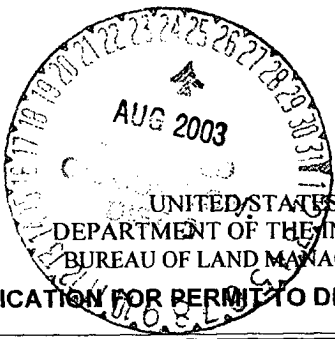


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070 Farmington, NM

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.	NMNM-89026
6. If Indian, Allottee or Tribe Name	N/A
7. If Unit or CA Agreement, Name and No.	N/A
8. Lease Name and Well No.	HP-Federal 6 #4 Repco
9. API Well No.	30-045-31852
10. Field and Pool, or Exploratory Basin, Fruitland Coal/Twin Mounds PC Ext.	
11. Sec., T., R., M., or Blk. and Survey or Area	M Sec. 6-T29N-R14W, NMPM
12. County or Parish	San Juan
13. State	NM

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		
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	
2. Name of Operator Richardson Operating Company		
3a. Address 3100 La Plata Highway, Farm. NM	3b. Phone No. (include area code) 505/564-3100	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 870' FWL & 1135' FSL At proposed prod. zone Same		
14. Distance in miles and direction from nearest town or post office* 1 milenorth of Kirtland, New Mexico		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	870'	16. No. of Acres in lease 552.80
17. Spacing Unit dedicated to this well SW/4-PC W/2-FC	312.95	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	3420'	19. Proposed Depth 780'
20. BLM/BIA Bond No. on file #158293308-BLM Nationwide		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5296 GR	22. Approximate date work will start* 9-15-03	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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Paul Lehrman	Date 8/13/03
Title		
Approved by (Signature) 	Name (Printed/Typed) David J. Mankiewicz	Date AUG 22 2003
Title		
Office		

Application approval does not warrant or certify the 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)

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

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

NMOCD

Form C - 102

☐ AMENDED REPORT

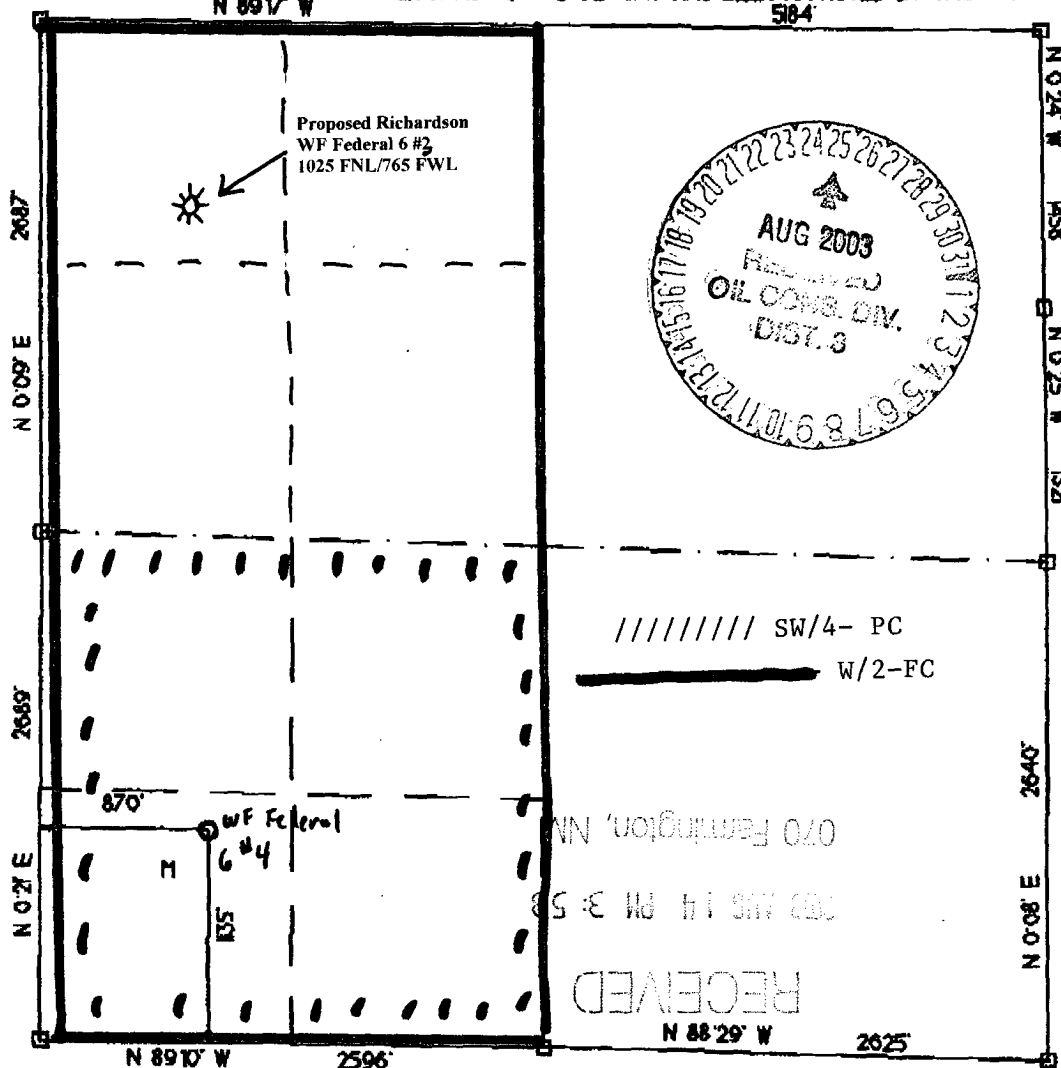
APA Number 30-045 31852	Pool Code 71629/86620	Pool Name Basin Fruitland Coal/Twin Mounds PC Ext.
Property Code 32544	Property Name ROPCO 6	Well Number 4
OGRIID No. 019219	Operator Name RICHARDSON OPERATING COMPANY	Elevation 5296'

U. or Lot	Sec.	Twp.	Rgn.	Lot Id.	Feet from	North/South	Feet from	East/West	County
M	6	29 N.	14 W.		135'	SOUTH	870'	WEST	SAN JUAN

UL or Lot	Sec.	Twp.	Rgn.	Lot Id.	Feet from	North/South	Feet from	East/West	County
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Deduction 156.15 312.95	Joint ?	Consolidation	Order No.
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NO ALLOWABLE WILL ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed/Notes

Paul Lehrman

Title

Landman

Date _____

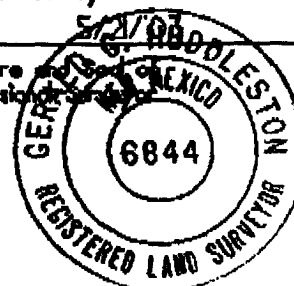
8/13/03

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 _____

Profession



Richardson Operating Company
WF Federal 6 #4
1135' FSL & 870' FWL
Section 6, 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'	+5,301'
Fruitland Fm	400'	405'	+4,901'
Pictured Cliffs Ss	651'	656'	+4,650'
Total Depth (TD)*	780'	785'	+4,521'

*All elevations reflect the ungraded ground level of 5,296'

2. NOTABLE ZONES:

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland Fm (400')	Fruitland Fm (400')	Fruitland Fm (400')
Pictured Cliffs (610')		

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 H-40	New	120'
6 1/4"	4 1/2"	10.5	J-55	New	780'

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. Four 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 run 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 September 15, 2003. It should take 5 days to drill and 1 week to complete the well.