

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

| | | | | | |
|--|--|--|---|--|--|
| 1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | | 5. Lease Serial No. 14-20-603-2172 | | |
| 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 | | | 6. If Indian, Allottee or Tribe Name NAVAJO | | |
| 2. Name of Operator RICHARDSON OPERATING COMPANY | | | 7. If Unit or CA Agreement, Name and No. N/A 34155 | | |
| 3a. Address 3100 LaPLATA HIGHWAY FARMINGTON, NM 87401 | | 3b. Phone No. (include area code) (505) 564-3100 | 8. Lease Name and Well No. NV PATRICIA 26 #2 | | |
| 4. Location of Well (Report location clearly and in accordance with any State requirements*) At surface 1905' FNL & 1600' FWL At proposed prod. zone SAME | | | 9. API Well No. 30-045- 31436 | | |
| 14. Distance in miles and direction from nearest town or post office* 4 AIR MILES SW OF FARMINGTON | | | 10. Field and Pool, or Exploratory BA. FRUIT. COAL & W. KUTZ PC | | |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1,600' | | 16. No. of Acres in lease 2,560 | 11. Sec., T., R., M., or Blk. and Survey or Area F 26-29n-14w NMPM | | |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 942' | | 19. Proposed Depth 1,350' | 12. County or Parish SAN JUAN | | |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,655' GL | | 22. Approximate date work will start* UPON APPROVAL | 13. State NM | | |
| 23. Estimated duration 2 WEEKS | | 17. Spacing Unit dedicated to this well W2 (320 acres to Fruitland Coal) NW4 (160 acres to Pictured Cliff) | | | |
| 20. BLM/BIA Bond No. on file 158-293-308 | | | | | |
| 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. |

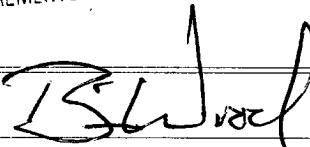
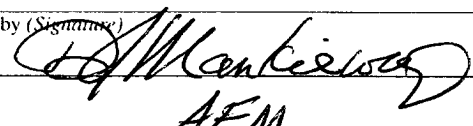
Comments

Shown as NV Benally 26 #2 on Notice of Staking and WF Navajo 26-2 on archaeology report.

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".

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

| | | |
|--|---|--------------------------|
| 25. Signature  | Name (Printed/Typed) BRIAN WOOD | Date 3-9-03 |
| Title CONSULTANT | PHONE: 505 466-8120 | FAX: 505 466-9682 |
| Approved by (Signature)  | Name (Printed/Typed) AFM | Date 7-16-04 |
| 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.

