Forst 3160-5, (June 1990)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT



5 Lesse Designation and Seri

		5. Lease Designation and Serial No.
	202 GET 30 PM 1: 31	14-20-603-2198
SUNDRY NOTICES AN	ID REPORTS ON WELLS	6. If Indian, Allottee or Tribe Name
	ill or to deepen or reentry to a different reservoir.	Navajo Tribe
Use "APPLICATION FOR	PERMIT-" for such proposals	Navajo IIIbe
	N TRIPLICATE	7. If Unit or CA, Agreement Designation
1. Type of Well Gas Uvell Well Other	DEC 2002	8. Well Name and No.
2. Name of Operator	OIL CONS. DIV.	Navajo 13 No.1
Richardson Operating Company	DIST. 3	9. API Well No.
3. Address and Telephone No.		30-045-30652
3100 LaPlata Hwy. Farmington, A. Location of Well (Footage, Sec., T., R., M., or Survey Des	21 - 2740	10. Field and Pool, or Exploratory Area
4. Location of Well (Footage, Sec., 1., K., M., of Survey Des	C 1 112 UE OCE	Basin FC/West Kutz PC
1300' FNL & 1230' FEL, Sec 13,	T29N, R14W, NMPM	11. County or Parish, State
· ,,,		San Juan, NM
12 OUECK ADDDODDIATE DOV	(-) TO INDIOATE MATURE OF MOTIOE RE	TOOT OF STUES DATA
	(s) TO INDICATE NATURE OF NOTICE, RE	PORT, OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTION	
	Abandonment	Change of Plans
Notice of Intent	Recompletion	New Construction
	Plugging Back	Non-Routine Fracturing
Subsequent Report	Casing Repair	Water Shut-Off
	Altering Casing	Conversion to Injection
Final Abandonment Notice	Other Copy:OCD DHC Application	
13. Describe Proposed or Completed Operations (Clearly state all part	inent details, and give pertinennt dates, including estimated date of starting any pro	Dispose Water
Kutz Pictured Cliffs in this we		ication to downhole vii).
	CONDITIONS OF AP	PROVAL
	Adhere to previously issued	Stippersace, or
14. I hereby certify the foregoing is true and correct		
Signed Thurles Herley	Title Agent	Date 10/30/02
(This space for Federal or State office use)  /s/ Jim Lovato Approved by	Title	DEC 1.2 2002
Conditions of approval, if any:		<u> </u>

**DISTRICT II** 

#### State of New Mexico Energy, Minerals and Natural Resources Department

PLUG AND ABANDONMENT

**DISTRICT** I P.O. Box 1980, Hobbs, NM 88240

P.O. Drawer DD Artesia, NM 88210

**TEMPORARILY ABANDON** 

**PULL OR ALTER CASING** 

SEE RULE 1103.

OIL CONSERVATION DIVISION P.O. Box 2088

Santa Fe, New Mexico 87504-2088

WELL API NO. 30-045-30652

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STATE L	FEE
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**DISTRICT III** 

6. State Oil & Gas Lease No.

1000 Rio Brazos Rd., Aztec, NM 87410	)	OTO TATALITIES N. NI.	Navajo 1	4-20-603-2198	
SUNDRY NOTICES AND REPORTS ON WELLS  (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A  DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"  (FORM C-101) FOR SUCH PROPOSALS.)		7. Lease Name or Unit Agreement Name Navajo 13			
1. Type of Well: OIL GAS WELL WELL	OTHER				
2. Name of Operator			8. Well No.		
Richardson Operating	Company		1		
3. Address of Operator			9. Pool name	or Wildcat	
•	Farmington, NM 87401		W. Kutz	PC/Basin Fruitland	Coal
4. Well Location					
	Feet From The North	Line and 1230	F <b>ee</b>	t From The <u>East</u>	Line
Section 13	Township 29N	Range 14W	NMPM	San Juan	County
	10. Elevation (Show who 5240 ' UG	ether DF,RKB,RT,GR,etc.)			
11. Check	Appropriate Box to Indicate	Nature of Notice, Ren	ort, or Othe	er Data	
	NTENTION TO:	· •	•	REPORT OF:	
PERFORM REMEDIAL WORK	PLUG AND ABANDON	REMEDIAL WORK		ALTERING CASING	

2002 OCT 30 PM 1:3

V OTHER: Downhole Commingling Application OTHER: 12. Describe Proposed or Completed Operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)

COMMENCE DRILLING OPNS.

CASING TEST AND CEMENT JOB

Richardson Operating Company proposes to downhole commingle the Basin Fruitland Coal and the West Kutz Pictured Cliffs in this well. Please see the attached for details on downhole commingling these "preapproved" pools.

Your consideration and approval of this application is appreciated.

**CHANGE PLANS** 

I hereby certify that the information above is true and complete to the best of my kr	owledge and belief	
SIGNATURE franker Merkey	TITLE Agent	DATE 10/30/02
TYPE OR PRINT NAME Charles Neeley		TELEPHONE NO. 505-486-0211
(This space for State Use)		
APPROVED BY	TITLE	DATE

Richardson Operating Company Navajo 13 - 1 API No. 30-045-30652 1300' FNL & 1230' FEL Sec 13, T29N, R14W, NMPM San Juan County, New Mexico

# Down-hole Commingling Application (Details)

The Navajo 13-1 is a newly drilled Basin Fruitland Coal / West Kutz Pictured Cliffs well. This well is part of Richardson's 2002 development drilling program.

