

DATE IN 1/7/00	SUSPENSE 1/27/00	ENGINEER DC	LOGGED MV	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION  
- Engineering Bureau -

*2604*

**ADMINISTRATIVE APPLICATION COVERSHEET**

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

**Application Acronyms:**

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
- [DD-Directional Drilling] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

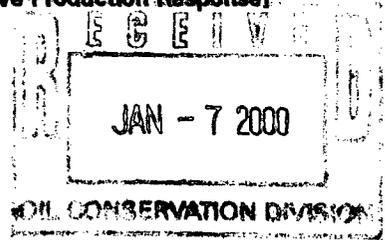
[1] **TYPE OF APPLICATION - Check Those Which Apply for [A]**

- [A] Location - Spacing Unit - Directional Drilling  
 NSL  NSP  DD  SD

Check One Only for [B] and [C]

- [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR



[2] **NOTIFICATION REQUIRED TO: - Check Those Which Apply, or  Does Not Apply**

- [A]  Working, Royalty or Overriding Royalty Interest Owners
- [B]  Offset Operators, Leaseholders or Surface Owner
- [C]  Application is One Which Requires Published Legal Notice
- [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F]  Waivers are Attached

[3] **INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding**

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Cathleen Colby Cathleen Colby Land Manager 1-3-00  
 Print or Type Name Signature Title Date

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 South First, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department  
**OIL CONSERVATION DIVISION**  
2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429

Form C-107-A  
Revised August 1999  
APPROVAL PROCESS:  
 Administrative  Hearing  
EXISTING WELLBORE  
 YES  NO

**APPLICATION FOR DOWNHOLE COMMINGLING**

Richardson Operating Company 1700 Lincoln, Suite 1700, Denver, CO 80203  
Operator Address  
WF Federal 34 #2 N 34-30N-14W San Juan  
Lease Well No. Unit Ltr. - Sec - Twp - Rge County  
Spacing Unit Lease Types: (check 1 or more)  
OGRID NO. 019219 Property Code API NO. 30-045-29882 Federal  State (and/or) Fee

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Basin Fruitland Coal 71629		Twin Mounds FR Sand PC 86620
2. Top and Bottom of Pay Section (Perforations)	1034' - 1052'		1062' - 1072'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: <u>Estimated</u> or Measured Original	(Current) a.	a.	a.
	(Original) b.	b.	b.
6. Oil Gravity (°API) or Gas BTU Content	200		200
7. Producing or Shut-in?	1000		1000
Production Marginal? (yes or no)	Shut in-waiting on pipeline		Shut in-waiting on pipeline
* If Shut-in, give date and oil/gas/water rates of last production Note: For new zones with no production history applicant shall be required to attach production estimates and supporting data  * If Producing, give date and oil/gas/water rates of recent test (within 60 days)	yes		yes
	Date: Rates:	Date: Rates:	Date: Rates:
	Date: Rates:	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula -% for each zone	Oil: Gas: % %	Oil: Gas: % %	Oil: Gas: % %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical in all commingled zones?  Yes  No  
If not, have all working, overriding, and royalty interests been notified by certified mail?  Yes  No
11. Will cross-flow occur?  Yes  No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable.  Yes  No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each other?  Yes  No
13. Will the value of production be decreased by commingling?  Yes  No (If Yes, attached explanation)
14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application.  Yes  No
15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S) \_\_\_\_\_
16. ATTACHMENTS:  
\* C-102 for each zone to be commingled showing its spacing unit and acreage dedication.  
\* Production curve for each zone for at least one year. (If not available, attach explanation.)  
\* For zones with no production history, estimated production rates and supporting data.  
\* Data to support allocation method or formula.  
\* Notification list of working, overriding, and royalty interests for uncommon interest cases.  
\* Any additional statements, data, or documents required to support commingling.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Barry R Gager TITLE Consulting Geologist DATE January 3, 2000  
TYPE OR PRINT NAME Barry Gager TELEPHONE NO. 303-830-8000

**Richardson Operating Company**  
**WF Federal 34-2**  
**Commingling Application**

The WF Federal 34-2 is a newly drilled Basin Fruitland Coal/Twin Mounds Frt. Sand Pictured Cliffs well. This is part of Richardson's development program in their WF (West Farmington) field. This is the second Pictured Cliffs well in this section, but only the first Fruitland Coal well in this section. The closest Fruitland Coal offset is Richardson's WF Federal 28-1 (located in Unit B, Sec. 28, T30N, R14W), which was approved for downhole commingling of the Fruitland Coal and Pictured Cliffs formations in Administrative Order DHC-2435.

Based on recent Richardson Operating wells in this township, it is anticipated that both zones will have similar bottom hole pressures of approximately 200 psi. Both zones produce some water and no liquid hydrocarbons. Neither zone is fluid sensitive and fluids from the two zones are compatible.

