

DATE IN 3/14/00	SUSPENSE 4/3/00	ENGINEER DC	LOGGED KN	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
- Engineering Bureau -

**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  
Print or Type Name

*Cathleen Colby*  
Signature

Land Manager  
Title

3-9-00  
Date



RICHARDSON OPERATING COMPANY

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

March 9, 2000

Ms. Lori Wrotenberry  
New Mexico Oil Conservation Division  
2040 S. Pacheco  
Santa Fe, NM 87504

RE: Downhole Commingle Application  
WF Federal 34-3  
1060' FNL, 975' FEL-Sec. 34-30N-14W  
San Juan County, NM  
Basin Fruitland Coal and Harper Hill PC

Dear Ms. Wrotenberry:

This is a request for administrative approval for downhole commingling of the production from the captioned formations.

We have attached for your review, acreage plats outlining the dedicated acreage and a proposed allocation formula with a short discussion of the history of the well.

All royalty and overriding royalty owners are being notified of this application by certified return receipt mail. Copies of the letters are enclosed.

Thank you for your consideration and approval of this application. If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

Cathleen Colby  
Land Manager

Enclosures

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 #3 A 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. 30-045-29881 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		Harper Hill PC 78160
2. Top and Bottom of Pay Section (Perforations)	1137'-1144' and 1148'-1154'		1160'-1172'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	To be determined		To be determined
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Current) a.  (Original) b. 200 psi (est.)	a.  b.	a.  b. 200 psi (est.)
6. Oil Gravity (°API) or Gas BTU Content	1000 BTU		1000 BTU
7. Producing or Shut-in?	Shut-in waiting on pipeline		Shut-in waiting on pipeline
Production Marginal? (yes or no)	yes		yes
* 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	Date: Rates:	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/ water rates of recent test (within 60 days)	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 Gager TITLE Consulting Geologist DATE 3/9/00  
TYPE OR PRINT NAME Barry Gager TELEPHONE NO. 303-830-8000

**Richardson Operating Company**  
**WF Federal 34-3**  
**Commingling Application**

The WF Federal 34-3 is a newly drilled Basin Fruitland Coal/Harper Hill Pictured Cliffs well. This is part of Richardson's development program in their WF (West Farmington) field. This is the third Pictured Cliffs well and the second Fruitland Coal well in this section. The closest Fruitland Coal offset is Richardson's WF Federal 34-2 (located in Unit N, Sec. 34, T30N, R14W), which was approved for downhole commingling of the Fruitland Coal and Pictured Cliffs formations in Administrative Order DHC-2608.

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.

**Richardson Operating Company**  
WF Federal 34-3

**FRUITLAND COAL FORMATION:**

Township 30 North, Range 14 West

Section 34: N/2

Containing 320.00 acres, more or less

San Juan County, NM

Working Interest:

Burlington Resources Oil & Gas Company

Richardson Production Company

Royalty Interest:

USA NMNM-206995

USA NMSF-080466

Overriding Royalty Interest:

Linda Orwitz Palley, trustee of Estate of Samuel D. Orwitz

Burlington Resources Oil & Gas Company

**PICTURED CLIFFS FORMATION:**

Township 30 North, Range 14 West

Section 34: NE/4

Containing 160.00 acres, more or less

San Juan County, NM

Working Interest:

Richardson Production Company

Royalty Interest:

USA NMNM-206995

Overriding Royalty Interest:

Linda Orwitz Palley, trustee of Estate of Samuel D. Orwitz

Burlington Resources Oil & Gas Company

District I  
Box 1900, Hobbs, NM 88241-1900  
District II  
111 South First, Artesia, NM 88210  
District III  
1000 Rio Benito Rd., Aztec, NM 87410  
District IV  
2044 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> APN Number 30-045-29881	<sup>1</sup> Pool Code 71629	<sup>1</sup> Pool Name Basin Fruitland Coal
<sup>1</sup> Property Code WF Federal	<sup>1</sup> Property Name WF Federal	<sup>1</sup> Well Number 34-3
<sup>1</sup> OGRID No. 019219	<sup>1</sup> Operator Name Richardson Operating Company	<sup>1</sup> Elevation 5587'

<sup>10</sup> Surface Location

UL or lot no. A	Section 34	Township 30N	Range 14W	Lot Ida	Feet from the 1060	North/South line North	Feet from the 975	East/West line East	County San Juan
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<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

<sup>16</sup> NMSF-080466		<sup>16</sup> NMJM-206995	
34			
Lot 4		Lot 3	
Lot 2		Lot 1	

<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

*Cathleen Colby*  
Signature  
Cathleen Colby  
Printed Name  
Land Manager  
Title  
October 12, 1999  
Date

<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 Surveyor  
Certificate Number

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

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

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

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

State of New Mexico  
Energy, Minerals & Natural Resources Dept

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

Form C-101  
Revised February 21, 1991  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

