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RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

August 26, 2002

**Hand Delivery**

Ms. Lori Wrotenbery, Chairman

Ms. Jamie Bailey, Member

Dr. Robert Lee, Member

Oil Conservation Commission

1220 South Saint Francis Drive

Santa Fe, New Mexico 87505

OIL CONSERVATION COM.  
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**Re: Motion to Dismiss Protest of San Juan Coal Company**

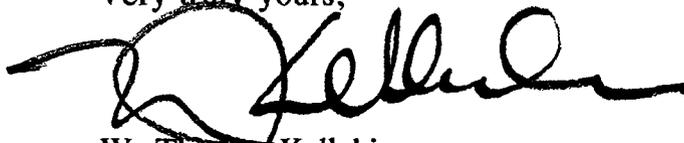
NMOCD Case: 12734 (De Novo)

Application of Richardson Operating Company  
to establish a Special "Infill Well" Area within  
the Basin-Fruitland Coal Gas Pool as provided in  
Rule of the special rule for this pool,  
San Juan County, New Mexico

Dear Members of the Commission:

On behalf of Richardson Operating Company please find enclosed our reference motion to dismiss San Juan Coal Company's protest. This case is set for hearing on October 28, 29, 30, 2002.

Very truly yours,



W. Thomas Kellahin

cc: Michael E. Stogner  
OCD Hearing Examiner

*Application of Richardson Operating  
Co.  
Record on Appeal, 1284.*

Steve Ross, Esq.  
Attorney for the Commission  
David Brooks, Esq.  
Attorneys for the Division  
James Bruce, Esq.,  
Charles Roybal, Esq.  
Larry Ausherman, Esq.  
Attorney for San Juan Coal Company  
Richardson Operating Company  
Attn: David Richardson

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

**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 POOL RULES,  
SAN JUAN COUNTY, NEW MEXICO**

**CASE NO. 12734 (De Novo)**

**MOTION OF  
RICHARDSON OPERATING COMPANY'S  
TO DISMISS  
THE PROTEST OF  
SAN JUAN COAL COMPANY**

Richardson Operating Company ("Richardson"), by its attorneys, Kellahin and Kellahin, hereby moves that the New Mexico Oil Conservation Commission ("Commission") dismiss San Juan Coal Company's ("SJCC") protest in this case because the Commission lacks jurisdiction over Federal or State coal, because SJCC lacks standing and, further, because SJCC's coal lease rights are, in any event, junior to Richardson's oil and gas lease rights;  
and in support states:

**BACKGROUND**

(1) Effective October 17, 1988, the Division issued Order R-8768 creating the Basin-Fruitland Coal Gas Pool ("Pool") and established special rules and regulations authorizing the production of coalbed methane gas from the coal seam within the Fruitland formation.

(2) These rules provide for 320-acre spacing units (GPU") with one well per GPU provided the well is located in the NE/4 or SW/4 of a section.

(3) In accordance with NMSA (1979) Section 70-2-11, the Division has already established a procedure for any oil and gas operator to drill a second well on a GPU in this pool. See Division Order R-8768

(4) These rules also provide for the creation of a special "Infill Area" which will allow a well density of 2 wells per GPU.

(5) On July 9-10, 2002, the Division heard the Case 12888 to consider a request by the pool operators in the San Juan Basin to increase the well density for the entire Basin Fruitland Coal Gas Pool to the same density sought by Richardson in this case.

#### **RICHARDSON'S REQUEST**

(6) On November 13-14, 2001, the Division heard Richardson's request seeking the creation of a special "Infill Well" Area for the drilling of a second well on a 320-acre GPU where SJCC intends to mine the coal. See Exhibit "A".

(7) Richardson's application is an attempt to accommodate SJCC by accelerating the production of gas from the Fruitland formation so that SJCC can then mine the coal.

(8) On June 6, 2002, the Division entered Order R-11755 granting Richardson's application and denying the protest of SJCC. See Exhibit "B"

#### **SJCC'S PROTEST**

(9) SJCC asks the Commission to "protect the coal" despite its agreement with both the State and with the BLM that the coalbed methane gas shall be recovered and produced prior to coal mining.

(10) SJCC contends<sup>1</sup> that it has standing to protest this case before the Commission because:

(a) SJCC claims that the Secretary of the Energy, Minerals and Natural Resources Department ("Secretary") may review an order of the Commission and modifying that order if the Secretary believes that the Commission order does not give "due regard for the conservation of the states' oil, gas and minerals resources" NMSA (1979) Section 70-2-26.

(b) that the Secretary "may hold a public hearing to determine whether an order or decision issued by the Commission contravenes the public interest." NMSA(1979)Section 70-2-26.

(11) SJCC argues that the Secretary must "consider impacts on coal resources development in making decisions under the Oil and Gas Act. (See SJCC's reply to Richardson's response to stay, at paragraph 1, page 2.)

(12) What SJCC conveniently forgets to tell the Commission is that except for Section 36 and about 20 acres in Section 36, all of the rest of the acreage in Richardson's request is Federal acreage administered by the BLM who controls both the gas and coal.

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<sup>1</sup> SJCC Motion for Stay (paragraph 10)  
SJCC Reply to Richardson's Response to Stay (paragraph 4)

(13) SJCC's objection is an attempt to create a dispute before the Division which the Bureau of Land Management ("BLM") has already resolved in Richardson's favor. A copy of the decision of the BLM Farmington Field Office is attached is **Exhibit C.** and a copy of the BLM State Director's decision is attached as **Exhibit D.**

### **THE COMMISSION'S JURISDICTION**

(14) The New Mexico Oil & Gas Act has specific statutory mandates concerning the prevent of waste of potash in addition to prevention of the waste of oil and gas; however, no such specific mandates exists concerning waste of coal. **See Division Order R-11775 (Finding 26), Exhibit "B"**

### **SCOPE OF SJCC PROTEST**

(15) San Juan Coal Company wants to substantially expand the scope of this case and to use this proceeding to seek the adoption of exploration, development and operational rules for oil & gas operations conducted within the area of its coal mining plan. San Juan Coal Company wants the Commission to engage in such mining issues as the affects, if any, of hydraulic fracturing of coalbed methane wells on roof stability in San Juan Coal Company's underground mine; the potential, if any, for the migration of methane gas into a mine area including the potential, if any, for combustion of the methane; and potential waste of coal by the presence of existing and future wellbores.

### **SJCC LACKS STANDING BEFORE THE COMMISSION**

(16) San Juan Coal Company has no standing to participate in Case 12734. Richardson has filed this case in accordance with Rule 4 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool ("The Special Pool Rules") which provides a procedure for oil & gas operators and certain oil & gas interest owners to complain about if and how the optional infill well might cause waste of hydrocarbons or

adversely affect oil & gas correlative rights. This case, as advertised, is not an opportunity for the San Juan Coal Company to complain about oil & gas exploration and development which is taking place in an area they now contend they want to mine.

**RICHARDSON'S OIL & GAS LEASES  
TAKE PRIORITY OVER  
SJCC'S COAL LEASES**

(17) SJCC has certain state and federal coal leases which are subject to the prior existing rights of Richardson as the oil and gas lease. Copies of the relevant coal leases are attached as **Exhibits E-1 and E-2**. The relevant oil & gas leases are attached as **Exhibits F-1 and F-2**.

(18) Over the objection of Richardson, SJCC participated in the Division's examiner hearing of this case, despite the fact that SJCC's coal leases preclude it from interfering with Richardson's production of oil and gas from these lands. The end result is that the Division denied SJCC protest and authorized Richardson to drill the infill gas wells. See Order R-11775, attached is **Exhibit "B"**.

(19) SJCC holds three coal leases which cover a portion of the lands described in Richardson's application: two State of New Mexico leases were issued July 15, 1991 and Federal Leases NMNM-99144 issued March 1, 2001. The State coal leases cover Section 32, Township 30 North, Range 14 West and Section 36, Township 30 North Range 14 West. The federal coal leases covers Sections 19, 20, 29, 30, and 31, Township 30 North 14 West. See **Exhibits E-1 and E-2**.

(20) Each of Richardson's oil & gas leases which cover the same lands as SJCC's coal leases within the application area was issued **prior** to SJCC's coal leases. See **Exhibits F-1 to F-9**.

(21) SJCC has asserted that Richardson's application should be denied because additional coalbed methane ("CBM") wells will make its coal mining operations more difficult and potentially dangerous. Even if SJCC's allegations are correct, they do not justify a decision by the Commission which would prevent Richardson from achieving maximum recovery of CBM. SJCC's coal lease rights are junior to the oil & gas lease rights and SJCC took its coal leases specifically subject to those rights.

(22) Coal Lease NMNM-99144 was issued to SJCC effective March 1, 2001. It was signed on behalf of SJCC by its president on February 6, 2001. In addition to the standard lease terms, that lease contained in Section 15 the following special stipulation:

2. This coal lease is subject to all prior existing rights including the right of oil and gas lessees and other mineral lessees and surface users.
3. It is solely the responsibility of the coal lessee, not the responsibility of BLM, to clear the coal tracts of any legal incumbencies or pre-existing land uses that would impede or prevent coal mining on the tract.
4. No portion of the 1998 Coal Leasing Area Resources Plan Amendment shall be construed to require BLM to act in the role of a party to medication or mitigation efforts between mineral and surface interest holder.

**See Exhibit E-1.** These stipulations give SJCC fair warning, in plain language, that it has the responsibility for reaching any agreement without prior mineral lessees which it considers necessary in the unfettered operations of its mine.

(23) Federal leases are contracts and are subject to the same rules of interpretations as are contracts between private parties. *See Petrolcorp*, 152 IBLA 77, 84 (2000). The Interior Board of Land Appeals ("IBLA") has rules that "a central tenet of contract construction provides that intent is to be determined by the words of the contract, when these are clear and explicit and lead to no absurd consequences." *Exxon Company, USA*, 118 IBLA 30, 36 (1991). The IBLA has also noticed that its task in interpreting contracts "is to determine and give effect to the intent of the partes to the contract as manifested by the language used therein, construing the document as a whole." *BHP Minerals International Inc.*, 153 IBLA 99, 105 (2000). The plain language used in the federal coal lease means that SJCC took that lease subject to the burden of clearing any "legal incumbrance or pre-existing land uses that would impede or prevent coal mining." SJCC is bound by the terms of its coal leases and its protect to Richardson's application should be stricken on that basis.

(24) The State oil and gas leases in which Richardson owns an interest covering Section 36, Township 30 North, Range 15 West was issued on December 10, 1949. SJCC's State coal lease covering those same lands was not issued until July 15, 1991. That coal lease specifically excluded coalbed methane gas "except for small incidental quantities which may have be vented or flared to achieve access to coal." Para. 14, Lease No. MC-0088 (**Exhibit E-2**). SJCC's subsequent coal lease certainly does not give its the right to prevent Richardson from fully recovering the maximum amount of CBM it can under the terns of the 1949 oil & gas lease, nor which is allow SJCC should mine the coal before Richardson removes the coal bed methane.

## PURPOSE OF COMMISSION HEARING

(25) Rule 4 of the Special Rules and Regulations for the Basin Fruitland Coal Gas Pool provides a procedure for oil and gas operators and certain oil and gas interest owners to complain about whether the optional infill well might cause waste or hydrocarbons or adversely affect oil and gas correlative rights.

(26) This case is not an opportunity for SJCC, which owns no oil and gas interest, to complain about oil and gas exploration and development which is occurring in an area which SJCC now would like to mine.

(27) SJCC's protest essentially asks the Division to allow all other operators in the Basin-Fruitland Coal Gas Pool to enjoy the opportunity to infill drill coal bed methane well **except for Richardson**.

(28) SJCC protest asks the Commission to allow too few Basin-Fruitland Coal Gas well in the vicinity of its mine for the purpose of simplifying its coal mining operations.

## CONCLUSION

SJCC asks the Commission to "protect the coal" despite its agreement to sake coal leases under which both the state of BLM has made gas recovery first prior over coal production.

In any event, the Commission does not have any authority over coal mining operations and its consideration of Richardson's application should be limited to those matters enumerated in NMSA, 1979, Section 70-2-11.

Richardson did not send notice of this hearing, or a copy of the application, to San Juan Coal Company because San Juan Coal Company was not entitled to notice. Rule 4(b) of the Special Pool Rules requires notice only to certain oil & gas operators, and in certain circumstances, to certain oil & gas working interest owners and unleased oil & gas mineral owners. This case is not the proper forum to address San Juan Coal Company's concerns.

Because SJCC acquired its coal leases subject to the prior existing rights of oil & gas lessees, the burden was on it, as it was plainly reminded in the terms of Lease NMNM-99144, to take whatever steps it deemed appropriate to buyout any conflicting oil and gas lease rights or negotiate mine-trough agreements. Nonetheless, SJCC elected to proceed with its mining operations notwithstanding the plan language in Coal Lese NMNM-99144 that the lease was "subject to all prior existing rights including the right of oil and gas lessees" and that it is "solely the responsibility of the coal lessee, not the responsibility of the BLM, to clear the coal tract of any legal encumbrances or pre-existing land uses that would impeded or prevent coal mining on the tract." SJCC cannot now shift the consequence of its decision to the Commission or to Richardson.

WHEREFORE Richardson Operating Company moves that the Commission entered an Order denying SJCC's protest in this case.

Respectfully submitted,



W. Thomas Kellahin  
P. O. Box 2265  
Santa Fe, New Mexico 87504

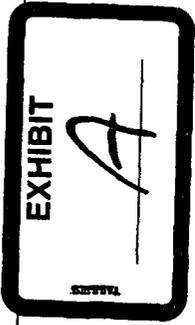
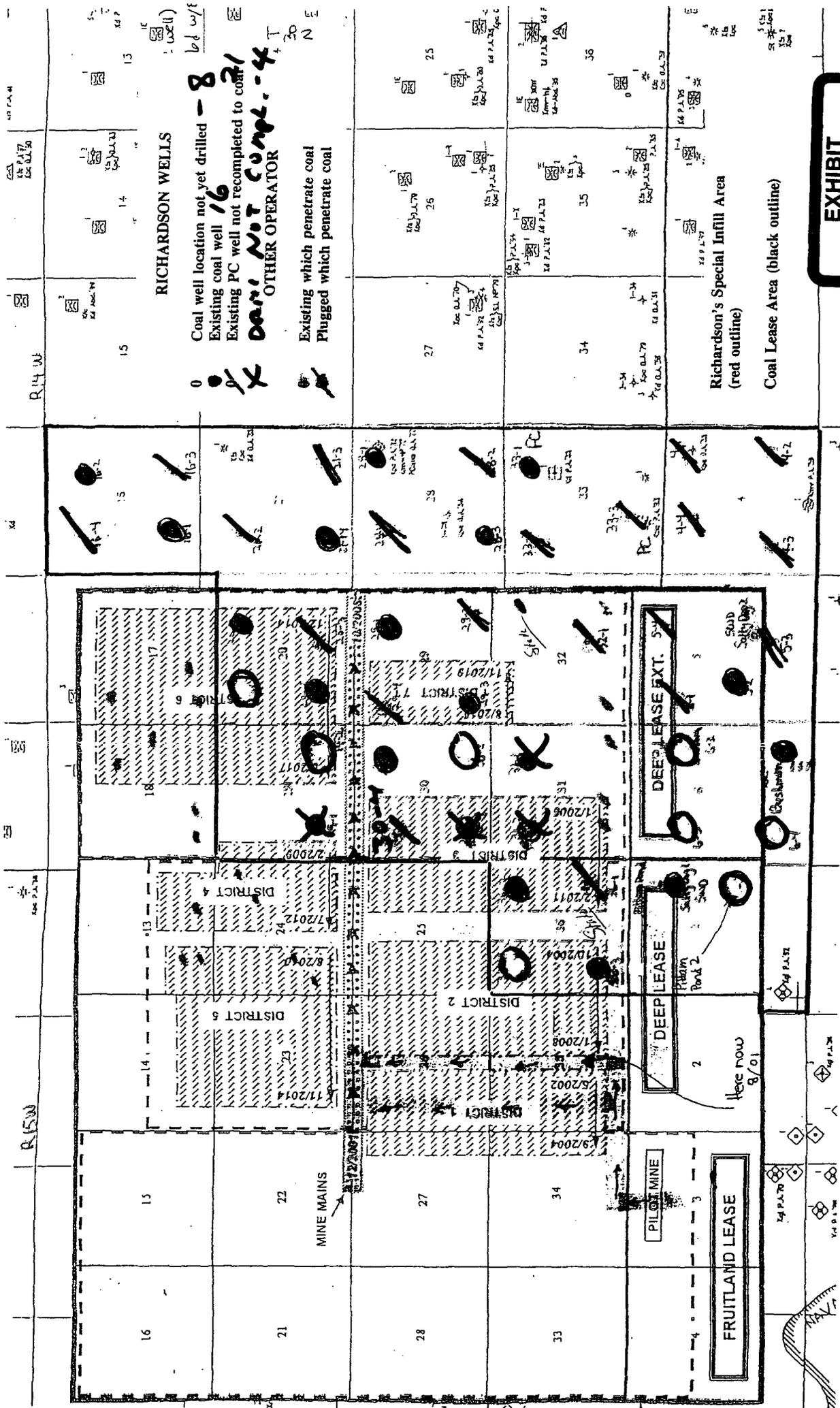
**CERTIFICATE OF SERVICE**

I certify that a copy of the foregoing pleading was sent by Federal Express this 26st day of August, 2002 to James Bruce, Esq, Larry Aucherman, Esq., Charles Roybal, Esq. attorneys for San Juan Coal Company.



W. Thomas Kellahin

Application of Richardson Operating Co.  
 Record on Appeal, 1296.



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-11775

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

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 18, November 13, and November 14, 2001, at Santa Fe, New Mexico before Examiner Michael E. Stogner.

NOW, on this 6th day of June, 2002, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The Basin-Fruitland Coal (Gas) Pool is an "unprorated gas pool" not subject to Part H of the Division's rules entitled "*Gas Proration and Allocation*" (Rules 601 through 605). However, the Basin-Fruitland Coal (Gas) Pool is subject to: (a) Division Rule 104.D (3), which restricts the number of producing wells within a single gas spacing unit within non-prorated gas pools to only one (see official notice to all operators issued by the Division Director on October 25, 1999), and allows producing wells within this pool to produce at capacity; and (b) the "*Special Rules and Regulations for the Basin-Fruitland Coal (Gas) Pool*," established by Division Order No. R-8768, as amended by Orders No. R-8768-A and R-8768-B, which rules provide for:

- (i) 320-acre spacing units (Rule 4);
- (ii) wells to be located in the NE/4 or SW/4 of a single governmental section and no closer than 660 feet to the

*Application of Richardson Operating  
Co.  
Record on Appeal, 1297.*



outer boundary of the spacing unit nor closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary (Rule 7); and

(iii) infill wells only after notice and hearing (Rule 4).

(3) In accordance with Rule 4 of the special pool rules governing the Basin-Fruitland Coal (Gas) Pool, Richardson Operating Company ("Richardson") seeks the creation of a special infill well area comprising the following-described lands within the pool in San Juan County, New Mexico ("infill area") to be governed by special provisions allowing two producing coal gas wells per 320-acre spacing unit:

TOWNSHIP 29 NORTH, RANGE 14 WEST, NMPM

Sections 4 through 6: All

TOWNSHIP 29 NORTH, RANGE 15 WEST, NMPM

Section 1: All

TOWNSHIP 30 NORTH, RANGE 14 WEST, NMPM

Section 16: All

Sections 19 through 21: All

Sections 28 through 33: All

TOWNSHIP 30 NORTH, RANGE 15 WEST, NMPM

Section 36: All.

