

RECEIVED

JUN 15 PM 1:29

070 Farmington, NM

Form 3160-3
(September 2001)

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

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM-101994
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 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. ROPCO 17 #4
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1283' FSL & 1908' FEL At proposed prod. zone Same		9. API Well No. 30-045-32315
14. Distance in miles and direction from nearest town or post office* 2 miles SE of Kirtland, NM		10. Field and Pool, or Exploratory Twin Mounds Fruitland Sand PC
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 37'		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 17-T29N-R14W, NMPM
16. No. of Acres in lease 20.89	17. Spacing Unit dedicated to this well SE/4-162.07 Acres	12. County or Parish San Juan
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 0'	19. Proposed Depth 1000'	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5165 GR	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:

- 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 2/11/04
Title Landman		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 6-9-04
Title AFM	Office FFO	

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)

See attached negative Archaeological Report from La Plata consultants report No. LAC 2003-37s.

NMOCD

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

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

Form C - 102

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

APA Number 30-045- 32315	Pool Code 86620	Pool Name Twin Mounds Fruitland Sand PC (Gas)
Property Code 33256	Property Name ROPCO 17	Well Number 4
OGRID No. 19219	Operator Name RICHARDSON OPERATING COMPANY	Elevation 5165'

Surface Location

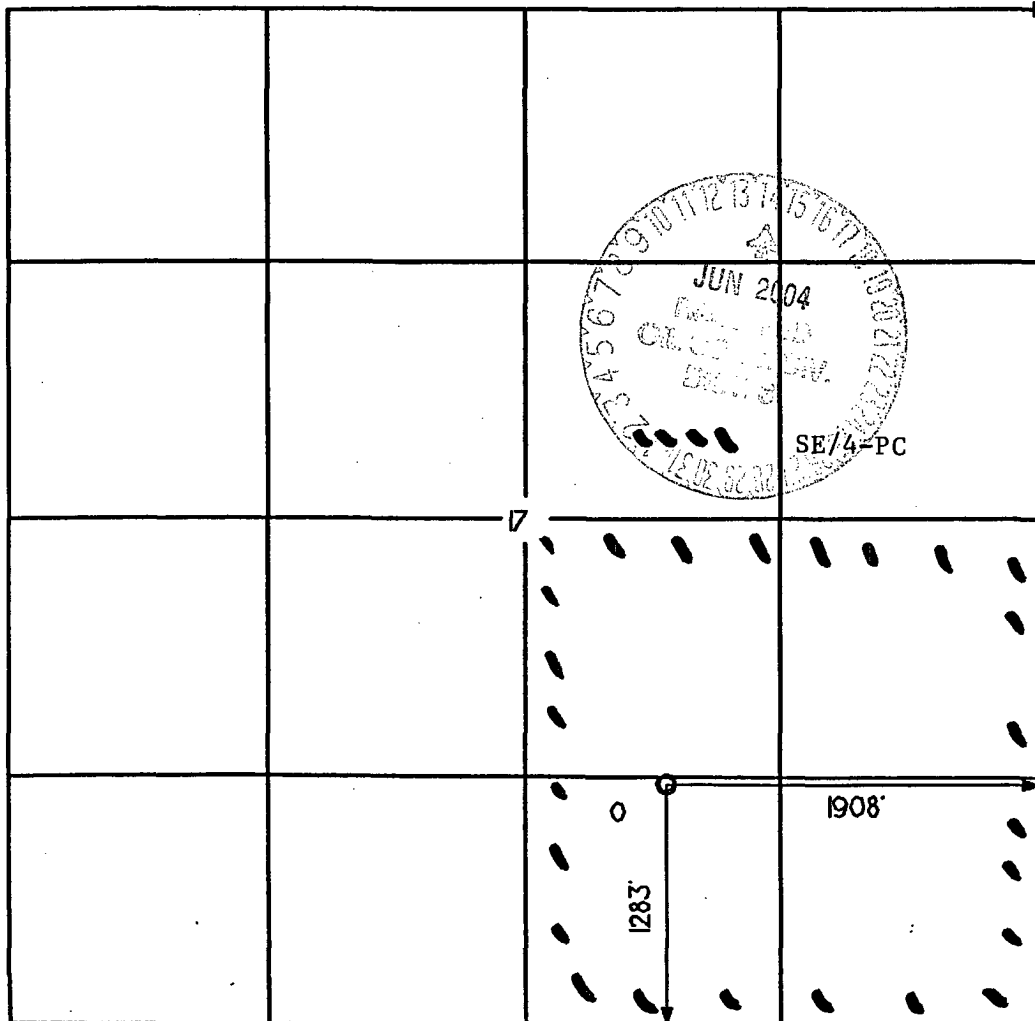
UL or Lot	Sec.	Top.	Rge.	Lot Lch.	Feet from >	North/South	Feet from >	East/West	County
0	17	29 N.	14 W.		1283'	SOUTH	1908'	East	SAN JUAN