Since neither zone has enough data to prepare a reliable production forecast, or predict the ultimate reserves, Richardson Operating proposes to allocate the production based on the initial production rates from the Pictured Cliffs. The well will be perforated and stimulated in the Pictured Cliffs formation. The stimulation will then be cleaned up and the well flow tested. The production based on the flow test will establish the Pictured Cliffs base rate. The Fruitland Coal formation will be completed separately but it will be produced with the Pictured Cliffs. The Fruitland Coal production will be the total measured production minus the Pictured Cliffs production.

Assuming a 7% decline rate from the Pictured Cliffs, the proposed allocation formula is as follows:

**Pictured Cliffs Production** = Pictured Cliffs base rate  $\times e^{(-Dt)}$ , where  $D = 7\%/yr$  and  $t =$  time in years since first production.

**Fruitland Coal Production** = Total Production – Pictured Cliffs production.

District I  
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

District II  
PO Drawer 00, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

99 MAR 19 PM 12:29  AMENDED REPORT

District III  
1000 Rio Brazos Rd, Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT  
B70 HENNINGTON, NM

*API Number		*Pool Code	*Pool Name
		86620	TWIN MOUNDS FRUITLAND SAND PICTURED CLIFF
*Property Code	*Property Name		*Well Number
	WF FEDERAL		34-2
*GRID No.	*Operator Name		*Elevation
019219	RICHARDSON OPERATING COMPANY		5513'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
N	34	30N	14W		1055	SOUTH	1470	WEST	SAN JUAN

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
160	Y		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<sup>16</sup> 	5280.00'			<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  <i>Paul C. Thompson</i> Signature Paul C. Thompson Printed Name Agent Title 3/19/99 Date		
	5460.84'					
	34					
	5280.00'					
5504.40'	1470'	LOT 4	LOT 3	LOT 2	LOT 1	<sup>18</sup> SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  FEBRUARY 25, 1999 Date of Survey Signature and Seal of Professional Surveyor  Certificate Number 6857
1055'						

District I  
190 Reg 1980, Hobbs, NM 88241-1980  
District II  
811 South First, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised October 18, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

RECEIVED  
ELM  
99 SEP 20 PM 2:18  
070 FARMINGTON, NM

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-29882	<sup>1</sup> Pool Code 71629	<sup>3</sup> Pool Name Basin Fruitland Coal
<sup>4</sup> Property Code WF Federal	<sup>5</sup> Property Name	<sup>6</sup> Well Number 34-2
<sup>7</sup> OGRID No. 019219	<sup>8</sup> Operator Name Richardson Operating Company	<sup>9</sup> Elevation 5513'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	34	30N	14W	Lot 3	1055	South	1470	West	San Juan

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
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<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill Y	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16	NM-0206995				<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  <i>Cathleen Colby</i> Signature Cathleen Colby Printed Name Land Manager Title September 15, 1999 Date
	34				
Lot 4      Lot 3      Lot 2      Lot 1				<sup>18</sup> SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  Date of Survey Signature and Seal of Professional Surveyer:  Certificate Number	

**Richardson Operating Company**  
WF Federal 34-2

Ownership in two commingled zones is uniform

**FRUITLAND COAL FORMATION:**

Township 30 North, Range 14 West  
Section 34: S/2  
Containing 343.44 acres, more or less  
San Juan County, NM

Working Interest:  
Richardson Production Company

Royalty Interest:  
USA NMNM-0206995

Overriding Royalty Interest:  
Linda Orwitz Palley, trustee of Estate of Samuel D. Orwitz  
Burlington Resources Oil & Gas Co.

**PICTURED CLIFFS FORMATION:**

Township 30 North, Range 14 West  
Section 34: SW/4  
Containing 171.91 acres, more or less  
San Juan County, NM

Working Interest:  
Richardson Production Company

Royalty Interest:  
USA NMNM-0206995

Overriding Royalty Interest:  
Linda Orwitz Palley, trustee of Estate of Samuel D. Orwitz  
Burlington Resources Oil & Gas Co.



**RICHARDSON OPERATING COMPANY**

1700 Lincoln, Suite 1700  
Denver, Colorado 80203 (303) 830-8000  
FAX (303) 830-8009

January 3, 2000

Bureau of Land Management  
1235 La Plata Highway  
Farmington, NM 87401

Attention: Minerals

RE: Downhole Commingle Application  
WF Federal 34-2  
1055' FSL, 1470'FWL 34-30N-14W  
San Juan County, NM  
Basin Fruitland Coal and Twin Mounds FR  
Sand PC

Gentlemen:

Enclosed you will find a copy of the above referenced application that has been submitted to the New Mexico Oil Conservation Division for administrative approval. You are being notified of this application for concurrent approval.

If you desire to submit remarks concerning the application, please send them to Ms. Lori Wrotenberry, Director, New Mexico Oil Conservation Division, 2040 S. Pacheco, Santa Fe, New Mexico 87504 within 20 days from receipt of this notice. If you have no objections to the proposal, concurrent approval is requested. Ownership in the two commingled zones is uniform.

Thank you for your consideration in this matter, and if you have any questions or concerns, please do not hesitate to contact the undersigned.

Sincerely,

Chris O'Shea  
Lease Analyst

cos  
enclosure