(4) Richardson is the current operator of wells in the Basin-Fruitland Coal (Gas) Pool and owns interests in both State and Federal oil and gas leases within the proposed infill area. Richardson's rights under its leases extend from the surface to at least the base of the Pictured Cliffs formation.

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

TOWNSHIP 30 NORTH, RANGE 15 WEST, NMPM

Section 13: S/2

Section 14: S/2

Sections 23 through 26: All

Section 35: All

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

TOWNSHIP 30 NORTH, RANGE 15 WEST, NMPM

Section 36: All.

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

TOWNSHIP 30 NORTH, RANGE 14 WEST, NMPM

Sections 17 through 20: All  
Sections 29: All  
Section 30: All  
Section 31: 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, NMPM

Section 32: All.

(6) SJCC currently operates an open pit and pilot underground coal mine on the western side of its above-described coal leases; however, the closest mining operations are approximately one-half mile from the western edge of the proposed infill area.

(7) On August 31, 2001 SJCC filed an application with the United States Bureau of Land Management ("USBLM") for a coal exploration license covering the following lands:

TOWNSHIP 30 NORTH, RANGE 14 WEST, NMPM

Sections 9 and 10: All  
Section 15: All  
Sections 21 and 22: All  
Sections 27 and 28: All  
Sections 33 and 34: All.

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

TOWNSHIP 30 NORTH, RANGE 14 WEST, NMPM

Section 16: All.

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

(8) The Basin-Fruitland Coal (Gas) Pool underlying the proposed infill area will be affected by SJCC's current mine plan and by SJCC's plan to mine the Twin Peaks Extension Area.

(9) The proposed infill area was defined by Richardson's oil and gas leases and is overlapped by SJCC's coal leases.

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

(11) Richardson's application is an attempt to prevent the waste of hydrocarbon resources by accelerating the production of gas from the Fruitland coal interval prior SJCC mining operations.

(12) SJCC is currently in the process of converting from surface mining operations to an underground mine system (consisting of "mine districts") to mine the Coal Seam No. 8. SJCC's underground operations will utilize continuous miner units to establish a network of tunnels around coal blocks each approximately 10,000 feet long and 1,000 feet wide. These coal blocks are then mined by a "longwall" miner machine that runs parallel to the 1,000-foot face of the coal block. The mine plan is to mine each mine district through the system, expanding the mining in an easterly direction towards Richardson's existing coal gas wells and gathering system.

(13) The longwall miner process allows for the extraction of the coal but vents the coal gas and leaves behind a void. The roof then collapses into a rubble heap called the "gob," which contains a residue of debris including some gas.

(14) SJCC intends to mine the coal before the coal gas is produced by Richardson, which would require SJCC to vent to the atmosphere coal gas present in the coal seam, and contends that there will be gas remaining in the gob left after it has mined the coal.

(15) 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. The coal supplied by SJCC to the San Juan Generating Station has been supplemented by coal from the nearby La Plata Mine. In order to replace dwindling coal reserves at the surface operations of both mines, SJCC commenced a pilot underground mine in

early 1998 in order to demonstrate the viability of such an operation.

(16) At about the same time, SJCC began development of an underground mine permit application to be filed with the Mining and Minerals Division (“MMD”) of the New Mexico Energy, Minerals, and Natural Resources Department. In October, 1999 SJCC received authorization for development of the underground mine from the MMD.

(17) Effective March 2001, SJCC obtained the Deep Lease Extension, which lies on the eastern boundary of the Deep Lease. This lease will allow SJCC to meet its coal supply contract with Public Service Company of New Mexico that extends through 2017.

(18) Originally SJCC took the position that it was in the best interests of all parties, including SJCC, to have Richardson drill and produce coal gas with infill wells in order to accelerate withdrawal; however, in August, 2001, SJCC changed its position due to concerns raised about: (i) spontaneous combustion; (ii) the existence of well casings in the coal seam; (iii) the hydraulic fracturing of the Fruitland interval; and (iv) the de-watering of the coal.

(19) SJCC presented evidence showing that the development of coal bed methane gas in advance of underground mining could pose certain safety and operational risks that would be increased by Richardson’s proposed infill development.

(20) In accordance with Mine Safety and Health Administration (“MSHA”) regulations, wellbores not properly abandoned in advance of underground mining operations must be avoided. A 300-foot radius protection pillar is required around wellbores not properly abandoned. Proper abandonment involves milling out the casing and cementing the wellbore. To create a protection pillar SJCC would need to disassemble its longwall apparatus the required distance from such a wellbore and re-establish it within the mining district an equal distance past the wellbore; therefore, the volume of coal to be by-passed by SJCC will be at least 600 feet long by 1,000 feet wide and 13 feet high.

(21) SJCC is concerned about the time lost in moving its underground mining equipment and the volume of coal lost to create these pillars.

(22) Evidence was presented by SJCC concerning increased risk for spontaneous combustion within its Mine caused by: (i) prolonged periods of down time required in order to move the longwall apparatus; (ii) the fracturing of the coal seam by the oil and gas operations, which serves to hamper SJCC’s ability to manage its ventilation systems; and (iii) the de-watering of the coal seam, which dries the coal.

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~~(23) Richardson's proposed infill area would allow the following.~~

(i) recompletion in the Basin-Fruitland Coal (Gas) Pool of 18 existing Pictured Cliffs formation wells and the downhole commingling of production from both zones; and

(ii) drilling of 7 new wells to be completed as downhole commingled wellbores in the Pictured Cliffs formation and the Basin Fruitland Coal Gas Pool.

(24) The geological and engineering evidence presented demonstrates that:

(i) the No. 8 coal seam is present throughout the proposed infill area and is thick enough to support coal gas production in commercial quantities;

(ii) the proposed infill area is within that portion of the Basin-Fruitland Coal (Gas) Pool that is under-pressured;

(iii) this coal seam appears to be methane-gas saturated;

(iv) it is necessary to de-water the coal in order to obtain gas production;

(v) the gas content yield in the No. 8 coal seam within the proposed infill area ranges from 178 to 281 standard cubic feet per ton of coal; and

(vi) based on an average thickness of 20 feet, the initial gas in place within this coal seam ranges from 2.06 BCF to 3.24 BCF per 320-acre unit.

(25) The engineering evidence presented by Richardson demonstrates that infill drilling on a single 320-acre unit within the proposed infill area will serve to: (i) de-water the coal seam more quickly and efficiently; and (ii) allow for additional hydrocarbon reserves to be recovered.

(26) The New Mexico Oil & Gas Act has specific statutory mandates concerning the prevention of the waste of potash in addition to prevention of the waste of oil and gas; however, no such specific mandates exists concerning waste of coal.

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~~(27) Richardson's application will prevent waste of its hydrocarbon resources by~~

accelerating the production of gas from the Fruitland formation prior to SJCC mining the coal and venting the methane gas.

(28) SJCC presented testimony that some of the coal gas that would be vented by mining operations could be recovered at the surface, but did not establish the amount that could be so recovered or the economic feasibility of such recovery.

(29) SJCC's concerns about mine safety and fire prevention can be alleviated by:

(i) leaving a 300-foot radius protection pillar around any current or future wellbore as required by MHSR Regulations; or in the alternative

(ii) milling out the casing in any wellbore through the coal seam and properly plugging and abandoning the wellbore with cement, in which case a coal protection pillar would not be needed.

(30) Application of the latter method would also alleviate SJCC's concerns about reduction of recoverable coal reserves due to the necessity to leave coal in place around wellbores.

(31) In order to minimize waste of gas reserves and to protect the oil and gas mineral interests correlative rights, the Division should grant Richardson's request to establish a special infill area [as described in Finding Paragraph No. (3) above] that provides an opportunity to accelerate the production of gas from the Fruitland Coal formation prior to SJCC's mining operations.

**IT IS THEREFORE ORDERED THAT:**

(1) As an exception to (i) Rule 4 of the "*Special Rules and Regulations for the Basin-Fruitland Coal (Gas) Pool*," established by Division Order No. R-8768, as amended by Orders No. R-8768-A and R-8768-B, and (ii) Division Rule 104.D (3), the applicant, Richardson Operating Company, is hereby authorized to drill, complete and produce an optional infill well within each 320-acre gas spacing unit within the following described Special "Infill Well" Area:

TOWNSHIP 29 NORTH, RANGE 14 WEST, NMPM  
Sections 4 through 6: All

TOWNSHIP 29 NORTH, RANGE 15 WEST, NMPM

Section 1: All

TOWNSHIP 30 NORTH, RANGE 14 WEST, NMPM

Section 16: All  
Sections 19 through 21: All  
Sections 28 through 33: All

TOWNSHIP 30 NORTH, RANGE 15 WEST, NMPM

Section 36: All.

(2) The following conditions apply to the authority granted by this order:

- (A) THE INITIAL COAL GAS WELL located on a 320-acre spacing unit shall be located in compliance with the setback and quarter section placement requirements set forth in Rule 7 of the special pool rules.
- (B) THE INFILL COAL GAS WELL on an existing 320-acre unit shall be located in the quarter section of the unit not containing a Basin-Fruitland coal gas well, and shall be located in compliance with the setback requirements set forth in Rule 7 of the special pool rules.
- (C) THE PLAT (Form C-102) accompanying the Application for Permit to Drill (OCD Form C-101 or federal form) for the subsequent infill well on an existing unit shall have outlined thereon the boundaries of the unit and shall show the location of the existing Basin-Fruitland coal gas well plus the proposed new well.

(3) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

Case No. 12734  
Order No. R-11775  
Page 9

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

LORI WROTENBERY  
Director

SEAL



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Farmington Field Office  
1235 La Plata Highway, Suite A  
Farmington, New Mexico 87401



IN REPLY REFER TO:

NM NM 99144 ((Coal, GC)  
NM NM 99003 (O & G, GC)  
3100/3400 (07100)

September 20, 2001

**CERTIFIED-RETURN RECEIPT REQUESTED**  
7106 4575 1292 2684 0142

Mr. Lynn Woomer  
BHP Billiton  
San Juan Coal Company  
P.O. Box 561  
Waterflow, NM 87421

*Application of Richardson Operating  
Co.  
Record on Appeal, 1306.*

**RE: Protest of Applications for Permit to Drill (APDs)**

Dear Mr. Woomer:

The Bureau of Land Management (BLM) acknowledges the receipt of your letter dated August 31, 2001, protesting the issuance of APDs to Richardson Operating Company and Dugan Production Corporation. The area of concern identified in your correspondence involves properties covered by valid existing oil and gas leases listed below.

Richardson Operating Company	Secs. 30 and 31, T. 30 N., R. 14 W., San Juan County
Dugan Production Corporation	Sec. 24, T. 30 N., R. 15 W., and Secs. 17, 18 and 19, T. 30 N., R. 14 W., San Juan County

The protest requests that the BLM refrain from issuing APDs unless certain stipulations are placed on the operators. BHP also requests that the Operators refrain from hydraulically fracturing the coal seams. These requests were made in order to mitigate certain safety concerns associated with subsequent underground coal mining of the oil and gas leases.

There are three specific safety issues mentioned: 1) the presence of steel casing in the basal coal seam and the adverse impact on the continuous mining machines (CMs); 2) the potentially adverse impacts of hydraulic fracturing on roof stability; and 3) the increased risk of spontaneous combustion occasioned by hydraulic fracturing.

The BLM appreciated the opportunity to meet with BHP-Billiton on Friday, September 14, 2001, to discuss the safety concerns and review a rather comprehensive ventilation plan for the mine.

After reviewing the safety issues in detail, it is difficult to quantify the risks associated with degassing of the basal coal seam of the Fruitland Coal horizon by conventional drilling and completion techniques utilized by the oil and gas operators. There are many publications which attempt to address the safety concerns raised by BHP-Billiton with conflicting opinions as to severity and magnitude. The BLM acknowledges the concern for the health and safety of the underground mining workforce and believes that the safety issues should be addressed by the mine safety plan developed by BHP-Billiton.

Your proposed conditions to be imposed upon the operators (e.g. milling of casing, pressure coring, and lack of well stimulation) would add significant costs to the operators thereby rendering the leases uneconomic to

develop. This would constitute an unfair burden on the oil and gas lessees who have priority rights in developing their associated mineral resource. All properties alluded to fall within the Deep Lease Extension with the exception of Sec. 24, T. 30 N., R. 15 W. The BLM reminds BHP-Billiton of Special Stipulation 3 of coal lease NM NM 99144 (The Deep Lease Extension) issued March 1, 2001, which reads:

"It is solely the responsibility of the coal lessee, not the responsibility of BLM, to clear the coal tract of any legal encumbrances or pre-existing land uses that would impede or prevent coal mining on the tract."

The BLM cannot encumber the issuance of APDs with unreasonable conditions of approval that render the lessees' operations uneconomic. Consequently, the APDs on Federal oil and gas lease NM-99003 in Secs. 30 and 31, T. 31 N., R. 14 W. are approved. There are several steel-cased well bores already existing on the coal leases with the potential for several more in the foreseeable future with subsequent issuance of additional APDs to the operators. In the interest of mitigating the perceived safety threat to the underground mining operations, the BLM strongly encourages BHP-Billiton to reach a settlement with the oil and gas operators in the area as quickly as possible.

Under provisions of 43 CFR 3165.3, you may request an Administrative Review, before the State Director either with or without oral presentation, or the action described above. Such a request, including all supporting documentation, shall be filed in writing with the State Director, Bureau of Land Management (NM-93000), P.O. Box 27115, Santa Fe, New Mexico 87502-0115 within 20-business days of the date this notice was received or considered to have been received. Such request shall not result in a suspension of the action unless the reviewing official so determines. Procedures governing appeals from instructions, orders or decisions are contained in 43 CFR 3165.4 and 43 CFR 4.400 *et seq.*

If you have any questions regarding the above, please contact Dave Mankiewicz at (505) 599-6387.

Sincerely,



Steve Henke  
Acting Field Manager

cc:  
(7106 4575 1292 2684 0159)  
Richardson Operating Company  
1700 Lincoln, Suite 1700  
Denver, CO 80203

(7106 4575 1292 2684 0166)  
Dugan Production Corporation  
P.O. Box 420  
Farmington, NM 87499

(7106 4575 1292 2684 0173)  
Mr. Steve Hayden  
New Mexico Oil Conservation Division  
1000 Rio Brazos Road  
Aztec, NM 87410



# United States Department of the Interior

Bureau of Land Management  
New Mexico State Office  
1474 Rodeo Road  
P.O. Box 27115  
Santa Fe, New Mexico 87502-0115  
www.nm.blm.gov

IN REPLY REFER TO:  
SDR 02-01  
3160 (93000)  
NMNM 99144  
NMNM 99003



**CERTIFIED MAIL RETURN RECEIPT REQUESTED**  
7001 0360 0001 0168 1013

San Juan Coal Company	:	
c/o Modrall, Sperling, Roehl, Harris & Sisk	:	Decision Dismissing Protest of
500 Fourth St. NW	:	Issuance of Applications for Permits
Bank of America Centre, Suite 1000	:	To Drill in Vicinity of Coal Mine and
Albuquerque, NM 87102	:	Approval of APD's

**Decision Remanded; Request for Stay Dismissed as Moot**  
**Request for Stay of Approval of Further Applications Dismissed**

By letter dated October 18, 2001, Modrall, Sperling, Roehl, Harris & Sisk, P.A., as agent for San Juan Coal Company (San Juan), requested a Stay Pending Administrative Review and State Director Review (SDR) of a September 20, 2001, Decision of the Farmington Field Office (FFO). That Decision dismissed San Juan's August 31, 2001, protest of the issuance of applications for a permit to drill (APD's) in areas where San Juan has plans to mine. The decision also approved four Richardson Operating Company (Richardson) APD's. San Juan also requested the opportunity to present its arguments orally. The oral presentation occurred on November 19, 2001.

On October 29, 2001, we received a Reply to San Juan's request for administrative review from Richardson and on November 7, 2001, this office received a Reply from Dugan Production Corporation (Dugan). Dugan is an affected party through its existing oil and gas leases, and its current and proposed coalbed methane (CBM) development program. During the oral presentation on November 19, 2001, San Juan expanded upon its written arguments. Following San Juan's presentation, Richardson presented its oral arguments.

*Application of Richardson Operating Co.  
Record on Appeal, 1308.*

**Facts:**

San Juan requested that Richardson's drilling operations be curtailed in the following lands:

T. 30 N., R. 14 W., N.M.P.M., San Juan County, New Mexico

Secs. 17-19, 30, 31; and

T. 30 N., R. 15 W., N.M.P.M.

Sec. 24.

These lands are located within San Juan's "Deep Lease" and "Deep Lease Extension," NMNM 28093 and NMNM 99144, respectively.

Leasing of the Federal oil and gas estate has occurred in this area since the first 'oil pennit' was issued in 1923. There are seven active oil and gas leases in effect within the above-described area. Six of the leases were issued 27-33 years ago, and are held by production from other wells. Richardson operates lease NMNM 99003, obtained at a competitive lease sale in 1997. One well within the lease has produced since October 1999. Dugan operates two leases within the area.

Coal has been mined for residential use since the late nineteenth century. Large-scale surface mining began in 1958. Western Coal Company initiated surface mining of coal in 1973. The "Deep Lease," later acquired by San Juan, was issued to Western Coal Company in April 1980. San Juan's "Deep Lease Extension" was issued effective March 1, 2000, with a term of 20 years.

Section 15 of the lease has the following special stipulations:

1. The lessee will comply at its own expense with all reasonable orders of the Secretary respecting diligent operations, prevention of waste, and protection of non-coal resources.
2. This coal lease is subject to all prior existing rights, including the right of oil and gas lessees and other mineral lessees and surface users.
3. It is solely the responsibility of the coal lessee, not the responsibility of the Bureau of Land Management (BLM), to clear the coal tract of any legal encumbrances or pre-existing land uses that would impede or prevent coal mining on the tract."

We have minutes of four of the monthly meetings facilitated by the FFO, held between January and May 2001, in which San Juan, Richardson and Dugan met in an effort to optimize recovery of both coal and CBM, as well as potential gas reserves in deeper horizons. San Juan originally encouraged degassing prior to mining. In fact, it was this position that prompted the FFO to send demand letters to both Richardson and Dugan, requiring development of the CBM prior to mining as a means of recovering gas that otherwise would be lost. San Juan now opposes development of the CBM, due to safety concerns expressed by its ventilation engineer.

*Application of Richardson Operating  
Co.*

Record on Appeal, 1309.

Richardson submitted four APD's that triggered the August 31, 2001, protest from San Juan. After the September 20, 2001, decisions, Richardson drilled all four wells.

**San Juan's Arguments:**

Our review of the oral presentation, written material submitted by San Juan and Richardson, and case record data, demonstrated that this dispute has been ongoing for over a year. There are four main issues in the dispute, as articulated by San Juan.

**1. Who has the priority right to develop his lease(s)?**

San Juan admits that its lease postdates the oil and gas leases. However, it states that its plan of development predates any drilling plans filed by either company, and that BLM should look at actual plans of development, not merely lease issuance dates. In addition, San Juan states that the BLM is bound to consider the more valuable resource from the standpoint of public needs; coal is more valuable and returns more in royalties to the public.

In its oral presentation, San Juan stated that the Resource Management Plan Amendment for Coal Leasing effectively modified the lessees' potential to develop their existing oil and gas leases.

**2. Development of the CBM will result in safety hazards to mining equipment and personnel**

San Juan made several statements regarding increased safety hazards if CBM development occurs prior to mining. The hazards result from the actual steel well casing itself, fire might be caused through mining equipment striking the casing and creating a spark that ignites coal fines or methane. There is an additional risk for spontaneous combustion of the coal if CBM completion techniques include hydraulic fracturing of the coal. San Juan states that hydraulic fracturing of the carbonaceous shale overlying the coal could result in further risk to equipment and employees if it weakens the roof of the mine. If the coal is de-watered and de-gassed ahead of mining, the coal will be more susceptible to oxygen adsorption through an opened cleat system, thereby increasing the risk for spontaneous combustion.

