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Date: February 6, 2003  
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## MODRALL SPERLING

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February 5, 2003

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Florene Davidson

NM Oil Conservation Commission

Re: In the Matter of the Application of Richardson Operating Company to Establish a Special "Infill Well" Area Within the Basin-Fruitland Coal Gas Pool as Provided by Rule 4 of the Special Rules for this Pool, San Juan County, New Mexico; De Novo Review by the Secretary of OCC Case No. 12734 (De Novo); Pre-Hearing Statement and Exhibit List of San Juan Coal Company

Dear Ms. Leach and Ms. Davidson:

Enclosed for filing are San Juan Coal Company's Pre-Hearing Statement and Exhibit List.

Very truly yours,

Larry P. Ausherman

LPA/cc

Enclosure

cc/cncl:

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**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT**

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

De Novo Review  
By the Secretary of  
OCC Case No. 12734 (De Novo)

**PRE-HEARING STATEMENT**

This pre-hearing statement is submitted by San Juan Coal Company in compliance with the Secretary's Pre-Hearing Order of January 30, 2003. Throughout, it identifies, as an aid to the Secretary and the hearing Officer, portions of the Commission's record relevant to the issues before the Secretary as indicated in the Pre-Hearing Order. The entire Commission record is part of the record in this proceeding, and therefore the references in this Pre-Hearing Statement to the record are not exhaustive.

**APPEARANCES**

**APPLICANT**

Richardson Operating Company

**APPLICANT'S ATTORNEYS**

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William F. Carr  
Robert J. Sutphin, Jr.

**OPPONENT**

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**OPPONENT'S ATTORNEYS**

James Bruce  
Larry P. Ausherman  
Charles E. Roybal

## STATEMENT OF THE CASE

### APPLICANT

Richardson Operating Company ("Richardson") seeks approval of an infill well area in the Basin-Fruitland Coal Gas Pool covering: Sections 4-6, Township 29 North, Range 14 West, NMPM; Sections 16, 19-21, and 28-33, Township 30 North, Range 14 West, NMPM; Section 1, Township 29 North, Range 15 West, NMPM; and Section 36, Township 30 North, Range 15 West, NMPM (Richardson's infill application; Richardson Exhibit A-1 map; and SJCC Exhibit 6 map depict the infill area and lease area).

### OPPONENT

In the area covered by Richardson's application, San Juan Coal Company ("SJCC") owns state and federal coal leases covering: Sections 17-20 and 29-32, Township 30 North, Range 14 West, NMPM; and the S½ Section 13, S½ Section 14, Sections 23-26, and Sections 35 and 36, Township 30 North, Range 15 West, NMPM (located approximately 16 miles west of Farmington). SJCC also owns other coal leases in the Farmington area. SJCC has operated surface coal mines in the area for decades, but in October of 2002 it began mining at the San Juan underground mine located on the above lands. The underground mine will replace the existing surface mines as the sole source of supply for the San Juan Generating Station ("SJGS"). SJCC will use primarily a longwall mining system to mine coal, which became operational in October 2002. The longwall mining system is an enormous piece of equipment (1,000 feet long), which mines a "panel" of coal 1000 feet wide and up to almost two miles long. (San Juan's leases are SJCC Exhibits 2-5 and their general location are shown on SJCC Exhibit 1. The SJCC Exhibit 6 map shows the related locations of (1) San Juan's lease area; (2)

Richardson's leases; and (3) Richardson's proposed infill area. The testimony of Lynn Woomer introduces the underground mine and SJCC Exhibits 12, 14 and 15 show the longwall mining system.)

The San Juan underground mine will be the sole coal supplier to SJGS, which is operated by Public Service Company of New Mexico. SJGS is the second largest power plant in New Mexico, and it supplies much of the electricity distributed in New Mexico. SJCC and SJGS each generate substantial payrolls and taxes which benefit state and local governments. (The testimony of Lynn Woomer briefly described the supply of coal to SJGS and its generation of electricity. SJCC Exhibit 8 summarizes certain key points about these matters. Mr. Real will provide greater detail at hearing).

