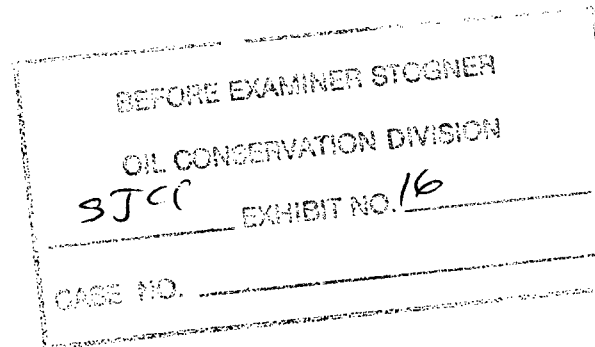


STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION DIVISION
FOR THE PURPOSE OF CONSIDERING:

APPLICATION OF RICHARDSON OPERATING
COMPANY TO ESTABLISH A SPECIAL "INFILL
WELL" AREA WITHIN THE BASIN-FRUITLAND
COAL GAS POOL AS AN EXCEPTION TO RULE 4
OF THE SPECIAL RULES FOR THIS POOL,
SAN JUAN COUNTY, NEW MEXICO.



Case No. 12734

SUMMARY OF TESTIMONY OF PAUL C. BERTOGLIO

My name is Paul Bertoglio. I am a licensed professional engineer with training and experience in evaluating coal bed methane reserves. I graduated from Montana College of Mineral Science and Technology with a Bachelor of Science degree in Petroleum Engineering. Since that time I have developed expertise in many facets of petroleum engineering, include reservoir engineering. I have over twenty years of broad experience in the oil and gas industry, and approximately fifteen years of that experience has focused on the San Juan Basin. I have specific experience with evaluation of gas reserves in the San Juan Basin, including coal seam gas.

Starting in November 1996, on behalf of San Juan Coal Company, I began evaluating oil and gas interests in the area of San Juan Coal Company's underground mine. The interests I evaluated include those of Richardson Operating Company ("Richardson"). The evaluation is ongoing. I have evaluated well production histories, potentially economic producing formations, coal bed reservoir engineering, and BLM's February 2000 Maximum Economic Recovery Report, San Juan Mine Lease By Application - NM9914 ("BLM Report").

Although oil and gas leases now held by Richardson on the lands of San Juan Coal Company's two underground coal leases were leased many years ago, they have produced relatively small amounts of gas. In the entire Deep Lease and Deep Lease Extension, approximately 2,614,200 mcf of gas and 76,400 barrels of oil as of July 1, 2001.

The BLM Report indicates recoverable gas reserves of 36,843,839 mcf on San Juan Coal Company's Deep Lease and Deep Lease Extension. (BLM Report, Appendix 4, Ex. 7). At an average price (used in BLM Report) of \$2.25 per mcf at the well, the royalty value of 1/8 of this production would be \$10,362,330.

The BLM Report's estimate of recoverable gas reserves overstates actual recoverable reserves. This overstatement in part results from the BLM Report's erroneous assumption (inherent in BLM's use of the Langmuir absorption isotherm) that the coal on San Juan Coal Company's two underground leases is saturated with gas. It is not. Core tests from coal in and near the San Juan Coal Company mine area shows that the coal there is undersaturated with gas. Also, the BLM's blanket use of an 80% recovery factor overstates the reserves.

Correction of erroneous assumptions in the BLM Report shows substantially less recoverable gas reserves. By correcting the assumptions in the BLM Report that coal is saturated and the recovery factor is 80%, the BLM Report's estimate of recoverable gas reserves would be reduced by approximately 60% to 90%, depending upon abandonment pressure. Of course, this reduction would create a corresponding reduction in the royalty stream.

The location of the mine leases and vicinity, is clearly outside of the higher producing gas zones in the San Juan Basin known as the "fairway". Production from these wells on average cannot be expected to be nearly what wells in the fairway would be. Not only is this area well outside of the fairway, based upon my review of existing data, I have significant doubt that the coal bed methane reserves in Sections 13, 14, 23, 24, 25, 26 and 35, Township 30 North Range 15 West NMPM of San Juan County Company's Deep Lease can be economically developed.

It is unnecessary to accelerate the development of production of gas from many of Richardson's wells in order to deplete the natural gas resources before mining operations reach them. Particularly in portions of the Deep Lease Extension and areas outside the Deep Lease Extension to the east, most of the natural gas resource that would be affected by the mining operations would already be produced. The area of Richardson's application is therefore overbroad. The application is premature.

Richardson is likely already producing on a 160 acre spacing basis with certain Pictured Cliffs wells. His Pictured Cliffs wells are likely fracing the coal bed. He is effectively taking coal bed methane gas from the pictured cliff wells.