument did not include completing existing wells in additional zones to increase their economic viability. Instead, Ballard proposes to pursue hydrocarbons left behind by past operators because it now relies on today's computing power for 3-D seismic interpretation that was unavailable in the past.

Although the Day Case was heard after the existing version of SWR 37(1) was adopted, the Examiners' Report failed to weigh it for designation as a piercement-type salt dome field. In other words, although the Day Case was ultimately approved, the Finding of Facts and Conclusions of Law did not show that it met the requirements of SWR 37(1).

Ballard's September 18, 2014, Correspondence

Ballard submitted a copy of the Final Order and Examiners' Proposal For Decision made in Oil & Gas Docket No. 3-88,435 – Application of A. Nelson McCarter Energy Company to

³⁴ Ballard Exh. No. 22.

³⁵ See Finding of Fact Nos. 8 and 9 for Oil & Gas Docket No. 03-0259895

³⁶ Tr., Pg. 19, L. 14.

³⁷ Tr., Pg. 86, L. 1.

Consider a New Field Designation for its Townsend Well No. 1-C (Proposed) Mykawa East (Miocene) Field, Harris County, Texas (“McCarter Case”).³⁸

The subject field of the McCarter Case was administratively designated a piercement-type salt dome field prior to the hearing held on August 13, 1986 for Oil & Gas Docket No. 3-88,435. Subsequently, a protest was received and the McCarter case set for public hearing. The hearing for the McCarter case only dealt with the Protestant’s discovery motion. Ultimately, the Protestant’s motion was denied and the Protestant denied standing. As a result, the case was rendered unprotested and consequently returned to the Oil & Gas Division for administrative review where the Mykawa East (Miocene) Field was administratively designated as a new field and a piercement-type salt dome field.³⁹

The McCarter Case does not consider the reservoir characteristics of the Mykawa, Mykawa New, or the Mykawa East (Miocene) Fields against Statewide Rule 37(1)(1) because the outcome of the McCarter Case was that it only ruled on a discovery motion made by the Protestant.⁴⁰ The McCarter Case is dissimilar to the instant case as a result, therefore rendering Ballard’s application as a case of first impression.

The Examiners note that the Commission administratively distinguished the Mykawa and Mykawa New Fields as piercement-type salt dome fields on May 11, 1954 (*i.e.* roughly 32 years prior to the McCarter Case, and 28 years before Statewide Rule 37(1)’s current form was adopted).⁴¹

Consolidation of the Subject Fields into the Proposed Mykawa (Cons.) Field

The Commission’s Statewide Rules do not provide explicit criteria or regulations aimed at considering an application for field consolidation. However, the Commission’s publication entitled “Discussions of Law, Practice and Procedure” does address this issue.

Part III, Section B, Consolidation of Fields – General states:

When necessary, separate fields are combined into a single field. The most common situation requiring consolidation occurs when additional development between separate fields shows that the fields are actually producing from a single reservoir...Another situation requiring consolidation arises when an area overlies several distinct, vertically separated zones which are capable of producing at marginal rates and down-hole commingling of the zones is necessary to make them economic.

³⁸ Ballard Exh. No. 27.

³⁹ *Id.* Last paragraph of Oil & Gas Final Order 3-88,435 states that the Trust’s discovery motion is denied, the Trust’s standing protest is denied, and that the application be referred to the appropriate Oil and Gas Division staff for administrative review.

⁴⁰ *Id.* Examiners’ Proposal For Decision, Pg. 2, middle paragraph – “The hearing in this docket on August 13, 1986 dealt with the Trust’s discovery motion.”

⁴¹ The Mykawa, Mykawa New, and Mykawa East (Miocene) Fields are the only fields designated as piercement-type salt dome fields of the Subject Fields that Ballard seeks to consolidate.

Recall, Ballard's requested relief is to consolidate the Existing Fields with an unknown quantity of Wildcat Fields, which do not yet exist, into a single field (*i.e.*, Mykawa (Cons.) Field) and designate it as a piercement-type salt dome field.

When compared to the record evidence, however, Ballard lacks sufficient probative evidence to conclude that a field consolidation is necessary as a result of the Subject Fields occurring as a single reservoir, or that down-hole commingling of the Subject Fields is necessary to make them economic because each Subject Field alone produces only marginal rates. In fact, Ballard's evidence is contradictory in each instance.

The Examiners note that if Ballard were to argue it intends to down-hole commingle production from individual reservoirs, it has yet to directly address the subject application against the requirements of Statewide Rule 10 (Restriction of Production of Oil and Gas from Different Strata).

Mr. Miller testified as follows:

We don't have a big continuous reservoir. They're all small, little chopped-up fault blocks.⁴²

[...]

I mean, there – there's some very significant reserves that were produced out of these wells, but it was done rapidly. And when it's done, it's done.⁴³

Subsequently, Mr. Binig testified as follows:

So the idea here is – again, the simple argument is to consolidate this stuff because they are small reservoirs. They all should be treated the same with the same status, if you will. And in the event that while drilling you do come in and discover reserves, you'd like to be able to produce them and not sit there.⁴⁴

[...]

And in fact, you know because of the culture of the City of Houston and how small it is, there are people that just say, no, I'm not going to lease it. I don't care. I don't care if there's oil and gas. I don't care if you're going to get oil. I mean, there's people that are just absolutely adamant and then they become the Rule 37.

[...]

⁴² Tr., Pg. 71, L. 8.

⁴³ Tr., Pg. 71, L. 22.

⁴⁴ Tr., Pg. 82, L. 4.

So the point of the matter is, because of the geologic style of the dome and the way that it's broken, it's unfair to leave these fields that have statewide rules, which are not really appropriate, in place and not consolidate it all into piercement-type salt dome status. And that's really kind of the bottom line argument, I think.