The underground mine involves an initial capital investment of approximately \$150 million, with additional investments planned over time. SJCC plans to employ over 300 people in the underground mine and associated operations (when in full production), with an annual payroll of about \$33 million. SJCC plans to extract over 100 million tons of coal from the underground mine through the year 2017 under the current contract with SJGS, which will yield about \$250 million in royalties from the federal leases (based on a royalty rate of 8%). One-half of this royalty is payable to the state under applicable federal leasing statutes. In addition, coal production from the two state coal leases is expected to generate an additional \$25 million in royalty revenue to the State Land Office. There is also the possibility of coal mining beyond 2017, especially the "Twin Peaks" area immediately east of the existing coal leases, which could result in a royalty stream beyond that date. Preserving these benefits is in the public interest. (Those

benefits are generally described in the testimony of Lynn Woomer (Tr. 270-273) and summarized on SJCC Exhibits 8 and 9.)

Generally, the underground mine is designed so that mining occurs in a sequence which begins in the west of the mine permit area, and it proceeds east. The economic viability of the underground mine depends upon systematic, uninterrupted development of the coal reserve. Adherence to the mine plan is important because, if the longwall miner is required to stop production for prolonged periods (days), explosive gases can accumulate, and the risk of an underground explosion increases. Moreover, stopping and moving the longwall equipment around wellbores is cumbersome, time consuming, costly. It is contrary to public interest because it threatens the reliable and low cost supply of coal to the San Juan Generating Station. (Lynn Woomer described the mining sequence and mine plan (Tr. 273-284). SJCC Exhibit 10, which Mr. Woomer testifies about in the cited portion of the record, shows the mining plan and sequence in relation to the portion of Richardson's leases that overlap the San Juan leases. Richardson Exhibit A-1 also depicts the overlap in a different view.)

SJCC has concerns about the compatibility of the development of coalbed methane by Richardson and SJCC's development of the coal itself. SJCC initially thought that a good solution to the conflict between coal development and gas development was for gas development to occur ahead of mining. Because mining proceeds slowly, it appeared that coal gas development could proceed in advance of coal mining. However, upon further study, SJCC concluded that additional wellbores and fracturing in the coal in advance of mining raise serious safety concerns that Richardson's gas development could increase the risk of spontaneous combustion and aggravate

existing roof instability problems. (Mr. Woomer describes SJCC's first learning of the concerns associated with fracturing of wells (Tr. 317-318). The problems associated with fracturing are introduced by Lynn Woomer and described in greater detail by Jacques Abrahamse. (See, e.g., Tr. 361-373.) Also, SJCC Exhibit 16 shows potential disturbance areas from fractures.)

Fracing causes roof instability, increasing the potential for dangerous cave-ins, which adversely affects miner safety. These issues also affect the safety of the coal gas wells, in addition to miner safety, and the ability to fully develop the underground coal reserves. (Mr. Abrahamse described these matters. (See, e.g., Tr. 361-373.) SJCC Exhibits 17 and 18 show prevalent unstable roof conditions. Dr. Stephen Bessinger will elaborate on these matters, describing further the effects of roof instability on the integrity and operation of the longwall miner.)

Hydraulic fracturing of the coal seam also can create passageways for oxygen to mix with methane in the coal bed, which creates conditions conducive to spontaneous combustion and mine fires. This danger is particularly real at SJCC's mine due to the type of coal being mined. A second way that fracing can create dangerous conditions, particularly in and around "gate roads" is by creating cracks in the ceilings and elsewhere which make it difficult to create a good seal for purposes of controlling mine ventilation and providing a safe working environment. An important part of underground mine management is to seal off areas that have been mined to prevent dilution of the inert atmosphere injected into the "gob." Cracks in the gate roads create pores which cannot be readily sealed, thus allowing gases to migrate.

