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December 13, 2001

Hand Delivered

Michael E. Stogner
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Case 12734 (Application of Richardson Operating Company)

Dear Mr. Stogner:

As requested at the close of the hearing in this case, enclosed are the following documents submitted on behalf of San Juan Coal Company:

1. A written Closing Statement;
2. A proposed order; and
3. The Memorandum Brief of San Juan Coal Company Concerning Jurisdiction, Standing, and Response to Richardson's Motion to Dismiss.

Please let me know if we can provide you with any additional materials in this matter.

Very truly yours,



James Bruce

Attorney for San Juan Coal Company

cc: David K. Brooks w/encls. (via hand delivery)
W. Thomas Kellahin w/encls. (via U.S. Mail)
Charles E. Roybal w/encls. (via U.S. Mail)
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OIL CONSERVATION DIV.
DEC 13 AM 8:56

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

OIL CONSERVATION DIV.
01 DEC 13 AM 8:56

SAN JUAN COAL COMPANY'S CLOSING STATEMENT
FOR HEARING OF NOVEMBER 13 AND 14, 2001

This is a unique case. It requires the Division to interpret and apply portions of the Oil and Gas Act not normally addressed in Examiner hearings. It also involves a determination as to whether this application is proper under Rule 4 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool. In this proceeding, Richardson Operating Company ("Richardson") bears the burden of proof that, through its application, it is entitled to greater rights than it now has under the Special Rules and Regulations.

In its proffered testimony and written submittals, San Juan Coal Company ("SJCC") has emphasized four main points: (1) mine safety is essential, and SJCC requires control over the factors it must manage to ensure safety; (2) Richardson's application is premature; (3) granting Richardson's application will waste coal; and (4) full production of the coal resource is in the public interest because it is far more valuable than the associated coal bed methane.

1. Safety: SJCC's paramount concern is the safety of its miners and of its mine. SJCC has employed extensive measures to ensure that its underground operations are safe. Toward this end, it requires control of the factors it must manage to ensure safety. The existence of coal bed methane wells in the coal seam, and associated hydraulic fracturing, can hamper SJCC's ability to manage factors critical to maintaining a safe mine. Therefore, these wells can pose a threat to safety. The threat is increased if additional wells are completed in the coal seam, as Richardson's application requests.

SJCC will be mining a coal seam known to be prone to spontaneous combustion, and so it is particularly important that it be allowed to manage its operation to prevent spontaneous combustion in the mine. The need to manage the spontaneous combustion risk is real; mine fires and explosions described by Mr. Abrahamse have happened before in other underground mines. Unmanaged risk can kill and injure miners. In addition, it can disrupt operations and, indeed, cause the loss of a large portion of the mine, or the entire mine -- a mine that will cost \$146,000,000.00 just to start up. Spontaneous combustion could also adversely affect coal gas wells. SJCC must be able to manage the development of the coal and gas resources to minimize the risk of mine fires.

SJCC has the ability to safely manage the risk of spontaneous combustion, but such risk management requires that it be able to manage mine ventilation. Spontaneous combustion and the attendant

potential for an underground mine explosion can be caused when too much air flows through the gob in the mine. To reduce the risk that too much air reaches the gob, it is important first that the longwall mining apparatus keeps moving through the coal without stoppage; if the apparatus stops, more air can reach the gob. Second, it is important that ventilation systems control the flow of air to prevent dangerous amounts of air from reaching the gob.

The completion of additional coal bed methane wells in the No. 8 Coal Seam at the San Juan Mine can interfere with SJCC's management of air flow to avoid spontaneous combustion risk. The wells may increase risk by: (1) causing the longwall apparatus to stop for prolonged periods, either due to roof cave-ins or the approximate one month period required to disassemble and reassemble the longwall apparatus; (2) frac'ing of the coal, which creates pathways for oxygen and hampers SJCC's ability to manage its ventilation systems; and (3) dewatering of the coal, which dries the coal and makes spontaneous combustion more likely. Increasing the number of gas wells increases the cumulative risk of spontaneous combustion at the mine.

The Division is charged with preventing fires and preventing injury to neighboring leases and properties. **NMSA 1978 §70-2-12(B)(5), (7)**. The protection afforded by the statute is not limited to neighboring oil and gas properties. Clearly, the effect of the additional gas wells and recompletions requested by Richardson could be to increase the risk of mine fire and threaten injury to miners and SJCC's mine, which is a neighboring lease or

property. These effects are within the purview of the Division, and the Division should deny the application.

2. Prematurity: Infill drilling orders have been entered by the Division before in other unrelated proceedings. However, infill drilling is commonly based on substantial data developed over decades of production which shows that additional wells are necessary to adequately drain the reservoir. **See, e.g., infill orders for the Basin-Dakota Gas Pool and the Blanco-Mesaverde Gas Pool.** That data is not available in this case. When the rules for the Basin-Fruitland Coal Gas Pool were made permanent in 1991, some operators wanted an infill drilling option, which was opposed by the major operators in the Pool. One primary reason the infill option was opposed by these operators was that "We're talking about infill concepts here in the third year of operation of" this pool. **Statement of W. Thomas Kellahin, attorney for Meridian Oil, Inc. et al., p. 296 of hearing transcript in Case No. 9420 (reopened).** In the present case, Richardson's wells have been producing for (at most) two years, and there is insufficient data upon which to base an infill drilling order.

