

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

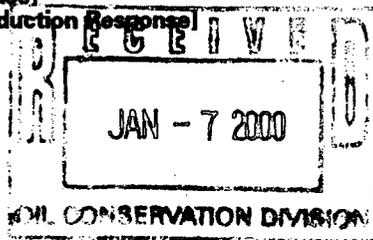
NEW MEXICO OIL CONSERVATION DIVISION  
- Engineering Bureau -

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 \_\_\_\_\_ Land Manager \_\_\_\_\_ 1-3-00  
 Print or Type Name Signature Title Date



**RICHARDSON OPERATING COMPANY**

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

January 3, 2000

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

RE: Downhole Commingle Application  
WF State 16-2  
900' FNL, 1745' FEL 16-30N-14W  
San Juan County, NM  
Basin Fruitland Coal and Harper Hill FR  
Sand PC Ext.

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, an acreage plat outlining the dedicated acreage and a proposed allocation formula with a short discussion of the history of the well.

The New Mexico State Land Office is being notified of this application by certified return receipt mail. A copy of this letter is also enclosed.

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

Sincerely,

Chris O'Shea  
Lease Analyst

cos  
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 State 16 #2 B 16-30N-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 23932 API NO. 30-045-29950 Federal State  (and/or) Fee

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediates Zone	Lower Zone
1. Pool Name and Pool Code	Basin Fruitland Coal 71629		Harper Hill FR Sand PC ext. 78160
2. Top and Bottom of Pay Section (Perforations)	1274' - 1282'		1292' - 1300'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Pumping		Pumping
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
8. Fixed Percentage Allocation Formula - % for each zone	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 <small>Note: For new zones with no production history applicant shall be required to attach production estimates and supporting data</small>	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 K Gager TITLE Consulting Geologist DATE January 3, 2000  
TYPE OR PRINT NAME Barry Gager TELEPHONE NO. 303-830-8000

**Richardson Operating Company**  
**WF State 16-2**  
**Commingling Application**

The WF State 16-2 is a newly drilled Basin Fruitland Coal/Harper Hill Frt. Sand Pictured Cliffs Ext. well. This is part of Richardson's development program in their WF (West Farmington) field. This is the second Pictured Cliffs and Fruitland Coal well in this section. The first such well in the section is Richardson's WF State 16-1 (Unit M, Sec. 16, T30N, R14W), which was approved for downhole commingling of the Fruitland Coal and Pictured Cliffs formations in Administrative Order DHC-2433.

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.

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045-29950		2 Pool Code 71629		3 Pool Name Basin Fruitland Coal	
4 Property Code 23932		5 Property Name WF State			6 Well Number 16-2
7 OGRID No. 019219		8 Operator Name RICHARDSON OPERATING COMPANY			9 Elevation 5710'

10 Surface Location

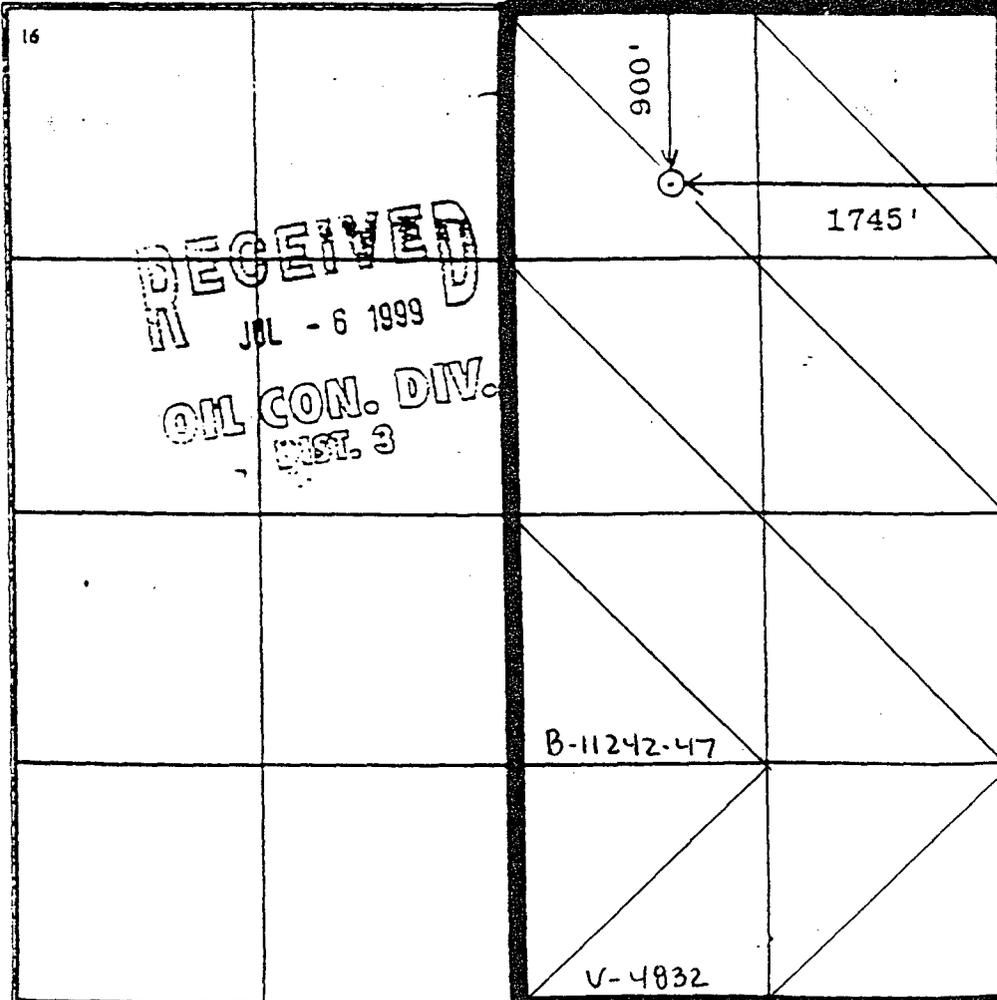
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	16	30 N	14 W		900'	North	1745'	East	San Juan