Another problem for coal development caused by gas operations is the existence of well casing in the coal seam. If wells are not abandoned or milled out in advance of mining operations, the mine must avoid the wells, and large segments of coal around each well must be bypassed, to satisfy Mine Safety and Health Administration ("MSHA") regulations. Even if existing wells are re-entered and frac'd, as opposed to drilling new wells, fracturing associated with coal gas development can require mining operations to bypass or take significant mitigation efforts to stabilize the fractured areas due to roof instability.

The more wells that are drilled or recompleted, the greater the problems for the mine, especially if wells are located at certain areas in the mine plan. The problems caused by fracturing in the coal seam place large segments of the mine at risk. For example, if a single wellbore must be bypassed, the amount of coal left un-mined is approximately 1000 feet long and either 300 feet or 600 feet wide, depending upon interpretation of MSHA rules. At 600 feet wide, the coal block contains approximately 330,000 tons of coal, and at a royalty rate of 8%, the royalty value alone is \$800,00. At 300 feet wide, the value is half of that. If there are too many wellbores in a longwall panel, it could cause portions of a coal panel or an entire coal panel (10,000' x 1000' x 13') to be bypassed, with an attendant potential royalty loss for an entire panel of over \$13 million. This loss of royalty and coal is not in the public interest, and it is exacerbated by the economic loss caused by down time of the longwall mining system while moving the system around a well or wells. If these issues are not addressed, gas development could lead to significant waste of coal resource, which has far greater value than the coal bed methane. Moreover, in addition to waste of coal, gas development and infill wells could impede operations,

causing increased costs and delays in mining that could lead to interruption of coal supply. These events could lead to higher cost and less secure electricity for PNM's customers - a result that is not in the public interest. (The quality of bypassed coal is summarized in SJCC Exhibit 13. Bypass of coal is described by Lynn Woomer. (See, e.g., Tr. 283-296.)

The potential exists for recovering significant amounts of methane vented from the mine operations. San Juan recognizes the potential for capturing and making available to gas operators at the surface certain gas vented from its mining operations. San Juan has recently described to Richardson in a letter dated February 5, 2003 (see SJCC Exhibit list) its desire to make vented gas available according to the terms and conditions of the letter. Although technical regulatory and operational issues would still need to be resolved, and SJCC must still determine whether it is safe, economic, and practicable to recover gas, this potential may allow for recovery of some of the vented gas and may provide for a means to minimize waste and recover gas without drilling infill wells that are damaging to the coal seam. (Lynn Woomer testified briefly about the potential for producing gas at the surface. (See Tr. 298-300. Since that hearing, SJCC has evaluated further those prospects as described in the February 5, 2003 letter, and Steve Bessinger will testify concerning the matters in the letter.

In addition, the Oil and Gas Act (the "Act"), and the Divisions regulations, preclude approval of Richardson's application. The Act states in part:

The division may establish a proration unit for each pool, such being the area that can be efficiently and economically drained by one well, and in so doing the division shall consider the economic loss caused by the drilling of unnecessary wells, the protection of correlative rights, . . . the prevention of waste, the avoidance of the augmentation of risks arising from the drilling of an excessive

number of wells, and the prevention of reduced recovery which might result from the drilling of too few wells.

NMSA 1978 §70-2-17.b. It is contrary to law and to the public interest to allow inefficient or uneconomic wells to damage the coal seam. (That Richardson infill wells are not economic or efficient is demonstrated throughout the record before the Commission. On behalf of Richardson, Mr. Cox presented testimony that infill wells are justified. However, SJCC effectively refuted that testimony. First, Mr. Bertoglio testified on behalf of SJCC that production from many of Richardson wells have peaked (Tr. 454-455) and a number of Richardson's wells do not meet an economic threshold (Tr. 460-464). Second, Dan Smith presented opinions that ultimate gas reserves for the mine lease are much less than those presented by Mr. Cox (See, e.g., Tr. 540-543 and SJCC Exhibits 44, 50-58) and determined that many wells of Richardson are not economical (Exhibit 59). His conclusions are summarized at SJCC Exhibit 60. Third, testimony establishes that allowing uneconomic or inefficient wells is particularly improper and contrary to public interest because of the damage to and abundant waste of coal. (See generally, previously quoted testimony of Messrs. Woomer and Abrahmsee; and SJCC Exhibit 13).

