

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

2003 OCT -6 PM 3:25

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

5. Lease Serial No.
NMSF-078390

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.
Federal 12-13 #4

9. API Well No.
30-045- 31955

10. Field and Pool, or Exploratory
Basin Fruitland Coal

11. Sec., T., R., M., or Blk. and Survey or Area
Sec. 13-T28N-R8W, NMPM

12. County or Parish
San Juan

13. State
NM

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator
Richardson Operating Company

3a. Address
3100 La Plata Hwy, Farm. NM

3b. Phone No. (include area code)
564-3100

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface 1020' FNL & 1910' FWL
At proposed prod. zone Same

14. Distance in miles and direction from nearest town or post office*
13 miles from Blanco, NM

15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any) 1020'

16. No. of Acres in lease
1,851.96

17. Spacing Unit dedicated to this well
W/2 320.00 Acres

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. 125'

19. Proposed Depth
3,000'

20. BLM/BIA Bond No. on file
BLM Nationwide #158293308

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6370' GL

22. Approximate date work will start*
Upon approval

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)

Date

Paul Lehrman

10/6/03

Title

Landman

Approved by (Signature)

Name (Printed/Typed)

Date

David J. Markiewicz

OCT 16 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

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

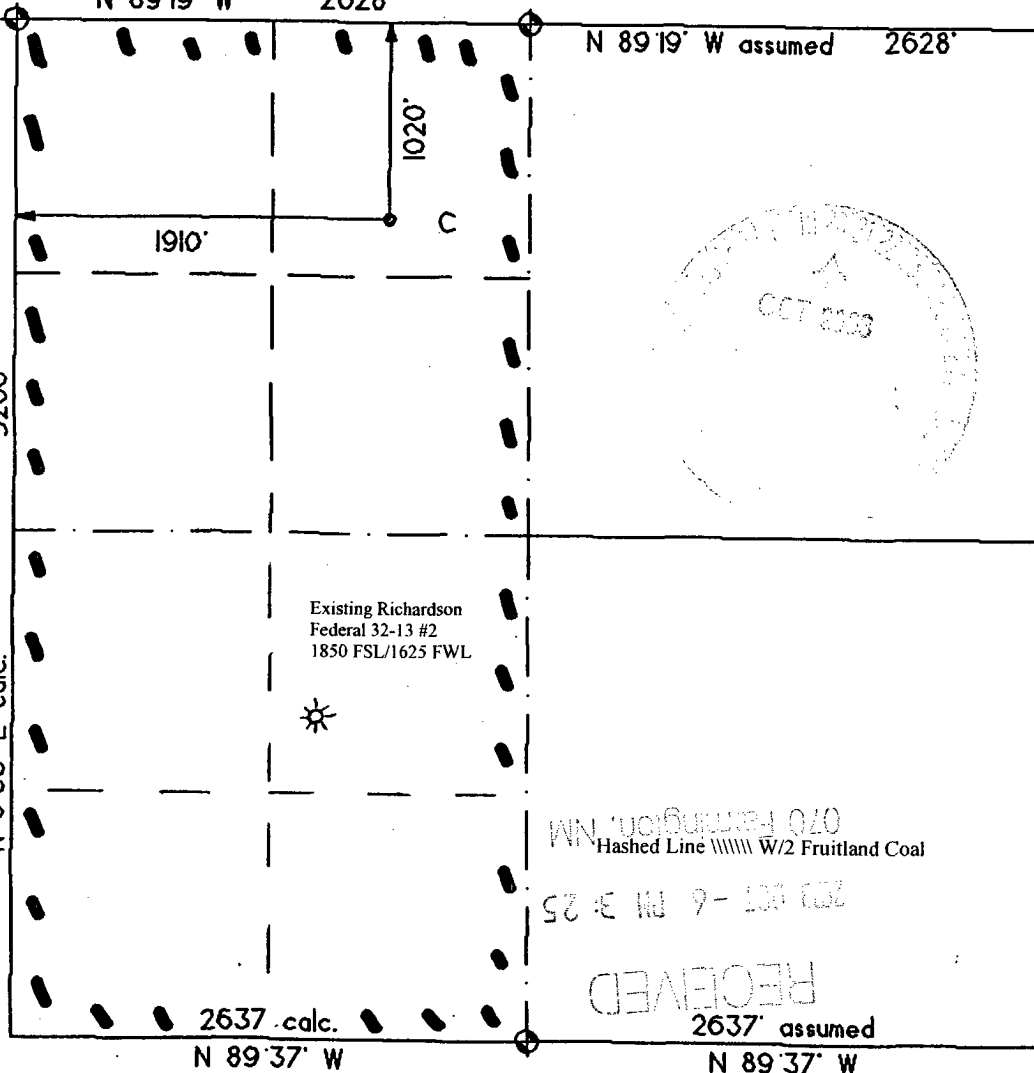
APA Number 30-045- 31955	Pool Code 71629	Pool Name Basin Fruitland Coal
Property Code 33054	Property Name FEDERAL 12-13	Well Number 4
GRID No. 19219	Operator Name RICHARDSON OPERATING COMPANY	Elevation 6370'

Surface Location									
UL or Lot C	Sec. 13	Twp. 28 N.	Rge. 8 W.	Lot Lk.	Feet from 1020'	North/South NORTH	Feet from 1910'	East/West WEST	County SAN JUAN

Bottom Hole Location If Different From Surface									
UL or Lot	Sec.	Twp.	Rge.	Lot Lk.	Feet from	North/South	Feet from	East/West	County

Dedication	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



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 9/30/03	
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 8/25/03	
Signature of Surveyor 	

Richardson Operating Company
Federal 12-13 #4
1020' FNL & 1910' FWL
Section 13, T28N, R8W, 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>
San Jose Fm	000'	5'	+6,370'
Nacimiento	570'	575'	+5,800'
Ojo Alamo Ss	1866'	1871'	+4,504'
Kirtland Shale	2120'	2125'	+4,250'
Fruitland Formation	2640'	2645'	+3,730'
Pictured Cliffs Ss	2932'	2937'	+3,438'
Total Depth (TD)*	3000'	3005'	+3,370'

*All elevations reflect the ungraded ground level of 6,370'

2. NOTABLE ZONES:

Gas Zones

Fruitland
Pictured Cliffs

Water Zones

Ojo Alamo

Coal Zones

Fruitland Coal

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Centralizers will be run through the Ojo Alamo. A turbulizing centralizer will be run at the base of the Ojo Alamo to ensure an adequate cement procedure. 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 less than 1000 psi.

Drilling Program
Richardson Operating Company

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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"	20	K-55	New	300'
6 1/4"	4 1/2"	10.5	K-55	New	3000'

Surface casing will be cemented to surface with ≈ 100 cu.ft. (≈ 85 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 ≈ 370 cu.ft. (≈ 180 sx) Class B with 2% metasilicate (yield = 2.06 cu.ft./sk, slurry weight = 12.5 ppg). Tail in with ≈ 155 cu.ft. (≈ 132 sx) Class B with 2% CaCl (yield = 1.18 cu.ft./sk, weight = 15.6 ppg). Total cement volume is ≈ 525 cu.ft. based on 100% 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. Six centralizers will be spaced every other joint starting above the shoe. Six 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 November 1, 2003. It should take 5 days to drill and 1 week to complete the well.