



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
Office of the Director
Reston, Virginia 20192

In Reply Refer To:
Mail Stop 915A
#2008465-DO

JUN 19 2008

Honorable Jeff Bingaman
Chairman, Committee on Energy and
Natural Resources
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Thank you for your letter of May 27, 2008, and your request for U.S. Geological Survey (USGS) oil and gas resource information regarding the Wyoming Range Withdrawal Area (WRWA), outlined in S. 2229.

Based on the map your staff provided, the withdrawal area encompasses parts of two geological provinces assessed by the USGS – the Southwestern Wyoming Province and the Wyoming Thrust Belt Province. The USGS conducts assessments of the undiscovered, technically recoverable oil and gas resources of the entire geologically defined province.

To approximate the amount of the estimated resources underlying the proposed withdrawal area, we placed the map provided to us into a geographic information system (GIS), calculated the amount of WRWA area that overlaps the assessment units we had analyzed and assessed in the two geologic provinces, and calculated the percentage geographic area that the WRWA represents of each assessment unit. We then calculated a first approximation of the potential undiscovered, technically recoverable oil and gas resources in this region by taking the mean estimates of each resource category and multiplying by the percent geographic area of each assessment unit. Results are as follows:

Mean oil potential in the WRWA is 5 million barrels
Mean natural gas potential is 1.5 trillion cubic feet
Mean natural gas liquids potential is 60 million barrels

Please note that these GIS-analyzed estimates can only be considered approximations, for the following reasons: (1) The map provided to us of the WRWA was a general outline and therefore subject to error when calculating the geographic extent of the assessment units relative to the WRWA; and (2) a homogeneous distribution of oil and gas resources was assumed across each entire assessment unit.

Honorable Jeff Bingaman

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For an overview of USGS mean estimates for undiscovered, technically recoverable natural gas resources for geologic provinces within in the United States and their relative sizes, please see the map at http://certmapper.cr.usgs.gov/data/noga00/natl/graphic/2007/total_gas_mean_07.pdf

Please let us know if you have any further questions or we can be of further help.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark D. Myers". The signature is fluid and cursive, with the first name "Mark" being the most prominent.

Mark D. Myers
Director



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May 21, 2008

Attn: Wyoming Range Withdrawal Area

To Whom It May Concern:

The Wyoming Range withdrawal area is part of two different hydrocarbon-bearing geologic provinces, the Thrust Belt Province (TBP) and the Southwestern Wyoming Province (SWP). The Wyoming State Geological Survey (WSGS) agrees with the undiscovered resource potential of the (TBP) defined by the USGS (2003) of .918 trillion cubic feet (Tcf) of natural gas for the entire province that spans into Idaho and Utah. The WSGS has conducted an independent study using data from the USGS (USGS 2005). The focus of that study was to more accurately address resource potential of the SWP within the Wyoming Range Withdrawal area. This study incorporated the four major petroleum systems within the withdrawal boundary including conventional resources from the Permian Phosphoria Formation and continuous resources from the Cretaceous Mowry, Hillard-Baxter-Mancos, Mesaverde-Lance-Fort Union systems. The USGS data used in the study is based on the premise that the gas is evenly distributed throughout the geologic province that may or may not be the case. However the data used is the best available data and has led to a large decrease in resource potential defined by previous studies.

The WSGS has concluded that the SWP portion of the withdrawal area has a mean resource potential of 1.1 Tcf (Table 1) in conventional and continuous petroleum systems. Even in the most optimum case the withdrawal area could yield 1.7 Tcf of natural gas.

Warm Regards,
Scott Quillinan
Energy Geologist
Wyoming State Geological Survey