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Form 3160-3
(September 2001)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

070 Farmington, NM

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

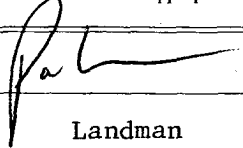

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF-078390
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input 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
3a. Address 3100 La Plata Hwy, Farm., NM 87401	3b. Phone No. (include area code) 564-3100	8. Lease Name and Well No. Federal 31-15 #4
4. Location of Well (Report location clearly and in accordance with any State requirements). At surface 2423' FNL & 1696' FWL At proposed prod. zone Same		9. API Well No. 30-045- 31977
14. Distance in miles and direction from nearest town or post office* 13 miles SE of Blanco, NM		10. Field and Pool, or Exploratory Basin Fruitland Coal
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 217'	16. No. of Acres in lease 1,851.96	11. Sec., T., R., M., or Blk. and Survey or Area Sec. 15-T28N-R8W, NMPM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1335'	19. Proposed Depth 2575'	12. County or Parish San Juan
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5878 GL	22. Approximate date work will start* Upon approval	13. State NM
20. BLM/BIA Bond No. on file BLM Nationwide #158293308		
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:

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

25. Signature 	Name (Printed/Typed) Paul Lehrman	Date 10/22/03
Title Landman		
Approved by (Signature) 	Name (Printed/Typed) David J. Mankiewicz	Date JAN 30 2004
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)

On-Sited with Albert Gonzales of BLM on 10/8/03.

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

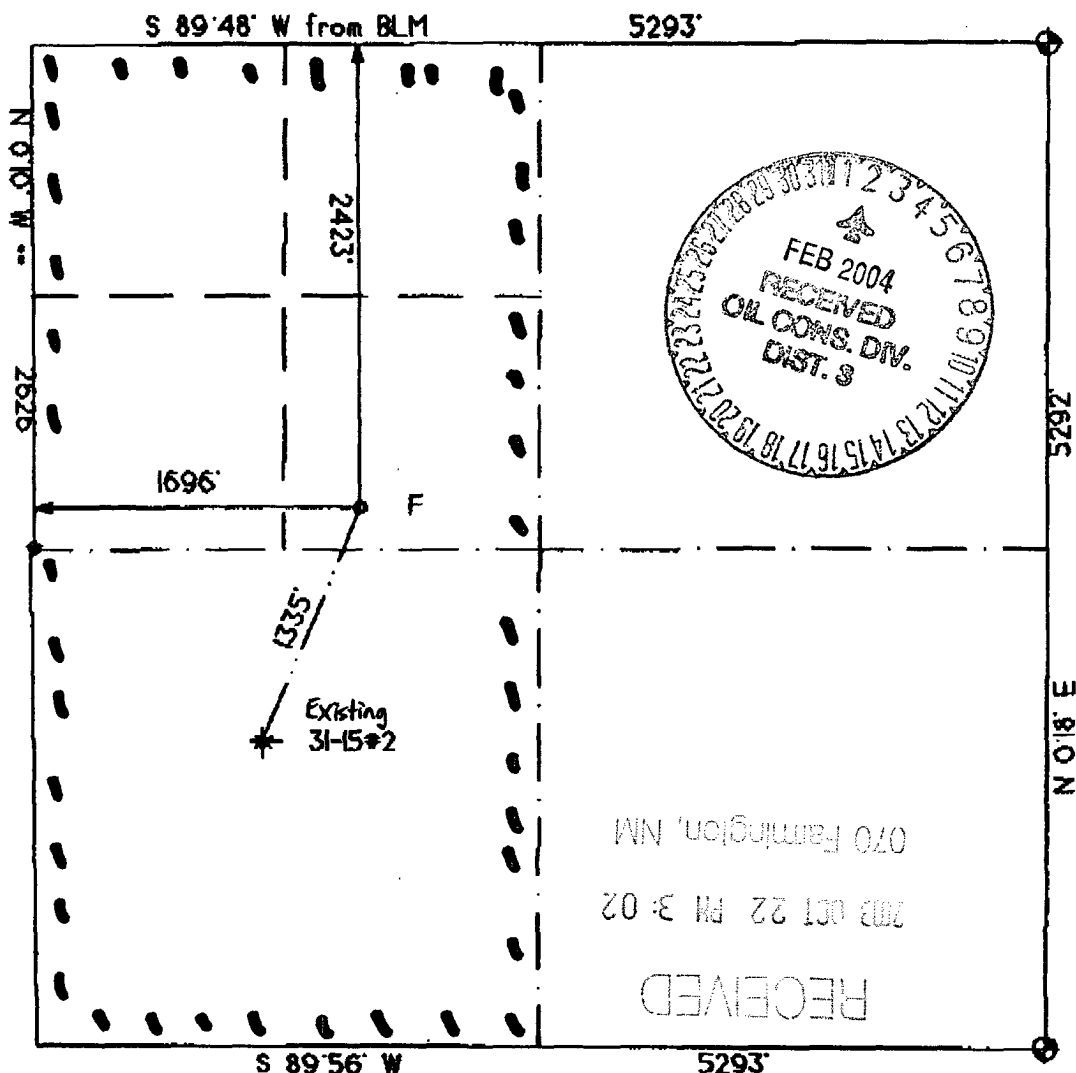
APA Number 30-045 31977	Pool Code 71629	Pool Name Basin Fruitland Coal
Property Code 9637	Property Name 31-15 FEDERAL 31-15	Well Number 4
OGED No. 19219	Operator Name RICHARDSON OPERATING COMPANY	Elevation 5878'

