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|----------------|------------------|-------------|-----------|----------|
| DATE IN 1/7/00 | SUSPENSE 1/27/00 | ENGINEER DC | LOGGED MV | TYPE DHC |
|----------------|------------------|-------------|-----------|----------|

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]

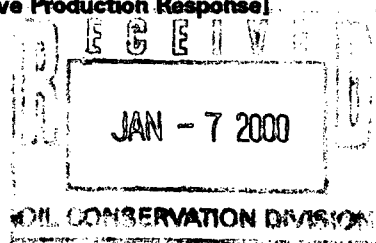
[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[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
Print or Type Name

Cathleen Colby
Signature

Land Manager
Title

1-3-00
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: Gas & Oil - Flowing: All Gas Zones: <u>Estimated</u> or Measured Original | (Current) a. (Original) b. 200 | a. b. | a. b. 200 |
| 6. Oil Gravity (°API) or Gas BTU Content | 1000 | | 1000 |
| 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 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

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 Department

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

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

99 MAR 19 PM 12:29 ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT
070 FLEMINGTON, NM

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

¹⁰ Surface Location

| UL or lot no. | Section | Township | Range | Lot 101 | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| N | 34 | 30N | 14W | | 1055 | SOUTH | 1470 | WEST | SAN JUAN |

¹¹ Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot 101 | 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

| | | | | | |
|---------------|--|----------|--|---|--|
| ¹⁶ | | 5280.00' | | ¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. | |
| | | | | Signature <i>Paul C. Thompson</i> | |
| | | | | Printed Name Paul C. Thompson | |
| | | | | Agent | |
| | | | | Title 3/19/99 | |
| | | | | 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. | |
| | | | | FEBRUARY 25, 1999 | |
| | | | | Date of Survey | |
| | | | | Signature and Seal of Professional Surveyor | |
| | | | | NEALE C. EDWARDS NEW MEXICO 6857 | |
| | | | | Certification Number 6857 | |
| | | | | | |

5504.40'

5460.84'

34

1470'

1055'

LOT 4

LOT 3

LOT 2

LOT 1

5280.00'

District I
1901 Bgt 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

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

RECEIVED
99 SEP 20 PM 2:18

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

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

¹⁰ Surface Location

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

¹¹ Bottom Hole Location If Different From Surface

| | | | | | | | | | |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot no. | Section | Township | Range | Lot Idg | 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. |
|--------------------------------------|------------------------------------|----------------------------------|-------------------------|

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 | | | | 17 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 September 15, 1999 Date |
| 34 | | | | | 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 Surveyer: Certificate Number |
| Lot 4 Lot 3 Lot 2 Lot 1 | | | | | |

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