**3. Development of the CBM will result in a major economic loss to San Juan**

San Juan states that development of the CBM would result in reduced recovery of coal. San Juan states that underground mine safety regulations require that no mining occur within 300 feet from any existing wells. This would reduce coal recovery by 300,000 tons around each well. It would also require San Juan to reposition its equipment around each well, which is both time consuming and expensive. If there is more than one well within a particular mining block, it might make that block uneconomical to develop, resulting in the loss of three million tons of coal.

*Application of Richardson Operating Co.*

Record on Appeal, 1310.

might make that block uneconomical to develop, resulting in the loss of three million tons of coal.

**4. The BLM planning and environmental documents are flawed and do not comply with FLPMA**

San Juan states that the 1998 Farmington Resource Management Plan Amendment (RMPA) for coal leasing activity is flawed, in that it did not consider the coal versus CBM conflict, nor provide a method to resolve the conflict. The Environmental Assessments (EA's) prepared for Richardson's APD's do not consider alternatives to drilling that were developed in the RMPA.

**Richardson's and Dugan's Arguments**

Richardson states that its rights are senior to San Juan's, and that the 'first in time, first in right' concept is not outmoded. Richardson cites the stipulations attached to the "Deep Lease Extension" lease, and states that they are controlling; these lease terms were attached in an attempt to eliminate arguments over priority in coal versus CBM resource development. Richardson notes that, in spite of those stipulations, San Juan has failed to conduct due diligence by taking steps necessary to minimize legal and technological risks to the mine, and instead has passed the burden to BLM and Richardson.

Richardson states that its oil and gas lease predates the RMPA, and thus, it cannot alter valid existing rights. Richardson adds that it actively participated in commenting on the RMPA to be sure BLM was aware of the potential adverse effects to its plans to develop the coalbed methane.

Richardson and Dugan disagree with San Juan's conclusion that the EA's failed to consider all reasonable alternatives, including alternative well locations, and a no-action alternative.

Dugan identifies its lease interests, and notes that they predate San Juan's lease. Dugan noted that it currently operates 18 wells within the subject area; the wells produce 850 MMBTU/day. Dugan describes the infrastructure needed to produce the gas, and its investment of more than \$6 million.

Dugan also notes that the development potential of CBM has only surfaced recently, and that advances in technology have made recovery of CBM economical in this under pressured area. Dugan notes those existing regulations would allow it to drill an additional 24 wells within the subject area, and that if well density is increased, 38 additional CBM wells could be drilled.

*Application of Richardson Operating Co.*

Record on Appeal, 1311.

**Analysis and Response**

Following is our response to each argument:

**1. Priority**

We find no justification for San Juan's argument that we should consider the date that plans of development were approved, in lieu of actual lease issuance dates. The terms of San Juan's coal lease provide our rationale, that the oil and gas lessees have priority in development of their gas resources.

San Juan's coal lease contained special stipulations as a means of resolving future development conflicts. Section 15 of the lease states that it is San Juan's sole responsibility to resolve conflicts with prior oil and gas lessees. The terms clearly state that the oil and gas leases are valid existing rights, and that San Juan is solely responsible for removing impediments to coal mining.

In addition, the Protocol for the Mediation of Adverse Impacts on Oil and Gas Revenues, signed by San Juan, recognizes the senior stature of valid existing oil and gas leases. By signing the lease form and the protocol, San Juan agreed to those provisions. The protocol committed San Juan to honor existing Federal and fee oil and gas leases, and to avoid or mitigate adverse impacts to the oil and gas lessees. San Juan agreed to compensate the oil and gas lessees by paying damages for decreased production. If production would permanently cease, San Juan would compensate the lessees for the fair market value of lost production.

Finally, San Juan's asserted that the RMPA for Coal Leasing effectively modified the oil and gas lessees' potential to develop their existing oil and gas leases. This is untrue - the BLM cannot retroactively constrain development by applying new, restrictive stipulations to existing leases. We do agree with San Juan that the Plan requires that future drilling activity would be coordinated with the BLM and mining company.

**2. Safety**

We agree with the September 20, 2001, FFO decision letter that the risks of degassing the coal seam are difficult to quantify. San Juan presented only its concerns about potential safety hazards. San Juan presented no data that demonstrate that hydraulic fracturing of the coal would increase the potential for spontaneous combustion, or weaken the mine roof. San Juan's arguments regarding potential safety hazards if CBM development preceded mining may be addressed by underground mine safety rules requiring the 300 foot buffer around existing wells.

*Application of Richardson Operating Co.  
Record on Appeal, 1312.*

### 3. Economics

We agree that Richardson's CBM development plans could impair coal mining, and could force San Juan to bypass recoverable coal reserves. Nonetheless, San Juan could mine through a well location if it milled out the casing prior to mining. While San Juan states that this is a slow and expensive procedure, it would maximize the economic recovery of the coal resource. San Juan implies that Richardson and Dugan are filing APD's to jeopardize its mining operations, then holding out on a settlement to obtain "... many multiples of such value ...". The BLM has seen no evidence of the two companies filing APD's merely to impede underground mining, or force an unfair buyout. Rather, Richardson and Dugan appear to be proposing drilling operations, and carrying out development in an attempt to recover CBM prior to mining. Evidently, the two companies are unconvinced, as is the BLM, that there would be recoverable CBM following mining, such that they might obtain some economic benefit of their leases post mining.

### 4. The 1998 FFO Resource Management Plan Amendment and individual EA's for Richardson's CBM wells are flawed.

We believe the RMPA adequately addresses the oil and gas development versus coal mining issue. It offers a sufficient range of alternatives for the BLM to consider.

The State Office examined the Environmental Assessment (EA) prepared by Permits West, Inc. (Richardson's contractor), dated August 16, 2001. We also reviewed the Finding of No Significant Impact (FONSI) and Decision Record, completed by the FFO on August 29, 2001, and approved September 4, 2001.

We find that the EA did not comprehensively address all issues regarding other mineral resources and potential conflicts. Similarly, the FONSI should have recognized the lack of such analysis. Specifically, there was no analysis of potential impacts to the coal resource. We note that the EA were prepared prior to San Juan's protest letter. At that time, degassing of the coal was considered as a positive effect.

#### Decision

This decision has been coordinated with our Field Solicitor in Santa Fe, and Department of the Interior solicitors in Washington, D.C.

We understand San Juan's concerns regarding mine safety and the economic costs of remediating well bores within its mine area. It is unfortunate that San Juan only recently recognized the potential adverse impacts of CBM development on its ability to mine the coal. The BLM had encouraged our lessees to accelerate development of the CBM in advance of mining to ensure recovery of methane that otherwise would be lost, and to reduce the safety threat of methane degassing during mining operations.

*Application of Richardson Operating Co.*

Record on Appeal, 1313.

We believe that Richardson has a prior existing right to develop the CBM. This is true even if it would cause reduced recovery of coal reserves, and adversely affect the economics of San Juan's mine. San Juan must adjust its mine plan to provide necessary safety to mine personnel. Accordingly, we sustain the FFO decision with regard to: 1) priority; 2) safety; and 3) economics.

We disagree with San Juan's fourth argument that the APD approvals do not comply with the 1998 Coal Leasing RMPA. The Decision Record for the RMPA was issued after the effective date of Richardson's oil and gas lease. The RMPA cannot unreasonably constrain development of pre-existing rights.

We agree with San Juan that the EA's do not address alternatives to oil and gas development identified in the 1998 RMPA. We herein remand the case to FFO for review of the EAs prepared for the Richardson wells.

The FFO must ensure that cumulative impacts to the coal resource are analyzed, and consider alternatives that would reduce adverse impact to coal development. After the FFO have completed its analysis, and reported its conclusions to the State Director, we will decide this last issue.

The request for the State Director to stay FFO approval of the Richardson APD's is rendered moot by the completion of all four wells prior to our receipt of the SDR request. The request to stay approval of other applications within the area identified is dismissed as premature. We cannot stay applications prior to their approval.

This Decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and Form 1842-1 (copy attached). If an appeal is taken, your notice of appeal must be filled in this office within 30 days from your receipt of this decision. The appellant has the burden of showing that the Decision appealed from is in error.

If you wish to file a petition for stay of the effectiveness of this Decision during the time that your appeal is being reviewed by the Board, the petition for stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed on the attached (Form 1842-1). Copies of the notice to appeal and petition for stay must be submitted to each party named in the Decision and to the Interior Board of Land Appeals, and to the appropriate office of the solicitor

*Application of Richardson Operating Co.*  
Record on Appeal, 1314.

(see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that the stay should be granted.

Sincerely,



Carsten F. Goff  
Deputy State Director  
Division of Resource Planning,  
Use and Protection

/Enclosure

cc:

WO(310)  
MSO(920)  
WSO(920)  
USO(920)  
NM(010)  
NM(020)  
NM(030)  
NM(040)  
NM(050)  
NM(060)  
NM(070)  
NM(080)  
NM(090)  
NM(930)

*Application of Richardson Operating  
Co.*

Record on Appeal, 1315.

RECEIVED

DEC 5 AM 10 14

NEW MEXICO STATE LAND OFFICE  
A M E N D E D  
COAL MINING LEASE

STATE LAND OFFICE

APPLICATION NO. MC-0088

LEASE NO. MC-0088

THIS AGREEMENT, dated this 15TH day of JULY, 1991, made and entered into, between the STATE OF NEW MEXICO, acting by and through the undersigned, its COMMISSIONER OF PUBLIC LANDS, hereinafter called the "lessor", and:  
SAN JUAN COAL COMPANY  
P.O. BOX 561 WATERFLOW, NEW MEXICO 87421,  
hereinafter called the "lessee".

WITNESSETH:

WHEREAS, lessee has filed in the State Land Office an application for a coal lease for the purpose of exploring for, mining, developing and producing coal upon the lands hereinafter described, and has tendered THREE THOUSAND TWO HUNDRED FIFTY AND 00/100---DOLLARS (\$3,250.00), for the first annual rental payment, together with one hundred dollars (\$100.00) application fee, and N/A dollars (\$N/A), for a bonus;

NOW THEREFORE, in consideration of the above tender, receipt of which is acknowledged, and the COVENANTS herein, lessor hereby grants, and leases to lessee, exclusively, for the sole and only purpose of exploring for, mining, developing, producing and removing coal in, upon or under the following described lands in SAN JUAN County, New Mexico:

INST	SEC	TWP	RGE	SUBDIVISION	ACRES
C.S.	36	30N	15W	LOTS 1(40.57), 2(41.73), 3(42.87), 4(44.03), N2, N2S2	649.20

together with the right to use so much of the surface as is reasonably necessary to explore for, mine, develop, produce and remove the coal.

8/23/89



TO HAVE AND TO HOLD the said lands and privileges granted hereunder for a primary term of five years.

IN CONSIDERATION OF THE PREMISES, THE PARTIES COVENANT AND AGREE AS FOLLOWS:

1. As royalty, lessee shall pay to lessor twelve and one-half percent of the proceeds received from the sale of all surface-mined coal or, at the option of the lessor, the market value thereof, and eight percent of the proceeds received from the sale of all underground-mined coal or, at the option of the lessor, the market value thereof. The royalty rate may be reduced by the lessor upon a showing by the lessee that the leases for non-state coal in the same logical mining unit provide for a lower rate or that the lands leased hereunder will be bypassed and not mined without a rate reduction. Such royalty is due in full on the last day of the month following the calendar month of sale and shall be reported to the lessor, together with such other information as may be required by the lessor, upon forms prescribed by the lessor. In the event of a dispute as to the amount of royalty due, the lessee shall assume the burden of proof in any court action arising out of such dispute.

2. As rental, lessee shall pay to lessor annually on or before each anniversary date of this lease the sum of five dollars (\$5.00) per acre or fraction thereof, such rental payments to continue so long as this lease shall remain in force.

3. Lessee agrees to pay interest on delinquent royalty and rental payments at the rate of one percent (1%) per month, or fraction thereof, accruing from the date said payment becomes due.

4. If, at the end of the primary term, the lessee has submitted a mine plan, which is not subsequently disapproved by the lessor within three months after submission, and the lessee has either incorporated the land leased hereunder with adjacent land into a logical mining unit or has shown to the satisfaction of the lessor that the adjacent land is federal land which has not been available for coal leasing but that the lessee has incurred substantial costs in developing the leased land, then this lease shall not expire at the end of the primary term but shall continue for a secondary term of an additional five years.

5. If, at the end of the secondary term, the lessee is producing coal at an average annual rate of either one percent of the estimated recoverable reserves from the leased lands or one percent of the estimated recoverable reserves from the logical mining unit, then this lease shall not expire but shall continue as long as the one percent production is maintained. Provided,

that, for purposes of determining if the one percent annual production has been maintained during any year after the end of the second year following the beginning of production, the annual production averaged over the previous three years, shall be used. For purposes of this paragraph, annual rates of production shall be measured from lease anniversary date to lease anniversary date.

6. In lieu of actual production at or after the end of the secondary term hereof, lessee may prevent the expiration of this lease by the timely payment of an advance royalty equal to the estimated royalty obligation which would be due if one percent of the recoverable reserves in the lands leased hereunder were produced. Payment of such advance royalty on or before a lease anniversary date will act to prevent the expiration of this lease until the next ensuing lease anniversary date; provided, that this lease shall not be extended for more than ten years by payment of advance royalties. Any credit later taken in any month for advance royalties shall not exceed fifty percent of the actual production royalty due for that month.

7. The lessee, with the written approval of the lessor, may assign or sublet this lease in whole or in part; provided, however, that no assignment of an undivided interest nor any assignment or sublease of less than a legal subdivision shall be recognized or approved by the lessor. Provided further, however, the lessee may enter into any contract for the development of the leasehold premises or any portion thereof, or may create overriding royalties or obligations payable out of production, or enter into any other agreements with respect to the development of the leasehold premises or disposition of the production therefrom, and it shall not be necessary for any such contracts, agreements, or other instruments to be approved by the lessor; but nothing herein contained shall relieve the lessee from complying with any of the terms or provisions hereof.

8. Lessee, including his heirs, assigns, agents, and contractors shall at his own expense fully comply with and conform to accepted operational standards and practices in general use in the industry and all laws, regulations, rules, ordinances, and requirements of the city, county, state, federal authorities and agencies, in all matters and things affecting the premises and operations thereon which may be enacted or promulgated under the governmental police powers pertaining to the public health and welfare, including but not limited to conservation, reclamation, sanitation, aesthetics, pollution, cultural properties, fire, and ecology. Such agencies are not to be deemed third party beneficiaries hereunder; however, this clause is enforceable by the lessor in the same manner as other covenants of this lease.

9. The lessor or his authorized representative shall have the right to enter the leased lands for the purpose of measuring the cubical contents of every opening from which coal has been extracted and to otherwise inspect the leased lands to ensure that proper royalties have been paid. The lessor or his representative shall have the right to inspect all records, books or accounts pertaining to the mining, extraction, transportation and marketing of coal produced from the leased lands and, at the request of the lessor, the lessee shall furnish contracts, reports, samples, logs, assays or cores within reasonable bounds as the lessor may determine to be necessary to the proper administration of the leased lands and this lease. In addition, lessee shall furnish annually and at such other times as the lessor may require, plats, maps, or tracings, clearly and accurately showing all development work upon the leased lands, and other related information, with a report as to all buildings, structures, or other work placed in or upon the leased lands, and a statement as to the amount and grade of coal produced and sold.

10. The value of any unpaid royalty shall become a prior lien upon the production from the leased lands and the improvements situated thereon.

11. Before commencing excavation operations or development upon the leased lands, the lessee shall execute and file with the lessor a good and sufficient bond or other appropriate surety in an amount to be fixed at that time by the lessor and based upon the approved mine plan to:

A. Guarantee the performance of all covenants and obligations under this lease, including the obligation to pay royalties;

B. Ensure that all aspects of mining operations and reclamation operations are conducted in conformity with the mine permit issued by the Mining and Minerals Division of the Energy, Minerals and Natural Resources Department pursuant to the Surface Mining Act; and

C. Ensure compensation for damage to the surface or surface improvements in the absence of an agreement between the lessee and any surface owner.

A bond filed with the Mining and Minerals division of the Energy, Minerals and Natural Resources Department pursuant to the Surface Mining Act will satisfy the requirements of Subsection B of this paragraph unless the lessor, in his discretion, determines that the bond filed with the Mining and Minerals Division is insufficient. Any bond, filed with the lessor pursuant to the provisions of this paragraph, shall be released by the lessor

upon a showing that lessee has complied with the obligations as specified in Subsections A, B and C of this paragraph.

12. Lessor may cancel this lease for nonpayment of rentals, nonpayment of royalties, or violation of any of the terms or covenants thereof; provided, however, that before any such cancellation shall be made, lessor, must mail to lessee, by registered or certified mail addressed to the post office address of the lessee shown by the lease, or by specific written notice of change of address furnished by lessee, a thirty-day notice of intention to cancel this lease, specifying the default for which the lease is subject to cancellation. No proof or receipt of notice shall be necessary and thirty days after such mailing, lessor may enter cancellation unless lessee shall have sooner remedied the default; provided, that if the violation cannot be remedied within the thirty-day period and the lessee shall have commenced operations to substantially remedy the violation within such period, the lease shall not be cancelled as long as lessee diligently pursues actions necessary to remedy the violation.

13. With the consent of the lessor this lease may be relinquished in whole or in part; provided, that the lessor will not approve any relinquishment of an undivided interest nor less than a legal subdivision. When filed and approved, such relinquishment shall be effective from the date of filing. Upon relinquishment of the lease, lessee shall be relieved from further obligations and liabilities hereunder as to the lands surrendered subject, however, to the continued obligations to: make payment of all accrued rentals and royalties; protect or restore the surface and surface resources consistent with the mine permit issued by the Mining and Minerals Division of the Energy, Minerals and Natural Resources Department; and to otherwise perform other obligations accrued under the lease.

14. Coalbed methane gas is specifically excluded and reserved from this lease, except for small incidental quantities which may have to be vented or flared to achieve access to coal. Although lessee may engage in insitu coal gasification in order to remove coal, such gasification shall not disturb or diminish commercial quantities of coalbed methane gas.

15. Lessee may make or place such improvements and equipment upon the leased land as may be reasonably necessary to explore for, mine and remove coal, and upon termination of this lease for any reason, lessee may remove such improvements and equipment as can be removed without material injury to the premises; provided, however, that all rentals and royalties have been paid and that such removal is accomplished within 180 days of the termination date. All improvements and equipment remaining upon the premises after the removal date, as set forth

in accordance with this paragraph, shall be forfeited to lessor without compensation.

16. Lessee shall not mortgage any improvements placed upon the land.

17. The State has a continuing option to purchase at any time and from time to time, at the market price prevailing in the area on the date of purchase, all or any part of the coal that will be produced from the lands covered by this lease.

18. All the obligations, covenants, agreements, rights and privileges of this lease shall extend to and be binding and inure to the benefit of the lawful and recognized assigns or successors in interest of the parties hereto.

19. Lessor reserves to itself the right to lease, sell, or otherwise dispose of the surface or other mineral deposits in the lands leased and the right to continue existing uses upon or in the leased lands, including issuing leases for mineral deposits not covered hereunder or the approval of easements or rights-of-way. Lessor shall condition such uses to prevent unnecessary or unreasonable interference with rights of lessee as may be consistent with concepts of multiple use and multiple mineral development.

