

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

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1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No. N/A	
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		8. Lease Name and Well No. NV NAVAJO 20 #3	
2. Name of Operator RICHARDSON OPERATING CO.		9. API Well No. 30-045- 31275	
3a. Address 3100 LaPLATA HIGHWAY FARMINGTON, NM 87401	3b. Phone No. (include area code) (505) 564-3100	10. Field and Pool, or Exploratory BA. FRUIT. COAL & W. KUTZ PC	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1845' FSL & 1980' FWL At proposed prod. zone SAME		11. Sec., T., R., M., or Blk. and Survey or Area K20-29n-14w NMPM	
14. Distance in miles and direction from nearest town or post office* 6 AIR MILES WSW OF FARMINGTON		12. County or Parish SAN JUAN	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1,845'	16. No. of Acres in lease 1,431.12	17. Spacing Unit dedicated to this well W2 (320 acres to Fruit. Coal) SW4 (160 ac. to PC)	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,867'	19. Proposed Depth 1,200'	20. BLM/BIA Bond No. on file 158-293-308	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,525' GL	22. Approximate date work will start* UPON APPROVAL	23. Estimated duration 2 WEEKS	
24. Attachments			

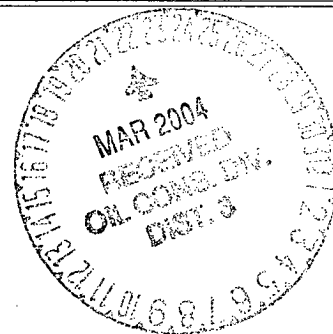
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor. | 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. |

Comments

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



cc: BIA, BLM (&OCD), Richardson, Tribe

25. Signature	Name (Printed/Typed) BRIAN WOOD	Date 11-24-02
Title CONSULTANT	PHONE: 505 466-8120 FAX: 505 466-9682	
Approved by (Signature)	Name (Printed/Typed) /s/ David J. Markiewicz	Date MAR 19 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.

NMOC

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

Form C - 102

☐ AMENDED REPORT

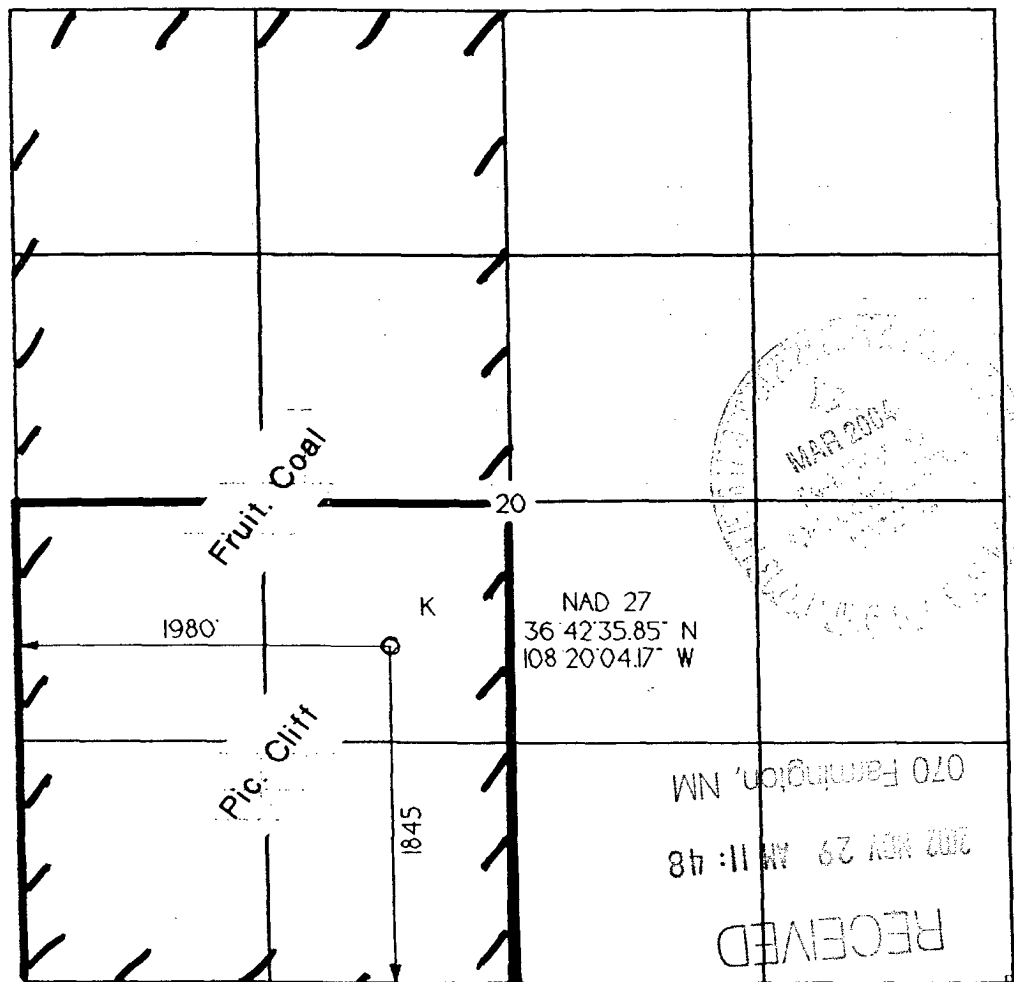
WELL LOCATION AND ACREAGE DEDICATION PLAT