The Examiners fail to see what circumstances have changed to necessitate Ballard's requested field consolidation. With regard to the Existing Fields, the record indicates that the only change over the course of roughly 81 years (*i.e.*, the span of time from the discovery of the Mykawa Field till the hearing) is that Ballard is an operator in 1 of the 28 existing Existing Fields with one well.⁴⁵

When asked by the Examiners, "Is that [proposed correlative interval] unusually large?" Mr. Miller testified as follows:

I've done intervals this big for some other fields on consolidations for historical fields. A good example would be the Sarita East Field...It's a very large interval. It's a very historical field...it wasn't a salt dome...it was just stacked pays that were all up and down. And that field has been basically depleted...they can go in and complete the various sands that they encountered with some reserves.

On this [Ballard's subject application], I mean there could be some reservoirs that basically were depleted by a well...[b]ecause the beds are dipping, there might be a little bit of oil or gas left in some formation that you could still get.

The Examiners find Mr. Miller's above testimony on this issue unpersuasive and inconsistent. First, he compared the subject application to the Sarita East Field, which is not a salt dome field. Second, he indicated that the purpose of consolidating the Sarita East Field was because its constituent fields were not economic to produce individually. However in the instant case, Ballard does not argue that consolidation of the Subject Fields is necessary to make them economic. Instead, Ballard argues that its requested relief is based on the need for well location flexibility. What's more, Ballard indicated that it will encounter virgin pressures in certain Subject Fields because each field is its own reservoir with a life span of about two years.

Mr. Binig testified that "the historic well spacing and well density field rules are not appropriate for the Subject Fields, or that if reserves are discovered that an operator is left to sit idly as a result of the spacing and/or density restrictions." The Examiners respectfully disagree with Mr. Binig's conclusions in those regards.

First, Ballard's evidence is unpersuasive to determine whether Statewide Rules appropriately govern the unknown quantity of Wildcat Fields that Ballard seeks to consolidate because the Wildcat Fields do not yet exist.

⁴⁵ The Examiners' conclusory opinion in this regard is weighed against the Commission's historic guidance provided in Part III, Section B, Consolidation and Separation of Fields.

Second, Ballard merely claimed that Statewide Rules are inappropriate for governing the Subject Fields. However, Ballard's evidence does not indicate whether it applied for or obtained an exception to Statewide Rules 37 and 38 as a result of the current field rules governing the Subject Fields. Ballard acknowledged that the majority of the Existing Fields have never been considered for designation as piercement-type salt dome fields until now.⁴⁶ In other words, 25 of the 28 existing Subject Fields have produced under Statewide Rules since their respective discovery and resulted in cumulative production volumes of 7,671,898 barrels of oil and 10.5 billion cubic feet of gas through 108 oil and gas wells.⁴⁷ The record does not persuasively indicate a volume of reserves to be lost forever if the proposed Mykawa (Cons.) Field is governed by Statewide Rules. Once more, Ballard merely claimed it, and lacks sufficient evidence to support its conclusion.

Large field consolidations are common in unconventional plays; while the Subject Fields are conventional plays where horizontal development is not economical by Ballard's standards.⁴⁸

Moreover, Mr. Miller testified as follows:⁴⁹

...But for some reason, they came in and did separate fields, but – and then there's so many fields because, basically, every time you drill a well, you're hitting a different accumulation or reserves. So you can prove discoveries all day long, because when you hit it, you're probably going to hit, you know, higher pressure. The other zones are depleted.

In conclusion, Ballard's argument for field consolidation of the Subject Fields is unpersuasive. On one hand, it argues that the Existing Fields, including an undisclosed amount of New and/or Wildcat Fields which yet to be discovered, are separate and distinct reservoirs. On the other hand, it argues that consolidating the Subject Fields under one set of field rules is appropriate, notwithstanding Mr. Binig's testimony that the Subject Fields are "individual tanks [reservoirs] that contain different API oil gravities because they're in different genetic reservoirs."⁵⁰

Therefore, the Examiners believe that the proposed field consolidation should be denied because Ballard's evidence lacks persuasive weight to conclude that it is necessary to prevent waste, promote conservation, or protect correlative rights,⁵¹ or that waste is reasonably imminent if not granted.⁵²

Designation as a Piercement-Type Salt Dome – Statewide Rule 37(l)

In the wake of horizontal development in Texas (*i.e.* unconventional plays), the Commission routinely adjudicates cases where operators request field rule amendments and/or

⁴⁶ Tr., Pg. 85, L. 1.

⁴⁷ Ballard Exh. No. 14, Pg. 11.

⁴⁸ Tr., Pg. 16, L. 16 – Pg. 17, L. 5.

⁴⁹ Tr., Pg. 49, L. 22.

⁵⁰ Tr., Pg. 66, L. 7.

⁵¹ Tex. Nat. Res. Code §85.046.

⁵² Tex. Nat. Res. Code §85.051.

field consolidation of numerous fields. However, Ballard indicated that the Subject Fields and the Mykawa (Cons.) Field are conventional plays through vertical development and that horizontal development is not economical in these fields.⁵³ Therefore, the Examiners believe that any comparison of unconventional plays / horizontally developed fields to the instant case is akin to comparing apples to oranges.

The practical effect of Ballard's application, if approved as requested, is that the Mykawa (Cons.) Field will not be governed by minimum well spacing or well density requirements for any well that is completed within Ballard's proposed correlative interval (*i.e.*, 2,200' to 10,720') throughout an undefined areal extent that is located in Houston, Texas.⁵⁴

In other words, wells in the Mykawa (Cons.) Field would be exempt from the minimum spacing and density provisions historically in effect since the discovery of 25 of the 28 existing Subject Fields across an undefined area within a densely populated region.

Statewide Rule 37(1)(1)(A)

Geological evidence proving that an oil or gas field is a piercement-type salt dome, that faulting has caused the producing formation to be at a 45 angle or greater, and that each well is likely to be completed in a separate reservoir;

The Examiners believe that Ballard failed to meet the required conjunctive criteria of this subsection.⁵⁵ Specifically, (1) whether faulting has caused the producing formations to be at a 45 angle or greater, and (2) that each well is likely to be completed in a separate reservoir.

