

**BEFORE THE BOARD OF OIL, GAS AND MINING  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF UTAH**

IN THE MATTER OF THE REQUEST FOR AGENCY ACTION OF ROBERT L. BAYLESS, PRODUCER LLC FOR AN ORDER ESTABLISHING TWO (2) SPECIAL DRILLING UNITS FOR THE PRODUCTION OF OIL, GAS AND ASSOCIATED HYDROCARBONS FROM THE UTELAND BUTTE MEMBER OF THE LOWER GREEN RIVER FORMATION, COMPRISED OF LOT 3 AND THE BED OF THE GREEN RIVER ADJACENT THERETO (49.15 ACRES), AND LOTS 1 AND 4 AND THE BED OF THE GREEN RIVER ADJACENT THERETO (66.66 ACRES), SECTION 9, T10S, R19E, SLM, UINTAH COUNTY, UTAH, AND AUTHORIZING DIRECTIONALLY DRILLED WELLS ON EACH SUCH DRILLING UNIT SO ESTABLISHED TO ACHIEVE AN APPROXIMATE EQUIVALENT 20-ACRE WELL DENSITY

**Docket No. 2014-034  
Cause No. 259-05**

**INDEX OF ORDERS**

<u>NO.</u>	<u>DATE</u>	<u>DESCRIPTION</u>
1.	11/4/2014	Findings of Fact, Conclusions of Law and Order

**FILED**

NOV 04 2014

SECRETARY, BOARD OF  
OIL, GAS & MINING

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**FINDINGS OF FACT,  
CONCLUSIONS OF LAW AND  
ORDER**

Docket No. 2014-034

Cause No. 259-05

This Cause came on for hearing before the Utah Board of Oil, Gas and Mining (the "Board") on Wednesday, October 22, 2014, at approximately 11:30 a.m., in the Auditorium of the Utah Department of Natural Resources Building in Salt Lake City. The following Board members were present and participated at the hearing: Chairman Ruland J. Gill, Jr., Michael R. Brown, Carl F. Kendell, Chris D. Hansen, Susan S. Davis and Gordon L. Moon. Board Member Kelly L. Payne was unable to attend. The Board was represented by Douglas J. Crapo, Esq., Assistant Attorney General.

Testifying on behalf of Petitioner Robert L. Bayless, Producer LLC (“Bayless”) were Cranford D. Newell, Jr. - Land Manager, George F. Coryell - Senior Geologist, and John D. Thomas - Operations Engineer. Messrs. Coryell and Thomas were recognized by the Board as experts in geology and petroleum engineering, respectively, for purposes of this Cause. Frederick M. MacDonald, Esq., of and for MacDonald & Miller Mineral Legal Services, PLLC, appeared as attorney for Bayless.

The Division of Oil, Gas and Mining (the “Division”) did not file a staff memorandum in this Cause but participated in the hearing. Steven F. Alder, Esq., Assistant Attorney General, appeared as attorney for, and with the Board’s permission, Dustin Doucet, Petroleum Engineer, asked questions on behalf of, the Division. Mr. Alder made a statement expressing the Division’s support for the granting of Bayless’ Request for Agency Action filed on September 10, 2014 in this Cause (the “Request”) as conformed to the testimony and other evidence provided at the hearing.

Jerry Kenczka, Assistant Field Manager for Lands and Minerals, Vernal District Office of the United States Bureau of Land Management (“BLM”), made a statement clarifying the status of no surface occupancy lease stipulations and enforcement in and around the vicinity of the Green River. The BLM expressed no objection to the granting of the Request.

No other party filed a response to the Request and no other party appeared or participated at the hearing.

The Board, having considered the testimony presented and the exhibits received into evidence at the hearing, being fully advised, and for good cause, hereby makes the following findings of fact, conclusions of law and order in this Cause.

### **FINDINGS OF FACT**

1. Bayless is a Colorado limited liability company in good standing with its principal place of business in Denver. It is duly qualified to conduct business in Utah, and is fully and appropriately bonded with all Federal and State of Utah agencies.

2. Bayless seeks establishment of the following respective Uintah County, Utah lands as special drilling units for the production of oil, gas and associated hydrocarbons from the Uteland Butte Member of the Lower Green River formation, defined for purposes of this Cause as follows:

the stratigraphic equivalent of the interval between 4,657 feet MD and 4,816 feet MD as reflected on the Dual Laterolog – Compensated Z-Densilog – Compensated Neutron Triple Combo Log of the RBU #7-9E Well, API No. 43-047-36426, located 1,906 feet FSL and 1,597 feet FEL in Lot 7 of Section 9, T10S, R19E, SLM

(the “Subject Formation”):

A) Township 10 South, Range 19 East, SLM

Sec. 9: Lot 3 (27.22) and the bed of the Green River adjacent thereto (21.93)

(containing 49.15 acres, more or less); and

B) Township 10 South, Range 19 East, SLM

Sec. 9: Lots 1 (25.21) and 4 (5.70) and the bed of the Green River adjacent thereto (35.75)

(containing 66.66 acres, more or less),

(collectively, the “Subject Lands”).

