

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]

2433

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

[A] Location - Spacing Unit - Directional Drilling

☐ NSL ☐ NSP ☐ DD ☐ SD

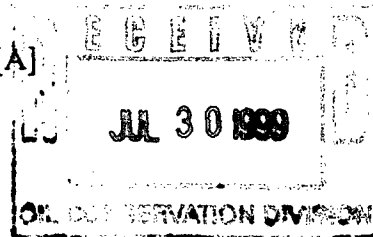
Check One Only for [B] or [C]

[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 further verify that all applicable API Numbers are included. 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.

John C. Thompson
Print or Type Name

Signature

Title

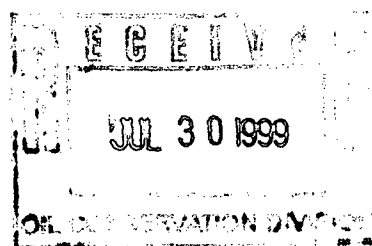
7/27/99
Date

**WALSH**

ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping7415 East Main
Farmington, New Mexico 87402
(505) 327-4892 • Fax: (505) 327-9834

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

July 27, 1999

***Re: Downhole Commingle Application
Richardson Operating Company
WF State 16-1
930' FSL & 1115' FEL, Section 16, T30N, R14W
San Juan County, New Mexico
Basin Fruitland Coal and Harper Hill Frt. Sand/ Pictured Cliffs Ext.***

Dear Ms. Wrotenberry,

This is a request for administrative approval for downhole commingling of the production from the Basin Fruitland Coal and the Harper Hill Fruitland Sand / Pictured Cliffs Ext.

I have attached for your review, an acreage plat outlining the dedicated acreage and offset operators. I have also included a proposed allocation formula with a short discussion of the history of the well.

The offset operators are being notified of this application by certified return receipt mail. Copies of these letters are enclosed.

Thank you for your consideration and approval of this application. If you have any questions or concerns please do not hesitate to contact me anytime at (505) 327-4892.

Sincerely,

**John C. Thompson
Engineer**

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Enclosures

DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II

811 South First St., Artesia, NM 88210-2835

DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429Form C-107-A
New 3-12-96

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 1 M 16-30N-14W San Juan County

Lease Well No. Unit Ltr. - Sec - Twp - Rge County

OGRID NO. 019219 Property Code API NO. 30-045-29750 Spacing Unit Lease Types: (check 1 or more)
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		Harper Hill FRT Sand/EC
2. Top and Bottom of Pay Section (Perforations)	1152-1162'		1170-1186'
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: Gas & Oil - Flowing: All Gas Zones: <u>Estimated</u> Or Measured Original	a. (Current) b. (Original) 200	a. b.	a. b. 200
6. Oil Gravity (° API) or Gas BTU Content	1000		1000
7. Producing or Shut-In?			
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 • If Producing, give date and oil/gas/water rates of recent test (within 60 days)	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
Have all offset operators been given written notice of the proposed downhole commingling? ☒ 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, attach 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:

