

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

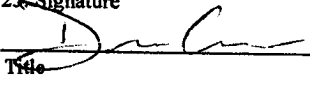

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF-079968	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A	
2. Name of Operator Richardson Operating Company		7. If Unit or CA Agreement, Name and No. N/A 24390	
3a. Address 3100 La Plata Highway, Farmington, New Mexico 8740		8. Lease Name and Well No. WF Federal 5 #1R	
3b. Phone No. (include area code) 505/564-3100		9. API Well No. 30-045- 31353	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1555' FNL & 710' FEL At proposed prod. zone Same		10. Field and Pool, or Exploratory Basin FC/Twin Mounds PC	
14. Distance in miles and direction from nearest town or post office* 1 air mile north of Kirtland, New Mexico		11. Sec., T., R., M., or Blk. and Survey or Area E 5,29N-14W, NMPM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 710'		12. County or Parish San Juan	
16. No. of Acres in lease 2,523.72		13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2,261'		17. Spacing Unit dedicated to this well 319.35 W/2 FC NW/4 PC 159.35	
19. Proposed Depth 850'		20. BLM/BIA Bond No. on file #158293308 (BLM-Nationwide)	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,370' ungraded ground		22. Approximate date work will start* 3-1-03	
		23. Estimated duration 2 weeks	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature 	Name (Printed/Typed) Drew Carnes	Date 1/13/03
Operations Manager		
Approved by (Signature) 	Name (Printed/Typed) /s/ Jim Lovato	Date MAR 12 2003
Title	Office	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on reverse)

Note: Richardson Operating proposes adding the Basin Fruitland Coal (71629) pursuant to New Mexico Oil Conservation Division Order No. R-8768-C.

THIS IS A REPLACEMENT WELL FOR THE RICHARDSON OPERATING COMPANY'S WF FEDERAL 5 #1 WELL WHICH WAS P & A'D pursuant to approved Sundry Notice by Steve Mason of FFO dated 9/2/02. Richardson plans on moving 50 feet east of old well bore to drill new WF Federal 5 #1R.

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

NMOCD

State of New Mexico
Energy, Minerals & Mining Resources Department
OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C - 102

☐ AMENDED REPORT

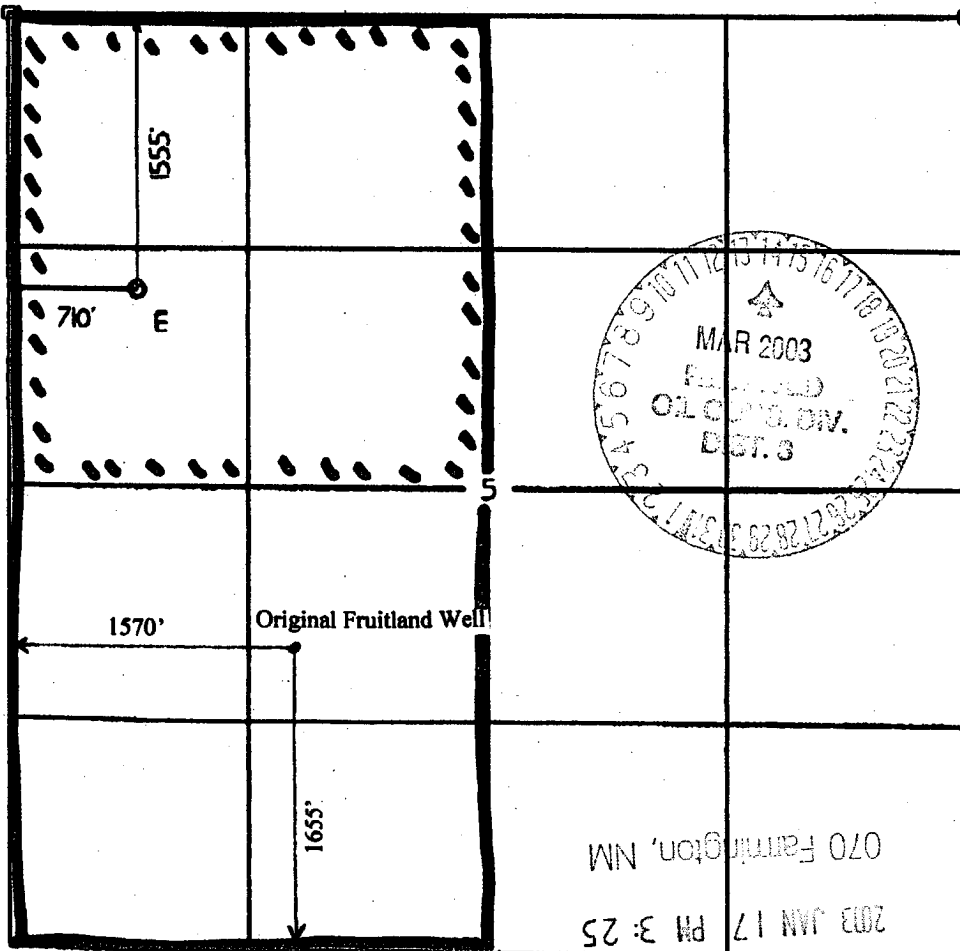
WELL LOCATION AND ACREAGE DEDICATION PLAT