20. Lessee shall be liable and agree to pay for all damage to livestock, growing crops, water or other tangible improvements on the leased lands as may be suffered by reason of development, use and occupation of the lands by lessee.

21. Any and all water rights developed on the leased lands by lessee shall be developed in the name of lessor. Lessee, at its own expense, shall comply with all regulations of, and obtain all necessary permits from, the office of the State Engineer. Lessee shall have the full and free use of such water rights for lease operations during the term of the lease. Upon expiration or termination of the lease, such water rights shall be retained by lessor. During the term of the lease, lessee shall preserve, protect and defend such water rights.

22. Lessee shall save and hold harmless, indemnify and defend the State of New Mexico, the Commissioner of Public Lands, and his agents in their official and individual capacities, of and from any and all liability claims, losses, or damages arising out of or alleged to arise out of or indirectly connected with the operations of lessee hereunder, off or on the leased lands, or the presence on said lands of any agent, contractor or subcontractor of lessee. All terms and provisions of this instrument shall be binding upon the contractors and subcontractors of lessee in like manner as the same are binding

upon lessee, and all acts and doings of said contractors and subcontractors shall be deemed and treated as the same and held responsible by lessee.

23. Lessee shall exercise reasonable diligence, care and skill in the operating of the leased lands in accordance with standard and approved mining methods and practices. Lessee shall conduct all exploration, development and mining operations in a good workmanlike manner having due regard to the health and safety of employees, the prevention of waste and the preservation of the property for further productive operations. All mining and related productive operations are to be subject to inspection by lessor or his duly authorized agent.

24. See attached stipulations, if any, hereby made part of this lease.

IN WITNESS WHEREOF, the State of New Mexico has hereunto signed and caused its name to be signed by its Commissioner of Public Lands thereunto duly authorized, with the seal of his office affixed, and the lessee has signed this agreement to be effective the day and year above written.

STATE OF NEW MEXICO

BY: Jim Boer  
COMMISSIONER OF PUBLIC LANDS  
SAN JUAN COAL COMPANY

BY: James R. Rothwell  
LESSEE/ JAMES R. ROTHWELL  
Vice President & Gen. Mgr.

(PERSONAL ACKNOWLEDGMENT) Western U. S. Mining

STATE OF \_\_\_\_\_)

COUNTY OF \_\_\_\_\_)

The foregoing instrument was acknowledged before me on this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by \_\_\_\_\_.

My Commission Expires:

\_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

(ACKNOWLEDGMENT BY CORPORATION)

STATE OF NEW MEXICO            )  
  ) ss.  
COUNTY OF SAN JUAN            )

The foregoing instrument was acknowledged before me on this 2nd day of December, 1991, by James R. Rothwell, Vice President & General Manager, of San Juan Coal Company, a Delaware corporation, on behalf of said corporation.

My Commission Expires:

5-9-92

*Beverly S. Morris*  
NOTARY PUBLIC



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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Serial Number

EXHIBIT  
E-1

NMNM 99144

COAL LEASE

PART I. LEASE RIGHTS GRANTED

This lease, entered into by and between the UNITED STATES OF AMERICA, hereinafter called lessor, through the Bureau of Land Management, a  
(Name and Address)

San Juan Coal Company  
300 W. Arrington, Suite 200  
Farmington, NM 87401

hereinafter called lessee, is effective MAR 1 2001, for a period of 20 years and for so long thereafter as coal is produced in commerc quantities from the leased lands, subject to readjustment of lease terms at the end of the 20th lease year and each 10-year period thereafter.

Sec. 1. This lease is issued pursuant and subject to the terms and provisions of the:

- Mineral Lands Leasing Act of 1920, Act of February 25, 1920, as amended, 41 Stat. 437, 30 U.S.C. 181-287, hereinafter referred to as the Act
- Mineral Leasing Act for Acquired Lands, Act of August 7, 1947, 61 Stat. 913, 30 U.S.C. 351-359;

and to the regulations and formal orders of the Secretary of the Interior which are now or hereafter in force, when not inconsistent with the expr and specific provisions herein.

Sec. 2. Lessor, in consideration of any bonuses, rents, and royalties to be paid, and the conditions and covenants to be observed as herein set fo hereby grants and leases to lessee the exclusive right and privilege to drill for, mine, extract, remove, or otherwise process and dispose of the c deposits in, upon, or under the following described lands:

- T. 30 N., R. 14 W., NMPM
- sec. 17, ALL;
- sec. 18, ALL;
- sec. 19, ALL;
- sec. 20, ALL;
- sec. 29, ALL;
- sec. 30, ALL;
- sec. 31, Lots 1-4,  
N $\frac{1}{2}$ , N $\frac{1}{2}$ S $\frac{1}{2}$ ;

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containing 4,483.88 acres, more or less, together with the right to construct such works, buildings, plants, structures, equipment and appliar and the right to use such on-lease rights-of-way which may be necessary and convenient in the exercise of the rights and privileges granted, subje the conditions herein provided.

PART II. TERMS AND CONDITIONS

Sec. 1. (a) RENTAL RATE - Lessee shall pay lessor rental annually and in advance for each acre or fraction thereof during the continuance of the lease at the rate of \$ 3.00 for each lease year.

(b) RENTAL CREDITS - Rental shall not be credited against either production or advance royalties for any year.

Sec. 2. (a) PRODUCTION ROYALTIES - The royalty shall be \* percent of the value of the coal as set forth in the regulations. Royalties are due to lessor the final day of the month succeeding the calendar month in which the royalty obligation accrues.

(b) ADVANCE ROYALTIES - Upon request by the lessee, the authorized officer may accept, for a total of not more than 10 years, the payment of advance royalties in lieu of continued operation, consistent with the regulations. The advance royalty shall be based on a percent of the value of a minimum number of tons determined in the manner established by the advance royalty regulations in effect at the time the lessee requests approval to pay advance royalties in lieu of continued operation.

Sec. 3. BONDS - Lessee shall maintain in the proper office a lease bond in the amount of \$ 14,000. The authorized officer may require an increase in this amount when additional coverage is determined appropriate.

Sec. 4. DILIGENCE - This lease is subject to the conditions of dilig development and continued operation, except that these conditions excused when operations under the lease are interrupted by strikes, elements, or casualties not attributable to the lessee. The lessor, in public interest, may suspend the condition of continued operation up payment of advance royalties in accordance with the regulations existence at the time of the suspension. Lessee's failure to produce c in commercial quantities at the end of 10 years shall terminate lease. Lessee shall submit an operation and reclamation plan pursu to Section 7 of the Act not later than 3 years after lease issuance.

The lessor reserves the power to assent to or order the suspension of terms and conditions of this lease in accordance with, inter a Section 39 of the Mineral Leasing Act, 30 U.S.C. 209.

Sec. 5. LOGICAL MINING UNIT (LMU) - Either upon approval by lessor of the lessee's application or at the direction of the lessor, t lease shall become an LMU or part of an LMU, subject to the provisi set forth in the regulations.

The stipulations established in an LMU approval in effect at the tim LMU approval will supersede the relevant inconsistent terms of t lease so long as the lease remains committed to the LMU. If the LMI which this lease is a part is dissolved, the lease shall then be subje the lease terms which would have been applied if the lease had not b included in an LMU.

\*12 $\frac{1}{2}$  percent of the value of the coal removed by surface methods or

Sec. 6. DOCUMENTS, EVIDENCE AND INSPECTION - At such times and in such form as lessor may prescribe, lessee shall furnish detailed statements showing the amounts and quality of products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost.

Lessee shall keep open at all reasonable times for the inspection of any authorized officer of lessor, the leased premises and all surface and underground improvements, works, machinery, ore stockpiles, equipment, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or under the leased lands.

Lessee shall allow lessor access to and copying of documents reasonably necessary to verify lessee compliance with terms and conditions of the lease.

While this lease remains in effect, information obtained under this section shall be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec. 7. DAMAGES TO PROPERTY AND CONDUCT OF OPERATIONS - Lessee shall comply at its own expense with all reasonable orders of the Secretary, respecting diligent operations, prevention of waste, and protection of other resources.

Lessee shall not conduct exploration operations, other than casual use, without an approved exploration plan. All exploration plans prior to the commencement of mining operations within an approved mining permit area shall be submitted to the authorized officer.

Lessee shall carry on all operations in accordance with approved methods and practices as provided in the operating regulations, having due regard for the prevention of injury to life, health, or property, and prevention of waste, damage or degradation to any land, air, water, cultural, biological, visual, and other resources, including mineral deposits and formations of mineral deposits not leased hereunder, and to other land uses or users. Lessee shall take measures deemed necessary by lessor to accomplish the intent of this lease term. Such measures may include, but are not limited to, modification to proposed siting or design of facilities, timing of operations, and specification of interim and final reclamation procedures. Lessor reserves to itself the right to lease, sell, or otherwise dispose of the surface or other mineral deposits in the lands and the right to continue existing uses and to authorize future uses upon or in the leased lands, including issuing leases for mineral deposits not covered hereunder and approving easements or rights-of-way. Lessor shall condition such uses to prevent unnecessary or unreasonable interference with rights of lessee as may be consistent with concepts of multiple use and multiple mineral development.

Sec. 8. PROTECTION OF DIVERSE INTERESTS, AND EQUAL OPPORTUNITY - Lessee shall: pay when due all taxes legally assessed and levied under the laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; restrict the workday to not more than 8 hours in any one day for underground workers, except in emergencies; and take measures necessary to protect the health and safety of the public. No person under the age of 16 years shall be employed in any mine below the surface. To the extent that laws of the State in which the lands are situated are more restrictive than the provisions in this paragraph, then the State laws apply.

Lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor. Neither lessee nor lessee's subcontractors shall maintain segregated facilities.

Sec. 15. SPECIAL STIPULATIONS -

1. The lessee shall comply at its own expense with all reasonable orders of the Secretary respecting diligent operations, prevention of waste, and protection of non-coal resources.
2. This coal lease is subject to all prior existing rights including the right of oil and gas lessees & other mineral lessees and surface users.
3. It is solely the responsibility of the coal lessee, not the responsibility of BLM, to clear the coal tract of any legal encumbrances or pre-existing land uses that would impede or prevent coal mining on the tract.

Sec. 9. (a) TRANSFERS

- This lease may be transferred in whole or in part to any person, association or corporation qualified to hold such lease interest.
- This lease may be transferred in whole or in part to another public body or to a person who will mine the coal on behalf of, and for the use of, the public body or to a person who for the limited purpose of creating a security interest in favor of a lender agrees to be obligated to mine the coal on behalf of the public body.
- This lease may only be transferred in whole or in part to another small business qualified under 13 CFR 121.

Transfers of record title, working or royalty interest must be approved in accordance with the regulations.

(b) RELINQUISHMENT - The lessee may relinquish in writing at any time all rights under this lease or any portion thereof as provided in the regulations. Upon lessor's acceptance of the relinquishment, lessee shall be relieved of all future obligations under the lease or the relinquished portion thereof, whichever is applicable.

Sec. 10. DELIVERY OF PREMISES, REMOVAL OF MACHINERY, EQUIPMENT, ETC. - At such time as all portions of this lease are returned to lessor, lessee shall deliver up to lessor the land leased, underground timbering, and such other supports and structures necessary for the preservation of the mine workings on the leased premises or deposits and place all workings in condition for suspension or abandonment. Within 180 days thereof, lessee shall remove from the premises all other structures, machinery, equipment, tools, and materials that it elects to or as required by the authorized officer. Any such structures, machinery, equipment, tools, and materials remaining on the leased lands beyond 180 days, or approved extension thereof, shall become the property of the lessor, but lessee shall either remove any or all such property or shall continue to be liable for the cost of removal and disposal in the amount actually incurred by the lessor. If the surface is owned by third parties, lessor shall waive the requirement for removal, provided the third parties do not object to such waiver. Lessee shall, prior to the termination of bond liability or at any other time when required and in accordance with all applicable laws and regulations, reclaim all lands the surface of which has been disturbed, dispose of all debris or solid waste, repair the offsite and onsite damage caused by lessee's activity or activities incidental thereto, and reclaim access roads or trails.

Sec. 11. PROCEEDINGS IN CASE OF DEFAULT - If lessee fails to comply with applicable laws, existing regulations, or the terms, conditions and stipulations of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease shall be subject to cancellation by the lessor only by judicial proceedings. This provision shall not be construed to prevent the exercise by lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver shall not prevent later cancellation for the same default occurring at any other time.

Sec. 12. HEIRS AND SUCCESSORS IN INTEREST - Each obligation of this lease shall extend to and be binding upon, and every benefit hereof shall inure to, the heirs, executors, administrators, successors, or assigns of the respective parties hereto.

Sec. 13. INDEMNIFICATION - Lessee shall hold harmless the United States from any and all claims arising out of the lessee's activities and operations under this lease.

Sec. 14. SPECIAL STATUTES - This lease is subject to the Clean Water Act (33 U.S.C. 1252 et. seq.), the Clean Air Act (42 U.S.C. 4274 et. seq.), and to all other applicable laws pertaining to exploration mining operations and reclamation, including the Surf Control and Reclamation Act of 1977 (30 U.S.C. 1201 et. seq.)

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c. 15. SPECIAL STIPULATIONS (Cont'd.) -

4. No portion of the 1998 Coal Leasing Area Resource Plan Amendment shall be construed to require BLM to act in the role of a party to mediation or mitigation efforts between mineral or surface interest holders.

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THE UNITED STATES OF AMERICA

SAN JUAN COAL COMPANY

Company or Lessee Name

  
(Signature of Lessee)

President

(Title)

February 06, 2001

(Date)

By

  
(Signing Officer)

Carsten F. Goff  
Acting, State Director

(Title)

FEB 23 2001

(Date)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

This form does not constitute an information collection as defined by 44 U.S.C. 3502 and therefore does not require OMB approval.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Land Office and Serial Number

OIL AND GAS LEASE  
(COMPETITIVE PUBLIC DOMAIN LANDS)

NM 4465

THIS INSTRUMENT OF LEASE, entered into, as of **APR - 1 1968**, by and between  
the UNITED STATES OF AMERICA, through the Bureau of Land Management, hereinafter called the lessor, and

**Dugan Production Corporation**  
P. O. Box 234  
Farmington, New Mexico 87401

hereinafter called the lessee, under, pursuant, and subject to the terms and provisions of the Act of February 25, 1920, (41 Stat. 437), as amended, (30 U.S.C. Sec. 181 *et seq.*) hereinafter referred to as the Act, and to all reasonable regulations of the Secretary of the Interior now or hereafter in force when not inconsistent with any express and specific provisions herein, which are made a part hereof.

WITNESSETH:

Sec. 1. *Rights of lessee.* That the lessor, in consideration of rents and royalties to be paid, and the conditions and covenants to be observed as herein set forth, does hereby grant and lease to the lessee the exclusive right and privilege to drill for, mine, extract, remove, and dispose of all the oil and gas deposits, except helium gas, in or under the following-described tracts of land situated in the

**San Juan** field:

**T. 30 N., R. 16 W., NMPM**  
**Sec. 27: SE 4**  
**Sec. 31: Lots 1, 2, 3, 4, N48 1/2**

FILED OR RECORDED

BOOK 695 PAGE 39  
SAN JUAN COUNTY, NEW MEXICO  
Dec. 195069-20 495  
1970 JUN 24 AM 11:18

*Archie P. ...*  
COUNTY CLERK  
*Christina L. Jones*  
PROPERTY



containing **483.88** acres, more or less, together with the right to construct and maintain thereupon all works, buildings, plants, waterways, roads, telegraph or telephone lines, pipelines, reservoirs, tanks, pumping stations, or other structures necessary to the full enjoyment thereof, for a period of five (5) years, and so long thereafter as oil or gas is produced in paying quantities; subject to any unit agreement heretofore or hereafter approved by the Secretary of the Interior, the provisions of said agreement to govern the lands subject thereto where inconsistencies with the terms of this lease occur.

Sec. 2. In consideration of the foregoing, the lessee agrees:

(a) *Bonds* (1) To maintain any bond furnished by the lessee as a condition for the issuance of this lease.

(2) To furnish prior to beginning of drilling operations and maintain at all times thereafter as required by the lessor a bond in the penal sum of \$10,000 with approved corporate surety, or with deposit of United States bonds as surety therefor, conditioned upon compliance with the terms of this lease, unless a bond of that amount is already being maintained or unless such a bond furnished by an operator of the lease is accepted, or unless a bond has been filed under 3 CFR 3126.1 applicable to this lease.

(b) *Cooperative or unit plan.* Within thirty (30) days of demand, or, if the leased land is committed to an approved unit or cooperative plan and such plan is terminated prior to the expiration of this lease, within thirty (30) days of demand made thereafter, to subscribe and to operate under such reasonable cooperative or unit plan for the development and operation of the area, field, or pool, or part thereof, embracing the lands included herein as the Secretary of the Interior may then determine to be practicable and necessary or advisable,

which plan shall adequately protect the rights of all parties in interest, including the United States.

(c) *Wells.* (1) To drill and produce all wells necessary to protect the leased land from drainage by wells on lands not the property of the lessor, or lands of the United States leased at a lower royalty rate, or as to which the royalties and rentals are paid into different funds than are those of this lease; or in lieu of any part of such drilling and production, with the consent of the Director of the Geological Survey, to compensate the lessor, in full, each month for the estimated loss of royalty through drainage in the amount determined by said Director.

(2) At the election of the lessee, to drill and produce other wells in conformity with any system of well spacing or production allotments affecting the field or area in which the leased lands are situated, which is authorized and sanctioned by applicable law or by the Secretary of the Interior.

(3) Promptly after due notice, in writing, to drill and produce such other wells as the Secretary of the Interior may reasonably require in order that the leased premises may be properly and timely developed and produced in accordance with good operating practice.

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(d) *Rentals and royalties.* (1) To pay rentals and royalties in amount or value of production removed or sold from the leased lands as set forth in the rental and royalty schedule attached to and made a part hereof.

(2) It is expressly agreed that the Secretary of the Interior may establish reasonable minimum values for purposes of computing royalty on any or all oil, gas, natural gasoline, and other products obtained from gas, due consideration being given to the highest price paid for a part or for a majority of production of like quality in the same field, to the price received by the lessee, to posted prices, and to other relevant matters and, whenever appropriate, after notice and opportunity to be heard.

(3) When paid in value, such royalties on production shall be due and payable monthly on the last day of the month next following the month in which produced. When paid in amount of production, such royalty products shall be delivered in merchantable condition on the premises where produced without cost to lessor, unless otherwise agreed to by the parties hereto, at such times and in such tanks provided by the lessee as reasonably may be required by the lessor, but in no case shall the lessee be required to hold such royalty oil or other products in storage beyond the last day of the month next following the month in which produced nor be responsible or held liable for the loss or destruction of royalty oil or other products in storage from causes over which he has no control.

(4) Rentals or minimum royalties may be waived, suspended, or reduced; and royalties on the entire leasehold or any portion thereof segregated for royalty purposes may be reduced if the Secretary of the Interior finds that, for the purpose of encouraging the the greatest ultimate recovery of oil or gas and in the interest of conservation of natural resources, it is necessary, in his judgment, to do so in order to promote development, or because the lease cannot be successfully operated under the terms fixed herein.

(e) *Payments.* Unless otherwise directed by the Secretary of the Interior, to make rental, royalty; or other payments to the lessor, to the order of the Bureau of Land Management at the places mentioned in the regulation 43 CFR 3102.2. If there is no well on the leased lands capable of producing oil or gas in paying quantities, the failure to pay rental on or before the anniversary date shall automatically terminate the lease by operation of law. However, if the time for payment falls on a day in which the proper Land Office to receive payment is closed, payment shall be deemed timely if made on the next official working day.