45 Angle or Greater

At the onset of the hearing Ballard argued that, "[T]hey all are, in fact, piercement-type salt dome fields that meet the requirements of the rule, 45 degree different beds, [and] every well is likely to be completed in a separate reservoir."⁵⁶

Later, Ballard evidenced that the Mykawa Field's productive intervals occur at dip angles between 13 and 20 degrees.⁵⁷ After that, Mr. Binig testified while Ballard's evidence indicates that three sides of the salt dome dip at 75 degrees, 60 degrees and 45 degrees, respectively, it does not indicate the dip angles of the salt dome's "producing formations". Then, he testified that "a lot of the producing formations dip at 45 degrees or more, but not all of them."⁵⁸

⁵³ Tr., Pg. 13, L. 14; Pg. 16, L. 16; Pg. 99, L. 15.

⁵⁴ Transcript, Pg. 8, L. 18. The Examiners concur with Ballard's interpretation of Statewide Rule 37(1), which begins with "The provisions of this section shall not apply to certain approved salt dome oil or gas fields."

⁵⁵ There are three criteria found in this subsection that require an applicant to show the following: (1) geologic evidence proving that an oil or gas field is a piercement-type salt dome; (2) faulting has caused the producing formation to be at a 45 angle or greater; and (3) that each well is likely to be completed in a separate reservoir.

⁵⁶ Tr., Pg. 9, L. 10.

⁵⁷ Ballard Exh. No. 4. Pg. 1. ¶ 2.

⁵⁸ Tr., Pg. 107, L. 16-24.

When asked by the Examiners, “which of the Subject Fields occur at a 45 degree or greater dip,” Mr. Binig responded, “some of them.”⁵⁹ Yet, the record remains unclear as to which Subject Fields he concludes meet the 45 angle or greater component of Statewide rule 37(l). Ballard’s counsel subsequently asked, “Do you think – every one of these potential formations, perhaps not in every fault block, but every producing formation will demonstrate dip 45 degrees or more,” Mr. Binig replied, “It very well *could*, yes (emphasis added).”⁶⁰

With regard to this subsection, the Examiners give Mr. Binig’s testimony little weight because on one hand he testified that Ballard’s application “very well *could* meet Statewide Rule 37(l)’s requirements.” On the other hand, he testified that “*some* of the Subject Fields occur at dip angles of 45 degrees or greater” without specificity as to which Subject Fields.

After the hearing, Ballard argued in its late-filed exhibits that “the 45 degree dip provision is a showing necessary for administrative approval of a salt dome designation. Because this application is being considered in a hearing context the 45 degree dip provision does not apply.”⁶¹ However, Ballard’s evidence indicates that the 45 angle or greater provision of Statewide Rule 37(l)(1)(A) was carefully adopted decades after the Mykawa and Mykawa New Fields were administratively classified as piercement-type salt dome fields.⁶²

On April 23, 1982, the Commission publicly commented on its proposed amendments to Statewide Rule 37, as follows:⁶³

The commission intends for the availability of administrative approval of salt dome oil or gas fields to be restricted. Therefore, the use of a 45 degree angle requirement is appropriate. An operator may request a hearing if an application is not approved administratively.

Effective May 7, 1982, the Commission adopted the existing language found in Statewide Rule 37(l). Again, the Examiners note that Ballard did not file an administrative application for the immediate case.

In conclusion, the Examiners respectfully disagree with Ballard’s above argument and instead believe that those requirements are applicable as the rule gives no indication otherwise. For Ballard to conclude that the mentioned rule requirements do not apply in the context of a hearing seems counterintuitive because if that were true then the 45 angle or greater provision of Statewide Rule 37(l) would be irrelevant once an application reached the hearing stage. Therefore, any recommendation in this context considered at a hearing would likely be arbitrary absent the promulgated objective requirements found in Statewide Rule 37(l).

⁵⁹ Tr., Pg. 122, L. 25.

⁶⁰ Tr., Pg. 125, L. 1-6.

⁶¹ See Ballard’s September 18, 2014 correspondence, Pg. 1, ¶ 2.

⁶² Ballard Exh. Nos. 4, 7, 8 and 26.

⁶³ Ballard Exh. No. 23.

Lagniappe⁶⁴

In addition to other elements, Statewide Rule 37(1)(1)(A) requires that “each well is likely to be completed in a separate reservoir.” Despite Ballard’s claim that its application meets the requirements of Statewide Rule 37(1), the record does not support whether or not “each well is likely to be completed in a separate reservoir.” Ballard’s evidence suggests that the Miocene [Formation] is always a secondary target in the Mykawa Dome with the Frio as the primary target.⁶⁵

Mr. Binig testified as follows:

If I could just say something here. One of the things that complicates my job is that...these things [formations] are just stacked. Again, the pancakes. I’m drilling wells, more or less, for a certain target, and I enter and intercept a couple of extra pays, and I’ve got salt dome [rules] let’s say in my oil target, whatever, and statewide rules and these other ones, I can’t produce them because I’m in the wrong field.

[...]

Well, the truth of the matter is, if I’m only leasing 10 or 15 acres or 5 acres, you know because of my oil reservoirs, all this beat-up small stuff, and I run into a gas strata in the Miocene at 3,100 feet, I can’t produce it because I don’t have the correct proration.

Mr. Binig indicated that because the Subject Fields are stacked like pancakes, certain wells in the proposed Mykawa (Cons.) Field will produce out of multiple segregated reservoirs, or fields. Therefore, the Examiners believe it is reasonable to assume that certain wells will encounter multiple segregated productive reservoirs, due to the salt dome’s inherent faulting. In the context of Statewide Rule 37(1), however, the Examiners believe the rule contemplates one well per separate reservoir; not one well for multiple, separate reservoirs because if the later were true then it would completely contradict Statewide Rule 10 (Restriction of Production of Oil and Gas from Different Strata).

As a result, the Examiners opine that the record does not contain sufficient probative evidence to conclude whether consolidating the Subject Fields is appropriate because Ballard evidenced the following: (1) each fault block/reservoir is separate and distinct; (2) the record does not clarify which fault blocks are under virgin reservoir pressures (*i.e.*, cross-flow); (3) the fault blocks that make-up the Subject Fields are genetically different, as represented by the varying types of API-gravity oil throughout the Subject Fields; and (5) the record does not persuasively indicate whether downhole commingling of the Subject Fields will create waste or protect correlative rights, pursuant to Statewide Rule 10.