11 Bottom Hole Location If Different From Surface

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

12 Dedicated Acres 320	13 Joint or Infill Y	14 Consolidation Code	15 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



17 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  
7-2-99  
Date

18 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  
6844  
REGISTERED LAND SURVEYOR  
Certificate Number

State of New Mexico  
Energy, Minerals & Natural Resources

Form C-102  
Revised March 17, 1994

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-29250		Pool Code 78160	Pool Name Harper Hill Fruitland Sand-PC ext.
Property Code 23932	Property Name WF State		Well Number 16-2
OGRID No. 019219	Operator Name RICHARDSON OPERATING COMPANY		Elevation 5710'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	16	30 N	14 W		900'	North	1745'	East	San Juan

11 Bottom Hole Location If Different From Surface

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

12 Dedicated Acres 160	13 Joint or Infill Y	14 Consolidation Code	15 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

<p>16</p> <p>RECEIVED JUL - 6 1999</p> <p>OIL CON. DIV. JUL 3</p>		<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Paul C. Thompson</i></p> <p>Signature Paul C. Thompson</p> <p>Printed Name Agent</p> <p>Title 7-2-99</p> <p>Date</p>
		<p>18 SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p><i>Gerald G. Huddleston</i></p> <p>6844</p> <p>REGISTERED LAND SURVEYOR</p> <p>Certificate Number</p>

V-4832

Richardson Operating Company  
WF State 16-2

NOTIFICATION LIST

Yates Petroleum Corporation  
Yates Drilling Company  
Abo Petroleum Corporation  
Myco Industries, Inc.  
105 South Fourth Street  
Artesia, NM 88210

EVKO Development Company  
PO Box 245  
Sausalito, CA 94966

New Mexico State Land Office  
PO Box 1148  
Santa Fe, NM 87504

Richardson Operating Company

WF State 16-2  
900' FNL, 1745' FEL, Section 16-T30N-R14W  
San Juan County, New Mexico  
Basin Fruitland Coal and Harper Hill FR Sand-PC Ext.

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

Yates Petroleum Corporation  
Yates Drilling Company  
Abo Petroleum Corporation  
Myco Industries, Inc.  
EVKO Development Company  
New Mexico State Land Office

I certify that copies of the Application for Downhole Commingling has 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 3rd day of January, 2000 by Cathleen Colby.

Debris O'Shea  
Notary Public

My Commission Expires:

3-24-02

**Richardson Operating Company**  
WF State 16-2

**FRUITLAND COAL FORMATION:**

Township 30 North, Range 14 West  
Section 16: E/2  
Containing 320.00 acres, more or less  
San Juan County, NM

Working Interest:  
Richardson Production Company

Royalty Interest:  
State of New Mexico B-11242-47  
State of New Mexico V-4832

Overriding Royalty Interest:  
Yates Petroleum Corporation  
Yates Drilling Company  
Abo Petroleum Corporation  
Myco Industries, Inc.  
EVKO Development Company

**PICTURED CLIFFS FORMATION:**

Township 30 North, Range 14 West  
Section 16: NE/4  
Containing 160.00 acres, more or less  
San Juan County, NM

Working Interest:  
Richardson Production Company

Royalty Interest:  
State of New Mexico B-11242-47

Overriding Royalty Interest:  
EVKO Development Company



RICHARDSON OPERATING COMPANY

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

January 3, 2000

New Mexico State Land Office  
PO Box 1148  
Santa Fe, NM 87504

Attention: Land Department

RE: Downhole Commingle Application  
WF State 16-2  
900' FNL, 1745' FEL 16-30N-14W  
San Juan County, NM  
Basin Fruitland Coal and Harper Hill FR  
Sand PC Ext.

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. As a 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 Wrottenberry, 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, please provide concurrent approval.

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



RICHARDSON OPERATING COMPANY

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

January 3, 2000

Yates Petroleum Corporation  
Yates Drilling Company  
Abo Petroleum Corporation  
Myco Industries, Inc.  
105 South Fourth Street  
Artesia, NM 88210

RE: Downhole Commingle Application  
WF State 16-2  
900' FNL, 1745' FEL 16-30N-14W  
San Juan County, NM  
Basin Fruitland Coal and Harper Hill FR  
Sand PC Ext.

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. As overriding royalty owners 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, and if you have any questions or concerns, please do not hesitate to contact the undersigned.

Sincerely,

Chris O'Shea  
Lease Analyst

cos  
enclosure



RICHARDSON OPERATING COMPANY

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

January 3, 2000

EVKO Development Company  
PO Box 245  
Sausalito, CA 94966

RE: Downhole Commingle Application  
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900' FNL, 1745' FEL 16-30N-14W  
San Juan County, NM  
Basin Fruitland Coal and Harper Hill FR  
Sand PC Ext.

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. 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.

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