



**Comment Concerning BLM Oil and GAS Environmental Assessment (EOI-266)
Attn: Kemba Anderson (Brazee)**

Brazee, Richard J <brazee@illinois.edu>
To: "ES_EOI_Nominations@blm.gov" <ES_EOI_Nominations@blm.gov>
Cc: "Brazee, Richard J" <brazee@illinois.edu>

Thu, Jul 25, 2013 at 1:03 PM

Dear Kemba Anderson,

I have attached as MSWord file and included a second below of a comment on EOI-266.

Thank you in advance for recording my comment. If you could acknowledge receipt of the comment, it would be greatly appreciated.

Sincerely,

Richard J. Brazee

Bureau of Land Management

7450 Boston Blvd.

Springfield, VA 22153

Attention: Kemba Anderson

E-mail to: ES_EOI_Nominations@blm.gov

Concerning the BLM Oil and Gas Environmental Assessment (EOI-266)

My comments regard the Bureau of Land Management's Environment Assessment and the Bureau's decision to auction oil and gas leases in two 40 acre parcels in Pentwater Township, Oceana County, MI

(EOI-266). I disagree with the decision to auction oil and gas rights on the parcels in Pentwater Township.

The primary reason that I disagree with the decision to auction oil and gas rights on the parcels in Pentwater Township is the potential environmental and associated financial costs of drilling on the parcels. From available information the potential environmental and associated financial costs of drilling on the parcels are many times greater than the potential benefits of drilling.

The BLM report includes information on the potential benefits of drilling including oil and gas revenues, severance taxes and leasing fees. The BLM report also includes information on a wide range of potential environmental impacts and environmental costs of drilling. However, in my opinion the report does not adequately address the most significant potential environmental impacts and environmental costs. I base this claim on the following:

1. The most significant potential environmental harm from oil drilling on the Pentwater parcels is water contamination and the depletion of local groundwater supplies.
2. The reason that water contamination and the depletion of local groundwater supplies is the most significant harm is due to current oil and gas drilling technology. Current oil and gas drilling technology requires tremendous amounts of water to be injected into wells. Although the chemicals in the water are a small proportion of the liquid injected, some of the chemicals are toxic.
3. There are several recent studies that indicate water quality near oil and gas drilling sites is severely degraded, e.g., the water contains several times the acceptable levels for some of the toxic chemicals that were injected during oil and gas drilling. There are also studies indicating that groundwater supplies have been depleted by the quantity of water injected during oil and gas drilling.
4. The associated costs from a potential degradation of groundwater quality and quantity in the decision area are extremely high. The Decision Area is a very scenic area near Lake Michigan. I estimate that the value of the residential property alone in the Decision Area is a least \$100,000,000. (My sense is that \$100,000,000 is an extremely low estimate). As far as I know the water supply for every residence is a privately drilled well. If the groundwater were polluted or depleted, and these residences lost their water supplies, I estimate the value of the property in the Decision Area would fall by at least 90%, i.e., the loss in value would be over \$90,000,000. (Again, my sense is this estimate is very low, and the actual damages could be much higher.)

This potential loss even if the probability appears to be low dominates—by at least a couple of orders of magnitude—any potential benefits from oil and gas drilling.

Some other comments regarding the report:

I know how difficult a task it is to write a federal EOI, and do not envy the BLM report writers. Just understanding the statutes and regulations to write a report can be a daunting task. Performing the required

research is a time consuming task. Including defensible analysis for possible regulatory and legal actions limits what can be discussed. There is little time and no regulatory or legal incentive to include potential costs and benefits.

As reflected in the report, benefits and some of the costs are known with some confidence, e.g., the authors know current price of oil and natural gas, severance taxes and leasing fees and have a good sense of the environmental costs of well pad. However, in this case, it is the potential environmental impacts and financial costs that are difficult to estimate that totally dominate the legally required analysis of the included benefits and costs.

One problem with evaluating the impacts of the proposed leasing is the heterogeneity of Oceana County. The BLM report uses county wide averages in its analysis. However, the Decision Area is not typical of Oceana County. The Decision Area is less agricultural, more ecologically fragile and more residential than most of Oceana County. As implied above property values with the Decision Area are several times the average property values in Oceana County.

There is a potentially important typographical error on p.36 of the BLM Report. The first sentence of the second paragraph of III. **Description of Geology** states "The properties are about 1½ miles from the Lake Michigan shore and are drained by an unnamed wetlands stream which flows northward into Bass Lake." As can be seen from the maps in Figures 1, 2 or 3 in Appendix A of the BLM Report, the actual distance the properties are approximately ½ mile from the Lake Michigan shore. Thus any environmental impacts including impacts on sand dunes and water contamination from oil and gas drilling are much closer to Lake Michigan than the discussion in Appendix B -- *Reasonably Forseeable Development Scenario* suggests. (The proximity to Lake Michigan also partially accounts for the high property values discussed above.)

A second potentially important typographical error is on p.17 of the BLM Report. The first sentence of the *Water Resources and Water Quality* section states "There are 81 water wells in the Decision Area (Figure 3, Appendix A). There are many more wells in the Decision Area. From the number of residences in the Decision Area, I would estimate that there are several hundred residential water wells. (The underestimation of the number of wells could cause an underestimate of the damages from groundwater contamination or depletion of groundwater stocks.)

My name is Richard Brazee. I co-own residential property within the Decision Area. (The house and property are located at 9034 N. Helena Avenue, which is within Duna Vista Resorts.)

I have professional expertise in evaluating natural resource projects. Since receiving a Ph.D. in natural resource economics (University of Michigan, 1987), I have been continuously employed as either a researcher at the University of Michigan and the U.S.D.A.'s Economic Research Service or as a professor at University of Illinois at Urbana-Champaign. In the context of this employment I have participated in

numerous studies as researcher or expert witness that weigh the benefits and costs of developing natural resources for commercial use. Although I do not have access to all of the information on which the BLM report is based—nor am I am constrained by agency mission, regulation and statute as the authors of the BLM report are—if I were presenting testimony as an expert witness based on the information available, I would argue that due to the high potential costs of oil and gas drilling on the two parcels in Pentwater, MI, the decision should be not to offer the proposed leases for auction.

Sincerely,

Richard J. Brazee



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