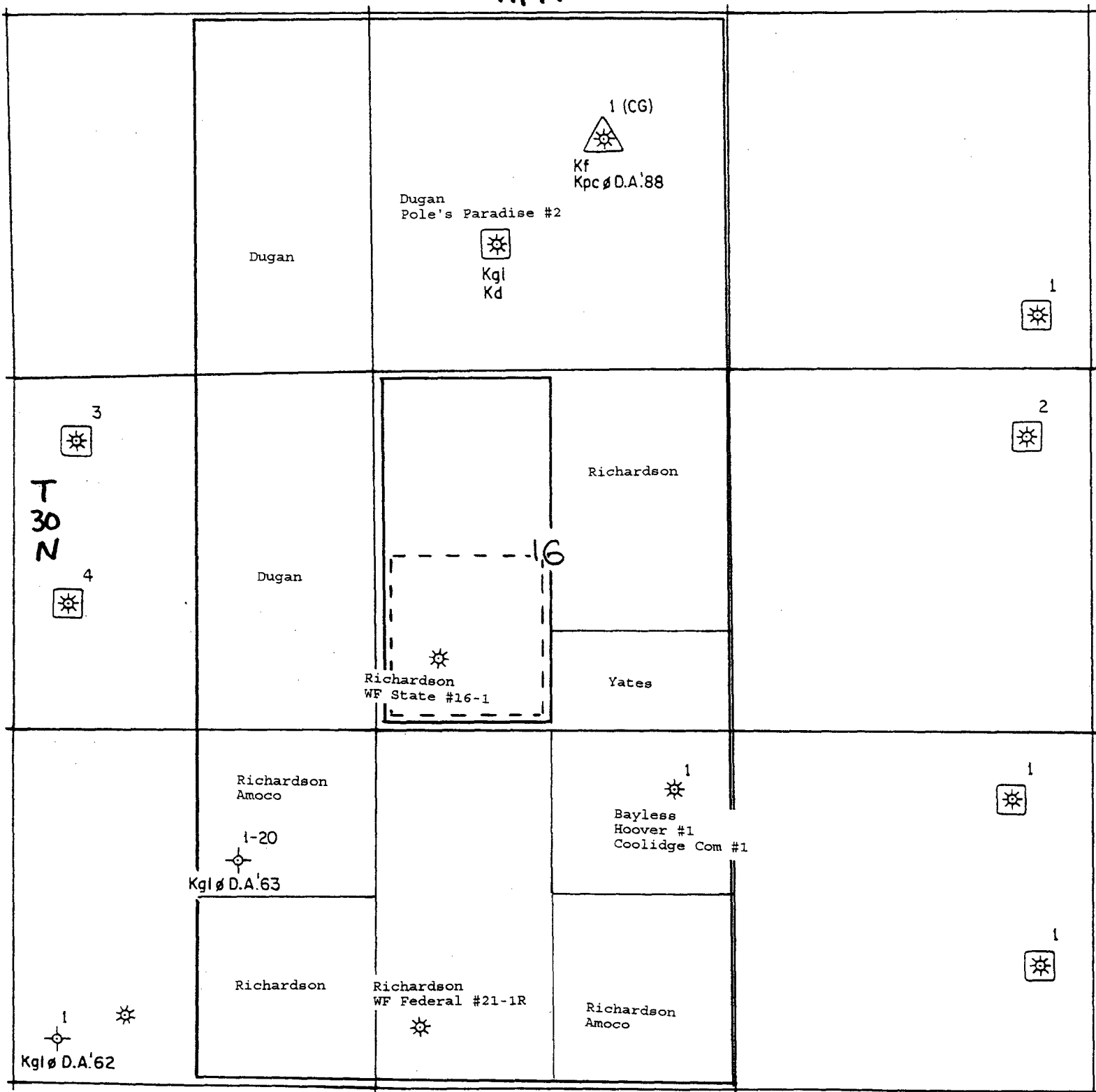
- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- Production curve for each zone for at least one year. (If not available, attach explanation.)
- For zones with no production history, estimated production rates and supporting data.
- Data to support allocation method or formula.
- Notification list of all offset operators.
- 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 John C. Thompson TITLE Agent/Engineer DATE 7/27/99

TYPE OR PRINT NAME John C. Thompson TELEPHONE NO. (505) 327-4892

R14W



Richardson Operating Company
WF State 16 #1
Commingling Application

The WF State 16-1 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 only Pictured Cliffs well in this section. There are also no other Fruitland Coal wells in this section. The closest Fruitland Coal off set is Richardson's Ms. Nona #2 (located in section 15, 30N, R14W) which has recently been approved for down hole commingling of the Fruitland Coal and Pictured Cliffs formations.

Based on recent Richardson Operating wells in the southwest quarter of this township and the Ms. Nona #2, 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 was perforated and stimulated in the Pictured Cliffs formation. The stimulation was then cleaned up and the well was then flow tested. The production based on the flow test will establish the baseline for the Pictured Cliffs production. The Fruitland Coal formation will be completed separately but it will have to be produced with the Pictured Cliffs. The Fruitland Coal production will be the total measured production minus the Pictured Cliffs baseline rate.

Assuming a 7% decline rate from the Pictured Cliffs the 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.

WF State 16-1

Gas Production

The well was perforated and stimulated in the Pictured Cliffs. The well was allowed to flow back immediately after the stimulation. The well was then cleaned up and allowed to flow for 72 hrs. The well produced 45 MCF in the 72 hour test period. The calculated 24 hour flow rate was determined to 15 mcf/d. Richardson Operating proposes to use 15 mcf/d for the initial production from the Pictured Cliffs.