⁶⁴ Tr., Pg. 81, L. 16.

⁶⁵ Ballard Exh. No. 27, Examiners’ Proposal For Decision, Pg. 7, ¶ 1.

In conclusion, the Examiners believe that Ballard's evidence fails to meet the conjunctive criteria of SWR 37(l)(1)(A). Ballard failed to present sufficient probative evidence to show which of the Subject Fields produce at a 45 angle or greater, and by its own evidence demonstrated that certain wells will be completed in multiple, separate reservoirs which would likely result in a violation of Statewide Rule 10.

Statewide Rule 37(l)(1)(B)

Establishment, by plat or otherwise, of the probably productive limits of the salt dome area;

The Examiners note that Statewide Rule 37 does not define "probable productive limits." Near the end of the hearing, the Examiners inquired how Ballard's evidence satisfies the requirement of Statewide Rule 37(l)(1)(B). In response, Ballard's representatives indicated that the probable productive limits include the areal extent of a field, not necessarily the list of [geologic] sections that make up a field's area.⁶⁶ Subsequently, the Examiners acknowledged that Ballard's Exh. No. 5 (Area Map Various Mykawa Fields) showed the areal extent of the proposed Mykawa (Cons.) Field because it indicates the surface location of the historic wells that make-up the Existing Fields, thus establishing the proposed Mykawa (Cons.) Field's probable productive limits.⁶⁷ However, the Examiners were not fully aware at that time that Ballard's request in this application included consolidating any New and/or Wildcat Miocene, Marginulina, Frio, Vicksburg, and Yegua-age reservoir, in addition to the Existing Fields.

Therefore, after the hearing and after consideration of Ballard's late-filed exhibits, the Examiners believe that Ballard has yet to show the probable productive limits of the proposed Mykawa (Cons.) Field because the record lacks distinguishable evidence to address the areal extents of the New and/or Wildcat Fields. In other words, Ballard's evidence is only based on the Existing Fields and does not attend to the New and/or Wildcat Fields which do not yet exist.

The Examiners presume that the importance of establishing the probable productive limits in the context of Statewide Rule 37(l) is tied to the governing field rules a field receives once it is recognized as a piercement-type salt dome field. Once deemed a piercement-type salt dome field, the proposed Mykawa (Cons.) Field no longer is governed by minimum lease-line or between well spacing, or well density provisions.

By not establishing the probable productive limits or areal extent of the proposed Mykawa (Cons.) Field, future production wells which do not produce from the proposed Mykawa (Cons.) Field may be inappropriately placed in the Mykawa (Cons.) Field. Or, conversely, a well completed in the Mykawa (Cons.) Field will inadvertently be placed in the wrong field. The Examiners believe that it is reasonable to conclude the potential for correlative rights may be harmed because the areal boundaries of the proposed Mykawa (Cons.) Field are not known.

⁶⁶ Tr., Pg. 132, L. 20; Pg. 133, L. 1.

⁶⁷ Tr., Pg. 133, L. 21.

Statewide Rule 37(1)(1)(C)

Certification that notice of the application for salt dome classification with evidence included has been given to all operators in the field or, if a new field, in accordance with subsection (a)(2) of this section; and

Again, Ballard's application includes consolidating the Existing Fields with any New and/or Wildcat Miocene, Marginulina, Frio, Vicksburg, and Yegua reservoirs into its proposed Mykawa (Cons.) Field. Yet, the record is unclear on whether any leasees of record for tracts that have no designated operator or unleased mineral interest owners exist throughout the proposed Mykawa (Cons.) Field. Recall, the practical effect of Ballard's application, if approved as requested, is that the proposed correlative interval for the proposed Mykawa (Cons.) Field will no longer be governed by minimum well spacing and well density requirements. Ballard indicated that the proposed Mykawa (Cons.) Field is located in an area of high population density. As of today, if Ballard chooses to pursue an exception to Statewide Rules 37 and/or 38 in the existing Subject Fields, then by rule it is required to provide notice of its Rule 37/38 exception request to all affected persons.

The Examiners note that when a lease-line spacing exception is desired, Statewide Rule 37(a)(2) requires the following:

The applicant shall file a list of the mailing addresses of all affected persons, who, for tracts closer to the well than the greater of one-half of the prescribed minimum between-well spacing distance, include: (i) the designated operator; (ii) all leasees of record for tracts that have no designated operator; and (iii) all owners of record of unleased mineral interests.

When a between-well spacing exception is desired, Statewide Rule 37(a)(2) requires the following:

[T]he applicant is required to file the mailing addresses of those persons identified in subparagraph (A)(i)-(iii) of this paragraph for each adjacent tract and each tract nearer to the well than the greater of one-half the prescribed minimum between-well spacing distance or the minimum lease-line spacing.

The Examiners believe that sufficient notice was provided to all operators of record in the Existing Fields. The record is unclear, however, on whether Ballard's proposed field consolidation constitutes a new field because Ballard's request also includes those New and/or Wildcat Field(s) which do not yet exist.

Ballard contends that the only producing well in the proposed Mykawa (Cons.) Field is its recently discovered Ballard Well.⁶⁸ Upon completion, the Ballard Well was placed in the Mykawa, S (Frio) Field. The Mykawa, S (Frio) Field was discovered on September 29, 2012.

⁶⁸ *Id.* Compare Mr. Binig's testimony with Ballard Exh. No. 7, Pg. 2. The July Gas Proration Schedule for the Subject Fields.

With regard to Mr. Bing's testimony⁶⁹ that "the culture of the City of Houston and people becoming the Rule 37," the Examiners are unclear on why Ballard did not delineate whether notice of the subject application should have been made pursuant to Statewide Rule 37(a)(2), in addition to each operator in the Existing Fields, due to the following: (1) Ballard contends that the only producing well in the Subject Fields is its recently discovered Ballard Well; (2) Ballard seeks to incorporate any future New and/or Wildcat Field that does not currently exist into the proposed Mykawa (Cons.) Field; and (3) Ballard did not clarify whether any lessees of record for tracts that have no designated operator or unleased mineral interest owners exist throughout the Subject Fields.