Richardson, in its case before the Commission, asserted that it could recover 6 BCF of gas per section. (ROC Exhibit C-6). This was based on unrealistic gas content estimates, and speculation that coal in this area was saturated. Richardson's assumptions are false.

Data obtained by SJCC shows that the gas content of the coal is approximately half of the 250 scf/ton used by Richardson. Finally, the coal is not saturated but rather undersaturated. Thus, gas per section is radically less than the amounts calculated by

Richardson. Even then, due to the nearness to the outcrop and high operating expenses, most of the acreage in the mine area is uneconomic for coal gas development. (Tr. 540-565).

As a result of the foregoing, while coal gas wells in the mine area may drain less than 320 acres, they are, for the most part, uneconomic, and approving Richardson's application violates Section 70-2-17.B. The wells are (a) unnecessary, (b) augment the risks involved in coal development, and (c) will lead to economic loss and waste of the coal resource. None of these results in the public interest, especially given the comparative value of the resources and the potential for recovery of gas by other means as part of mining operations. Richardson's correlative rights are not violated because correlative rights simply means the right to produce oil and gas without waste. NMSA §70-2-33.

Finally, because Richardson's Pictured Cliffs wells produce from the coal seam, Richardson already has achieved the relief it seeks. This issue first arose in the Pendragon/Whiting Matter (Case No. 11996 (de novo)/ Order No. R-11133-A). In the present case, Richardson has numerous existing wells in the application area which are allegedly "Pictured Cliffs" wells. The evidence will show that the Pictured Cliffs wells are actually Fruitland coal producers. Thus, in effect, Richardson has already obtained what it has requested. In addition, four Pictured Cliffs wells are currently allowed per section, although a pilot project has been approved (Order R-11848) which could allow an additional four Pictured Cliffs wells per section. If additional Fruitland Coal

completions are allowed, there could be up to twelve coal gas wells per section.<sup>1</sup> (Tr. 531-567). Granting Richardson's application will only make matters worse.

To support its position, SJCC will present evidence on (a) public interest, (b) mine safety requirements, including the prevention of fires, (c) the lack of economic return and need for additional wellbores or recompletions, (d) and waste of and failure to conserve the coal resources caused by drilling unnecessary wells, (e) the dangers of fracturing in the coal seam, (f) economic and physical waste, (g) conservation of mineral resources, and (h) protection of neighboring properties.

### PROPOSED EVIDENCE

#### APPLICANT

##### WITNESS

##### EST. TIME

#### OPPONENT

##### WITNESS

##### EST. TIME<sup>2</sup>

SJCC will call:

Steve Bessinger  
(mine engineer)

90 minutes

Dan Paul Smith  
(engineer)

60 minutes

William Real  
(PNM Sr. Vice President)

25 minutes

SJCC may call:

John Mercier  
(geologist)

25 minutes

<sup>1</sup> In addition, there are numerous "Fruitland Sand" wells in the area, leading to the potential of numerous Fruitland coal wells.

<sup>2</sup> Direct examination only.

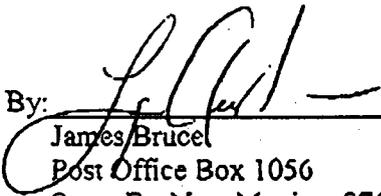
George Gilfillan  
(SJCC Sr. Contract Analyst)

25 minutes

**PROCEDURAL MATTERS**

1. San Juan's Request for Stay.
2. San Juan's request that Richardson comply with the Secretary's Pre-Hearing Order.
3. Consequences of Richardson's refusal to comply with Pre-Hearing Order.

Respectfully Submitted,

By: 

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-and-

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