Richardson Operating Company

WF State 16-1
930' FSL & 1115' FWL, Section 16, T30N, R14W
San Juan County, New Mexico
Basin Fruitland Coal and Harper Hill Frt. Sand/ Pictured Cliffs Ext.

The following offset Operators have received written notice of the proposed downhole commingling application:

Dugan Production Company
Yates Petroleum Corporation
Amoco Production Company
Robert L. Bayless

Yates Drilling Company
Abo Petroleum Corporation
Myco Industries, Inc.

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

Amoco Production Company
Yates Petroleum Corporation
Yates Drilling Company
Abo Petroleum Corporation

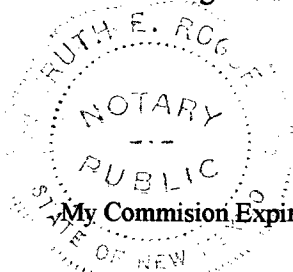
Myco Industries, Inc.
Evko Development

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



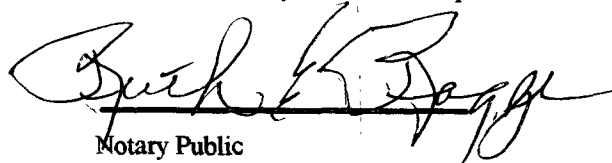
SAN JUAN COUNTY)
) ss
STATE OF NEW MEXICO)

The following instrument was acknowledged before me this 27 day of July, 1999 by John C. Thompson



My Commission Expires:

July 31, 2001



Notary Public

Richardson Operating Company
WF State #16-1

NOTIFICATION LIST

New Mexico State Land Office
P.O. Box 1148
Santa Fe, NM 87504-1148

Evko Development Company
P.O. Box 245
Sausalito, CA 94966

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

Amoco Production Company
P.O. Box 3092
Houston, TX 77253-3092

Dugan Production Corp.
P.O. Box 420
Farmington, NM 87401

Robert L. Bayless
P.O. Box 168
Farmington, NM 87499

Richardson Operating Company
WF State #16-1

Pictured Cliffs formation:

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

Fruitland Coal formation:

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

Working Interest:

Richardson Production Company

Non-Consent Working Interest:

Amoco Production Company

Royalty Interest:

State NM B11242-47
State NM B11571-54
State NM E3149-6
State NM V4832
State NM E70-39

Overriding Royalty Interest:

Yates Petroleum Corporation
Yates Drilling Company
Abo Petroleum Corporation
Myco Industries, Inc.
Evko Development Company

Hebbel NM 88240-1980
Boxer DO, Arroyo, NM 88211-0719
net III
Rio Brazos Rd., Aztec, NM 87410
net IV
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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-29150		Pool Code 7429/96863		BASIN FRUITLAND Pool Name COAL	
Property Code 23932		Property Name WELLOCAT 30N14W16E PICTURED CLIFFS		Well Number 16 - 1	
OGRID No. 019219		Operator Name RICHARDSON OPERATING CO.		Elevation 5617'	