APA Number 30-045-31275	Pool Code 71629 & 79680	Pool Name BASIN FRUIT. COAL & WEST KUTZ PC
Property Code 32175	Property Name NV NAVAJO 20	Well Number 3
OGRD No. 019219	Operator Name RICHARDSON OPERATING COMPANY	Elevation 5525'

Surface Location									
UL or Lot	Sec.	Twp.	Rge.	Lot Id.	Feet from	North/South	Feet from	East/West	County
K	20	29 N.	14 W.		1845'	SOUTH	1980'	WEST	SAN JUAN

Bottom Hole Location If Different From Surface									
UL or Lot	Sec.	Twp.	Rge.	Lot Id.	Feet from	North/South	Feet from	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 *B. Wood*

Printed Name BRIAN WOOD

Title CONSULTANT

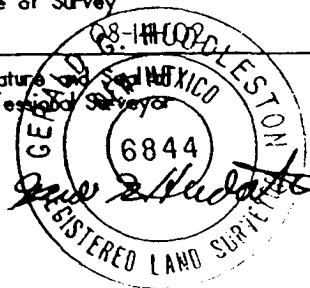
Date NOV. 24, 2002

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 Co.
NV Navajo 20 #3
1845' FSL & 1980' FWL
Sec. 20, T. 29 N., R. 14 W.
San Juan County, New Mexico

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Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Kirtland Shale	000'	5'	+5,525'
Fruitland	550'	555'	+4,975'
Pictured Cliffs Ss	800'	805'	+4,725'
Total Depth (TD)*	1,200'	1,205'	+4,390'

* all elevations reflect the ungraded ground level of 5,525 '

2. NOTABLE ZONES

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

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 geologist's recommendations.

3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. (A typical 2,000 psi model is on PAGE 3.) 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.

600

Richardson Operating Co.
NV Navajo 20 #3
1845' FSL & 1980' FWL
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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 kelly cock, floor safety valve, and choke manifold all rated to 2000 psi. Maximum expected pressure is \approx 520 psi.

4. CASING & CEMENT

<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	1,200'

Surface casing will be cemented to surface with \approx 36 cubic feet (\approx 30 sacks) Class B + 2% CaCl_2 . Volume is based on 100% excess, yield of 1.18 cubic feet per sack, and a slurry weight of 15.6 pounds per gallon. W.O.C. = 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 mud to the surface. Thirty barrels of fresh water will next be circulated. Lead with \approx 140 cubic feet (\approx 68 sacks) Class B with 2% metasilicate (yield = 2.06 cubic feet per sack, slurry weight = 12.5 pounds per gallon). Tail with \approx 85 cubic feet (\approx 72 sacks) of Class B with 2% CaCl_2 (yield = 1.18 cubic feet per sack, slurry weight = 15.6 pounds per gallon). Total cement volume is \approx 225 cubic feet 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. Five centralizers will be spaced on every other joint starting above the shoe. Five turbolizers will be placed on every other joint starting from the top of the well.