3. Bayless is the sole lessee and operating rights owner of State of Utah Oil, Gas and Hydrocarbon Lease ML-20000020 (the “State Lease”), administered by the Utah Division of Forestry, Fire and State Lands (“DFFSL”). The State Lease covers the bed of the Green River insofar as it meanders through Township 10 South, Range 19 East, SLM, including subject Section 9, an approximate aggregate 988 gross acres, more or less. The State Lease has a primary term scheduled to expire on May 1, 2015. However, for reasons self-evident, the State Lease expressly prohibits surface occupancy; Bayless may only access the leased substances through directional drilling and/or communitization.

4. Gasco Production Company (“Gasco”) and Wapiti Oil & Gas II, L.L.C. (“Wapiti”) are equal lessees and operating rights owners of United States Oil and Gas

Lease UTU-76490 (the “Federal Lease”) insofar as it covers Lots 1, 3 and 4 of subject Section 9. The Federal Lease is in an indefinite extended term due to production from elsewhere on the leasehold. However, the Federal Lease contains a stipulation prohibiting surface occupancy within 1/2 mile or line of sight, whichever is less, of the Green River. Thus, as relevant to the Subject Lands covered by the Federal Lease, Gasco and Wapiti likewise may only access the leased substances through directional drilling and/or communitization.

5. The remaining Section 9 lands adjacent to the bed of the Green River are subject to Federal oil and gas leases committed to the River Bend Unit, operated by XTO Energy Inc., which primarily targets Wasatch and Mesaverde formation gas production.

6. The Subject Lands are currently not subject to any spacing order of the Board and therefore are only subject to the Board’s and Division of Oil, Gas and Mining’s (the “Division’s”) general operational rules, including Utah Admin. Code Rule R649-3-2 (the general well siting rule) requiring wells to be located in the center of a quarter-quarter section within a tolerance of 200 feet (an allowed 400-foot square “window”).

7. Bayless intends to directionally drill the “Moon Bottom 9-7” well from an extension of an existing well pad located on Federally owned surface within Lot 7 of subject Section 9, which is on a cliff approximately 400 feet above and 700 feet away

from the Green River and not visible from the River, to a bottom hole location within the State Lease between Lots 4 and 7 of subject Section 9. Bayless is targeting oil production from the Subject Formation. Bayless is in the process of seeking appropriate Federal rights-of-way to secure access to and for well pad and infrastructure necessary to drill the well directionally.

8. The Subject Formation is the basal member of the Green River Formation in much of the Uinta Basin, and specifically in the vicinity of the Subject Lands. In the area of the Subject Lands, the Subject Formation is about 159 feet thick and may contain up to as many as 12 separate reservoirs within a sequence of limestone, dolomite, organic-rich calcareous mudstone, siltstone, and possible sandstone. Generally, the interbedded combination of these rocks has created an interval which is both self-sourcing and self-sealing. As a rule-of-thumb, the Green River waxy oils in this area cannot be easily produced from depths shallower than 4,000 feet due to their high pour-point temperature. The Subject Formation is considered an unconventional tight oil play in that its relatively thin-bedded limestone and dolomite reservoir rocks locally have good porosity, but almost always exhibit low permeability.

9. In the area of the Subject Lands, the major geologic risks are: 1) adequately high bottom-hole temperature to allow efficient oil recovery; 2) sufficient net porosity which can be accessed with advanced vertical completion techniques; and 3) pressure

gradient. Risk item 1 likely restricts production potential to the Subject Formation, since the true vertical depth Uteland Butte top at the bottom-hole location will only be about 4,300 feet. Risk item 2 addresses probable local, rapid lateral variations in reservoir quality within individual beds. A conventional oil reservoir well density of 40-acres is too large a drainage area for one well to access up to 12 offset tight-oil targets. Risk item 3 is critical because data suggests the area is about normally pressured. A lower-energy system may limit recovery over a 40-acre drainage area. 20-acre vertical well density therefore appears appropriate for efficient and economic development of resources.

10. Average EUR from the Lower Green River producing wells in a township radius surrounding the Subject Lands is 35,000 BO. Effective porosities from the RBU #7-9E Well, offset from the Subject Lands and from which the stratigraphic definition for the Subject Formation derives, average 10%. From this type well, the calculated oil in place is approximately 740,000 bbl per 40 acres. Therefore, resulting recovery of 40-acre density would be less than 5% (35,000 BO/740,000 BO). Recovery factors for solution gas drive reservoirs in limestone, dolomite, or chert average 9.6% for oil gravities similar to the Lower Green River. A 20-acre well density therefore appears justified to prevent waste by leaving resources unrecoverable and to be economic.