Ballard is not a named operator in 27 of the 28 Existing Fields, nor does the record indicate that Ballard holds a drilling permit for any of the Subject Fields. From the Examiners' knowledge, it has traditionally been the Commission's practice to grant standing in a case involving field consolidation or adoption of field rules if a person shows that he or she is an operator in the field or holds an active drilling permit in the field. In fact, Ballard alluded that notice of the subject application was given to the operator Smith, L.C., as a result of Smith being either an operator or holding an active drilling permit in the Existing Fields.⁷⁰

Based on that standard, Ballard would likely not have been granted standing in 27 of the 28 Subject Fields because it is not an existing operator in those fields, nor does it have a pending drilling permit for a well in those fields. Ballard's evidence does not persuasively indicate unusual circumstances exist to warrant it standing for those 27 fields in this proceeding. The Examiners believe that at a minimum, Ballard should have determined whether any lessees of record for tracts that have no designated operator or unleased mineral interest owners exist in those 27 Fields to afford affected persons notice of the subject application.⁷¹

Noteworthy, the Trust (*i.e.*, Protestant) in the McCarter Case was an unleased mineral interest owner of 12.809-acres.⁷² Presumably, the Trust received notice of the McCarter application because it involved McCarter's request for a piercement-type salt dome classification. Otherwise, it is reasonable to assume that a complaint by the Trust would likely not have been filed with the Commission because the Trust did not appear as an operator in the McCarter Case. The concept that a lessee with no designated operator or unleased mineral owner exists within the unknown areal extent of the proposed Mykawa (Cons.) Field seems reasonable given that it is in Houston, Texas, and that Ballard's Well is the only producing well throughout the Subject Fields.

⁶⁹ Tr., Pg. 82, L. 10.

⁷⁰ Tr., Pg. 128, L. 18 – Pg. 129, L.3.

⁷¹ See the Commission's "Discussions of Law, Practice and Procedure," Pg. 19, Section F - In a hearing to separate or consolidate fields, any person operating a well in the fields is an interested party and entitled to notice. Additionally, in Graford, supra, the Texas Supreme Court held that an owner of unleased mineral interests is an interested party and entitled to be heard by the Commission. However, the court stopped short of saying that owners of unleased mineral interests must be notified because that question was not before them. At least one court has held, however, that "[t]he right to be heard has little reality or worth unless one is informed that the matter is pending..." City of Houston v. Fore, 401 S.W.2d 921, 923 (Tex. Civ. App. – Waco 1966), aff'd 412 S.W.2d 35 (Tex. 1967).

⁷² Ballard Exh. No. 27. Oil & Gas Docket No. 88,435. Finding of Fact No. 4.

What's more, the Ballard Well is identified as the State Lease 110735 Unit, Well No. 1 and the well's path traverses across a stream or river.⁷³ In other words, the well's location and name indicate that it is located on lands owned by the State of Texas (GLO). The record is unclear whether any additional state-owned lands fall within the areal extent of Ballard's proposed Mykawa (Cons.) Field. Therefore, the Examiners are unclear on whether the State of Texas remains an unleased mineral interest owner and why notice was not provided to the GLO as a result.

Allocation Formula

If Ballard's application is granted as requested, then presumably all production from the proposed Mykawa (Cons.) Field would not be regulated by an allocation formula because the field would not be governed by a minimum well density provision. Production from a Commission-designated field governed by Statewide Rules (*i.e.*, 467' -1,200' well spacing and 40-acre density) is typically allocated by productive acreage.⁷⁴ In other words, a well's top allowable in a field governed by Statewide Rules is determined by the applicable Yardstick found in Statewide Rule 45. Then, the well's daily allowable is found by weighing the top allowable against the allowable formula set for the field.

An allocation formula is designed to prevent waste and protect correlative rights by fairly distributing the available market for production from the reservoir.⁷⁵ Furthermore, acreage permitted to be included within the productive acreage includes portions of leases within the known probable field limits.⁷⁶

Upon consolidation of numerous stacked reservoirs, the Commission requires that a two factor allocation formula be adopted, pursuant to Tex. Nat. Res. Code §86.089. In the instant case, Ballard seeks to consolidate the Existing Fields, as well as any New and/or Wildcat Field, that naturally occur as separate and distinct reservoirs. The Examiners believe that the probable productive limits (*i.e.*, areal extent) of the New and/or Wildcat Fields are not distinguished in the record. By virtue of not meeting the minimum rule requirements of Statewide Rule 37(1)(1)(A), the potential violation of correlative rights becomes real due to all wells completed in the proposed Mykawa (Cons.) Field not being governed by an allocation formula.

The Examiners presume that the State of Texas may reasonably be assumed as a mineral interest owner in the Ballard Well, seeing as the well is identified as the State Lease 110735 Unit, Well No. 1 and the well's path traverses across a stream or river. Therefore, it remains unclear whether the correlative rights of the state-owned lands will be harmed.⁷⁷

⁷³ Ballard Exh. No. 5, Map I.D. No. 108.

⁷⁴ See Discussions of Law, Practice and Procedure, Section F – Allowable.

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ Royalties from oil and gas production originating off Texas-owned lands contributes to the Permanent School Fund of Texas to help finance public schools.

When asked by the Examiners to verbalize its waste case, Ballard's counsel responded as follows:

You have these many, many separate little fault blocks...The reason why the Commission has this subsection, the Rule 37 which exempts salt dome fields from spacing and density is to give operators flexibility in locating wells to maximize their opportunity to get it all...If we were denied a piercement-type salt dome designation, and defaulted to statewide rules [467'-1,200' well spacing and 40-acre density] it would dramatically constrict the flexibility of locating wells...leaving otherwise recoverable oil and gas in place forever...

Earlier in the proceeding, Mr. Miller testified as follows:

Because without this in place [piercement-type salt dome classification], you're in the city limits. To hold a development plan down to 467'-1,200' with the amount of faultings and the different traps that we have, you would never be able to develop it.⁷⁸

[...]

There's definitely reserves that are out here to go get, and you're not going to get them without being able to have the flexibility in your density and spacing to go drill them and complete them.⁷⁹

[...]