Richardson claims that it needs to accelerate production in advance of mining. However, mining operations proceed slowly, and Richardson cannot prove that drilling additional wells will result in production of substantially greater gas reserves. In fact, in one of the first sections of land to be affected by underground mining, §36-30N-15W, Richardson has not produced its wells, or has produced them intermittently. Richardson's own actions belie its

claim to the need for accelerated production.

Finally, Rule 4 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool was adopted to allow infill drilling when an operator could show that a "specifically defined area" of the Pool could be distinguished from other portions of the Pool by engineering or geological data. **See hearing transcript in Case No. 9420 (reopened)**. That is not the case here. Richardson's landman testified that the proposed infill area was determined solely by land matters: The infill area is that area where Richardson's oil and gas leases overlap SJCC's coal leases. Moreover, Richardson's technical witnesses presented no testimony that the infill area is different from other areas of the Pool from a geological or engineering standpoint. As a result, this application does not meet the requirements of Rule 4, and it should be denied.

3. **Waste**: Richardson has no valid claim that infill drilling is necessary to protect its correlative rights. Correlative rights is defined as the opportunity to produce oil and gas "without waste." **NMSA 1978 70-2-33(H)**. In its Memorandum Brief Concerning Jurisdiction, Standing, and Response to Richardson's Motion to Dismiss, filed concurrently with this closing argument, SJCC demonstrates that "waste" includes waste of coal. **Brief, §I(A)**. Because of (a) the substantially greater value of the coal than the gas, (b) the fact that more coal than gas will be wasted if Richardson's application is approved, and (c) the fact that protection of correlative rights is subsidiary to the prevention of waste, Richardson's claim that it is entitled to

relief to protect its correlative rights is without merit: Richardson's claim is inferior to the need to prevent waste of the more valuable coal resource.

The magnitude of the potential waste of coal is illustrated in part by the volume of coal that the existence of a wellbore may cause to be bypassed. One well may cause the bypass of 330,000 tons of coal, with an estimated royalty loss of \$800,000.00; bypass of an entire panel may cause a loss ten times greater.

Potential waste of coalbed methane is not grounds to grant the application. First, SJCC is legally entitled to vent gas in its operations. In Amoco Production Co. v. Southern Ute Indian Tribe, 526 U.S. 865, 879 (1999), the United States Supreme Court recognized that the right to mine coal implies the right to vent coal bed methane where necessary and reasonable to extract coal. Second, waste of gas can be minimized by production of gas from gob vent boreholes. Coal mining acts as a massive frac, and liberates more gas from the coal that remains in the gob than could be liberated from that coal by conventional frac'ing. This offsets gas lost to coal mining operations. Third, SJCC is willing to pay Richardson fair compensation for its lost reserves, and thus SJCC does not propose an "all or nothing" scenario with respect to production of the coal.

4. Public Interest: As discussed in SJCC's Memorandum Brief, NMSA 1978 §70-2-26 requires the Secretary of the Energy, Minerals and Natural Resources Department (and thus the Division) to consider the "public interest," with due regard not just for

oil and gas but also for other "mineral resources." **Brief, §I(C).** The testimony clearly shows that the value of the mined coal is vastly greater than the value of the coal bed methane, even assuming the optimistic reserve calculations put forth by Richardson.¹ Total coal royalties are estimated to be in excess of \$250,000,000.00, compared with gas royalties of approximately \$10,000,000.00. Half of these amounts go to the state. It is not appropriate to accelerate development of the far less valuable gas resource, when to do so threatens the viability of the much more valuable coal resource.

5. Conclusion: The facts of this case mandate that Richardson's application be denied.

Respectfully submitted,



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¹Richardson bases its reserve calculations on a 20 foot thick coal seam. **See Richardson Exhibit C-6.** However, SJCC will mine only 13 feet of coal. Surely, if there were actually 20 feet of coal present in the No. 8 Coal Seam, SJCC would mine it.

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing pleading was served upon the following counsel of record this 13th day of December, 2001:

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James Bruce

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:

Case No. 12734
Order No. R-_____

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

ORDER OF THE DIVISION
(Proposed by San Juan Coal Company)

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on November 13 and 14, 2001, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this _____ day of _____, 2002, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

(1) The Division has jurisdiction of this cause and its subject matter.

(2) The applicant, Richardson Operating Company ("Richardson"), seeks an order approving a special infill well area within the Basin-Fruitland Coal Gas Pool comprised of the following area (the "infill area"):

Township 29 North, Range 14 West, N.M.P.M.
Sections 4-6: All

Township 29 North, Range 15 West, N.M.P.M.
Section 1: All

Township 30 North, Range 14 West, N.M.P.M.
Section 16: All
Sections 19-21: All
Sections 28-33: All

Township 30 North, Range 15 West, N.M.P.M.
Section 36: All

Richardson owns interests in oil and gas leases in a portion of the infill area.

(3) San Juan Coal Company ("SJCC"), a subsidiary of BHP Billiton Limited, appeared in opposition to the application. SJCC owns a federal coal lease (the "Deep Lease") covering the following lands:

Township 30 North, Range 15 West, N.M.P.M.
Section 13: S½
Section 14: S½
Sections 23-26: All
Section 35: Lots 1-4, N½, and N½S½ (All)

A state coal lease covering the following lands will be developed in conjunction with the Deep Lease:

Township 30 North, Range 15 West, N.M.P.M.
Section 36: Lots 1-4, N½, and N½S½ (All)

SJCC also owns a federal coal lease (the "Deep Lease Extension") covering the following lands:

Township 30 North, Range 14 West, N.M.P.M.
Sections 17-20: All
Sections 29: All
Section 30: All
Section 31: Lots 1-4, N½, and N½S½ (All)

A state coal lease covering the following lands will be developed in conjunction with the Deep Lease Extension:

Township 30 North, Range 14 West, N.M.P.M.
Section 32: Lots 1-4, N½, and N½S½ (All)

SJCC operates an active coal mine on and including the above lands.