Bottom Hole Location if Different From Surface

UL or Lot	Sec.	Top.	Rge.	Lot Lch.	Feet from >	North/South	Feet from >	East/West	County

Dedication SE/4 162.07	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 2/1/04	
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	

**Richardson Operating Company
ROPCO 17 #4
1283' FSL & 1908' FEL
Section 17, 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 Shale	000'	005'	+5,165'
Fruitland Formation	625'	630'	+4,540'
Pictured Cliffs Ss	725'	730'	+4,440'
Total Depth (TD)*	1000'	1005'	+4,165'

*All elevations reflect the ungraded ground level of 5,165'

2. NOTABLE ZONES:

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland	Fruitland	Fruitland Coal
Pictured Cliffs		

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 less than 400 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	120'
6 1/4"	4 1/2"	10.5	K-55	New	1000'

Surface casing will be cemented to surface with ≈ 36 cu.ft. (~~≈ 35~~ ³¹ 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 ~~≈ 115~~ ¹²⁴ cu.ft. (~~≈ 60~~ ⁴¹ sx) Class B with 2% metasilicate (yield = 2.06 cu.ft./sk, slurry weight = 12.5 ppg). Tail in with ~~≈ 75~~ ⁷⁵ cu.ft. (~~≈ 65~~ ⁶⁵ sx) Class B with 2% CaCl (yield = 1.18 cu.ft./sk, weight = 15.6 ppg). Total cement volume is ~~≈ 190~~ ²⁰¹ 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. Five centralizers will be spaced every other joint starting above the shoe. Five 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~~ ⁴⁰⁰ psi.