And if you look at an acre are – and so you might have an acre block that hasn't been developed...if you do the math 43,560 square feet [1-acre], and do the square root of that, that's, like, 209 feet by 209 feet. So if your spacing rule is 467 feet from the lease line, you can't get there. If you have a 2-acre block...that's 295 feet by 295 feet. Still can't get there.

However, Mr. Binig later testified that “some fault blocks occur in 2 to 3-acres sizes, they also get up to 5 to 7 to 8-acres”.⁸⁰ What's more, Mr. Binig's testimony indicated that blocks get up to 15-acres in size.⁸¹ Using Mr. Miller's logic, a 5-acre block equates to 467 feet by 467 feet, while a 15-acre block equates to 808 feet by 808 feet. The Examiners conclude, therefore, that Ballard's evidence shows that it could reasonably locate wells in a field that is governed by a lease line spacing restriction of 467' or less. Once more, Ballard presented no evidence to indicate whether it was required to obtain an exception to SWRs 37 and/or 38 as a result of the current field rules that govern the Existing Fields.

The Examiners find Mr. Miller's testimony in this regard lacks persuasive weight. Mr. Miller speculates that Statewide Rule well spacing restrictions are inappropriate based on the

⁷⁸ Tr., Pg. 20, L. 3.

⁷⁹ Tr., Pg. 58, L. 11.

⁸⁰ Tr., Pg. 112, L. 5-7

⁸¹ Pg. 81, L. 22-24.

above testimony. However, the Examiners believe that Ballard's evidence lacks sufficient probative evidence to reach this conclusion because the record indicates that the Subject Fields are limited in size from 2 to 15-acre blocks. In other words, the Examiners believe that is inappropriate to apply Mr. Miller's speculative analysis to the entire proposed Mykawa (Cons.) Field.

Ballard also implied the argument of legal confiscation.⁸² Ballard's counsel stated as follows:

So put yourself in the position of one of those mineral owners whose property overlies, and they own one of these little pockets of oil or gas. If the regulatory regime denies them the opportunity to recover their oil and gas, then they have been denied their property. It's legal confiscation, if you will, which is another variety of confiscation...say, well, gee, Mr. Mineral Owner, yes you've got a little 2 or 3-acre pocket, but our spacing rules won't permit you to get a well. Well, then by Commission action, by government action, you've been denied the value of your property, which is correlative rights violation.⁸³

[...]

So this just doesn't fit our conventional reservoir picture or – if you want to drill closer than 467 or on smaller, just file for a Rule 37 exception, Rule 38 exception. It's going to be tough to prove that stuff.

Based on Ballard's above arguments, and Mr. Binig's earlier testimony with regard to the culture of Houston's people becoming the Rule 37, the record indicates that Ballard seeks to designate the proposed Mykawa (Cons.) Field as a piercement-type salt dome field as an end around to well spacing and well density exception requirements of Statewide Rules 37 and 38 because it concludes such action will be a difficult task. Again, the Examiners note that the record does not indicate that Ballard has attempted to obtain exceptions to Statewide Rules 37 and 38 in any of the Subject Fields. The Examiners again look to the Commission's publication titled, "Discussions of Law, Practice, and Procedure." With regard to Rule 37 and Rule 38 exceptions, an applicant can obtain those exceptions based on a showing of waste or confiscation. With regard to waste, the Commission's historic practice has been an applicant must show that due to unusual conditions concerning the tract, the ultimate loss of substantial hydrocarbons will occur unless the exception is granted.⁸⁴ Furthermore, the Supreme Court stated that "unusual conditions" are not limited to subsurface conditions.⁸⁵ With regard to confiscation, the Commission's historic practice holds that "confiscation may result when the owner of a tract is denied a permit to drill pursuant to the applicable regulatory statutes and

⁸² Tr., Pg. 86, L. 21.

⁸³ Tr., Pg. 86, L. 16.

⁸⁴ See Discussions of Law, Practice and Procedure, Pg. 32, Waste. Hawkins v. Texas Company, 146 Tex. 511, 209 S.W.2d 338 (1948), Gulf Land Co. v. Atlantic Refining Co., 134 Tex. 59, 131 S.W.2d 73 (1939), Byrd v. Shell Oil Co., 178 S.W.2d 573 (Tex. Civ. App.—San Antonio 1944, writ ref'd. w.o.m.).

⁸⁵ *Id.* Pg. 33. Exxon Corporation v. Railroad Commission, 571 S.W.2d 497 (1978).

Statewide Rules. Sometimes confiscation is caused by drainage of hydrocarbons from a tract by adjacent, producing operators.”⁸⁶

Ballard’s evidence in the instant case indicates that the only producing well throughout the proposed Mykawa (Cons.) Field is the Ballard Well. The Examiners believe that Ballard’s evidence is unpersuasive to conclude that it has been denied a drilling permit in the Existing Fields it seeks to consolidate as a result of the current field rules in place for those field. In fact, Ballard’s evidence counterintuitively indicates that the Existing Fields have produced significant reserves under Statewide Rules.

The Examiners believe that Ballard’s evidence lacks persuasive weight to reason that a development plan of 467’ – 1,200’ would prevent an operator from recovering its fair share in those Subject Fields not designated as piercement-type salt dome fields. Merely, Ballard claimed it; however, the mere recital of waste prevention and protection of correlative rights is insufficient to meet the applicable rule requirements in a case.

Therefore, the Examiners believe that the record lacks sufficient probative evidence to conclude that the exception processes of Statewide Rules 37 and 38 adversely impact Ballard in the instant case due to the following: (1) Ballard’s arguments are based on the need for flexibility in locating wells; and (2) the record does not indicate that Ballard has been denied an exception to Statewide Rules 37 and 38 in the Subject Fields, which lead to waste and violation of correlative rights.

Examiners’ Recommendation

In conclusion, Ballard’s application fails to meet the requirements of SWR 37(1)(1)(A), adopted as a result of the Commission’s concerns as seen in Ballard Exh. No. 23, because Ballard’s evidence lacks persuasive weight to show the following: (1) the Subject Fields produce at a 45 angle or greater; (2) the probable productive limits of the Subject Fields; and (3) certain wells will be completed in more than one reservoir. Furthermore, the record insufficiently indicates whether any lessees for tracts that have no designated operator and unleased mineral interest owners, including the State of Texas, exist throughout the Subject Fields.