(4) SJCC has applied to the United States Bureau of Land Management (the "BLM") for a coal exploration license covering the following lands:

Township 30 North, Range 14 West, N.M.P.M.
Section 9: All
Section 10: All
Section 15: All

Section 21:	All
Section 22:	All
Section 27:	All
Section 28:	All
Section 33:	All
Section 34:	All

SJCC is also attempting to lease the following land from the state:

Township 30 North, Range 14 West, N.M.P.M.
Section 16: All

This area is referred to herein as the "Twin Peaks Exploration Area."

(5) Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool were adopted by Division Order No. R-8768, as amended. The rules provide for:

- (a) 320 acre spacing, with one well allowed per well unit;
- (b) wells to be located in the NE $\frac{1}{4}$ or SW $\frac{1}{4}$ of a section; and
- (c) wells to be located no closer than 660 feet to the outer boundary of a well unit nor closer than 10 feet to any interior quarter section or quarter-quarter section line.

Rule 4 allows operators to apply for permission to drill a second well on a well unit in "specifically defined areas of the pool."

(6) Richardson purportedly filed its application pursuant to Rule 4, and alleged that SJCC "has a mining plan which will unreasonably interfere with Richardson's ability and right to produce the coal bed methane gas within the Fruitland Coal formation." **Application, paragraphs (3), (14).** Richardson seeks to accelerate production of gas from the Fruitland Coal formation in advance of coal mining operations. **Id., paragraph (15).**

(7) Richardson presented the following evidence:

(a) Land:

(i) Richardson owns interests in oil and gas leases and operates wells in a portion of the infill area. It began acquiring leases in 1997, and commenced drilling wells in the infill area in 1998 or 1999.

(ii) Richardson's rights under its leases extend from the surface to at least the base of the Pictured Cliffs formation.

(iii) The infill area was defined by the area of Richardson's leases which are overlapped by SJCC's coal leases, to which was added a one mile "buffer zone." However, a "buffer zone" was not added to the north and west of SJCC's coal leases because Richardson owns no leases in those directions.

(iv) Richardson plans to drill approximately 9 new wells to test the Fruitland Coal, and to recomplete or dually complete approximately 18 of its existing Pictured Cliffs wells to the Fruitland Coal. Other operators have proposed additional infill wells. **Richardson Exhibit A-2.** Richardson does not plan to drill additional single completion Pictured Cliffs wells at this time.

(v) The policy of the BLM is to promote multiple use of federal resources. **Richardson Exhibit A-8.**

(vi) Richardson was aware of SJCC's application for the Deep Lease Extension in October 1997. **Richardson Exhibit A-3.**

(b) Geology:

(i) The infill area is underlain by several coal seams, including what are referred to as Coal Seam No. 8 and Coal Seam No. 9. Richardson only intends to perforate and fracture stimulate Coal Seam No. 8, which is the seam SJCC plans to mine in its underground operation.

(ii) Richardson calculated coal thickness by using the density log, rather than the gamma ray log. Using the density log results in a greater calculated coal thickness than if the gamma ray log is used. A greater calculated coal thickness results in greater calculated coal bed methane reserves.

(iii) In mapping coal thickness, Richardson did not use the extensive core data developed by SJCC.

(c) Engineering:

(i) Richardson's calculation of estimated gas reserves assumes that the coal in the infill area is saturated. However, Richardson ignored the desorption data developed

by SJCC, which shows that the area is undersaturated.

(ii) Richardson's Pictured Cliffs wells in the infill area generally exhibit gas production characteristics like those of coal bed methane wells. **Richardson Exhibit C-13.** Richardson's Pictured Cliffs wells in the infill area also produce water, which is a characteristic of coal bed methane wells. This similarity suggests that the Pictured Cliffs wells are producing gas from the coal seam.

(iii) Richardson cannot predict well performance in the infill area before a well is drilled.

(iv) Richardson calculates average Fruitland Coal reserves of about 2 BCF per well, and Pictured Cliffs reserves of approximately 0.125 BCF per well. However, Richardson's single completion Pictured Cliffs wells produce on average 165 MCFGPD as of October 27, 2001, compared with 89 MCFGPD for its Fruitland Coal/Pictured Cliffs completions. **Richardson Exhibit C-13.**

(8) SJCC presented the following evidence:

(a) Land:

(i) SJCC owns several state and federal coal leases, covering the lands described in Finding Paragraph (3) above. **SJCC Exhibits 4-7.**

(ii) SJCC also plans to explore the area described in Finding Paragraph (4) above for its coal potential, and has applied to the BLM for an exploration license covering this area. **SJCC Exhibit 9.**

(b) Mine Operations:

(i) SJCC operates the San Juan Mine (the "Mine") to supply coal to the San Juan Generating Station, operated by Public Service Company of New Mexico. The Mine was originally a surface mine, mining upwards of 3½-4 million tons of coal annually in recent times. The coal supplied by SJCC to the San Juan Generating Station has been supplemented by coal from the La Plata Mine, for a total delivery of about 6½-7 million tons annually.

(ii) After its pilot mine demonstrated a world class mine and coal seam, SJCC commenced underground mining operations on the Deep Lease. The location of the pilot

mine and the underground mine are depicted on SJCC Exhibit 1. The timeline in developing the underground mine is as follows:

(1) In 1980, SJCC's predecessor-in-title obtained the Deep Lease, which adjoins the surface mine on its eastern boundary.