11. Wells drilled on a 20-acre density pattern, *i.e.*, wells having productive intervals in the Subject Formation no closer than 330 feet to the boundary of the proposed

drilling unit and no closer than 660 feet to another well producing in the Subject Formation, should minimize, if not eliminate, communication and therefore such density pattern is protective of correlative rights.

12. However, given the meandering nature of the Green River itself and stipulations contained in the State and Federal Leases, and given the commitment of the other lands adjacent to the Green River to the River Bend Federal Unit, it is impractical, if not impossible, to create 20-acre units. Consequently, rather than establishing 20-acre drilling units, establishment of the drilling units requested by Bayless with a 20-acre well density, *i.e.*, two wells on Drilling Unit A and three wells on Drilling Unit B, as described in Findings of Fact No. 2 above, is fair, just and reasonable under the circumstances and is necessary to protect correlative rights.

13. Bayless has represented it will use multi-well pads from which to directionally drill the additional authorized wells to minimize surface impact, especially in light of the environmentally sensitive nature of the Subject Lands, if and to the extent economically and technically feasible.

14. A copy of the Request was mailed, postage pre-paid, certified with return receipt requested, and properly addressed to all mineral, leasehold and production interest owners in the Subject Lands, to all owners within 460 feet of the outer boundaries of the Subject Lands, and to DFFSL and the State and Vernal Field Office of the BLM as the

governmental agencies having mineral jurisdiction over portions of the Subject Lands. The mailings were sent to said parties at their last addresses disclosed by the DFFSL, BLM and Uintah County records.

15. Notice of the filing of the Request and of the hearing thereon was duly published in the Salt Lake Tribune and Deseret Morning News on October 5, 2014 and in the Uintah Basin Standard and the Vernal Express on October 7, 2014.

16. The vote of the Board members present and participating in the hearing on this Cause was unanimous (6-0) in favor of granting the Request.

#### **CONCLUSIONS OF LAW**

1. Due and regular notice of the time, place and purpose of the hearing was properly given to all parties whose legally protected interests are affected by the Request in the form and manner as required by law and the rules and regulations of the Board and Division.

2. The Board has jurisdiction over all matters covered by the Request and all interested parties therein, and has the power and authority to render the order herein set forth pursuant to Utah Code Ann. §§ 40-6-5(3)(b) and 40-6-6 and Utah Admin. Code Rule R649-2-1(2).

3. The Subject Formation, as defined in Finding of Fact No. 2 above, constitutes a “common source of supply” as that phrase is defined in Utah Code Ann. § 40-6-2(19).

4. The special drilling units described in Findings of Fact No. 2 above for the Subject Formation respectively are not smaller than the maximum area that can be efficiently and economically drained by one well.

5. Two wells on Drilling Unit A as described in Finding of Fact No. 2 above and three wells on Drilling Unit B as described in Findings of Fact No. 2 above are required to efficiently and economically drain the respective drilling unit and prevent waste.

6. Establishment of set-backs of 330 feet to a boundary of the applicable special drilling unit, and 660 feet to another well producing from the Subject Formation, is fair, just and reasonable under the circumstances and is protective of correlative rights.

7. Creation of the special drilling units is required for the State and Federal Leases to be communitized.

8. The Board has the authority under Utah Admin. Code Rule R649-2-1(2) to modify the requirements of Utah Admin. Code Rule R649-3-11(1.1) as to the parties given proper notice of the Request seeking relief relating thereto.

9. Bayless has demonstrated good cause as to why Utah Admin. Code Rule R649-3-11(1.1) should be declared inapplicable to directionally drilled wells with productive intervals entirely within the setbacks referenced in Conclusion of Law No. 6 above. All parties with “legally protected interests,” as it is defined in Utah Administrative Code Rule R641-100-200, impacted thereby were provided notice of the Request and hearing.

10. The relief granted hereby will result in consistent and orderly development and the greatest recovery of oil, gas and associated hydrocarbons from the Subject Formation underlying the Subject Lands, prevent waste and adequately protect the correlative rights of all affected parties.

11. Bayless has sustained its burden of proof, demonstrated good cause, and satisfied all legal requirements for granting of the Request.

### **ORDER**

Based upon the Request, testimony and evidence submitted, and the findings of fact and conclusions of law stated above, the Board hereby orders:

1. The Request in this cause is granted.
2. Drilling Units A and B as described in Findings of Fact No. 2 above are hereby established for the production of oil, gas, and hydrocarbons from the Subject Formation as described in Findings of Fact No. 2 above.