The Examiners find that Ballard’s evidence insufficiently indicates whether the exception processes of Statewide Rules 37 and 38 are unnecessary, will create waste, or harm correlative rights in this application. Therefore, it is recommended that the application be denied.

FINDINGS OF FACT

1. Ballard Petroleum Co., Inc. (“Ballard”) seeks to consolidate 28 existing Commission-designated fields, as well as any New and/or Wildcat Miocene, Marginulina, Frio, Vicksburg, and Yegua reservoirs (“Subject Fields”), into the proposed Mykawa (Cons.) Field, and designate the proposed Mykawa (Cons.) Field as a piercement-type salt dome field, pursuant to 16 Tex. Admin. Code §3.37(1) (“SWR 37(1)”) (collectively “Subject Application”).

⁸⁶ *Id.* Pg. 33, Confiscation.

2. The Subject Application is unopposed.
3. The Subject Application is a case of first impression because it is the first application to be weighed against the requirements of SWR 37(l) in a public hearing since SWR 37(l)'s existing language was promulgated.
4. Effective May 7, 1982, the existing language of Statewide Rule 37(l) was promulgated by the Commission and has remained unchanged.
5. Ballard did not pursue administrative approval of the Subject Application pursuant to Statewide Rule 37(l).
6. Ballard's first course of action in the Subject Application was to request a hearing on the merits.
7. Ballard argues that the technical requirements of Statewide Rule 37(l) do not apply to the Subject Application because it is being considered in the context of a hearing.
8. Ballard considers the Examiners' Proposal for Decision made for the Subject Application as adverse.
9. The merits of the Subject Application were considered at a public hearing held on July 30, 2014 at the Railroad Commission in Austin, Texas ("Subject Hearing").
10. Notice of the Subject Hearing was provided to the operators of record in the Subject Fields, as of July 8, July 11, and July 17, 2014.
11. Notice of the Subject Application was not provided to any unleased mineral interest owners or the General Land Office of Texas.
12. Ballard submitted late-filed evidence related to the Subject Application on August 4th and September 18, 2014.
13. On March 9, 2015, the transcript of the Subject Hearing was received by the Examiners.
14. Ballard alleges that the Subject Fields are composed of the following geologic formations: (1) Miocene Formation; (2) Marginulina Formation; (3) Frio Formation; (4) Vicksburg Formation; and (5) Yegua Formation.
15. The stratigraphic relationship of the Marginulina Formation, with respect to the geologic formations named in Finding of Fact No. 8 above, remains undistinguished by Ballard.
16. The Subject Fields are comprised of two groups: (1) the 28 existing Commission-designated fields ("Existing Fields"); and (2) an unknown quantity of New and/or Wildcat Fields which yet to exist.

17. A complete list of the Existing Fields referenced in Finding of Fact No. 16 above is included in Attachment "A" enclosed herewith.
18. Ballard is not an operator of record in 27 of the Existing Fields.
19. At the Subject Hearing, Ballard did not show that it holds an active drilling permit in 27 of the 28 Existing Fields referenced in Finding of Fact No. 17 above.
20. The following Existing Fields are designated as piercement-type salt dome fields: (1) Mykawa Field; (2) Mykawa New Field; and (3) Mykawa (East) Miocene Field.
21. Twenty-five (25) of the Existing Fields are not designated as a piercement-type salt dome field.
22. The Mykawa and Mykawa New Fields were administratively designated as piercement-type salt dome fields on May 19, 1954.
23. On July 9, 1986, the Commission administratively designated the Mykawa, East (Miocene) Field as a piercement-type salt dome field.
24. The Mykawa and Mykawa New Fields result from the salt intrusion of the Mykawa Dome and reside at dip angles ranging from 13 degrees to 20 degrees.
25. The west side of the Mykawa Dome dips at about 75 degrees, while the northeast and southwest flanks dip at angles of 60 degrees and 45 degrees, respectively.
26. Ballard failed to establish which of the Subject Fields' producing formations occur at a dip angle of 45 degrees or greater.
27. Ballard seeks to consolidate the Subject Fields into the proposed Mykawa (Cons.) Field, and requests that the following correlative interval be designated as the Mykawa (Cons.) Field:
 - a. From 2,200 feet to 6,800 feet, as shown on the log of the Gulf Oil Corporation's E.G. Siadous Lease, Well No. 1, Wm. J. Lovett Survey (A-526), Harris County, Texas, and
 - b. from 6,800 feet to 10,720 feet, as shown on the log of the Gulf Oil Corporation, Katie Ward Lease, Well No. 1, Harris County, Texas, for a combined total designated correlative interval from 2,200 feet to 10,720 feet.
28. The Existing Fields are generally located above or around a salt dome referred to as the Mykawa Salt Dome ("Mykawa Dome").
29. The Mykawa Dome is generally near the William P. Hobby Airport and South Sam Houston Tollway in Houston, Texas.