10 Surface Location

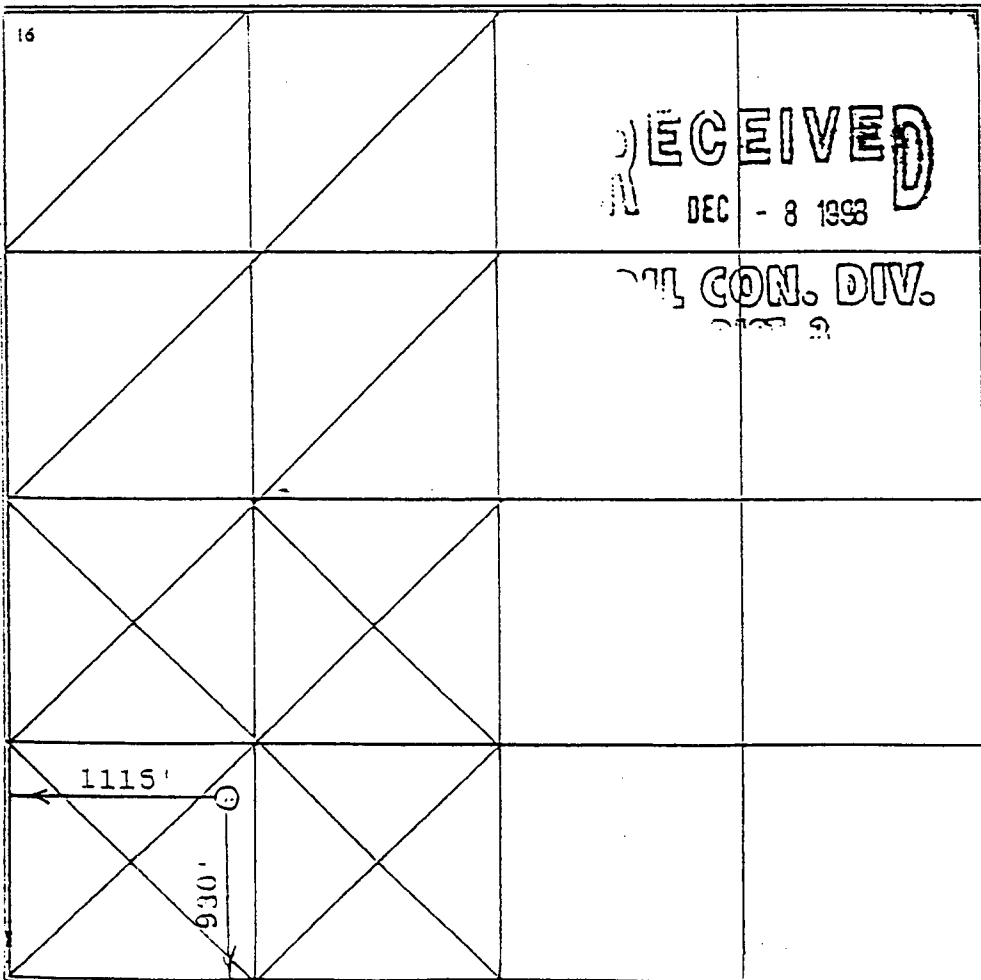
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
M	16	30 N.	14 W.		930	South	1115	West	San Juan

11 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

Dedicated Acres 3.98	Joint or Infill	Consolidation Code	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

<div>16</div> 	<div>RECEIVED DEC - 8 1998 OIL CON. DIV.</div>	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature <u>Cathleen Colby</u> Printed Name <u>Cathleen Colby</u> Title <u>Land Manager</u> Date <u>12-4-98</u>
		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 <u>Herbert E. Hudson</u> Professional Surveyor Seal (6844) REGISTERED LAND SURVEYOR Certificate Number

☒ Fruitland Coal
☒ Pictured Cliffs



ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping

7415 East Main
Farmington, New Mexico 87402
(505) 327-4892 • Fax: (505) 327-9834

New Mexico State Land Office
P.O. Box 1148
Santa Fe, NM 87504

July 27, 1999

Attn. Land Department

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To Whom It May Concern,

Enclosed you will find a copy of the above referred to application that has been submitted to the New Mexico Oil Conservation Division for administrative approval. As royalty or overriding royalty interest owner you are being notified of this application pursuant to NMOC rules.

If you desire to submit remarks concerning the application, please send them to Ms. Lori Wrotenberry, Director, New Mexico Oil Conservation Division, Santa Fe, New Mexico with in 20 days from the receipt of the notice. If you have no objection 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 me at 505-327-4892.

Sincerely,

John C. Thompson
Engineer

rr

Enclosure

**WALSH**

ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping7415 East Main
Farmington, New Mexico 87402
(505) 327-4892 • Fax: (505) 327-9634

**Yates Petroleum Corporation
Yates Drilling Company
Abo Petroleum Corporation
Myco Industries, Inc.**

July 27, 1999

**105 South Fourth Street
Artesia, New Mexico 88210**

Attn. Land Department

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Lease Management
Contract Pumping7415 East Main
Farmington, New Mexico 87402
(505) 327-4892 • Fax: (505) 327-9834**Evko Development Company
P.O. Box 245
Sausalito, CA 94966****July 27, 1999****Attn. Land Department**

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Farmington, New Mexico 87402
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**Amoco Production Company
P.O. Box 3092
Houston, TX 77253-3092**

July 27, 1999**Attn. Land Department**

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Dugan Production Corp.
P.O. Box 420
Farmington, NM 87499

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Farmington, New Mexico 87402
(505) 327-4892 • Fax: (505) 327-9834**Robert L. Bayless
P.O. Box 168
Farmington, NM 87499****July 27, 1999****Attn. Land Department**

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