(2) SJCC applied for the Deep Lease Extension in August 1997.

(3) In the fall of 1997 SJCC applied for a permit for its pilot underground mine, and began to mine in early 1998 to replace dwindling coal reserves at the surface operations of the Mine and the nearby La Plata Mine.

(4) At about the same time, SJCC began development of an underground mine permit application to be filed with the Mining and Minerals Division of the Energy, Minerals and Natural Resources Department. SJCC received permit revision 99-01, approving development of the underground mine, from the Mining and Minerals Division in October 1999. **SJCC Exhibit 8.**

(5) Effective March 2001, SJCC obtained the Deep Lease Extension, which lies on the eastern boundary of the Deep Lease. This lease will allow mining to continue well into the future: The coal supply contract with Public Service Company of New Mexico for the underground mine runs through 2017.

(6) On August 31, 2001 SJCC filed an application with the BLM for a coal exploration license for the Twin Peaks Exploration Area. **SJCC Exhibit 9.** The application is pending.

(7) SJCC is currently developing the San Juan Underground Mine, and longwall production on the Deep Lease is expected to be operational in the latter half of 2002.

(8) SJCC Exhibit 2 shows the dates that panels of coal will be mined in the Deep Lease and the Deep Lease Extension according to present estimates.

(iii) The No. 8 Coal Seam will be mined principally by the longwall method. The No. 9 Coal Seam, which lies

above the No. 8 Coal Seam, and another seam below the No. 8 Coal Seam, will not be mined.

(iv) The underground mine is a substantial operation, with an initial capital investment of \$146,000,000.00. Approximately 300 people will be employed at the Mine during its underground phase.

(v) The underground operations at the Mine will recover approximately 114 million tons of coal. Based on a royalty rate of 8% on the federal coal leases, the total royalty revenue from those leases through 2017 will be approximately \$250,000,000.00, of which one-half is paid to the state. Royalties paid to the state on the two state coal leases will add additional royalty revenues. This amount vastly exceeds the royalties which may be paid on coal bed methane gas.

(vi) SJCC understands that there are currently 51 existing and proposed oil or gas wells within the immediate Mine area.

(vii) Until the summer of 2001, SJCC thought that it was best for coal bed methane development to occur in advance of coal mining. However, during that summer, SJCC's views changed due to concerns raised about spontaneous combustion, the existence of well casings in the coal seam, and other problems caused by hydraulic fracturing and dewatering of the coal. Current evidence shows that development of coal bed methane in advance of underground mining at the Mine poses serious safety and operational risks that would be exacerbated by increasing the number of wells completed in the coal seam.

(viii) If wells are not abandoned and their casings milled out in advance of mining operations, the mining operations must avoid the wells, and large blocks of coal must be bypassed. Pursuant to Mine Safety and Health Administration ("MSHA") requirements, before mining can proceed to within 300 feet of an existing wellbore, SJCC must plug and abandon the well and mill out its casing.

(ix) In addition, frac'ing associated with new or recompleted wells requires SJCC to either bypass the wells or take significant measures to stabilize the frac'ed areas in advance of mining operations.

(x) The longwall apparatus to be used at the mine is 1000 feet wide and will mine a panel 10,000 feet long and 13

feet high. If a well must be bypassed, the volume of coal to be bypassed will be 600 feet long by 1000 feet wide by 13 feet high, which contains about 330,000 tons of coal. The coal royalty lost is estimated at approximately \$800,000.00 per bypassed well.

(xi) The number of wells to be bypassed increases the amount of coal wasted. Due to the nature of the longwall mining equipment, and the difficulty of disassembling and reassembling the equipment to avoid wells, if three or four wells are located in a panel, it could be necessary to bypass that entire panel. This could waste upwards of 3 million tons of bypassed coal, and about \$8,000,000.00 of royalty revenue would be lost.

(xii) Richardson was made aware of SJCC's concerns well before Richardson filed its application herein on September 11, 2001. SJCC never received written notice of the application.

(c) Mining and Ventilation Engineering:

(i) Spontaneous combustion is the process of oxidation of a product such as coal whereby heat is generated which can establish an open fire. In the Mine, an explosion can be caused by heat from coal which has spontaneously combusted, combining with methane as the fuel in the presence of oxygen.

(ii) Air flowing through the gob in the Mine can create conditions conducive to spontaneous combustion. "Gob" is the broken rock and coal pieces which accumulate when the mine roof collapses and drops, with pieces of the strata above it, into the space behind the longwall miner as it moves through the coal seam.

(iii) The coal at the Mine has been identified as sub-bituminous coal, and is particularly subject to spontaneous combustion. Concerns about spontaneous combustion have been identified as a primary risk to be managed at the Mine.

(iv) If a spontaneous combustion event were to cause an explosion at the Mine, it could cause fatalities and permanent closure of the operation. It could also have a catastrophic effect on coal bed methane wells in the vicinity of the explosion, and it would have an adverse economic effect on the San Juan Generating Station through the loss of its coal supply.

(v) Spontaneous combustion risk at the Mine is increased by the existence of coal bed methane wells in the coal seam. The wells increase risk by: (1) causing the longwall apparatus to stop for prolonged periods; (2) frac'ing of coal, which hampers SJCC's ability to manage its ventilation systems; and (3) dewatering of the coal, which dries the coal and makes spontaneous combustion more likely.