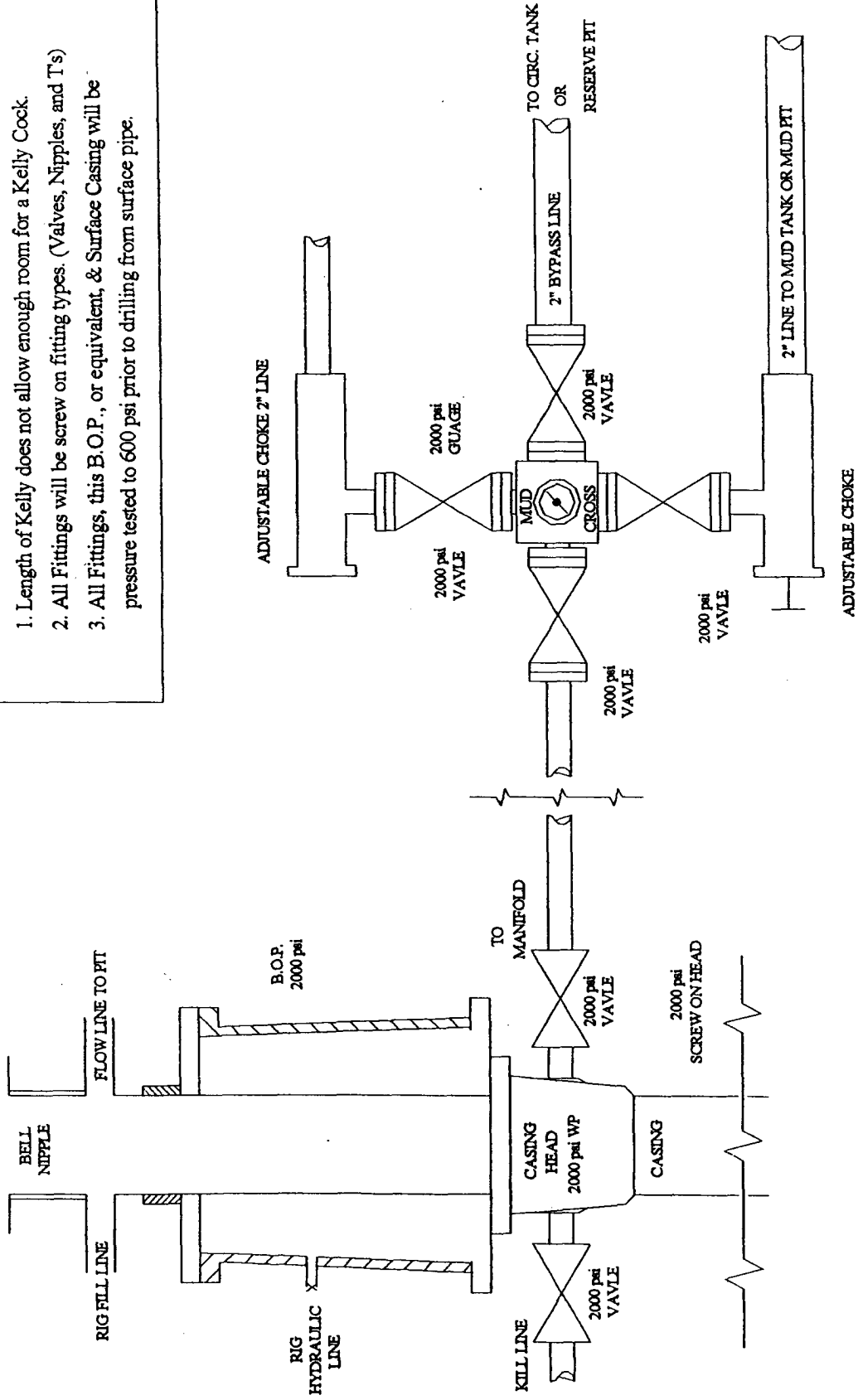
8. OTHER INFORMATION:

The anticipated spud date is immediately upon approval. It should take 5 days to drill and 5 days to complete the well.

BLOW OUT PREVENTER (B.O.P.)

Notes:

1. Length of Kelly does not allow enough room for a Kelly Cock.
2. All Fittings will be screw on fitting types. (Valves, Nipples, and Ts)
3. All Fittings, this B.O.P., or equivalent, & Surface Casing will be pressure tested to 600 psi prior to drilling from surface pipe.