Pursuant to Order R-11363, Richardson Operating Company seeks approval to downhole commingle the "Pre-approved pools and areas": Basin Fruitland Coal (71629) and West Kutz Pictured Cliffs (79680) pools in this well.

The Basin Fruitland Coal formation is perforated: 782' – 785', 815' – 816', 877' – 881' and 894' – 896'. The West Kutz Pictured Cliffs formation is perforated: 898' – 908' in this well.

Due to the vertical proximity of the pools and since neither pool has enough data to prepare a reliable production forecast or predict the ultimate reserves; therefore, based on production from wells in this Township and wells in Sections 32 & 33 of T30N, R14W, Richardson will allocate production as follows:

<u>Pictured Cliffs Production</u> = 0.51 x Total Production. <u>Fruitland Coal Production</u> = 0.49 x Total Production.

\* The data used and the corresponding calculations are attached for reference.

The down-hole commingling will not reduce the value of the total remaining production of this well.

Ownership between the two pools is not identical.

Richardson Operating Company has sent notice to all interest owners in the spacing units by certified mail (return receipt) of their intent to apply for down-hole commingling. No objection was received within 20 days of sending the notice.

A copy of this application has been submitted via Sundry Notice Form 3160-5 to the Bureau of Land Management.

Your consideration and approval of this application is appreciated.

# Richardson Operating Company

# Downhole Commingling Allocation Methodology

This document describes the methodology used in determining the allocation between the proposed pools to be commingled in the Navajo 13-1 well. Production data was obtained from the On-Gard system when possible. The Ropco 4 #3 data was obtained using current production for Richardson Operating Company files. For consistency the average production from the wells was calculated by using a minimum of 6 months of initial production in the well. This average should represent the initial potential of the well. Data was gathered for Section 4, T29N, R14W and the eight adjacent sections.

The data from four sections did not provide a reliable correlation to determine the allocation: Section 34, T29N R14W, Section 5, Section 8, and Section 9 T29N R14W.

### Section 32 T30N R14W:

Fruitland Coal:	Dugan Bi Knobs Com 90	23 Mcf/day
	Dugan Bi Knobs 91	75 Mcf/day

Pictured Cliffs:	Dugan Bi Knobs 1	52 Mcf/day
	Dugan Bi Knobs 2R	104 Mcf/day
	D' 1 1 VID C	40 3 5 0/1

Dugan Di Knoos 2K	104 McLaay
Richardson WF State 32-1	42 Mcf/day

PC avg.	= 66	Se

Section 32 allocation = 43% FC, 57% PC

#### Section 33 T30N R14W:

FC avg. = 49

Fruitland Coal:	Richardson	WF Federal 33-1	203 Mcf/day

Pictured Cliffs:	Dugan Cline #1R	75 Mcf/day
	Diobordson WE Endorol 22 #2	SSS Masida.

555 Mcf/day

FC avg. $= 203$	
DC over - 215	C-41 22 -1

Section 33 allocation = 39% FC, 61% PC PC avg. = 315

#### Section 4 T29N R14W:

Commingled FC/PC:	Richardson Ropco 4 #3	425 Mcf/day
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Pictured Cliffs:	Richardson Ropco 4 #2	231 Mcf/day
	Richardson Ropco 4 #4	129 Mcf/day

Comm. avg. = 425

PC avg. = 180Section 4 allocation = 57% FC, 43% PC

# Richardson Operating Company Downhole Commingling Allocation Methodology (Continued) Page 2

#### Section 3 T29N R14W:

Fruitland Coal: Dugan Federal 1 #99

187Mcf/day

Richardson WF Federal 3 #2

160 Mcf/day

**Pictured Cliffs:** 

Dugan Federal 1 #7

266 Mcf/day

Richardson WF Federal 3 #1

128 Mcf/day

FC avg. = 174

PC avg. = 160

Section 3 allocation = 47% FC, 53% PC

Section 10 T29N R14W:

Fruitland Coal:

Dugan Federal 1 #98

165 Mcf/day

Pictured Cliffs:

Richardson Ropco 10 #2

115 Mcf/day

FC avg. = 165

PC avg. = 115

Section 10 allocation = 59% FC, 41% PC

## **Summary:**

Section 32 allocation = 43% FC, 57% PC

Section 33 allocation = 39% FC, 61% PC

Section 4 allocation = 57% FC, 43% PC

Section 3 allocation = 47% FC, 53% PC

Section 10 allocation = 59% FC, 41% PC

**AVERAGE = 49% FC, 51% PC** 

The proposed allocation for the Navajo 13 No. 1 will be 49% Fruitland Coal and 51% Pictured Cliffs.

# **Conditions of Approval:**

Notice of Intent: Down hole commingle

Richardson Operating Company Navajo 13 # 1 1300 FNL & 1230 FEL Sec 13.,T29N.,R14W.,

1) Due to the Basin Fruitland Coal and West Kutz Pictured Cliffs intervals being in Close proximity to each other, and lack of reliable production history to make accurate determinations, you will be given authorization to produce the well with your proposed Allocation factors until January 10, 2004. At the end of period, you will be required to resubmit your allocations factors.