Surface Location									
UL or Lot F	Sec. 15	Twp. 28 N.	Rgn. 8 W.	Lot Id.	Feet from North/South 2423'	Feet from East/West 1696'	East/West WEST	County SAN JUAN	

Bottom Hole Location if Different From Surface									
UL or Lot	Sec.	Twp.	Rgn.	Lot Id.	Feet from North/South	Feet from East/West	East/West	County	
Dedication	Joint ?	Consolidation	Order No.						

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 10/15/03	
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 <i>9/25/03</i>	
Signature and Seal of Professional Surveyor <i>GERALD E. HULL</i>	Professional Seal 6844 REGISTERED LAND SURVEYOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires January 31, 2004

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

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SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Richardson Operating Company

3a. Address

3100 La Plata Hwy, Farm, NM 87401

3b. Phone No. (include area code)

564-3100

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2423' FNL & 1696' FWL-Sec. 15-T28N-R8W

5. Lease Serial No.

NMSF-078390

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA/Agreement, Name and/or No.

N/A

8. Well Name and No.

Federal 31-15 #3

9. API Well No.

30-045-31977

10. Field and Pool, or Exploratory Area

Basin Fruitland Coal

11. County or Parish, State

San Juan Co., NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Change Well Name</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Richardson Operating Company requests the name of the well as referenced above be changed from the original APD, which was the Federal 22-15 #4. Per OCD requirements the infill well must be the same as the parent well, which in this case was the Federal 31-15 #2. The APD filed on 10/22/03 had the name of the well, the Federal 22-15 #4. Therefore the well name shall be the Federal 31-15 #3. All other information submitted to the BIM for approval shall remain the same.

A revised C-102 is attached.

The well has not been drilled.

ENTERED
AFMSS

NOV 21 2003

BY ll

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Paul Lehrman

Title Landman

Signature

Date 11/18/03

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

/s/ David J. Markiewicz

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

NOV 30 2003
FARMINGTON DISTRICT OFFICE
BY ll

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(Instructions on reverse)

NMOCD
FARMINGTON

**Richardson Operating Company
Federal 22-15 #4
2423' FNL & 1696' FWL
Section 15, 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	000'	5'	5,878'
Nacimiento	225'	230'	+5,653'
Ojo Alamo Ss	1200'	1205'	+4,678'
Kirtland Shale	1575'	1580'	+4,303'
Fruitland Formation	2200'	2205'	+3,678'
Pictured Cliffs Ss	2385'	2390'	+3,493'
Total Depth (TD)*	2575'	2580'	+3,303'

*All elevations reflect the ungraded ground level of 5,878'

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

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"	20	K-55	New	250'
6 1/4"	4 1/2"	10.5	K-55	New	2575'

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 ≈ 360 cu.ft. (≈ 175 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 ≈ 505 cu.ft. based on 100% excess and circulating to surface.
514

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 30, 2003. It should take 5 days to drill and 1 week to complete the well.