** 2000 psi Rubber hose will be used from Well Head to Manifold & from Well Head to Kill Line.

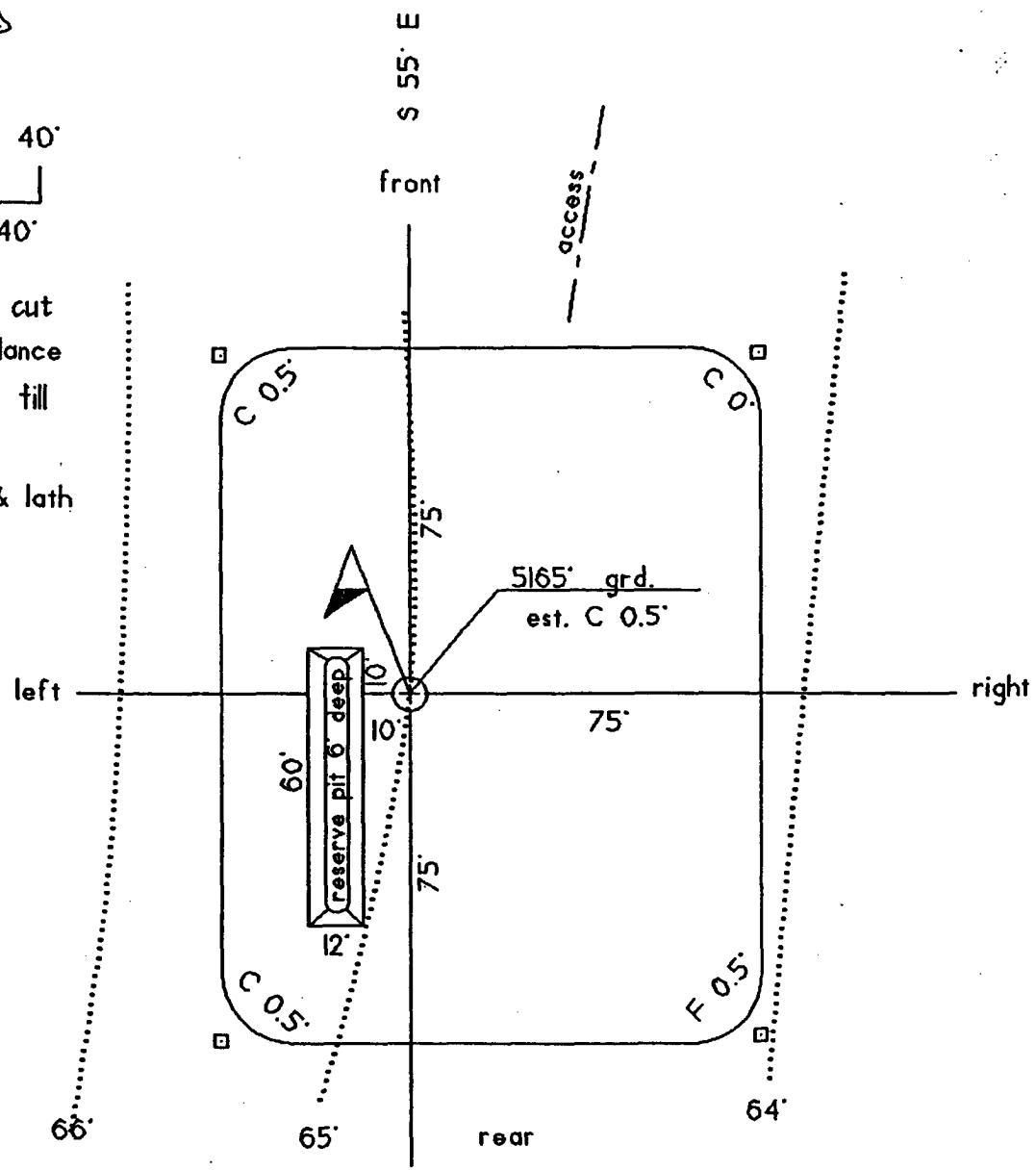
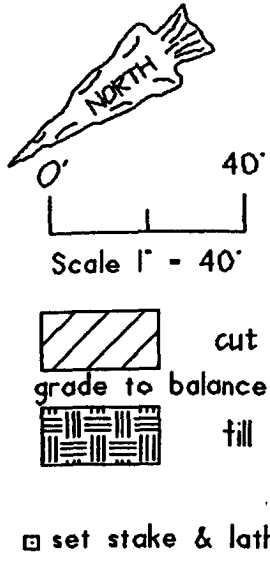


Exhibit "B"
 Attached to and made a part of that certain
 Surface Damage Agreement and Right-of-
 Way and Easement Agreement
 by and between
 San Juan County, New Mexico, as Grantor,
 and Richardson Operating Company as Grantee.
 section