

## Loni Davis

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**From:** Steve [sdurrett@augustusenergy.com]  
**Sent:** Tuesday, February 14, 2012 11:27 AM  
**To:** jane.stanczyk@state.co.us  
**Cc:** ldavis@augustusenergy.com; dzimmerman@augustusenergy.com  
**Subject:** Augustus Yuma County Pilot Project  
**Attachments:** Decline Curve 1.pdf; Decline Curve 2.pdf

**Follow Up Flag:** Follow up  
**Due By:** Tuesday, February 14, 2012 1:00 PM  
**Flag Status:** Flagged

Jane:

Your email to Loni Davis has been forwarded to me for response.

I have attached the two curves requested in 1)

2) These are the only two wells envisioned in the pilot.

3) We intend to produce these wells until their economic limit is reached, which may well be decades. As to when the results would be conclusive, I estimate it will take two-three years at a minimum to determine the degree of interference between wells. Pursuant to COGCC rules we will obviously report monthly production for as long as the wells are productive.

In the event that we feel our analysis of the results justifies broader permission to drill infill wells, we would present our technical analysis in detail to the COGCC in support of that application.

If the COGCC would like some interim reporting, we would be willing to provide annual reports that summarize the production from the pilot areas along with any pressure measurements that have been recorded. Just let us know to who's attention these reports should be sent.

I hope this answers the remaining concerns. Please feel free to contact me with any further questions.

Thanks,

*Steven D. Durrett*  
*President & CEO*  
*Augustus Energy Partners, LLC*  
*2016 Grand Ave*  
*Billings, MT 59102*  
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**From:** Stanczyk, Jane [<mailto:Jane.Stanczyk@state.co.us>]  
**Sent:** Monday, February 13, 2012 4:03 PM  
**To:** Loni Davis  
**Cc:** Kerr, Thom; Prince, Nancy  
**Subject:** Augustus Yuma County Pilot Project

Loni

COGCC engineering and permitting staff have reviewed the request from Augustus to allow additional wells in order to conduct a pilot evaluation of increased density in certain areas in Yuma County.

In concept, your proposal is sound, but a few items require clarification:

- We appreciate the cumulative production graphs, but would also like to see a decline curve (monthly production versus time) for the wells in these two quarter sections in question.
- Is this only a 2-well project, or are other locations being considered for the project at this time? If so, these wells should be specified in your proposal. COGCC prefers that Augustus present the full scope of this pilot study, rather than requesting additional wells as the project progresses. Inclusion of wells in the proposal for the pilot project would not obligate Augustus to drill the wells.
- As part of an approval of this pilot project, the COGCC will require a report of the results. How does Augustus plan to define the end of the pilot, and what data do you expect to be able to present at that time?

We will respond to your request following the COGCC staff's evaluation of the requested information.

Thank you.

Jane Stanczyk  
Permit Supervisor  
Colorado Oil and Gas Conservation Commission  
Phone: (303) 894 2100 ext. 5119  
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January 26, 2012

Thom Kerr  
Permitting Manager  
Colorado Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801

Dear Mr. Kerr:

Recently, Augustus Energy Partners requested COGCC approval for two exception locations in Yuma County, specifically:

C/NW Section 15, T1S, R45W

C/NE Section 18, T5N, R46W

I understand you have expressed a desire for more detailed information as to Augustus' reasoning for requesting these exception locations, which I hope to convey in this letter.

As you know, much of this area is covered under Order 318B, which allows for 4 wells per 160 acres, while other areas are subject to statewide spacing of 40 acres. However, due to extensive localized faulting, actual well placement and interwell distances are often much more in line with 20 acre density than with 40 acre density. These two locations are envisioned as a pilot program to evaluate the feasibility of increased well density in the Niobrara formation in the Yuma County area.

The gas production in this area is from the Beecher Island member of the Niobrara Chalk, which ranges from 800-3,500 feet deep and can achieve a maximum thickness of 55 feet. The Beecher Island zone is characterized by high porosity (25%-45%) and low permeability (typically less than 1 md) as determined by core samples. Recovery factor calculations through volumetric analysis are largely inconclusive due to uncertainty over how much of the Beecher Island interval is actually productive. Physical well lives are quite long, typically 50+ years, so there is little doubt that increased well density will provide a significant economic benefit through acceleration, but these two pilot wells will be designed and monitored in an attempt to establish to what extent incremental reserves will also be recovered.

To this end, reservoir pressure will be measured in each pilot well upon completion. Further, each of the existing wells surrounding the proposed locations will have a pressure build up test performed utilizing an automated fluid level sounder. These tests will be performed on all offsetting wells prior to completing the pilot wells, and will be performed at regular intervals thereafter.

Offsetting production will be closely monitored after completion of the pilot wells, particularly through the use of semi-log rate vs cumulative charts. Such charts have been prepared for the surrounding wells and are attached hereto. Both groupings have excellent trend-lines established, which should allow for early detection of incremental recoveries.

In an attempt to eliminate as many variables as possible and to assure the best possible chance of obtaining conclusive data, these locations were chosen for their structural and stratigraphic uniformity, as well as the relatively consistent age and quality of the existing wells. Maps of the two locations are attached hereto.

Lastly, I would point out that we have chosen our pilot locations to avoid correlative rights issues, in that both locations are 100% Augustus owned and are only offset by 100% Augustus owned wells, with consistent mineral/royalty ownership throughout.

I hope this letter adequately conveys our rationale and objectives for seeking these exception locations. Please feel free to contact me with any questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "S.D. Durrett", with a long horizontal flourish extending to the right.

Steven D. Durrett, P.E.  
President and CEO

# 5N-46W-18 NE/4