(f) *Contracts for disposal of products.* To file with the Oil and Gas Supervisor of the Geological Survey not later than thirty (30) days after the effective date thereof any contract, or evidence of other arrangement for the sale or disposal of oil, gas, natural gasoline, and other products of the leased land: *Provided, That* nothing in any such contract or other arrangement shall be construed as modifying any of the provisions of this lease, including, but not limited to, provisions relating to gas waste, taking royalty in kind, and the method of computing royalties due as based on a minimum valuation and in accordance with the Oil and Gas Operating Regulations.

(g) *Statements, plats, and reports.* At such times and in such form as the lessor may prescribe, to furnish detailed statements showing the amounts and quality of all products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost; a plat showing development work and improvements on the leased lands; and a report with respect to stockholders, investments, depreciation, and costs.

(h) *Well records.* To keep a daily drilling record, a log, and complete information on all well surveys and tests in form acceptable to or prescribed by the lessor of all wells drilled on the leased lands,

and an acceptable record of all subsurface investigations affecting said lands, and to furnish them, copies thereof, to the lessor when required. All information obtained under this paragraph, upon the request of lessor, shall not be open to inspection by the public until the expiration of the lease.

(i) *Inspection.* To keep open at all reasonable times for the inspection of any duly authorized office of the Department, the leased premises and all wells improvements, machinery, and fixtures thereon and all books, accounts, maps and records relative to operations and surveys or investigations on the leased lands under the lease. All information obtained pursuant to any such inspection, upon the request of the lessee shall not be open to inspection by the public until the expiration of the lease.

(j) *Diligence, prevention of waste, health and safety of workmen.* To exercise reasonable diligence in drilling and producing the wells herein provided for unless consent to suspend operations temporarily is granted by the lessor; to carry on all operations in accordance with approved methods and practices as provided in the Oil and Gas Operating Regulations, having due regard for the prevention of waste of oil or gas or damage to deposits or formations containing oil, gas, or water or to coal measures or other mineral deposits, for conservation of gas energy, for the preservation and conservation of the property for future productive operations, and for the health and safety of workmen and employees; to plug properly and effectively all wells drilled in accordance with the provisions of this lease or of any prior lease or permit upon which the right to this lease was predicated before abandoning the same; to carry out at expense of the lessee all reasonable orders of the lessor relative to the matters in this paragraph, and that on failure of the lessee so to do the lessor shall have the right to enter on the property and to accomplish the purpose of such orders at the lessee's cost: *Provided, That* the lessee shall not be held responsible for delays or casualties occasioned by causes beyond lessee's control.

(k) *Taxes and wages, freedom of purchase.* To pay when due, all taxes lawfully assessed and levied under the laws of the State or the United States upon improvements, oil and gas produced from the lands hereunder, or other rights, property or assets of the lessee; to accord all workmen and employees complete freedom of purchase, and to pay all wages due workmen and employees at least twice each month in the lawful money of the United States.

(l) *Equal Opportunity clause.* During the performance of this contract the lessee agrees as follows:

(1) The lessee will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The lessee will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The lessee agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The lessee will, in all solicitations or advertisements for employees placed by or on behalf of the lessee, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

(3) The lessee will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by

the agency contracting officer, advising the labor union or workers' representative of the lessee's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The lessee will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the lessee's noncompliance with the nondiscrimination clauses of this contract or with any such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the lessee may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The lessee will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The lessee will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the lessee becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the lessee may request the United States to enter into such litigation to protect the interests of the United States.

(m) *Assignment of oil and gas lease or interest therein.* As required by applicable law, to file for approval by the lessor any instrument of transfer made of this lease or any interest therein, including assignments of record title, operating agreements and subleases, working or royalty interests, within ninety (90) days from the date of final execution thereof.

(n) *Pipelines to purchase or convey at reasonable rates and without discrimination.* If owner, or operator, or owner of a controlling interest in any pipeline or of any company operating the same which may be operated accessible to the oil or gas derived from lands under this lease, to accept and convey and, if a purchaser of such products, to purchase at reasonable rates and without discrimination the oil or gas of the Government or of any citizen or company not the owner of any pipeline, operating a lease or purchasing or selling oil, gas, natural gasoline, or other products under the provisions of the Act, or under the provisions of the Act of August 7, 1947 (61 Stat. 913; 30 U.S.C. 351).

(o) *Lands patented with oil and gas deposits reserved to the United States.* To comply with all statutory requirements and regulations thereunder, if the lands embraced herein have been or shall hereafter be disposed of under the laws reserving to the United States the deposits of oil and gas therein, subject to such conditions as are or may hereafter be provided by the laws reserving such oil or gas.

(p) *Reserved or segregated lands.* If any of the land included in this lease is embraced in a reservation

or segregated for any particular purpose, to conduct operations thereunder in conformity with such requirements as may be made by the Director, Bureau of Land Management, for the protection and use of the land the purpose for which it was reserved or segregated so far as may be consistent with the use of the land for the purpose of this lease, which latter shall be regarded as the dominant use unless otherwise provided herein or separately stipulated.

(q) *Protection of surface, natural resources, and improvements.* To take such reasonable steps as may be needed to prevent operations on the leased lands from unnecessarily: (1) causing or contributing to soil erosion or damaging crops, including forage, and timber grow thereon or on Federal or non-Federal lands in the vicinity; (2) polluting air and water; (3) damaging improvements owned by the United States or other parties; (4) destroying, damaging or removing fossils, historic prehistoric ruins, or artifacts; and upon any partial total relinquishment of title, cancellation or expiration of this lease, or at any other time prior thereto when required and to the extent deemed necessary by the lessor to fill any pits, ditches and other excavations remove or cover all debris, and so far as reasonably possible, restore the surface of the leased land or access roads to their former condition, including the removal of structures as and if required. The lessor may prescribe the steps to be taken and restoration to be made with respect to the leased lands and improvements thereon whether or not owned by the United States.

(r) *Overriding royalties.* Not to create overriding royalties in excess of five percent except as otherwise authorized by the regulations.

(s) *Deliver premises in case of forfeiture.* To deliver up to the lessor in good order and condition the land leased including all improvements which are necessary for the preservation of producing wells.

### Sec. 3. The lessor reserves:

(b) *Easements and rights-of-way.* The right to permit for joint or several use easements or rights-of-way, including easements in tunnels upon, through or in the lands leased, occupied, or used as may be necessary or appropriate to the working of the same as of other lands containing the deposits described in the Act, and the treatment and shipment of products therefrom by or under authority of the Government, its lessees or permittees, and for other public purposes.

(b) *Disposition of surface.* The right to lease, sell, or otherwise dispose of the surface of the leased lands under existing law or laws hereafter enacted, insofar as said surface is not necessary for the use of the lessee in the extraction and removal of the oil and gas therein, or to dispose of any resource in such land which will not unreasonably interfere with operations under this lease.

(c) *Monopoly and fair prices.* Full power and authority to promulgate and enforce all orders necessary to insure the sale of the production of the leased lands to the United States and to the public at reasonable prices, to protect the interests of the United States, to prevent monopoly, and to safeguard the public welfare.

(d) *Helium.* Pursuant to Sec. 1 of the Act, as amended, the ownership and the right to extract helium from all gas produced under this lease, subject to such rules and regulations as shall be prescribed by the Secretary of the Interior. In case the lessor elects to take the helium, the lessee shall deliver all gas containing same, or portion thereof desired, to the lessor at any point on the leased premises in the manner required by the lessor, for the extraction of the helium in such plant or reduction works for that purpose as the lessor may provide, whereupon the residue shall be returned to the lessee with no substantial duty in the delivery of gas produced from the well to the purchaser thereof. The lessee shall not suffer a diminution of value of the gas from which the helium has been extracted, or loss otherwise, for which he is not reasonably compensated, save for the value of the helium extracted. The lessor further reserves the right to erect, maintain, and operate any and all reduction works, and other equipment necessary for the extraction of helium on the premises leased.

SENT BY FARMINGTON N.M.

11-8-1 : 10:39 : DUGAN PRODUCTION -

303 830 8009:# 6/ 6

Form 3120-9  
(February 1965)  
(formerly 4-1691a & b)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RENTALS AND ROYALTIES FOR OIL AND GAS LEASES

SCHEDULE "A" - NONCOMPETITIVE

RENTALS. To pay the lessor in advance on or before the first day of the month in which the lease issues a rental at the following rates:

- a. If the lands are wholly outside the known geologic structure of a producing oil or gas field: 50 cents per acre or fraction thereof for each lease year.
- b. On leases wholly or partly within the geologic structure of a producing oil or gas field:
  - 1. If not committed to a cooperative or unit plan which includes a well capable of producing oil or gas and contains a general provision for allocation of production beginning with the first lease year after 30 days' notice that all or part of the land is included in such a structure and for each year thereafter, prior to a discovery of oil or gas on the lands herein, \$2 per acre or fraction thereof.

- 2. On the lands committed to an approved cooperative or unit plan which includes a well capable of producing oil or gas and contains a general provision for allocation of production, for the lands not within the participating area an annual rental of 50 cents per acre or fraction thereof each lease year following discovery.

MINIMUM ROYALTY. To pay the lessor in lieu of rental at the expiration of each lease year after discovery a minimum royalty of \$1 per acre or, if there is production, the difference between the actual royalty paid during the year and the prescribed minimum royalty of \$1 per acre, provided that on unutilized leases, the minimum royalty shall be payable only on the participating acreage.

ROYALTY ON PRODUCTION. To pay the lessor 12 1/2 percent royalty on the production removed or sold from the leased lands.

SCHEDULE "B" - COMPETITIVE

ROYALTY ON PRODUCTION. To pay the lessor the following royalty on production removed or sold from the leased lands.

- 1. When the average production for the month in barrels per well per day is:

OVER	NOT OVER	PERCENT OF ROYALTY	OVER	NOT OVER	PERCENT OF ROYALTY
	50	12.5	130	150	19
50	60	13	150	200	20
60	70	14	200	250	21
70	80	15	250	300	22
80	90	16	300	350	23
90	110	17	350	400	24
110	130	18	400		25

- 2. On gas, including inflammable gas, helium, carbon dioxide and all other natural gases and mixtures thereof, and on natural or casinghead gasoline and

other liquid products obtained from gas; when the average production of gas per well per day for the month does not exceed 5,000,000 cubic feet, 12-1/2 percent; and when said production of gas exceeds 5,000,000 cubic feet, 16-2/3 percent of the amount or value of the gas and liquid products produced, said amount or value of such liquid products to be net after an allowance for the cost of manufacture.

MINIMUM ROYALTY. To pay the lessor in lieu of rental at the expiration of each lease year after discovery a minimum royalty of \$1 per acre or, if there is production, the difference between the actual royalty paid during the year and the prescribed minimum royalty of \$1 per acre, provided that on unutilized leases, the minimum royalty shall be payable only on the participating acreage.

RENTALS. To pay the lessor in advance on or before the first day of the month in which the lease issued and for each lease year thereafter prior to a discovery of oil or gas on the leased lands, an annual rental of \$2 per acre or fraction thereof.

NOTICE

The average production per well per day for oil and gas shall be determined pursuant to 30 CFR, Part 221, "Oil and Gas Operating Regulations."

In determining the amount or value of gas and liquid products produced, the amount or value shall be net after an allowance for the cost of manufacture. The allowance for cost of manufacture may exceed two-thirds of the amount or value of any product only on approval by the Secretary of the Interior.

**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
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**01 02-25-1920;041STAT0437;30USC181ETSEQ**  
**Case Type 311211: O&G LSE SIMO PUBLIC LAND**  
**Commodity 459: OIL & GAS L**  
**Case Disposition: AUTHORIZED**

**Total Acres**  
**1,840.000**

**Serial Number**  
**NMNM-- - 019163**

**Serial Number: NMNM-- - 019163**

Name & Address			Int Rel	% Interest
DUGAN PRODUCTION CORP	PO BOX 420	FARMINGTON NM 87499	OPERATING RIGHTS	0.000000000
QUESTAR EXPL & PROD CO	1331 17TH ST #800	DENVER CO 80202	LESSEE	100.000000000
RICHARDSON PRODUCTION CO	1700 LINCOLN #1700	DENVER CO 80203	OPERATING RIGHTS	0.000000000

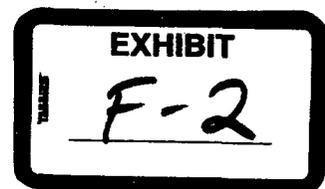
**Serial Number: NMNM-- - 019163**

Mer Twp	Rng	Sec	STyp	SNr SUFF	Subdivision	District/Resource Area	County	Mgmt Agency
23 0300N	0140W	017	ALIQ		ALL;	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT
23 0300N	0140W	018	ALIQ		SE,S2SW;	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT
23 0300N	0140W	019	ALIQ		ALL;	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT
23 0300N	0140W	020	ALIQ		W2;	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT

**Serial Number: NMNM-- - 019163**

Act Date	Code	Action	Action Remarks	Pending Office
07/22/1973	387	CASE ESTABLISHED	SPAR25;	
07/23/1973	888	DRAWING HELD		
09/10/1973	237	LEASE ISSUED		
10/01/1973	496	FUND CODE	05;145003	
10/01/1973	530	RLTY RATE - 12 1/2%		
10/01/1973	868	EFFECTIVE DATE		
10/01/1973	909	BOND ACCEPTED	EFF 05/01/67;NM0140	
06/30/1981	500	GEOGRAPHIC NAME	UNDEFINED FLD;	
06/30/1981	510	KMA CLASSIFIED		
02/24/1982	315	RENTAL RATE DET/ADJ	\$2.00;	
04/30/1982	140	ASGN FILED	MTN FUEL/CELSIUS	
05/19/1982	139	ASGN APPROVED	EFF 05/01/82;	
01/10/1983	512	KMA EXPANDED		
01/10/1983	650	HELD BY PROD - ACTUAL		
01/10/1983	658	MEMO OF 1ST PROD-ACTUAL	CA NMA-011, #1	CLB
04/13/1983	932	TRF OPER RGTS FILED		
05/16/1983	933	TRF OPER RGTS APPROVED	EFF 05/01/83;	
07/18/1983	512	KMA EXPANDED		
08/02/1983	246	LEASE COMMITTED TO CA	NMA-0011 EFF 11/15/82	
10/19/1983	932	TRF OPER RGTS FILED		
11/29/1983	102	NOTICE SENT-PROD STATUS		
12/14/1983	658	MEMO OF 1ST PROD-ACTUAL	CA NMA-069, #1	CLB
01/05/1984	512	KMA EXPANDED		
02/06/1984	933	TRF OPER RGTS APPROVED	EFF 11/01/83;	
09/26/1987	974	AUTOMATED RECORD VERIF		MLM/CB
10/20/1988	963	CASE MICROFILMED	CNUM 106,530	
03/30/1989	575	APD FILED		
04/07/1989	575	APD FILED		
05/16/1989	576	APD APPROVED	3 TURKS TOAST	NRK
06/02/1989	576	APD APPROVED	4 TURKS TOAST	NRK
11/06/1989	932	TRF OPER RGTS FILED	CELSIUS ENE/DUGAN	
12/19/1989	933	TRF OPER RGTS APPROVED	EFF 12/01/89;	
12/19/1989	974	AUTOMATED RECORD VERIF		TF/MT
03/19/1990	932	TRF OPER RGTS FILED	CELSIUS ENE/DUGAN	
05/18/1990	933	TRF OPER RGTS APPROVED	EFF 04/01/90;	
05/18/1990	974	AUTOMATED RECORD VERIF		GLC/MT

*Application of Richardson Operating Co.  
Record on Appeal, 1331.*



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06/18/1994	933	TRF OPER RGTS APPROVED	EFF 04/01/94;
05/11/1998	575	APD FILED	RICHARDSON OPERATING
05/20/1998	576	APD APPROVED	20-1 WF FEDERAL LB
05/19/1999	817	MERGER RECOGNIZED	CELSIUS/QUESTAR EXPL
05/19/1999	974	AUTOMATED RECORD VERIF	AT
01/24/2000	932	TRF OPER RGTS FILED	QUESTAR/RICHARDSON
03/21/2000	933	TRF OPER RGTS APPROVED	EFF 02/01/00;
03/21/2000	974	AUTOMATED RECORD VERIF	JLV
05/02/2000	575	APD FILED	RICHARDSON OPERATING
05/31/2000	576	APD APPROVED	4 WF FEDERAL 20

Line Nr Remarks

Serial Number: NMNM-- - 019163

0002	03/21/2000 - BONDED OPERATOR
0003	DUGAN PROD CO - NM0140 SW/NM
0004	RICHARDSON OPERATING - NM1711 SW/NM

*Application of Richardson Operating  
Co.  
Record on Appeal, 1332.*

**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
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**01 12-22-1987;101STAT1330;30USC181 ET SE**  
**Case Type 312021: O&G LSE COMP PD -1987**  
**Commodity 459: OIL & GAS L**  
**Case Disposition: AUTHORIZED**

**Total Acres**  
**480.000**

**Serial Number**  
**NMNM-- - 097841**

**Serial Number: NMNM-- - 097841**

Name & Address			Int Rel	% Interest
RICHARDSON PRODUCTION CO	1700 LINCOLN #1700	DENVER CO 80203	LESSEE	100.000000000

**Serial Number: NMNM-- - 097841**

Mer Twp Rng Sec	STyp SNr Suff	Subdivision	District/Resource Area	County	Mgmt Agency
23 0300N 0140W 020	ALIQ	SE;	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT
23 0300N 0140W 027	ALIQ	N2;	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT

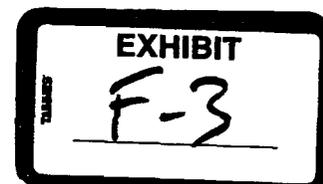
**Serial Number: NMNM-- - 097841**

Act Date	Code	Action	Action Remarks	Pending Office
10/15/1996	387	CASE ESTABLISHED	9610020	
10/16/1996	191	SALE HELD		
10/16/1996	267	BID RECEIVED	\$38400.00;	
10/16/1996	392	MONIES RECEIVED	\$960.00;	
10/29/1996	392	MONIES RECEIVED	\$37440.00;	
11/06/1996	237	LEASE ISSUED		
11/06/1996	974	AUTOMATED RECORD VERIF	AT	
12/01/1996	496	FUND CODE	05;145003	
12/01/1996	530	RLTY RATE - 12 1/2%		
12/01/1996	868	EFFECTIVE DATE		
12/06/1996	084	RENTAL RECEIVED BY MMS	\$720.00;11/MULTIPLE	
03/20/1997	963	CASE MICROFILMED		
11/18/1997	084	RENTAL RECEIVED BY MMS	\$720.00;21/0000000222	
11/09/1998	084	RENTAL RECEIVED BY MMS	\$720.00;21/0000000238	
11/24/1999	084	RENTAL RECEIVED BY MMS	\$720.00;21/24	
01/24/2000	575	APD FILED	RICHARDSON OPER CO	
03/02/2000	576	APD APPROVED	3 WF FEDERAL 20	
09/21/2000	650	HELD BY PROD - ACTUAL	WF FEDERAL 20 #3	
09/21/2000	658	MEMO OF 1ST PROD-ACTUAL	/1/WF FEDERAL 20 #3	
10/12/2000	575	APD FILED	RICHARDSON OPER CO	PETROLEUM MANAGEMENT T
11/22/2000	084	RENTAL RECEIVED BY MMS	\$719.50;23/286	
02/20/2001	084	RENTAL RECEIVED BY MMS	\$0.50;22/293	
08/08/2001	643	PRODUCTION DETERMINATION	/1/	

Line Nr	Remarks	Serial Number: NMNM-- - 097841
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*Application of Richardson Operating Co.*  
 Record on Appeal, 1333.