99 MAR 19 PM 12:30

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number	'Pool Code 78160	'Pool Name Harper Hill PC
'Property Code	'Property Name WF FEDERAL	'Well Number 34-3
'OGRID No. 019219	'Operator Name RICHARDSON OPERATING COMPANY	'Elevation 5587'

<sup>10</sup> Surface Location

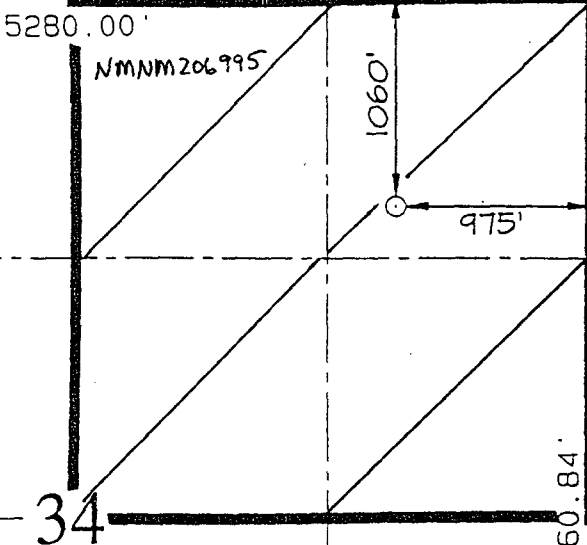
U. or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
A	34	30N	14W		1060	NORTH	975	EAST	SAN JUAN

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

U. 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 160	<sup>13</sup> Joint or Infill Y	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--------------------------------------	------------------------------------	----------------------------------	-------------------------

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>15</sup> 5504.40'					<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.  Paul C. Thompson Signature Paul C. Thompson Printed Name Agent Title 3/19/99 Date
	<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 NEALE C. EDWARDS NEW MEXICO 6857 Certificate Number 6857				

Richardson Operating Company  
WF Federal 34-3

NOTIFICATION LIST

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

Burlington Resources Oil & Gas Company  
P.O. Box 4289  
Farmington, NM 87499-4289

Ms. Linda Orwitz Palley, Trustee  
Estate of Samuel D. Orwitz  
103 Providence Mine Road, #204  
Nevada City, CA 95959



Richardson Operating Company

**WF Federal 34-3**  
**1060' FNL, 975' FEL, Section 34-T30N-R14W**  
**San Juan County, New Mexico**  
**Basin Fruitland Coal and Harper Hill PC**

The following royalty and overriding royalty owners have received written notice of the proposed downhole commingling application:

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

Burlington Resources Oil & Gas Company  
P.O. Box 4289  
Farmington, NM 87499-4289

Ms. Linda Orwitz Palley, Trustee  
Estate of Samuel D. Orwitz  
103 Providence Mine Road, #204  
Nevada City, CA 95959

I certify that copies of the Application for Downhole Commingling have been mailed to the above interest owners.

Cathleen Colby  
Cathleen Colby

STATE OF COLORADO     )  
                                      ) ss.  
COUNTY OF DENVER     )

The following instrument was acknowledged before me this 24 day of March, 2000  
by Cathleen Colby.

Debra D'Shea  
Notary Public

My Commission Expires:

8-24-02



RICHARDSON OPERATING COMPANY

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

March 9, 2000

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

Attention: Minerals

RE: Downhole Commingle Application  
WF Federal 34-3  
1060' FNL, 975' FEL-Sec. 34-30N-14W  
San Juan County, NM  
Basin Fruitland Coal and Harper Hill 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 objection to the proposal, concurrent approval is requested.

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

Sincerely,

*Cathleen Colby*

Cathleen Colby  
Land Manager

Enclosures



RICHARDSON OPERATING COMPANY

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

March 9, 2000

Mr. James R. J. Strickler  
Burlington Resources Oil & Gas Company  
P.O. Box 4289  
Farmington, NM 87499-4289

RE: Downhole Commingle Application  
WF Federal 34-3  
1060' FNL, 975' FEL-Sec. 34-30N-14W  
San Juan County, NM  
Basin Fruitland Coal and Harper Hill PC

Dear James:

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. As an overriding royalty owner, you are being notified of this application pursuant to NMOCD rules.

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 objection to the proposal, no action is required on your part.

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

Sincerely,

*Cathleen Colby*

Cathleen Colby  
Land Manager

Enclosure



RICHARDSON OPERATING COMPANY

---

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

March 9, 2000

Ms. Linda Orwitz Palley, Trustee  
Estate of Samuel D. Orwitz  
103 Providence Mine Road, #204  
Nevada City, CA 95959

RE: Downhole Commingle Application  
WF Federal 34-3  
1060' FNL, 975' FEL-Sec. 34-30N-14W  
San Juan County, NM  
Basin Fruitland Coal and Harper Hill PC

Dear Ms. Palley:

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. As an overriding royalty owner, you are being notified of this application pursuant to NMOCD rules.

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 objection to the proposal, no action is required on your part.

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

Sincerely,

Cathleen Colby  
Land Manager

Enclosure