(vi) Increasing the number of wells which can be drilled or recompleted in the Mine area, and then frac'ed and dewatered, increases the cumulative risk of spontaneous combustion at the Mine.

(vii) To reduce the risk of spontaneous combustion, it is essential that the longwall mining system keep moving through the coal seam without stoppage. If the longwall apparatus stops, air can reach broken coal and methane within the gob and increase the risk of spontaneous combustion and an underground explosion.

(viii) Frac'ing associated with gas wells in the No. 8 Coal Seam can degrade the structural integrity of the coal, shale, and mudstone in the vicinity of a well, and create roof instability for the coal mining operations around the gas wells. Roof instability can cause the roof to collapse around the longwall shields.

(ix) Roof collapse would require the longwall operation to be stopped for a period of time (up to several days) to re-establish the integrity of the roof and allow the longwall apparatus to proceed. While the longwall apparatus is stopped, air will flow behind the longwall shields and through the gob for a longer period of time than under normal mining operations, where there is no stoppage of the longwall process. This increases the risk of a spontaneous combustion event occurring.

(x) If the longwall apparatus encounters an area of coal containing a gas well that is not plugged and abandoned to MSHA standards, it must stop 300 feet away from the well. SJCC must stop and then physically disassemble and relocate the pieces of the longwall apparatus 300 feet beyond the well in the panel being mined. This process takes approximately one month, and increases the risk of spontaneous combustion.

(xi) The MSHA 300 foot pillar requirement is a minimum standard, and is only one of several criteria to consider

in evaluating the safety of concurrent development of the coal and coal bed methane.

(xii) It is particularly important that gas wells not be located in the gateroads or passageways, or in the coal pillars in them, because the frac'ed hole of a well in such location remains for the life of the Mine, and allows a passageway for air to reach the gob. It thereby allows oxygen to flow around a seal and combine with methane in the gob. In addition, it causes roof instability problems, and could cause cave-ins.

(xiii) The increase in risk of spontaneous combustion caused by frac'ing and dewatering is the same whether a well is newly drilled or is recompleted from another formation.

(xiv) After mining, gas remains in the gob from the collapsed No. 9 Coal Seam (located above the No. 8 Coal Seam), the collapsed portion of the coal in the roof of the No. 8 Coal Seam, coal left in the floor of the No. 8 Coal Seam, and the Pictured Cliffs sandstone.

(xv) The collapse of the roof and the strata above it, together with floor heave, is analogous to a massive frac. The voids created in the gob by this frac increases permeability and liberates methane, which can be produced by a gob vent borehole.

(xvi) Preliminary data suggests that after coal is produced from an area, gas can be produced from gob vent boreholes in that area of the Mine, particularly in the Deep Lease Extension and the Twin Peaks Exploration Area.

(xvii) In many coal mining operations in Colorado and Utah, gob vent boreholes have been used to produce a significant amount of gas after the coal seam in which the gas resides has been mined. Such production is feasible at the Mine.

(d) Petroleum Engineering:

(i) Richardson's Pictured Cliffs wells in the infill area have frac'ed the coal. Wells completed in the Gallegos Canyon Unit area show that frac'ing the coal from a Pictured Cliffs completion is the most efficient way to produce the methane. Thus, Richardson is already developing coal bed methane reserves on its leases through its existing Pictured Cliffs wells, which act as

infill wells. Therefore, no additional wells or recompletions should be allowed.

(ii) A BLM report estimates coal bed methane reserves of approximately 37 BCF on the Deep Lease and Deep Lease Extension. The federal royalty was valued by the BLM at approximately \$10,000,000.00, of which the state receives one-half.

(iii) The BLM report, and Richardson's estimate, of recoverable coal bed methane reserves overstate actual reserves due to erroneous assumptions on recovery factor and saturation. For example, (1) an 80% recovery factor overstates reserves, and (2) core data from the Mine indicate that the coal is undersaturated with gas. Correcting these factors reduces reserves by 60-90%, depending on abandonment pressure. In addition, using the density log rather than the gamma ray log to calculate coal thickness overstates reserves.

(iv) The bulk of the coalbed methane wells in the infill area are economically marginal, especially in lands covered by the Deep Lease and Deep Lease Extension. For example, wells in S36-30N-15W are extremely marginal even though Richardson posits excellent coal thickness in that section. Thus, infill drilling which interferes with coal mining should not be allowed.

(v) Richardson's most productive wells are in the "buffer zone" on the east and south sides of the Deep Lease Extension. It is unnecessary to accelerate production in those areas since mining operations will take decades to reach the "buffer zone," as shown by the sequence of the mine plan as shown on SJCC Exhibit 2. By then, the bulk of the gas reserves will already have been produced.

(vi) Coal bed methane development is new in the infill area, and it is premature to make any infill drilling decisions at this time.

(9) Based on the evidence, **the Division concludes:**

(a) Although Richardson's oil and gas leases generally pre-date SJCC's coal leases, Richardson acquired its interest in these leases and commenced drilling with knowledge of SJCC's existing and planned mining operations.

(b) Approving Richardson's application may cause injury to neighboring leases or properties (i.e., SJCC's coal leases).

(c) Approving Richardson's application will unduly increase safety risks in the infill area, including a significant risk of underground mine fires.

(d) Approving Richardson's application will cause waste of large volumes of coal, the loss of royalty to the State of New Mexico and others far in excess of any corresponding oil and gas royalties from the same lands, and be detrimental to the public interest.

(e) The infill area provision of Rule 4 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool was intended to allow infill drilling in a specific area of the pool defined by unique engineering or geological parameters. **See hearing transcript in Case No. 9420 (reopened).** Richardson's application is based on lease ownership, and it has not proven that the infill area is different from other areas of the pool.