3. Two wells on Drilling Unit A and three wells on Drilling Unit B are authorized, *i.e.*, to achieve an equivalent 20-acre well density on each Unit, provided no well may be located closer than 330 feet to a drilling unit boundary line or 660-feet to another well producing from the Subject Formation without an exception location approval in accordance with Utah Admin. Code Rule R649-3-3 (or subsequently enacted equivalent regulation).

4. Utah Admin. Code Rule R649-3-11-(1.1) is hereby declared inapplicable to any directionally drilled well on the drilling units so established as long as all productive intervals are within the setbacks so established and with the caveat, that, if an uphole completion closer than the set back is subsequently proposed, an exception location approval in accordance with Utah Admin. Code Rule R649-3-3 (or subsequently enacted equivalent regulation) will be required.

5. Pursuant to Utah Admin. Code Rules R641 and Utah Code Ann. §§ 63G-4-204 to 208, the Board has considered and decided this matter as a formal adjudication.

6. This Order is based exclusively on evidence of record in the adjudicative proceeding or on facts officially noted, and constitutes the signed written order stating the Board's decision and the reasons for the decision, all as required by the Administrative

Procedures Act, Utah Code Ann. § 63G-4-208 and Utah Administrative Code Rule R641-109.

7. Notice re: Right to Seek Judicial Review by the Utah Supreme Court or to Request Board Reconsideration: As required by Utah Code Ann. § 63G-4-208(e) - (g), the Board hereby notifies all parties in interest that they have the right to seek judicial review of this final Board Order in this formal adjudication by filing a timely appeal with the Utah Supreme Court within 30 days after the date that this Order issued. Utah Code Ann. §§ 63G-4-401(3)(a) and 403. As an alternative to seeking immediate judicial review, and not as a prerequisite to seeking judicial review, the Board also hereby notifies parties that they may elect to request that the Board reconsider this Order, which constitutes a final agency action of the Board. Utah Code Ann. § 63G-4-302, entitled, “Agency Review – Reconsideration,” states:

(1)(a) Within 20 days after the date that an order is issued for which review by the agency or by a superior agency under Section 63G-4-301 is unavailable, and if the order would otherwise constitute final agency action, any party may file a written request for reconsideration with the agency, stating the specific grounds upon which relief is requested.

(b) Unless otherwise provided by statute, the filing of the request is not a prerequisite for seeking judicial review of the order.

(2) The request for reconsideration shall be filed with the agency and one copy shall be sent by mail to each party by the person making the request.

(3)(a) The agency head, or a person designated for that purpose, shall issue a written order granting the request or denying the request.

(b) If the agency head or the person designated for that purpose does not issue an order within 20 days after the filing of the request, the request for reconsideration shall be considered to be denied.

*Id.* The Board also hereby notifies the parties that Utah Admin. Code Rule R641-110-100, which is part of a group of Board rules entitled, “Rehearing and Modification of Existing Orders,” states:

Any person affected by a final order or decision of the Board may file a petition for rehearing. Unless otherwise provided, a petition for rehearing must be filed no later than the 10<sup>th</sup> day of the month following the date of signing of the final order or decision for which the rehearing is sought. A copy of such petition will be served on each other party to the proceeding no later than the 15<sup>th</sup> day of the month.

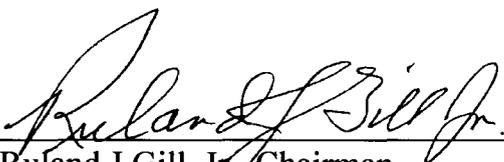
*Id.* See Utah Admin. Code Rule R641-110-200 for the required contents of a petition for Rehearing. If there is any conflict between the deadline in Utah Code Ann. § 63G-4-302 and the deadline in Utah Admin. Code Rule R641-110-100 for moving to rehear this matter, the Board hereby rules that the later of the two deadlines shall be available to any party moving to rehear this matter. If the Board later denies a timely petition for rehearing, the party may still seek judicial review of the Order by perfecting a timely appeal with the Utah Supreme Court within 30 days thereafter.

The Board retains continuing jurisdiction over all the parties and over the subject matter of this cause, except to the extent said jurisdiction may be divested by the filing of a timely appeal to seek judicial review of this order by the Utah Supreme Court.

For all purposes, the Chairman's signature on a faxed copy of this Order shall be deemed the equivalent of a signed original.

DATED this 4th day of November, 2014

**STATE OF UTAH  
BOARD OF OIL, GAS AND MINING**

By:   
Rufand J Gill, Jr., Chairman

1525.01

**CERTIFICATE OF SERVICE**

I hereby certify that on this 4th day of November, 2014, I caused a true and correct copy of the foregoing **FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER** for Docket No. 2014-034, Cause No. 259-05, to be mailed by Email or via First Class Mail with postage prepaid, to the following:

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