30. The Existing Fields are made of roughly 130 historic wells.
31. The Existing Fields' cumulative production is 7,671,898 barrels of oil and 10.5 billion cubic feet of gas.
32. Ballard is the only active operator in the Existing Fields with one production well, the Ballard's State Lease 110735 Unit, Well No. 1 ("Ballard Well").
33. The Ballard Well is completed in the Mykawa, S (Frio) Field.
34. The Subject Fields are conventional reservoirs developed through vertical wells.
35. Horizontal drilling is not economical to develop the Subject Fields or the proposed Mykawa (Cons.) Field.
36. Ballard failed to present evidence in the Subject Application to meet the requirements of Statewide Rule 37(l), with regard to designation of the proposed Mykawa (Cons.) Field as a piercement-type salt dome field.
37. Ballard evidenced in the Subject Application that consolidation of the Subject Fields into the proposed Mykawa (Cons.) Field is necessary to provide it flexibility in locating future wells.
38. Ballard did not distinguish whether it has been required to obtain an exception to Statewide Rules 37 and 38 in the Subject Fields.
39. Ballard did not distinguish whether pursuit of obtaining flexibility in locating wells in the Subject Fields should be made pursuant to Statewide Rules 37 and 38.
40. Ballard did not present argument with regard to whether consolidation of the Subject Fields into the proposed Mykawa (Cons.) Field violates Statewide Rule 10.
41. Consolidation of the Subject Fields would likely result in a violation of Statewide Rule 10, and a violation of correlative rights.
42. Consolidation of the Subject Fields is inappropriate because Ballard did not present persuasive evidence to conclude that its requested relief in the Subject Application will prevent waste and protect correlative rights.
43. Ballard did not clarify the quantity, location, or areal extent of the New and/or Wildcat Fields it seeks to consolidate in the Subject Application.
44. The Subject Application should be denied because Statewide Rules 37 and 38 provide exceptions that mitigate Ballard's necessity for flexibility in locating future wells in the Subject Fields or the proposed Mykawa (Cons.) Field.

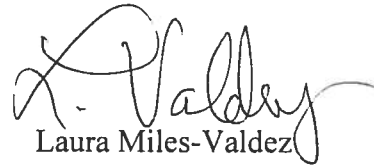
CONCLUSIONS OF LAW

1. Proper notice was issued to all operators of record in the Existing Fields.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Lessees of record that have no designated operator and unleased mineral interest owners in the Subject Fields were not provided notice of the Subject Application. 16 Tex. Admin. Code §3.37(a)(2).
4. Approval of Ballard's Subject Application will not prevent waste and protect correlative rights, as required under Statewide Rules 37 and 38.
5. Ballard failed to meet its burden of proof to satisfy the requirements of 16 Tex. Admin. Code §3.37(l).

Respectfully submitted,



Brian Fancher, P.G.
Technical Examiner



Laura Miles-Valdez
Legal Examiner

ATTACHMENT A

<u>Field Name</u>	<u>Field Type</u>
1. Mykawa	Oil / Gas
2. Mykawa New	Oil / Gas
3. Mykawa (Marginluina 4600)	Gas
4. Mykawa New (Mio. 2200)	Gas
5. Mykawa New (Mio. 2950)	Gas
6. Mykawa New (Mio. 4000)	Gas
7. Mykawa New (Mio. 3100)	Gas
8. Mykawa New (Mio. 3625)	Gas
9. Mykawa New (Mio. 2600)	Gas
10. Mykawa New (Mio. 3470)	Gas
11. Mykawa (Miocene 3300)	Gas
12. Mykawa (Miocene 2900)	Gas
13. Mykawa (Miocene 3700)	Gas
14. Mykawa (Miocene 2800)	Gas
15. Mykawa New (Mio. 3850)	Gas
16. Mykawa New (Mio. 3200)	Gas
17. Mykawa (Miocene 3000)	Gas
18. Mykawa (Miocene 3225)	Gas
19. Mykawa (Frio 4875)	Oil
20. Mykawa New (Mio. 3450)	Gas
21. Mykawa, New (Frio 4450)	Oil
22. Mykawa, East (Vicksburg)	Gas
23. Mykawa (Vicksburg "E" Sand)	Gas
24. Mykawa, East (Miocene)	Gas
25. Mykawa, S (Frio)	Gas
26. Mykawa New (Vicksburg 8500)	Gas
27. Mykawa New (Vicksburg 8600)	Gas
28. Mykawa New (Mio. 3625)	Oil

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

**OIL AND GAS DOCKET
NO. 03-0289456**

**IN THE MYKAWA (CONS.) FIELD,
HARRIS COUNTY, TEXAS**

**FINAL ORDER
APPLICATION OF BALLARD EXPLORATION COMPANY, INC.
CONSOLIDATION OF VARIOUS MYKAWA FIELDS INTO
THE MYKAWA (CONS.) FIELD AND
DESIGNATION OF THE MYKAWA (CONS.) FIELD
AS A PIERCEMENT-TYPE SALT DOME FIELD
MYKAWA (CONS.) FIELD
HARRIS COUNTY, TEXAS**

The Commission finds that after statutory notice in the above-numbered docket heard on July 30, 2014, the presiding examiners have made and filed a report and recommendation containing findings of fact and conclusions of law, for which service was not required; that the proposed application is in compliance with all statutory requirements; and that this proceeding was duly submitted to the Railroad Commission of Texas at conference held in its offices in Austin, Texas.

The Commission, after review and due consideration of the examiners' report and recommendation, the findings of fact and conclusions of law contained therein, hereby adopts as its own the findings of fact and conclusions of law contained therein, and incorporates said findings of fact and conclusions of law as if fully set out and separately stated herein.

Therefore, it is **ORDERED** by the Railroad Commission of Texas that Ballard Exploration Company, Inc.'s application to consolidate the complete list of fields in Attachment A, enclosed herewith, into the proposed Myawa (Cons.) Field, as well as any New and or Wildcat Mykawa Field, and designate the proposed Mykawa (Cons.) Field as a piercement-type salt dome field is **DENIED**.

Each exception to the examiners' report and recommendation not expressly granted herein is overruled. All requested findings of fact and conclusions of law which are not expressly adopted herein are denied. All pending motions and requests for relief not previously granted or granted herein are denied.

This order will not be final and effective until 20 days after a party is notified of the Commission's order. A party is presumed to have been notified of the Commission's order three days after the date on which the notice is actually mailed. If a timely motion for rehearing is filed by any party at interest, this order shall not become final and effective until such motion is overruled, or if such motion is granted, this order shall be subject to further action by the Commission. Pursuant to TEX. GOV'T CODE §2001.146(e), the time allotted for Commission action on a motion for rehearing in this case prior to its being overruled by operation of law, is hereby extended until 90 days from the date the order is served on the parties.

Done this 8th day of December, 2015.

RAILROAD COMMISSION OF TEXAS

CHAIRMAN DAVID PORTER

COMMISSIONER CHRISTI CRADDICK

COMMISSIONER RYAN SITTON

ATTEST:

SECRETARY

ATTACHMENT A

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