(g) Richardson has not met its burden of proof, and the application should be denied.

IT IS THEREFORE ORDERED THAT:

(1) The application of Richardson Operating Company for an order approving a special infill well area within the Basin-Fruitland Coal Gas Pool is hereby denied.

(2) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the date and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

[Seal]

LORI WROTENBERY
Director

**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

**MEMORANDUM BRIEF OF SAN JUAN COAL COMPANY
CONCERNING JURISDICTION, STANDING, AND
RESPONSE TO RICHARDSON'S MOTION TO DISMISS**

At the prehearing conference of October 23, 2001 in this matter, Richardson Operating Company ("Richardson") questioned whether the Oil Conservation Division ("OCD") has jurisdiction to consider San Juan Coal Company's ("SJCC") opposition to Richardson's Application and whether SJCC has standing to participate in this proceeding. On the eve of the November 13-14, 2001 hearing, Richardson also filed a Motion to Dismiss reasserting these and advancing other arguments. The Division Examiner determined that these three matters should be briefed post-hearing. This memorandum brief demonstrates that: (1) the OCD, the Oil Conservation Commission ("OCC"), and the Secretary of the Energy, Minerals and Natural Resources Department ("Secretary") have jurisdiction under the Oil and Gas Act, NMSA 1978, " 70-2-1 through 70-2-38, to hear SJCC's challenge to the Application; (2) SJCC has standing to participate in this proceeding; and (3) Richardson's Motion to Dismiss is not well-taken and should be denied.

I. THE OCD, OCC, AND THE SECRETARY EACH HAVE JURISDICTION OVER SJCC'S CHALLENGES TO THE APPLICATION.

A. Under the Oil And Gas Act, "Prevention Of Waste" Includes Consideration Of Resources Other than Oil And Gas.

Section 70-2-2 of the New Mexico Statutes Annotated provides simply that:

The production or handling of crude petroleum oil or natural gas of any type or in any form...in such manner or under such conditions or in such amounts as to constitute or result in **waste** is each hereby prohibited.

(Emphasis added.) "Waste" is not qualified or limited in any way by this statute, and a plain reading of the language does not limit "waste" to the waste of natural gas or crude oil. The relationship between "waste" and those commodities in Section 70-2-2 is simply that "production...of natural gas...as to constitute or result in waste [as defined by the Oil and Gas Act] is...hereby prohibited."

The question, of course, then becomes: What does "waste" mean under the Oil and Gas Act.

The term "waste" is defined in the next section of the Act: "As used in this act the term, 'waste,' **in addition to its ordinary meaning**, shall include: [a six item list]." NMSA 1978, ' 70-2-3 (emphasis added). The phrase, "in addition to its ordinary meaning," makes clear that the six items listed in ' 70-2-3 are not exclusive. *Webster's Third New International Dictionary* (1981 Ed.) provides the "ordinary meaning" of waste, defining "waste" to include: "a disused part of a coal mine," "useless or profitless consumption or expenditure," and "loss without equivalent gain." *Black's Law Dictionary* (7th ed. 1999) defines "waste" to include "permanent harm to real property committed by a tenant." The definitions quoted clearly fit the present situation. Richardson's Application will result in the waste of SJCC's coal reserves.¹

¹ Even Richardson's argument in its Motion to Dismiss, served November 9, 2001, seems to recognize that the "ordinary meaning" of waste is not limited to oil or gas. Paragraph 14 of Richardson's Motion discusses "waste of hydrocarbons" in contrast to "oil and gas correlative

In the past, the agencies and OCD practitioners have focused on waste of oil or gas or of potash. This historic focus on oil and gas or potash exists because issues concerning waste have typically arisen in the context of these particular minerals, not because the Oil and Gas Act precludes application of the doctrine of waste to other minerals such as coal. NMSA 1978, ' 70-2-11.A empowers (and requires) the OCD to “prevent waste prohibited by this act...” And, the jurisdiction of the OCC is “concurrent.” See NMSA 1978, ' 70-2-11.B. Thus, OCD and OCC have jurisdiction over issues relating to the waste of natural resources, including coal, arising from the production of natural gas. Such waste is a fundamental issue in this proceeding.

If the legislature had intended to limit the definition of waste to oil and gas, it would have so stated. For example, the Oil and Gas Act’s definition of “correlative rights” in NMSA 1978, ' 70-2-33.H is specific to oil and gas and stands in stark contrast to the broader definition of “waste” in NMSA 1978, ' 70-2-3. Specifically, the definition of “correlative rights” is limited to the rights of entities holding a “just and equitable share of the oil and gas” in a pool, but the legislature chose not to limit the definition of waste in this manner. The legislature has drawn a purposeful distinction that OCD should apply.

A definition of the term “waste” that includes waste of coal resources is also consistent with other provisions of the Oil and Gas Act, including NMSA 1978, ' 70-2-26. As discussed in greater detail in Point I.C below, this Section directs that in reviewing a decision of the OCC the Secretary must have “due regard” for the conservation of the state’s oil, gas **and mineral** resources....” (Emphasis added.) Coal is one of the state’s most important mineral resources.

rights. “Hydrocarbon” is defined as “any of a large class of organic compounds containing only carbon and hydrogen...and occurring in...petroleum, natural gas, coal, and bitumens.” *A Dictionary of Mining, Mineral, and Related Terms*, 562 (U.S. Dept. of Interior 1968); *Webster’s Third New International Dictionary*, 1108 (1981).