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**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
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**01 12-22-1987;101STAT1330;30USC181 ET SE**  
**Case Type 312021: O&G LSE COMP PD -1987**  
**Commodity 459: OIL & GAS L**  
**Case Disposition: AUTHORIZED**

**Total Acres**  
**1,120.000**

**Serial Number**  
**NMNM-- - 097843**

**Serial Number: NMNM-- - 097843**

Name & Address		Int Rel	% Interest
ABO PETROLEUM CORP	105 S 4TH ST	ARTESIA NM 88210	LESSEE 20.00000000
MYCO INDUSTRIES INC	PO BOX 840	ARTESIA NM 882020840	LESSEE 20.00000000
RICHARDSON PRODUCTION CO	1700 LINCOLN #1700	DENVER CO 80203	OPERATING RIGHTS 0.00000000
YATES DRILLING CO	105 S 4TH ST	ARTESIA NM 88210	LESSEE 20.00000000
YATES PETROLEUM CORP	105 S 4TH ST	ARTESIA NM 88210	LESSEE 40.00000000

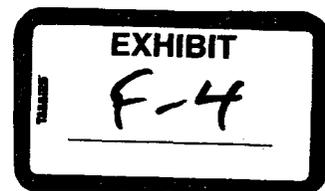
**Serial Number: NMNM-- - 097843**

Mer Twp	Rng	Sec	STyp	SNr	Suff	Subdivision	District/Resource Area	County	Mgmt Agency
23 0300N	0140W	028	ALL			ENTIRE SECTION	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT
23 0300N	0140W	029	ALIQ			NW,S2;	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT

**Serial Number: NMNM-- - 097843**

Act Date	Code	Action	Action Remarks	Pending Office
10/15/1996	387	CASE ESTABLISHED	9610022	
10/16/1996	191	SALE HELD		
10/16/1996	267	BID RECEIVED	\$70560.00;	
10/16/1996	392	MONIES RECEIVED	\$70560.00;	
11/06/1996	237	LEASE ISSUED		
11/06/1996	974	AUTOMATED RECORD VERIF	AT	
12/01/1996	496	FUND CODE	05;145003	
12/01/1996	530	RLTY RATE - 12 1/2%		
12/01/1996	868	EFFECTIVE DATE		
12/06/1996	084	RENTAL RECEIVED BY MMS	\$1680.00;11/MULTIPLE	
03/20/1997	963	CASE MICROFILMED	1	
10/16/1997	084	RENTAL RECEIVED BY MMS	\$1680.00;21/000000077	
10/19/1998	084	RENTAL RECEIVED BY MMS	\$1680.00;21/000000083	
03/01/1999	246	LEASE COMMITTED TO CA	NMNM102966;	
03/09/1999	651	HELD BY PROD - ALLOCATED		
03/09/1999	660	MEMO OF 1ST PROD-ALLOC	/1/NM102966;FEDWF29#1	
03/19/1999	575	APD FILED	RICHARDSON OPER CO	
04/19/1999	576	APD APPROVED	1 WF FEDERAL 28	
07/06/1999	575	APD FILED	RICHARDSON OPER CO	
08/06/1999	576	APD APPROVED	2 WF FEDERAL 28	
10/22/1999	084	RENTAL RECEIVED BY MMS	\$1680;21/900	
11/19/1999	643	PRODUCTION DETERMINATION	/1/	
11/22/1999	575	APD FILED	RICHARDSON OPER CO	
11/30/1999	932	TRF OPER RGTS FILED	(1)YATES/RICHARDSON	
11/30/1999	932	TRF OPER RGTS FILED	(2)YATES/RICHARDSON	
12/13/1999	933	TRF OPER RGTS APPROVED	01EFF 12/01/99;	
12/13/1999	933	TRF OPER RGTS APPROVED	02EFF 12/01/99;	
12/13/1999	974	AUTOMATED RECORD VERIF	LR	
12/21/1999	576	APD APPROVED	2 WF FEDERAL 29	
06/22/2000	932	TRF OPER RGTS FILED	(1)YATES/RICHARDSON	
06/22/2000	932	TRF OPER RGTS FILED	(2)YATES/RICHARDSON	
08/07/2000	933	TRF OPER RGTS APPROVED	01EFF 07/01/00;	
08/07/2000	933	TRF OPER RGTS APPROVED	02EFF 07/01/00;	
08/07/2000	974	AUTOMATED RECORD VERIF	MV/MV	
08/24/2000	575	APD FILED	/2/RICHARDSON OPER CO	
08/24/2000	575	APD FILED	RICHARDSON OPER CO	

*Application of Richardson Operating Co.  
Record on Appeal, 1334.*



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BUREAU OF LAND MANAGEMENT  
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09/21/2000	575	APD FILED	/2/RICHARDSON OPER CO
09/21/2000	575	APD FILED	RICHARDSON OPER CO
10/27/2000	576	APD APPROVED	3 WF FEDERAL 28
10/27/2000	576	APD APPROVED	3 WF FEDERAL 29
10/27/2000	576	APD APPROVED	4 WF FEDERAL 28
10/27/2000	576	APD APPROVED	4 WF FEDERAL 29
07/09/2001	932	TRF OPER RGTS FILED	(1)YATES/RICHARDSON
07/09/2001	932	TRF OPER RGTS FILED	(2)YATES/RICHARDSON
07/09/2001	932	TRF OPER RGTS FILED	(3)YATES/RICHARDSON
07/09/2001	932	TRF OPER RGTS FILED	(4)YATES/RICHARDSON
07/09/2001	932	TRF OPER RGTS FILED	(5)YATES/RICHARDSON
07/09/2001	932	TRF OPER RGTS FILED	(6)YATES/RICHARDSON
08/09/2001	933	TRF OPER RGTS APPROVED	01EFF 08/01/01;
08/09/2001	933	TRF OPER RGTS APPROVED	02EFF 08/01/01;
08/09/2001	933	TRF OPER RGTS APPROVED	03EFF 08/01/01;
08/09/2001	933	TRF OPER RGTS APPROVED	04EFF 08/01/01;
08/09/2001	933	TRF OPER RGTS APPROVED	05EFF 08/01/01;
08/09/2001	933	TRF OPER RGTS APPROVED	06EFF 08/01/01;
08/09/2001	974	AUTOMATED RECORD VERIF	JLV

Line Nr Remarks

Serial Number: NMNM-- - 097843

*Application of Richardson Operating  
Co.  
Record on Appeal, 1335.*

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**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
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**01 12-22-1987;101STAT1330;30USC181 ET SE**  
**Case Type 312021: O&G LSE COMP PD -1987**  
**Commodity 459: OIL & GAS L**  
**Case Disposition: AUTHORIZED**

**Total Acres**  
160.000

**Serial Number**  
NMNM-- - 097844

**Serial Number: NMNM-- - 097844**

Name & Address		Int Rel	% Interest
ABO PETROLEUM CORP	105 S 4TH ST	ARTESIA NM 88210	LESSEE 20.000000000
MYCO INDUSTRIES INC	PO BOX 840	ARTESIA NM 882020840	LESSEE 20.000000000
RICHARDSON PRODUCTION CO	1700 LINCOLN #1700	DENVER CO 80203	OPERATING RIGHTS 0.000000000
YATES DRILLING CO	105 S 4TH ST	ARTESIA NM 88210	LESSEE 20.000000000
YATES PETROLEUM CORP	105 S 4TH ST	ARTESIA NM 88210	LESSEE 40.000000000

**Serial Number: NMNM-- - 097844**

Mer Twp	Rng	Sec	STyp	SNr	Suff	Subdivision	District/Resource Area	County	Mgmt Agency
23	0300N	0140W	029	ALIQ		NE;	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT

**Serial Number: NMNM-- - 097844**

Act Date	Code	Action	Action Remarks	Pending Office
10/15/1996	387	CASE ESTABLISHED	9610023	
10/16/1996	191	SALE HELD		
10/16/1996	267	BID RECEIVED	\$9760.00;	
10/16/1996	392	MONIES RECEIVED	\$9760.00;	
11/06/1996	237	LEASE ISSUED		
11/06/1996	974	AUTOMATED RECORD VERIF	AT	
12/01/1996	496	FUND CODE	05;145003	
12/01/1996	530	RLTY RATE - 12 1/2%		
12/01/1996	868	EFFECTIVE DATE		
12/06/1996	084	RENTAL RECEIVED BY MMS	\$240.00;11/MULTIPLE	
03/20/1997	963	CASE MICROFILMED		
10/16/1997	084	RENTAL RECEIVED BY MMS	\$240.00;21/0000000779	
10/19/1998	084	RENTAL RECEIVED BY MMS	\$240.00;21/0000000838	
11/18/1998	575	APD FILED	RICHARDSON OPER CO	PETROLEUM MANAGEMENT T
03/01/1999	246	LEASE COMMITTED TO CA	NMNM102966;	
03/09/1999	650	HELD BY PROD - ACTUAL		
03/09/1999	658	MEMO OF 1ST PROD-ACTUAL	/1/NM102966;FEDWF29#1	
10/22/1999	084	RENTAL RECEIVED BY MMS	\$240.00;21/900	
11/19/1999	643	PRODUCTION DETERMINATION	/1/	
11/30/1999	932	TRF OPER RGTS FILED	YATES/RICHARDSON	
12/30/1999	933	TRF OPER RGTS APPROVED	EFF 12/01/99;	
12/30/1999	974	AUTOMATED RECORD VERIF	JLV	

Line Nr Remarks

**Serial Number: NMNM-- - 097844**

*Application of Richardson Operating Co.  
Record on Appeal, 1336.*

NO WARRANTY IS MADE BY BLM  
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PURPOSES NOT INTENDED BY BLM



**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
CASE RECORDATION  
(MASS) Serial Register Page**

Date/Time: 09/17/01 01:16 PM

Page 1 of 1

✓ 12-22-1987;101STAT1330;30USC181 ET SE  
Case Type 312021: O&G LSE COMP PD -1987  
Commodity 459: OIL & GAS L  
Case Disposition: AUTHORIZED

Total Acres  
960.000

Serial Number  
NMNM-- - 099003

Serial Number: NMNM-- - 099003

Name & Address			Int Rel	% Interest
ABO PETROLEUM CORP	105 S 4TH ST	ARTESIA NM 88210	LESSEE	20.00000000
MYCO INDUSTRIES INC	PO BOX 840	ARTESIA NM 882020840	LESSEE	20.00000000
RICHARDSON PRODUCTION CO	1700 LINCOLN #1700	DENVER CO 80203	OPERATING RIGHTS	0.00000000
YATES DRILLING CO	105 S 4TH ST	ARTESIA NM 88210	LESSEE	20.00000000
YATES PETROLEUM CORP	105 S 4TH ST	ARTESIA NM 88210	LESSEE	40.00000000

Serial Number: NMNM-- - 099003

Mer Twp	Rng	Sec	S Typ	SNr	Suff	Subdivision	District/Resource Area	County	Mgmt Agency
23 0300N	0140W	030	ALL			ENTIRE SECTION	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT
23 0300N	0140W	031	ALIQ			N2;	FARMINGTON	SAN JUAN	BUREAU OF LAND MGMT

Serial Number: NMNM-- - 099003

Act Date	Code	Action	Action Remarks	Pending Office
07/16/1997	191	SALE HELD		
07/16/1997	267	BID RECEIVED	\$35520.00;	
07/16/1997	392	MONIES RECEIVED	\$35520.00;	
'04/1997	237	LEASE ISSUED		
04/1997	974	AUTOMATED RECORD VERIF	BCO	
08/07/1997	600	RECORDS NOTED		
09/01/1997	496	FUND CODE	05;145003	
09/01/1997	530	RLTY RATE - 12 1/2%		
09/01/1997	868	EFFECTIVE DATE		
09/10/1997	084	RENTAL RECEIVED BY MMS	\$1440.00;11/MULTIPLE	
05/06/1998	575	APD FILED	RICHARDSON OPERATING	
05/15/1998	576	APD APPROVED	30-1 WF FEDERAL	
06/02/1998	963	CASE MICROFILMED		
07/15/1998	084	RENTAL RECEIVED BY MMS	\$1440.00;21/000000082	
03/29/1999	932	TRF OPER RGTS FILED	YATES ETAL/RICHARDSON	
04/13/1999	933	TRF OPER RGTS APPROVED	EFF 04/01/99;	
04/13/1999	974	AUTOMATED RECORD VERIF	JLV	
05/12/1999	650	HELD BY PROD - ACTUAL		
05/12/1999	658	MEMO OF 1ST PROD-ACTUAL	/1/#30-1 WF FEDERAL	
07/26/1999	084	RENTAL RECEIVED BY MMS	\$1,440.00;21/00000008	
12/07/1999	643	PRODUCTION DETERMINATION	/1/	
03/28/2000	575	APD FILED	RICHARDSON OPER CO	
05/24/2000	576	APD APPROVED	2 WF FEDERAL 30	

Line Nr Remarks

Serial Number: NMNM-- - 099003

Application of Richardson Operating  
Co.  
Record on Appeal, 1337.

NO WARRANTY IS MADE BY BLM  
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PURPOSES NOT INTENDED BY BLM



FORM 15-ORIGINAL  
LEASE NO. E-3150

APPLICATION NO. E-3150

OIL AND GAS LEASE

THIS AGREEMENT, dated this the 10th day of December, A. D. 1949, made and entered into by and between the STATE OF NEW MEXICO, acting by and through the undersigned, its Commissioner of Public Lands, therunto duly authorized, party of the first part and hereinafter called the "Lessor," and John Burroughs, party of the second part, hereinafter called the "Lessee," whether one or more,

WITNESSETH:

WHEREAS, the said lessee has filed in the office of the Commissioner of Public Lands an application for an oil and gas lease covering the lands hereinafter described and has tendered therewith the required first payment being not less than the amount required by law and by the rules and regulations of the New Mexico State Land Office; and

WHEREAS, all of the requirements of law relative to said application and tender have been duly complied with and said application has been approved and allowed by the Commissioner of Public Lands;

THEREFORE, for and in consideration of the premises as well as the sum of Twenty nine thousand two hundred sixty one dollars fifty one cents (\$ 29,261.51) Dollars, the same being the amount of the tender above mentioned, paid in cash, and evidenced by official receipt No. C-20470 and of the further sum of \$ 5.00 filing fee, and of the covenants and agreements hereinafter contained in the part of the lessee to be paid, kept and performed, the said lessor has granted and demised, leased and let, and by these presents does grant, demise, lease and let unto the said lessee, exclusively, for the sole and only purpose of exploration, development and production of oil and/or gas thereon and therefrom with the right to own all oil and gas so produced and saved therefrom and not reserved as royalty by the lessor under the term of this lease, together with rights of way, easements and servitudes for pipe lines, telephone and telegraph lines, tanks, power houses, stations, gasoline plants, and fixtures for producing, treating and caring for such products, and housing and boarding employees, and any and all rights and privileges necessary, incident to or convenient for the economical operation of said land, for oil and gas, with right for such purposes in the free use of oil, gas, casing-head gas, or water from said lands, but not from lessor's water wells, and with the right of removing either during or after the term hereof, all and any improvements placed or created on the premises by the lessee, including the right to pull all casing, subject, however, to the conditions hereinafter set out, the following described land situate in the Count. of San Juan, State of New Mexico, and more particularly described as follows:

Section	Twp	Range	SUBDIVISION				ACRES	
			Column 1	Column 2	Column 3	Column 4		
2	36	30N	15W	NE1/4	NW1/4	SW1/4	SE1/4	160.00
3	36	30N	15W	NE1/4	NW1/4	SW1/4	SE1/4	160.00
4	36	30N	15W	NE1/4	NW1/4	SW1/4	SE1/4	160.00
5	36	30N	15W	NE1/4	NW1/4	SW1/4	SE1/4	160.00
6	2	30N	16W	Lot 3	Lot 4	Lot 2	Lot 1	77.34
7	16	30N	16W					40.00
8	36	30N	16W				SE1/4	40.00
9	2	31N	7W	NE1/4	NW1/4	SW1/4	SE1/4	160.00
10	16	31N	7W	NE1/4	NW1/4			80.00
11	16	31N	7W	NE1/4	NW1/4			40.00
12	16	31N	7W	NE1/4	NW1/4			40.00
13	16	31N	7W	NE1/4	NW1/4	SW1/4	SE1/4	160.00
14	2	31N	8W			SW1/4		40.00
15	36	31N	8W			SW1/4	SE1/4	80.00
16	36	31N	8W	NE1/4	NW1/4			80.00
17	36	31N	8W	NE1/4	NW1/4	SW1/4		80.00
18	2	31N	9W			SW1/4	SE1/4	80.00
19	2	31N	9W	NE1/4				40.00
20	36	31N	9W			SW1/4		40.00

Application of Richardson Operating Co. Record on Appeal, 1338.

6-2150

No.	Twp.	Institution	Sec.	Range	SUBDIVISION				Acres
					Column 1	Column 2	Column 3	Column 4	
21	31N	C.S.	2	10W	40.35 Lot 1				40.35
22	31N	C.S.	2	10W			SW1/4		40.00
23	31N	C.S.	2	10W		NE1/4			40.00
24	31N	C.S.	16	10W	NE1/4		SW1/4		80.00
25	31N	C.S.	16	10W			SW1/4		40.00
26	31N	C.S.	16	10W	NE1/4				40.00
27	31N	C.S.	16	11W			SW1/4		40.00
28	31N	C.S.	16	11W				SE1/4	40.00
29	31N	C.S.	36	11W			SW1/4		40.00
30	31N	C.S.	36	11W			SW1/4		40.00
31	31N	C.S.	2	12W		NE1/4			40.00
32	31N	C.S.	16	12W		NE1/4			40.00
33	31N	C.S.	16	12W		NE1/4			40.00
34	31N	C.S.	16	12W	NE1/4	NE1/4		SE1/4	120.00
35	31N	C.S.	32	12W	NE1/4				40.00
36	31N	C.S.	32	12W		NE1/4			40.00
37	31N	C.S.	36	12W		NE1/4			40.00
38	31N	C.S.	36	12W			SW1/4	SE1/4	80.00
39	31N	C.S.	36	12W				SE1/4	40.00
40	31N	C.S.	2	13W			SW1/4	SE1/4	80.00
41	31N	C.S.	16	13W				SE1/4	40.00
42	31N	C.S.	36	13W				SE1/4	40.00
43	31N	C.S.	32	13W	NE1/4			SE1/4	80.00
44	32N	C.S.	16	8W	NE1/4				40.00
45	32N	C.S.	16	8W		NE1/4			40.00
46	32N	C.S.	32	8W				SE1/4	40.00
47	32N	C.S.	36	8W	NE1/4	NE1/4	SW1/4	SE1/4	160.00
48	32N	C.S.	36	8W	NE1/4	NE1/4	SW1/4	SE1/4	160.00
49	32N	C.S.	32	9W			SW1/4	SE1/4	80.00
50	32N	C.S.	32	9W	NE1/4	NE1/4			80.00
51	32N	C.S.	36	9W			SW1/4		40.00
52	32N	C.S.	36	9W				SE1/4	40.00
53	32N	C.S.	36	9W			SW1/4		40.00
54	32N	C.S.	36	9W	NE1/4				40.00
55	32N	C.S.	16	10W	NE1/4	NE1/4			40.00

Application of Richardson Operating Co. Record on Appeal, 1339.