APA Number 30-045-31353	Pool Code 86620 71629	Pool Name Twin mounds PC Barin Fruitland Coal
Property Code 24390	Property Name WF Federal 5	Well Number 1R
OGPD No. 19219	Operator Name RICHARDSON OPERATING COMPANY	Elevation 5370'

Surface Location									
UL or Lot E	Sec. 5	Twp. 29 N.	Rge. 14 W.	Lot Lth.	Feet from	North/South	Feet from	East/West	County SAN JUAN
					1555'	North	710'	West	

Bottom Hole Location if Different From Surface									
UL or Lot	Sec.	Twp.	Rge.	Lot Lth.	Feet from	North/South	Feet from	East/West	County
Dedication 319.35 FC 154.35 PC	Joint ?	Consolidation	Order No.						

NO ALLOWABLE WELL ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



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 Lehrman</i>
Printed Name	PAUL Lehrman
Title	Landman
Date	1/13/03
SURVEYOR CERTIFICATION	
I hereby certify that the well location 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	<i>GERALD S. WOODLSTON</i>
6844 REGISTERED LAND SURVEYOR	

PC
FC

RECEIVED

Richardson Operating Company
WF Federal 5 #1R
1555' FNL & 710' FWL
Section 5, T29N, R14W, NMPM
San Juan County, New Mexico

DRILLING PROGRAM

1. ESTIMATED FORMATION TOPS:

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Subsea Elevation</u>
Kirtland Sh	000'	5'	+5,370'
Fruitland Fm	500'	505'	+4,870'
Pictured Cliffs Ss	760'	765'	+4,615'
Total Depth (TD)*	850'	855'	+4,520'

*All elevations reflect the ungraded ground level of 5,370'

2. NOTABLE ZONES:

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland Fm (500')	Fruitland Fm (500')	Fruitland Fm (500')
Pictured Cliffs (760')		

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site representatives recommendations.

3. PRESSURE CONTROL:

The drilling contract has not yet been awarded, thus the exact BOP model to be used is unknown. (A typical 2,000 psi model has been attached to the end of the drilling program.) Double ram or annular system with a rotating head will be used. All ram preventers and related equipment will be hydraulically tested at nipple up and after any use under pressure to 1000 psi.

Blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. BOP equipment will include a floor safety valve and choke manifold rated to 2000 psi. Maximum expected pressure is 520 psi.

Drilling Program
Richardson Operating Company

Page Two

4. CASING AND CEMENTING PROGRAM:

<u>Hole Size</u>	<u>O.D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>GL Setting Depth</u>
8 3/4"	7"	17	J-55	New	120'
6 1/4"	4 1/2"	10.5	J-55	New	850'

Surface casing will be cemented to surface with ~36 cu.ft. (~30 sx) Class B + 2% CaCl. Volume is based on 100% excess, yield of 1.18 cu.ft./sk, and slurry weight of 15.6 ppg. WOC = 12 hours. Pressure test surface casing to 600 psi for 30 minutes.

Production casing hole will first be cleaned of rock chips by circulating at least 150% of hole volume with drilling fluid to surface. Thirty barrels of fresh water will then be circulated. Lead with ~90 cu.ft. (~45 sx) Class B with 2% metasilicate (yield = 2.06 cu.ft./sk, slurry weight = 12.5 ppg). Tail in with ~70 cu.ft. (~60 sx) Class B with 2% CaCl (yield = 1.18 cu.ft./sk, weight = 15.6 ppg). Total cement volume is ~160 cu.ft. based on 75% excess and circulating to surface.

Production casing will have 4 1/2" cement guide shoe and self fill float collar. Float will be placed one joint above the shoe. Four centralizers will be spaced every other joint starting above the shoe. Three turbolizers will be placed every other joint starting from the top of the well.

5. MUD PROGRAM:

Surface casing hole will be drilled with fresh water. Production casing hole will be drilled with a fresh water polymer mud. Weighting material will be drill solids or, if needed, barite. Maximum expected mud weight will be 8.7 ppg. Sufficient material to maintain mud properties, control lost circulation, and contain a blowout will be available at the well while drilling.

6. CORING, TESTING, & LOGGING:

No cores or DSTs are planned. A cased hole CNL/GR will be ran from TD to surface.

7. DOWNHOLE CONDITIONS:

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum pressure will be approximately 520 psi.

8. OTHER INFORMATION:

The anticipated spud date is March 1, 2003. It should take 5 days to drill and 1 week to complete the well.