B. Both Richardson's Application and the Oil and Gas Act Recognize that SJCC's Rights and Interests Are Part of OCD's and OCC's Jurisdictional Charge.

Richardson's Application expressly puts at issue the conflict between its operations and SJCC's coal mining operations. ("San Juan Coal Company has a mining plan which will unreasonably interfere with Richardson's ability and right to produce coal bed methane gas...", & 14; "In order to minimize the adverse consequences of San Juan Coal Company's mining plan, Richardson requests..." and "...gas wasted by the mining operations of San Juan Coal Company.", & 15). Having expressly raised these issues in its Application, Richardson cannot now credibly question OCD's authority to consider them.

Beyond Richardson's own framing of the issues, the Oil and Gas Act confers authority on OCD to consider the matters SJCC raises. The OCD is authorized to make orders to "prevent fires," and to "require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or property." NMSA 1978, ' 70-2-12.B (5), (7). As to fire prevention, SJCC submits that the proposed in-fill drilling, related hydraulic fracturing activity proposed by Richardson, dewatering, and coal bed methane production increase the risk of fires in the coal formation, thereby endangering the lives of SJCC's underground mine employees and risking the cessation of both mining and coal bed methane production. As to protection of neighboring leases or property, Richardson's hydraulic fracturing serves to degrade the stability of the roof in the underground mine, thereby increasing the risk of cave-in in the mine workings and attendant damage to the coal lease and property. In this regard, SJCC notes that the Act does not speak here in terms of protecting "correlative rights," but rather speaks to the broader subject of preventing injury to "neighboring leases or property." NMSA 1978, ' 70-2-12.B(7). The legislature's purposeful choice

of the broader language is telling, and indicates that the OCD's jurisdiction and mandate include consideration of SJCC's rights and interests as "neighboring leases or property."

C. Secretarial Review Provisions Of The Oil And Gas Act Confirm the Breadth of OCD and OCC Jurisdiction.

The proper interpretation of the statutory provisions discussed above is further informed by NMSA 1978, ' 70-2-26, which provides for review by the Secretary of Energy, Minerals and Natural Resources, by way of a public hearing, "to determine whether an order or decision issued by the commission contravenes the public interest." In that section, the legislature charges the Secretary to enter an order "having due regard for the conservation of the state's oil, gas, **and mineral resources....**" *Id.* (emphasis added). Thus, in reviewing a decision of OCC, the Secretary is charged to consider not just oil and gas resources, but also mineral resources (beyond just potash, a resource specifically identified elsewhere). If in such later stage of the proceeding, the Secretary must exercise "due regard" for mineral resources such as coal, it would be bad public policy for the OCD and OCC to turn a blind eye in the first instance to mineral interests other than oil and gas or potash. Such a limitation on authority of OCD and OCC would be a waste of administrative resources and could encourage reversal by the Secretary on appeal because the standards she applies would be different than those applied below. Such limitation would also make less meaningful the evidence presented to and the deliberations conducted by the OCD and OCC. Given the legislature's chosen structure and language of the Oil and Gas Act, the OCD and the OCC, together with the Secretary, have jurisdiction and authority over the positions, evidence and argument that SJCC advances in this proceeding.

II. SJCC HAS STANDING.

SJCC's interests in this proceeding are significant. First, as noted above, Richardson itself claims that its Application is necessitated by SJCC's coal mining plans and activities (&& 14 and 15). Second, Richardson's Application, if granted, could have a dramatic effect on SJCC's ability to mine coal from federal and state lands. Clearly, SJCC risks significant economic harm if the OCD grants the Application. Third, as demonstrated above, that harm lies within the scope of interests that the Oil and Gas Act was designed to protect against. Fourth, Rule 4(b) of the Special Rules and Regulations of the Basin-Fruitland Coal Gas Pool states an "interested party may appear and participate." Fifth, SJCC is an "interested party" under OCD Rule 1212.A, which provides: "Full opportunity shall be afforded all interested parties at a hearing before the Commissioner or a Division Examiner to present evidence and to cross-examine witnesses." Consistently, the Oil and Gas Act provides guidance concerning public hearings before OCD: "at any such hearing any person having an interest in the subject matter of the hearing shall be entitled to be heard." NMSA 1978, '70-2-23. Under any standard, SJCC has standing in this proceeding. See New Mexico Right to Choose/NARAL v. Johnson, 126 N.M. 788, 794; 975 P.2d 841, 847 (1998).

III. RICHARDSON'S MOTION TO DISMISS SHOULD BE DENIED.

This Section III of the memorandum brief responds specifically to Richardson's Motion to Dismiss.² It focuses on the two primary thrusts of the Motion: argument about issues pending before BLM and argument designed to prevent SJCC from being heard in this proceeding.

² The Motion includes, among other issues, certain of the standing and jurisdictional issues that the Hearing Examiner requested be briefed. Parts of this Section III make reference to the

A. The Issues of the BLM Proceeding Are Not at Issue Here.

Richardson asserts that it is SJCC that seeks to reargue to OCD a case that is pending before BLM. (Motion to Dismiss, & 5). Ironically, it is Richardson who proceeds to devote most of its Motion to Dismiss to rearguing issues that are pending before the BLM.³ (See Motion to Dismiss, && 5 through 12.) In contrast, SJCC's case focuses on issues that are within the authority of the OCD to decide. Specifically, SJCC seeks to prevent the waste of its coal resource (NMSA 1978, ' 70-2-2 and 3); to prevent fires (NMSA 1978, ' 70-2-12.B(5)); to require wells be drilled, operated and produced in such a manner as to prevent injury to neighboring leases or properties (NMSA 1978, ' 70-2-12.B(7)); and to achieve a resolution that does not "contravene the public interest" and has "due regard" for conservation of the state's "mineral resources" (NMSA 1978, ' 70-2-26).