F-3150

Range	Twp.	Sec.	Institution	SUBDIVISION				Acres
				Column 1	Column 2	Column 3	Column 4	
21	32N	16	O.S.	10W				40.00
22	32N	16	A.S.	10W				40.00
23	32N	16	O.S.	10W	NE 1/4		SE 1/4	80.00
24	32N	36	O.S.	10W	NE 1/4	NW 1/4	SE 1/4	120.00
25	32N	36	O.S.	10W	NE 1/4			80.00
26	32N	36	O.S.	10W				40.00
27	32N	32	O.S.	11W	NE 1/4			40.00
28	32N	36	O.S.	11W			SE 1/4	40.00
29	32N	16	O.S.	12W	NW 1/4			40.00
30	32N	16	O.S.	13W			SW 1/4	40.00
31								4367.39
32								4327.39
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Application of Richardson Operating Co. Record on Appeal, 1340.

said lands having been awarded to lease and designated as tract No. 39, a public sale held by the Commissioner of Public Lands on December 10, 1942. (To be filled in only where lands are offered at public sale.)

TO HAVE AND TO HOLD said land, and all the rights and privileges granted hereunder, to and unto the lessee for a primary term of five (5) years from the date hereof, and as long thereafter as oil and gas in paying quantities are produced from said land by the lessee, subject to all the terms and conditions as hereinafter set forth.

In consideration of the premises the parties covenant and agree as follows:

1. Subject to the free use without royalty, as hereinafter provided, the lessee shall pay the lessor a royalty one-eighth part of the oil produced and saved from the leased premises or the cash value thereof, at the option of the lessor, such value to be the price prevailing the day oil is run into a pipe line, if the oil be run into a pipe line, or into storage tanks, if the oil be stored.

2. Subject to the free use without royalty, as hereinafter provided, the lessee shall pay the lessor as royalty one-eighth of the cash value of gas, including casinghead gas, produced and saved from the leased premises and marketed or utilized, such value to be equal to the greater of the following amounts:

(a) the net proceeds derived from sale of such gas in the field, or  
(b) five cents (\$.05) per thousand cubic feet (m.c.f.), the volume of gas for such purposes to be computed on a pressure basis of 10 pounds above an assumed atmospheric pressure of 14.7 pounds per square inch, or 16.025 pounds per square inch absolute, at 69° Fahrenheit, and pursuant to appropriate regulations of the Commissioner of Public Lands which may provide, among other things, for a flowing temperature of 60° Fahrenheit to be assumed and applied in volume computation in all cases where a recording thermometer is not employed by the lessee in gas measurement, and for specific gravity tests at the lessee's expense at intervals not greater than one year in all cases where a recording gravimeter is not employed by the lessee in gas measurement.

Provided, however, the cash value for royalty purposes of carbon dioxide gas and of hydrocarbon gas delivered to a gasoline plant for extraction of liquid hydrocarbons shall be equal to the net proceeds derived from the sale of such gas, including any liquid hydrocarbons recovered therefrom.

Notwithstanding the foregoing provisions, the lessor acting by its Commissioner of Public Lands, may require the payment of royalty for all or any part of the gas produced and saved under this lease and marketed or utilized at a price per m.c.f. equal to the maximum price being paid for gas of like kind and quality and under like conditions in the same field or area or may reduce the royalty value of any such gas (to any amount not less than the net proceeds of sale thereof in the field) if the Commissioner of Public Lands shall determine such action to be necessary to the successful operation of the lands for oil or gas purposes or to encouragement of the greatest ultimate recovery of oil or gas or to the promotion of conservation of oil or gas.

3. Lessee agrees to make full settlement on the 1st day of each month for all royalties due. The lessor for the preceding month, under this lease, and to permit the lessor or its agents, at all reasonable hours, to examine lessee's books relating to the production and disposition of oil and gas produced, lessee further agrees to submit to lessor annually upon forms furnished by lessor, verified reports showing lessor's operations for the preceding year.

4. It is expressly agreed that the consideration heretofore specified is a good, valid and substantial consideration and sufficient in all respects to support each and every covenant herein, including specifically the option granted the lessee to prevent the termination of this lease from year to year, by the payment or tender of the further rent, hereinafter provided for.

5. An annual rental, at the rate of \$250 per acre shall become due and payable to the lessor by the lessee, or by any transferee or assignee of the same, or any part thereof, when such transferee or assignee has been recognized, and such transfer or assignment approved by the lessor as hereinafter provided, upon such date of the land above described and then claimed by such lessee, transferee or assignee hereunder, and the same shall be due and payable in advance to the lessor on the successive anniversary dates of this lease, but the annual rental on any assignment shall in no event be less than five dollars (\$5.00).

6. In event the lessee shall elect to surrender any or all of said acreage, he shall deliver to the Commissioner of Public Lands a certified copy of a duly recorded release, and in event said lease has been recorded, then he shall upon request furnish it and deliver to said Commissioner a certified copy of a duly recorded release.

7. The lessee may at any time by paying to the State of New Mexico, acting by its Commissioner of Public Lands, or other authorized officer, all amounts then due as provided herein and the further sum of Ten Dollars (\$10.00), surrender and cancel this lease insofar as the same covers all or any portion of the lands herein leased and be relieved from further obligations or liability hereunder, in the manner as hereinafter provided. Provided, this surrender shall be made and the option hereon exercised to the lessee shall cease and become absolutely inoperative immediately and concurrently with the institution of any suit in any court of law or equity by the lessee, lessor or any assignee, to enforce this lease, or any of its terms express or implied.

8. All payments due hereunder shall be made on or before the day such payment is due, in cash or by certified check at the office of the Commissioner of Public Lands, in Santa Fe, New Mexico.

9. The lessee with the consent of the lessor, shall have the right to assign this lease in whole or in part, provided, however, that no assignment of any undivided interest in the lease or any part thereof, or any assignment of less than a total subdivision shall be recognized or approved by the lessor, upon approval in writing by the lessor of an assignment, the assignor shall stand relieved from all obligations to the lessor with respect to the lands embraced in the assignment and the lessee shall likewise be relieved from all obligations to the assignor as to such lands, and the assignee shall succeed to all of the rights and obligations of the assignor with respect to such lands and shall be held to have assumed all of the duties and obligations of the assignor to the lessor as to such lands.

10. Lessee agrees with reasonable diligence to effect all paying oil or gas wells drilled, within 300 feet of any of the land covered by this lease and provided hereunder.

11. The lessee agrees to notify the lessor of the location of each well before commencing drilling thereon, to keep a complete and accurate log of each well drilled and to furnish a copy thereof, verified by some person having actual knowledge of the facts, to the lessor upon the completion of any well, and to furnish the log of any unfinished well at any time when requested to do so by the lessor. If any funds credited in this lease shall be included in any deed or contract of purchase, mortgage and subordinate lease made pursuant to any sale made of the surface of such lands prior to the date of this lease, it is agreed and understood that the drilling operations shall be commenced on any such lands on said date and until the lease or its assignee shall have filed a good and sufficient bond with the lessor as required by law, to secure the payment for such damage to the livestock, crops or other improvements on such lands as may be suffered by the purchaser holding such lands by such lessee. Provided, however, that no such bond shall be required if such purchaser shall waive the right to require such bond to be given in the manner provided by law.

12. In drilling wells all water-bearing strata shall be cased in the log, and the lessor reserves the right to require that all or any part of the casing shall be left in any non-productive well when lessor deems it in the interest of the State of New Mexico to maintain said well or wells for water. For such casing so left in wells the lessor shall pay to the lessee the reasonable value thereof.

13. Lessee shall be liable and agrees to pay for all damages to the range, livestock, growing crops or any improvements caused by lessee's operations on said lands. When requested by the lessor, the lessee shall pay

12. The lessee shall not remove any machinery or fixtures placed on the premises, nor draw the casing from any well unless and until all payments and obligations due the lessor under the terms of this agreement shall have been paid or satisfied. The lessee's right to remove the casing is subject to the provision of paragraph 10 above.

13. Upon failure or default of the lessee or any assignee to comply with any of the provisions or covenants hereof, the lessor is hereby authorized to cancel this lease and such cancellation shall extend to and include all rights hereunder as to the whole of the tract so claimed, or possessed by the lessee or assignee so defaulting, but shall not extend to, nor affect the rights of any other lessee or assignee claiming any portion of the lands upon which no default has been made; provided, however, that before any such cancellation shall be made, the lessor shall mail to the lessee, or assignee so defaulting, by registered mail, addressed to the postoffice address of such lessee or assignee as shown by the records of the State Land Office, a notice of intention of cancellation specifying the default for which cancellation is to be made, and if within 30 days from the date of mailing said notice the said lessee or assignee shall remedy the default specified in said notice, cancellation shall not be made.

14. All the terms of this agreement shall extend to and bind the heirs, executors, administrators, successors and assigns of the parties hereto.

15. If the lessee shall have failed to make discovery of oil and/or gas in paying quantities during the primary term hereof, the lessee may continue this lease in full force and effect for an additional term of five (5) years and as long thereafter as oil and gas in paying quantities, or either of them is produced from the leased premises, by paying each year in advance, as herein provided, double the rental provided herein for the primary term, or the highest rental prevailing at the commencement of the secondary term in any rental district, or districts in which the lands, or any part thereof, may be situated, if it be greater than double the rental provided for the primary term.

16. If the lessee shall have maintained this lease in accordance with the provisions hereof and if at the expiration of the secondary term provided herein oil or gas is not being produced on said land but lessee is then engaged in bona fide drilling or reworking operations thereon, this lease shall remain in full force and effect so long as such operations are diligently prosecuted and, if they result in the production of oil or gas, so long thereafter as oil and gas in paying quantities or either of them is produced from said lands; provided, however, such operations extending beyond the secondary term shall be approved by the lessor upon written application filed with the lessor on or before the expiration of said term, and a report of the status of all of such operations shall be made by the lessee to the lessor every 30 days and a cessation of such operations for more than 20 consecutive days shall be considered as an abandonment of such operations and thereupon the provisions hereof shall be of no further force or effect.

IN WITNESS WHEREOF, the party of the first part has hereunto signed and caused its name to be signed by its Commissioner of Public Lands thereunto duly authorized, with the seal of his office affixed, and the lessee has signed this agreement the day and year first above written.

STATE OF NEW MEXICO  
By: *[Signature]*  
COMMISSIONER OF PUBLIC LANDS, Lessor.  
*[Signature]*  
Lessee. (SEAL)

Distributed this the 14th day of December 1949

(PERSONAL ACKNOWLEDGMENT)

STATE OF New Mexico  
COUNTY OF Roosevelt

On this the 21st day of December 1949, personally appeared before me *John Burroughs*

to me known to be the person who executed the foregoing instrument as Lessee, and acknowledged that he executed the same as his free act and deed.

In WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My Commission Expires *[Signature]* Notary Public.

(ACKNOWLEDGMENT BY ATTORNEY IN FACT)

STATE OF  
COUNTY OF

On this the day of 19, personally appeared before me

to me known to be the person who executed the foregoing instrument in behalf of, and acknowledged that he executed the same as the free act and deed of said

In WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My Commission Expires Notary Public.

(CORPORATE ACKNOWLEDGMENT ON BACK)

OIL AND GAS LEASE

THIS AGREEMENT, dated this the 10th day of December, A. D. 1952, made and entered into by and between the STATE OF NEW MEXICO, acting by and through the undersigned, its Commissioner of Public Lands, thereunto duly authorized, party of the first part and hereinafter called the "Lessor," and PUBCO DEVELOPMENT, INC. (N.S.L.) Petroleum Corporation  
P. O. BOX 1360, ALBUQUERQUE, NEW MEXICO 87103  
 party of the second part, hereinafter called the "Lessee," whether one or more,

WITNESSETH:

WHEREAS, the said lessee has filed in the office of the Commissioner of Public Lands an application for an oil and gas lease covering the lands hereinafter described and has tendered therewith the required first payment being not less than the amount required by law and by the rules and regulations of the New Mexico State Land Office; and

WHEREAS, all of the requirements of law relative to said application and tender have been duly complied with and said application has been approved and allowed by the Commissioner of Public Lands:

THEREFORE, for and in consideration of the premises as well as the sum of THREE THOUSAND TWO HUNDRED EIGHTY-SIX DOLLARS AND SEVENTY CENTS (\$ 3,286.70 ) Dollars, the

same being the amount of the tender above mentioned, paid in cash, and evidenced by official receipt No. D-26596

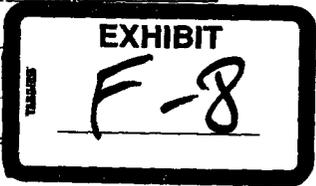
and of the further sum of \$ 5.00 filing fee, and of the covenants and agreements hereinafter contained on the part of the lessee to be paid, kept and performed, the said lessor has granted and demised, leased and let and by these presents does grant, demise, lease and let unto the said lessee, exclusively, for the sole and only purpose of exploration, development and production of oil and/or gas thereon and therefrom with the right to own all oil and gas so produced and saved therefrom and not reserved as royalty by the lessor under the term of this lease, together with rights of way, easements and servitudes for pipe lines, telephone and telegraph lines, tanks, power houses, stations, gasoline plants, and fixtures for producing, treating and caring for such products, and housing and boarding employees, and any and all rights and privileges necessary, incident to or convenient for the economical operation of said land, for oil and gas, with right for such purposes to the free use of oil, gas, casing-head gas, or water from said lands, but not from lessor's water wells, and with the right of removing either during or after the term hereof, all and any improvements placed or erected on the premises by the lessee, including the right to pull all casing, subject, however, to the conditions hereinafter

set out, the following described land situate in the Count. Y of San Juan State of New Mexico, and more particularity described as follows:

SEE MICS. INST. NO. # 4484

LINE	Institution	Sec.	Twp.	Range	SUBDIVISION				ACRES
					COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	
1	C. S.	2	29N	14W			SW 1/4 NE 1/4	SE 1/4 NE 1/4	80.00
2	C. S.	2	29N	14W			SW 1/4 NW 1/4		40.00
3	C. S.	32	30N	14W			Lot 2 42.89	Lot 1 43.27	86.16
4	C. S.	36	30N	14W	Lot 1 35.41				35.41
5	C. S.	36	30N	14W			SW 1/4 NW 1/4		40.00
6	C. S.	36	30N	14W				Lot 5 47.10	47.10
7									328.67
8									114.38
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

Application of Richardson Operating Co.  
 Record on Appeal, 1343.



said lands having been awarded to lessee and designated as tract No. 0-8 at a public sale held by the Commissioner of Public Lands on December 10th, 1952. (To be filled in only where lands are offered at public sale.)

TO HAVE AND TO HOLD said land, and all the rights and privileges granted hereunder, to and unto the lessee for a primary term of five (5) years from the date hereof, and as long thereafter as oil and gas in paying quantities, or either of them, is produced from said land by the lessee, subject to all the terms and conditions as hereinafter set forth.

In consideration of the premises the parties covenant and agree as follows:

1. Subject to the free use without royalty, as hereinbefore provided, the lessee shall pay the lessor as royalty one-eighth part of the oil produced and saved from the leased premises or the cash value thereof, at the option of the lessor, such value to be the price prevailing the day oil is run into a pipe line, if the oil be run into a pipe line, or into storage tanks, if the oil be stored.

2. Subject to the free use without royalty, as hereinbefore provided, the lessee shall pay the lessor as royalty one-eighth of the cash value of gas, including casinghead gas, produced and saved from the leased premises and marketed or utilized, such value to be equal to the greater of the following amounts:

(a) the net proceeds derived from sale of such gas in the field, or

(b) five cents (\$.05) per thousand cubic feet (m.c.f.), the volume of gas for such purposes to be computed on a pressure basis of 10 ounces above an assumed atmospheric pressure of 14.4 pounds per square inch, or 15.025 pounds per square inch absolute, at 60° Fahrenheit, and pursuant to appropriate regulations of the Commissioner of Public Lands which may provide, among other things, for a flowing temperature of 60° Fahrenheit to be assumed and applied in volume computation in all cases where a recording thermometer is not applied by the lessee in gas measurement, and for specific gravity tests at the lessee's expense at intervals not greater than one year in all cases where a recording gravitometer is not employed by the lessee in gas measurement;

Provided, however, the cash value for royalty purposes of carbon dioxide gas and of hydrocarbon gas delivered to a gasoline plant for extraction of liquid hydrocarbons shall be equal to the net proceeds derived from the sale of such gas, including any liquid hydrocarbons recovered therefrom.

Notwithstanding the foregoing provisions, the lessor acting by its Commissioner of Public Lands, may require the payment of royalty for all or any part of the gas produced and saved under this lease and marketed or utilized at a price per m.c.f. equal to the maximum price being paid for gas of like kind and quality and under like conditions in the same field or area or may reduce the royalty value of any such gas (to any amount not less than the net proceeds of sale thereof in the field) the Commissioner of Public Lands shall determine such action to be necessary to the successful operation of the lands for oil or gas purposes or to encouragement of the greatest ultimate recovery of oil or gas or to the promotion of conservation of oil or gas.

3. Lessee agrees to make full settlement on the 20th day of each month for all royalties due the lessor for the preceding month, under this lease, and to permit the lessor or its agents, at all reasonable hours, to examine lessee's books relating to the production and disposition of oil and gas produced. Lessee further agrees to submit to lessor annually upon forms furnished by lessor, verified reports showing lessee's operations for the preceding year.

4. It is expressly agreed that the consideration hereinbefore specified is a good, valid and substantial consideration and sufficient in all respects to support each and every covenant herein, including specifically the option granted the lessee to prevent the termination of this lease from year to year by the payment or tender of the further rental hereinafter provided for.

An annual rental, at the rate of 25¢ per acre shall become due and payable to the lessor by the lessee, or by any transferee or assignee of the same, or any part hereof, where such transferee or assignee has been recognized, and such transfer or assignment approved by the lessor as hereinafter provided, upon each acre of the land described and then claimed by such lessee, transferee or assignee hereunder, and the same shall be due and payable in advance to the lessor on the successive anniversary dates of this lease, but the annual rental on any assignment shall in no event be less than Six Dollars (\$6.00).

In event the lessee shall elect to surrender any or all of said acreage, he shall deliver to the Commissioner a duly executed release thereof and in event said lease has been recorded, then he shall, upon request furnish and deliver to said Commissioner a certified copy of a duly recorded release.

5. The lessee may at any time by paying to the State of New Mexico, acting by its Commissioner of Public Lands, or other authorized officer, all amounts then due as provided herein and the further sum of Ten Dollars (\$10.00), surrender and cancel this lease insofar as the same covers all or any portion of the lands herein leased and be relieved from further obligations or liability hereunder, in the manner as hereinbefore provided. Provided, this surrender clause and the option herein reserved to the lessee shall cease and become absolutely inoperative immediately and currently with the institution of any suit in any court of law or equity by the lessee, lessor or any assignee, to enforce this lease, or any of its terms express or implied.

6. All payments due hereunder shall be made on or before the day such payment is due, in cash or by certified exchange at the Office of the Commissioner of Public Lands in Santa Fe, New Mexico.

7. The lessee with the consent of the lessor, shall have the right to assign this lease in whole or in part. Provided, however, that no assignment of any undivided interest in the lease or any part thereof nor any assignment of less than a legal subdivision shall be recognized or approved by the lessor. Upon approval in writing by the lessor of an assignment, the assignor shall stand relieved from all obligations to the lessor with respect to the lands embraced in the assignment and the lessor shall likewise be relieved from all obligations to the assignor as to such tracts, and the assignee shall succeed to all of the rights and privileges of the assignor with respect to such tracts and shall be held to have assumed all of the duties and obligations of the assignor to the lessor as to such tracts.

8. Lessee agrees with reasonable diligence to offset all paying oil or gas wells drilled, within 300 feet of any of the land covered by this lease and retained hereunder.