Although the BLM and subsequent review within the Department of the Interior will decide issues of development right priority, the meaning of stipulations, and how to resolve a conflict between federal lessees, there is at least one issue the BLM will not decide: whether to allow infill spacing. Richardson does not now have the "right" to drill infill wells. Only OCD can confer upon Richardson the right to make application with the BLM to almost double its rights to complete wells in the coal seam within its proposed infill area.⁴ Not only would conferral of this right create waste, be contrary to the public interest, risk fire, and not protect neighboring coal leases and property, it would also give Richardson potential development opportunities that it currently does not have.

analysis in previous Sections of this brief to limit duplication.

³ Issues remain under review by the New Mexico State Director of BLM, and whatever decision the State Director renders likely will be under review in further appeals within the Department of the Interior for quite some time.

⁴ Of course, BLM still retains control over any of Applications for Permit to Drill that Richardson may pursue for the infill wells.

Here, in response to Richardson's request for rights it does not now possess, OCD must consider compelling competing concerns raised by SJCC and recognized as important by the Oil and Gas Act.

B. SJCC has the Right to Raise in this Proceeding Serious Problems Under the Oil and Gas Act Posed by Richardson's Application.

It is obvious from Richardson's Motion to Dismiss that it would prefer to silence SJCC. Beyond Richardson's reargument of issues pending within the Department of the Interior, the primary focus of its Motion is argument that SJCC should not be allowed to participate.

Throughout the Motion, Richardson seeks to deny SJCC's participation. After representing to the OCD in Paragraph 3 that "Richardson's Application is an attempt to accommodate SJCC,"⁵ the Motion proceeds to argue that SJCC should not be allowed to express its views about this brand of "accommodation." In Paragraph 4, Richardson characterizes SJCC's participation in this public proceeding as "interfering with Richardson's production of oil and gas." While Richardson may characterize as "interference" SJCC's response to an Application that expressly seeks, at the expense of coal operations, to expand greatly Richardson's existing right, SJCC's participation is allowed. (See Section II regarding standing.) In Paragraph 14, Richardson suggests that Rule 4 would preclude one who is not an oil and gas operator or interest holder from complaining about the proposed infill, notwithstanding the fact that Rule 4(b) states an "interested party may appear and participate." In Paragraph 15, Richardson suggests that the price of admission to this proceeding is

⁵ In Paragraph 3 of the Motion, Richardson states that its application "is an attempt to accommodate SJCC." It is not. While SJCC previously believed that accelerating coal bed methane development might be beneficial to subsequent coal mining, it determined in the summer of 2001 that accelerating coal bed methane production would create significant safety risks and could result in the bypassing of significant coal reserves as a result. SJCC advised Richardson of the health and safety risks and of its position that coal bed methane production should not proceed before mining well in advance of September 11, 2001, the day Richardson chose to file its Application. Richardson's strategy in filing the application is hardly an accommodation to SJCC.

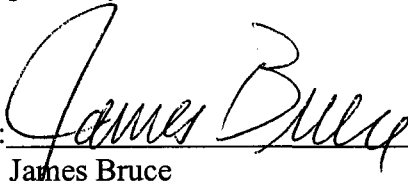
ownership of an “oil and gas interest.” Richardson’s position finds no support whatsoever in the Oil and Gas Act or elsewhere, nor is any support cited. Richardson’s position is particularly remarkable in light of the fact that Richardson’s Application expressly puts SJCC’s mining plan and operations at issue (Application, §§ 14-15).

The one reference to the Oil and Gas Act in the Motion to Dismiss is NMSA 1978, ' 70-2-11 (1979); in Paragraph 16, Richardson asks that consideration of Richardson’s Application be limited to issues contained in that provision of the Oil and Gas Act. Section 70-2-11 confirms rather than precludes SJCC’s right to participate. That section certainly articulates some of the factors the OCD should consider, such as its authority to prevent fires and require that wells be drilled, operated and produced in a manner so as to prevent injury to neighboring leases or properties. Those issues are presented here. Moreover, contrary to Richardson’s statement that the OCD’s Application should be “limited” to these matters in NMSA 1978, ' 70-2-11, the OCD should also prevent waste of a coal resource (NMSA 1978, ' 70-2-2 and 3), and it should avoid a decision that contravenes the public interest or does not have due regard for mineral resources, of which coal is one (pursuant to NMSA 1978, ' 70-2-26). See Section I, supra.

IV. CONCLUSION.

The OCD, the OCC, and the Secretary have jurisdiction over this matter, including the matters SJCC presents in opposition to the Application. And, SJCC has standing to participate in these proceedings. The OCD should accept jurisdiction, deny Richardson’s Motion to dismiss and proceed to determine the merits of the Application, considering the record presented by the parties at the November 13-14, 2001 hearing.

Respectfully Submitted,

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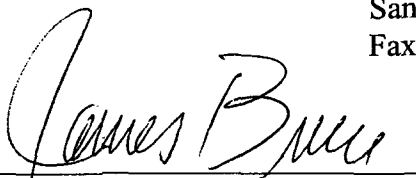
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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing pleading was served upon the following counsel of record via facsimile transmission this 31st day of December, 2001:

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A handwritten signature in cursive script, appearing to read "James Bruce", is written over a horizontal line.

James Bruce

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