9. The lessee agrees to notify the lessor of the location of each well before commencing drilling thereon, to keep a complete and accurate log of each well drilled and to furnish a copy thereof, verified by some person having actual knowledge of the facts, to the lessor upon the completion of any well, and to furnish the log of any unfinished well at any time when requested to do so by the lessor. If any lands embraced in this lease shall be included in any deed or contract of purchase outstanding and subsisting issued pursuant to any sale made of the surface of such lands prior to the date of this lease, it is agreed and understood that no drilling operations shall be commenced on any such lands so sold unless and until the lessee or his assignee shall have filed a good and sufficient bond with the lessor as required by law, to secure the payment for such damage to the livestock, range, water, crops or tangible improvements on such lands as may be suffered by the purchaser holding such deed or contract of purchase, or his successors, by reason of the developments, use and occupation of such lands by such lessee. Provided, however, that no such bond shall be required if such purchaser shall waive the right to require such bond to be given in the manner provided by law.

10. In drilling wells all water-bearing strata shall be noted in the log, and the lessor reserves the right to require that all or any part of the casing shall be left in any non-productive well when lessor deems it to the interest of the State of New Mexico to maintain said well or wells for water. For such casing so left in wells the lessor shall pay to the lessee the reasonable value thereof.

11. Lessee shall be liable and agrees to pay for all damages to the range, livestock, growing crops or improvements caused by lessee's operations on said lands. When requested by the lessor, the lessee shall bury pipe-lines below plow depth.

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... any machinery or fixtures placed on the premises, nor draw the casing from any well unless and until the payments and obligations due the lessor under the terms of this agreement shall have been paid or satisfied. The lessee's right to remove the casing is subject to the provision of paragraph 10 above.

13. Upon failure or default of the lessee or any assignee to comply with any of the provisions or covenants hereof, the lessor is hereby authorized to cancel this lease and such cancellation shall extend to and include all rights hereunder as to the whole of the tract so claimed, or possessed by the lessee or assignee so defaulting, but shall not extend to, nor affect the rights of any other lessee or assignee claiming any portion of the lands upon which no default has been made; provided, however, that before any such cancellation shall be made, the lessor shall mail to the lessee, or assignee so defaulting, by registered mail, addressed to the postoffice address of such lessee or assignee as shown by the records of the State Land Office, a notice of intention of cancellation specifying the default for which cancellation is to be made, and if within 30 days from the date of mailing said notice the said lessee or assignee shall remedy the default specified in said notice, cancellation shall not be made.

14. All the terms of this agreement shall extend to and bind the heirs, executors, administrators, successors and assigns of the parties hereto.

15. If the lessee shall have failed to make discovery of oil and/or gas in paying quantities during the primary term hereof, the lessee may continue this lease in full force and effect for an additional term of five (5) years and as long thereafter as oil and gas in paying quantities, or either of them is produced from the leased premises, by paying each year in advance, as herein provided, double the rental provided herein for the primary term, or the highest rental prevailing at the commencement of the secondary term in any rental district, or districts in which the lands, or any part thereof, may be situated, if it be greater than double the rental provided for the primary term.

16. If the lessee shall have maintained this lease in accordance with the provisions hereof and if at the expiration of the secondary term provided herein oil or gas is not being produced on said land but lessee is then engaged in bona fide drilling or reworking operations thereon, this lease shall remain in full force and effect so long as such operations are diligently prosecuted and, if they result in the production of oil or gas, so long thereafter as oil and gas in paying quantities or either of them is produced from said land; provided, however, such operations extending beyond the secondary term shall be approved by the lessor upon written application filed with the lessor on or before the expiration of said term, and a report of the status of all of such operations shall be made by the lessee to the lessor every 30 days and a cessation of such operations for more than 20 consecutive days shall be considered as an abandonment of such operations and thereupon the provisions hereof shall be of no further force or effect.

IN WITNESS WHEREOF, the party of the first part has hereunto signed and caused its name to be signed by its Commissioner of Public Lands thereunto duly authorized, with the seal of his office affixed, and the lessee has signed this agreement the day and year first above written.

STATE OF NEW MEXICO  
By *[Signature]*  
COMMISSIONER OF PUBLIC LANDS, Lessor  
PUBCO DEVELOPMENT, INC.  
BY *[Signature]*  
Frances G. Gorham, Jr., Vice-President (SEAL)

Distributed this the 19th day of December 19 52

(PERSONAL ACKNOWLEDGEMENT)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss:

On this the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_, personally appeared before me

to me known to be the person \_\_\_\_\_ who executed the foregoing instrument as Lessee, and acknowledged that \_\_\_\_\_ he \_\_\_\_\_ executed the same as \_\_\_\_\_ free act and deed.

IN WITNESS WHEREOF; I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My Commission Expires: \_\_\_\_\_ Notary Public.

(ACKNOWLEDGMENT BY ATTORNEY IN FACT)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss:

On this the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_, personally appeared before me \_\_\_\_\_

to me known to be the person \_\_\_\_\_ who executed the foregoing instrument in behalf of \_\_\_\_\_

and acknowledged that \_\_\_\_\_ he \_\_\_\_\_ executed the same as the free act and deed of said \_\_\_\_\_

IN WITNESS WHEREOF; I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

My Commission Expires: \_\_\_\_\_ Notary Public.

(CORPORATE ACKNOWLEDGMENT ON BACK)

Application of Richardson Operating Co. Record on Appeal, 1345.

(ACKNOWLEDGMENT BY CORPORATION)

STATE OF New Mexico  
COUNTY OF Bernalillo } 58:

On this the 17<sup>th</sup> day of December, 1952, personally appeared

Frank S. Gorham, Jr.

to me personally known, who being by me duly sworn did say that he is the Vice President of

Quibus Development, Inc.

and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said

Frank S. Gorham, Jr.

acknowledges said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF; I have hereunto set my hand and affixed my official seal the day and year in this certificate above written.

Barbara Shaw Marks  
Notary Public.

My Commission Expires:  
My Commission Expires Nov. 7, 1956



RECEIVED  
LAND OFFICE  
DEC 18 1 28 PM '52  
SANTA FE, N.M.

Application of Richardson Operating  
Co.  
Record on Appeal, 1346.

LEASE NO. 3-3555

APPLICATION NO. 25

### OIL AND GAS LEASE

THIS AGREEMENT, dated this the 26th day of May, A. D. 1940, made and entered into by and between the STATE OF NEW MEXICO, acting by and through the undersigned, its Commissioner of Public Lands, therunto duly authorized, party of the first part and hereinafter called the "Lessor," and W. H. ATKINS and L. T. FAURHONER, party of the second part, hereinafter called the "Lessee," whether one or more,

**WITNESSETH:**

WHEREAS, the said lessee has filed in the office of the Commissioner of Public Lands an application for an oil and gas lease covering the lands hereinafter described and has tendered therewith the required first payment being not less than the amount required by law and by the rules and regulations of the New Mexico State Land Office; and

WHEREAS, all of the requirements of law relative to said application and tender have been duly complied with and said application has been approved and allowed by the Commissioner of Public Lands;

THEREFORE, for and in consideration of the premises as well as the sum of ONE HUNDRED SIXTY (\$ 160.00) Dollars, the same being the amount of the tender above mentioned, paid in cash, and evidenced by official receipt No. 6-30842 and of the further sum of \$ 5.00 filing fee, and of the covenants and agreements hereinafter contained on the part of the lessee to be paid, kept and performed, the said lessor has granted and demised, leased and let, and by these presents does grant, demise, lease and let unto the said lessee, exclusively, for the sole and only purpose of exploration, development and production of oil and/or gas thereon and therefrom with the right to own all oil and gas so produced and saved therefrom and not reserved as royalty by the lessor under the term of this lease, together with rights of way, easements and servitudes for pipe lines, telephone and telegraph lines, tanks, power houses, stations, gasoline plants, and fixtures for producing, treating and caring for such products, and housing and boarding employees, and any and all rights and privileges necessary, incident to or convenient for the economical operation of said land, for oil and gas, with right for such purposes to the free use of oil, gas, casing-head gas, or water from said lands, but not from lessor's water wells, and with the right of removing either during or after the term hereof, all and any improvements placed or created on the premises by the lessee, including the right to pull all casing, subject, however, to the conditions hereinafter set out, the following described land situate in the County of San Juan State of New Mexico, and more particularly described as follows:

LINE	Institution	Sec.	Twp.	Range	SUBDIVISION				ACRES
					COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	
1	C.S.	16	22N	13W			S1/4		40.00
2	C.S.	36	22N	13W			S2/4		40.00
3	C.S.	2	23N	13W			S1/4		40.00
4	C.S.	36	23N	13W			S1/4		40.00
5	C.S.	2	26N	13W			S1/4		40.00
6	C.S.	16	22N	9W		1/4			40.00
7	C.S.	2	29N	14W			S1/4		40.00
8	C.S.	16	29N	14W	1/4				40.00
9	C.S.	2	27N	15W				S1/4	40.00
10	C.S.	2	30N	12W	1/4				40.00
11	C.S.	16	30N	9W	1/4				40.00
12	C.S.	20	30N	12W					40.00
13	C.S.	10	30N	12W				1/4	40.00
14	C.S.	36	31N	9W	1/4				40.00
15	C.S.	32	32N	9W					40.00
16	C.S.	16	32N	12W	1/4				40.00
17									640.00
18									
19									
20									

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EXHIBIT  
**F-9**

said lands having been awarded to lessee and designated as tract No. .... at a public sale held by the Commissioner of Public Lands on ....., 19..... (To be filled in only where lands are offered at public sale.)

**TO HAVE AND TO HOLD** said land, and all the rights and privileges granted hereunder, to and unto the lessee for a primary term of five (5) years from the date hereof, and as long thereafter as oil and gas in paying quantities, or either of them, is produced from said land by the lessee, subject to all the terms and conditions as hereinafter set forth.

In consideration of the premises the parties covenant and agree as follows:

1. Subject to the free use without royalty, as hereinbefore provided, the lessee shall pay the lessor as royalty one-eighth part of the oil produced and saved from the leased premises or the cash value thereof, at the option of the lessor, such value to be the price prevailing the day oil is run into a pipe line, if the oil be run into a pipe line, or into storage tanks, if the oil be stored.

2. Subject to the free use without royalty, as hereinbefore provided, the lessee shall pay the lessor as royalty one-eighth of the cash value of gas, including casinghead gas, produced and saved from the leased premises and marketed or utilized, such value to be equal to the greater of the following amounts:

(a) the net proceeds derived from sale of such gas in the field, or

(b) five cents (\$0.05) per thousand cubic feet (m.c.f.), the volume of gas for such purposes to be computed on a pressure basis of 10 ounces above an assumed atmospheric pressure of 14.7 pounds per square inch, or 15.025 pounds per square inch absolute, at 60° Fahrenheit, and pursuant to appropriate regulations of the Commissioner of Public Lands which may provide, among other things, for a flowing temperature of 60° Fahrenheit to be assumed and applied in volume computation in all cases where a recording thermometer is not employed by the lessee in gas measurement, and for specific gravity tests at the lessee's expense at intervals not greater than one year in all cases where a recording gravitometer is not employed by the lessee in gas measurement;

Provided, however, the cash value for royalty purposes of carbon dioxide gas and of hydrocarbon gas delivered to a gasoline plant for extraction of liquid hydrocarbons shall be equal to the net proceeds derived from the sale of such gas, including any liquid hydrocarbons recovered therefrom.

Notwithstanding the foregoing provisions, the lessor acting by its Commissioner of Public Lands, may require the payment of royalty for all or any part of the gas produced and saved under this lease and marketed or utilized at a price per m.c.f. equal to the maximum price being paid for gas of like kind and quality and under like conditions in the same field or area or may reduce the royalty value of any such gas (to any amount not less than the net proceeds of sale thereof in the field) if the Commissioner of Public Lands shall determine such action to be necessary to the successful operation of the lands for oil or gas purposes or to encouragement of the greatest ultimate recovery of oil or gas or to the promotion of conservation of oil or gas.

3. Lessee agrees to make full settlement on the 20th day of each month for all royalties due the lessor for the preceding month, under this lease, and to permit the lessor or its agents, at all reasonable hours, to examine lessee's books relating to the production and disposition of oil and gas produced. Lessee further agrees to submit to lessor annually upon forms furnished by lessor, verified reports showing lessee's operations for the preceding year.

4. It is expressly agreed that the consideration hereinbefore specified is a good, valid and substantial consideration and sufficient in all respects to support each and every covenant herein, including specifically the option granted the lessee to prevent the termination of this lease from year to year, by the payment or tender of the further rental hereinafter provided for.

An annual rental, at the rate of .....<sup>25¢</sup> per acre shall become due and payable to the lessor by the lessee, or by any transferee or assignee of the same, or any part hereof, where such transferee or assignee has been recognized, and such transfer or assignment approved by the lessor as hereinbefore provided, upon each acre of the land above described and then claimed by such lessee, transferee or assignee hereunder, and the same shall be due and payable in advance to the lessor on the successive anniversary dates of this lease, but the annual rental on any assignment shall in no event be less than Six Dollars (\$6.00).

In event the lessee shall elect to surrender any or all of said acreage, he shall deliver to the Commissioner a duly executed release thereof and in event said lease has been recorded, then he shall upon request furnish and deliver to said Commissioner a certified copy of a duly recorded release.

5. The lessee may at any time by paying to the State of New Mexico, acting by its Commissioner of Public Lands, or other authorized officer, all amounts then due as provided herein and the further sum of Ten Dollars (\$10.00), surrender and cancel this lease insofar as the same covers all or any portion of the lands herein leased and be relieved from further obligations or liability hereunder, in the manner as hereinbefore provided. Provided, this surrender clause and the option herein reserved to the lessee shall cease and become absolutely inoperative immediately and concurrently with the institution of any suit in any court of law or equity by the lessee, lessor or any assignee, to enforce this lease, or any of its terms express or implied.

6. All payments due hereunder shall be made on or before the day such payment is due, in cash or by certified exchange at the Office of the Commissioner of Public Lands in Santa Fe, New Mexico.

7. The lessee with the consent of the lessor, shall have the right to assign this lease in whole or in part. Provided, however, that no assignment of any undivided interest in the lease or any part thereof nor any assignment of less than a legal subdivision shall be recognized or approved by the lessor. Upon approval in writing by the lessor of an assignment, the assignor shall stand relieved from all obligations to the lessor with respect to the lands embraced in the assignment and the lessor shall likewise be relieved from all obligations to the assignor as to such tracts, and the assignee shall succeed to all of the rights and privileges of the assignor with respect to such tracts and shall be held to have assumed all of the duties and obligations of the assignor to the lessor as to such tracts.

8. Lessee agrees with reasonable diligence to effect all paying oil or gas wells drilled, within 300 feet of any of the land covered by this lease and retained hereunder.

9. The lessee agrees to notify the lessor of the location of each well before commencing drilling thereon, to keep a complete and accurate log of each well drilled and to furnish a copy thereof, verified by some person having actual knowledge of the facts, to the lessor upon the completion of any well, and to furnish the log of any unfinished well at any time when requested to do so by the lessor. If any lands embraced in this lease shall be included in any deed or contract of purchase outstanding and subsisting issued pursuant to any sale made of the surface of such lands prior to the date of this lease, it is agreed and understood that no drilling operations shall be commenced on any such lands so sold unless and until the lessee or his assignee shall have filed a good and sufficient bond with the lessor as required by law, to secure the payment for such damage to the livestock, range, water, crops or tangible improvements on such lands as may be suffered by the purchaser holding such deed or contract of purchase, or his successors, by reason of the developments, use and occupation of such lands by such lessee. Provided, however, that no such bond shall be required if such purchaser shall waive the right to require such bond to be given in the manner provided by law.

10. In drilling wells all water-bearing strata shall be noted in the log, and the lessor reserves the right to require that all or any part of the casing shall be left in any non-productive well when lessor deems it to the interest of the State of New Mexico to maintain said well or wells for water. For such casing so left in wells the lessor shall pay to the lessee the reasonable value thereof.

11. Lessee shall be liable and agrees to pay for all damages to the range, livestock, growing crops or improvements caused by lessee's operations on said lands. When requested by the lessor, the lessee shall bury pipe-lines below plow depth.

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12. The lessee shall not remove any machinery or fixtures placed on premises, nor draw the casing from any well unless and until all payments and obligations due the lessor under the terms of this agreement shall have been paid or satisfied. The lessee's right to remove the casing is subject to the provision of paragraph 10 above.

13. Upon failure or default of the lessee or any assignee to comply with any of the provisions or covenants hereof, the lessor is hereby authorized to cancel this lease and such cancellation shall extend to and include all rights hereunder as to the whole of the tract so claimed, or possessed by the lessee or assignee so defaulting, but shall not extend to, nor affect the rights of any other lessee or assignee claiming any portion of the lands upon which no default has been made; provided, however, that before any such cancellation shall be made, the lessor shall mail to the lessee, or assignee so defaulting, by registered mail, addressed to the postoffice address of such lessee or assignee as shown by the records of the State Land Office, a notice of intention of cancellation specifying the default for which cancellation is to be made, and if within 30 days from the date of mailing said notice the said lessee or assignee shall remedy the default specified in said notice, cancellation shall not be made.

14. All the terms of this agreement shall extend to and bind the heirs, executors, administrators, successors and assigns of the parties hereto.

15. If the lessee shall have failed to make discovery of oil and/or gas in paying quantities during the primary term hereof, the lessee may continue this lease in full force and effect for an additional term of five (5) years and as long thereafter as oil and gas in paying quantities, or either of them is produced from the leased premises, by paying each year in advance, as herein provided, double the rental provided herein for the primary term, or the highest rental prevailing at the commencement of the secondary term in any rental district, or districts in which the lands, or any part thereof, may be situated, if it be greater than double the rental provided for the primary term.

16. If the lessee shall have maintained this lease in accordance with the provisions hereof and if at the expiration of the secondary term provided herein oil or gas is not being produced on said land but lessee is then engaged in bona fide drilling or reworking operations thereon, this lease shall remain in full force and effect so long as such operations are diligently prosecuted and, if they result in the production of oil or gas, so long thereafter as oil and gas in paying quantities or either of them is produced from said land; provided, however, such operations extending beyond the secondary term shall be approved by the lessor upon written application filed with the lessor on or before the expiration of said term, and a report of the status of all of such operations shall be made by the lessee to the lessor every 30 days and a cessation of such operations for more than 20 consecutive days shall be considered as an abandonment of such operations and thereupon the provisions hereof shall be of no further force or effect.

IN WITNESS WHEREOF, the party of the first part has hereunto signed and caused its name to be signed by its Commissioner of Public Lands thereunto duly authorized, with the seal of his office affixed, and the lessee has signed this agreement the day and year first above written.

STATE OF NEW MEXICO  
By Guy Shepard  
COMMISSIONER OF PUBLIC LANDS, Lessor.  
A. T. Barringer  
Lessee. (SEAL)

Distributed this the 15th day of June, 1950.

(PERSONAL ACKNOWLEDGMENT)

STATE OF Texas )  
COUNTY OF Cameron ) ss:  
On this the 14th day of June, 1950, personally appeared before me  
W. H. Atkins  
to me known to be the person, who executed the foregoing instrument, and acknowledged that he

(PERSONAL ACKNOWLEDGMENT)

STATE OF TENNESSEE  
COUNTY OF SHELBY

On this the 16 day of June 1950, personally appeared  
before me A. T. Barringer to me known to be the person  
who executed the foregoing instrument as Lessee, and acknowledged that he  
executed the same as free act and deed.

IN WITNESS THEREOF: I have hereunto set my hand and affixed my  
official seal the day and year in this certificate above written.

Jane Kennedy  
Notary Public

My Commission Expires Apr. 6, 1952

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