NMOCOD

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

Form C - 102

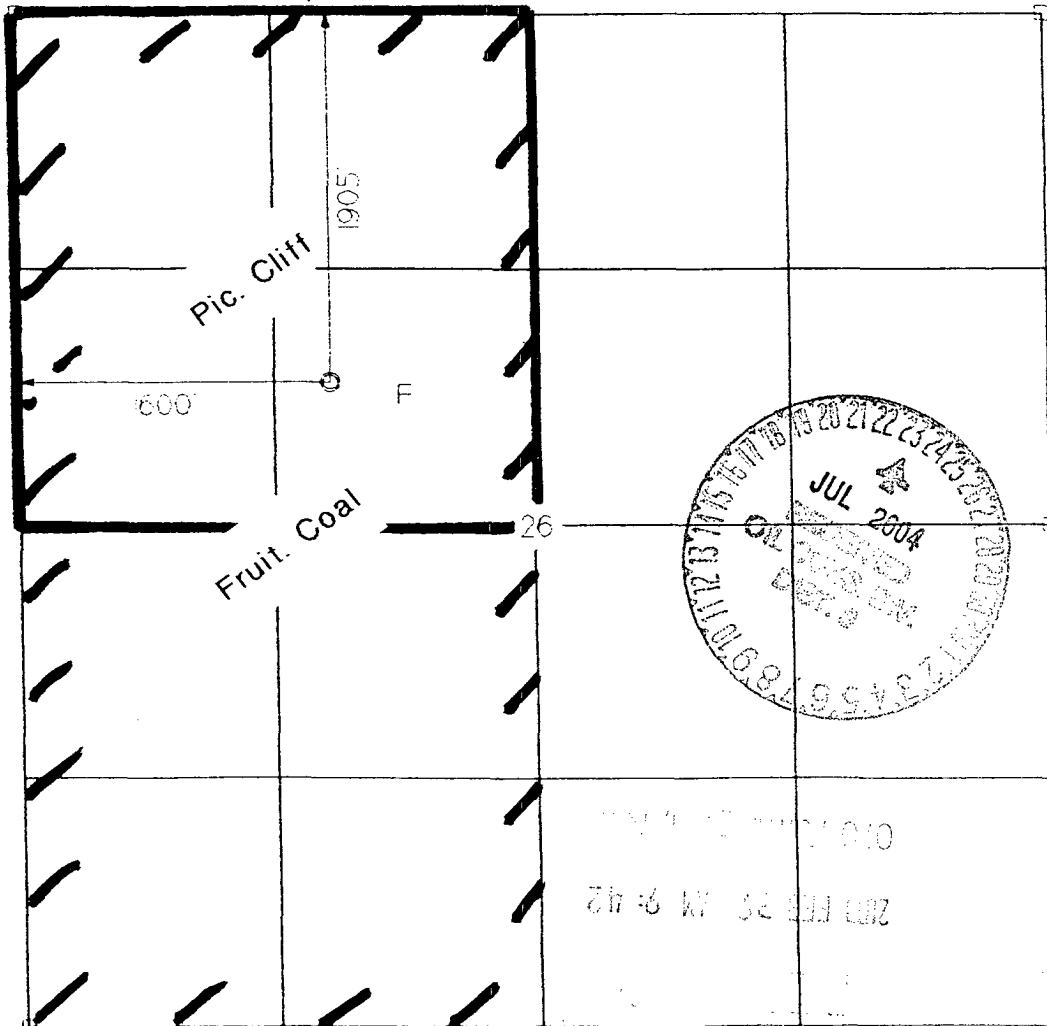
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|----------------------------|---|---|
| APA Number 30-045-31436 | Pool Code 71629 & 79680 | Pool Name BASIN FRUIT. COAL & WEST KUTZ PC |
| Property Code 31155 | Property Name Patricia NV 26 | Well Number 2 |
| OGRD No. 019219 | Operator Name - RICHARDSON OPERATING COMPANY | Elevation 5655' |

| Surface Location | | | | | | | | | |
|--|------------|----------------|----------------|----------|----------------------|----------------------|----------------------|-------------------|--------------------|
| UL or Lot F | Sec. 26 | Twp. 29. N. | Rge. 14. W. | Lot Ldn. | Feet from > .1905 | North/South NORTH | Feet from > 1600. | East/West WEST | County SAN JUAN |
| Bottom Hole Location If Different From Surface | | | | | | | | | |
| UL or Lot | Sec. | Twp. | Rge. | Lot Ldn. | 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 <i>Brian Wood</i> | |
| Printed Name | BRIAN WOOD |
| Title | CONSULTANT |
| Date | MAR. 9, 2003 |
| 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 | <i>[Signature]</i> 6844 REGISTERED LAND SURVEYOR |

Richardson Operating Company
NV Patricia 26 #2
1905' FNL & 1600' FWL
Sec. 26, T. 29 N., R. 14 W.
San Juan County, New Mexico

PAGE 1

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' | +5,655' |
| Fruitland Fm | 1,050' | 1,055' | +4,605' |
| Pictured Cliffs Ss | 1,200' | 1,205' | +4,455' |
| Lewis Shale | 1,345' | 1,350' | +4,310' |
| Total Depth (TD)* | 1,350' | 1,355' | +4,305' |

* all elevations reflect the ungraded ground level of 5,655'

2. NOTABLE ZONES

| <u>Gas Zones</u> | <u>Water Zones</u> | <u>Coal Zones</u> |
|------------------|--------------------|-------------------|
| Fruitland Coal | Fruitland Coal | 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 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 1,000 psi.

Richardson Operating Company
NV Patricia 26 #2
1905' FNL & 1600' FWL
Sec. 26, T. 29 N., R. 14 W.
San Juan County, New Mexico

PAGE 2

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 all rated to 2,000 psi. Maximum expected pressure is ≈ 540 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 ≈ 36 cubic feet (≈ 30 sacks) Class B + 2% CaCl_2 . Volume is based on 100% excess, yield of 1.18 cubic feet per sack, and slurry weight of 15.6 pounds per gallon. W. O. C. = 12 hours. Pressure test surface casing to 600 psi for 30 minutes.

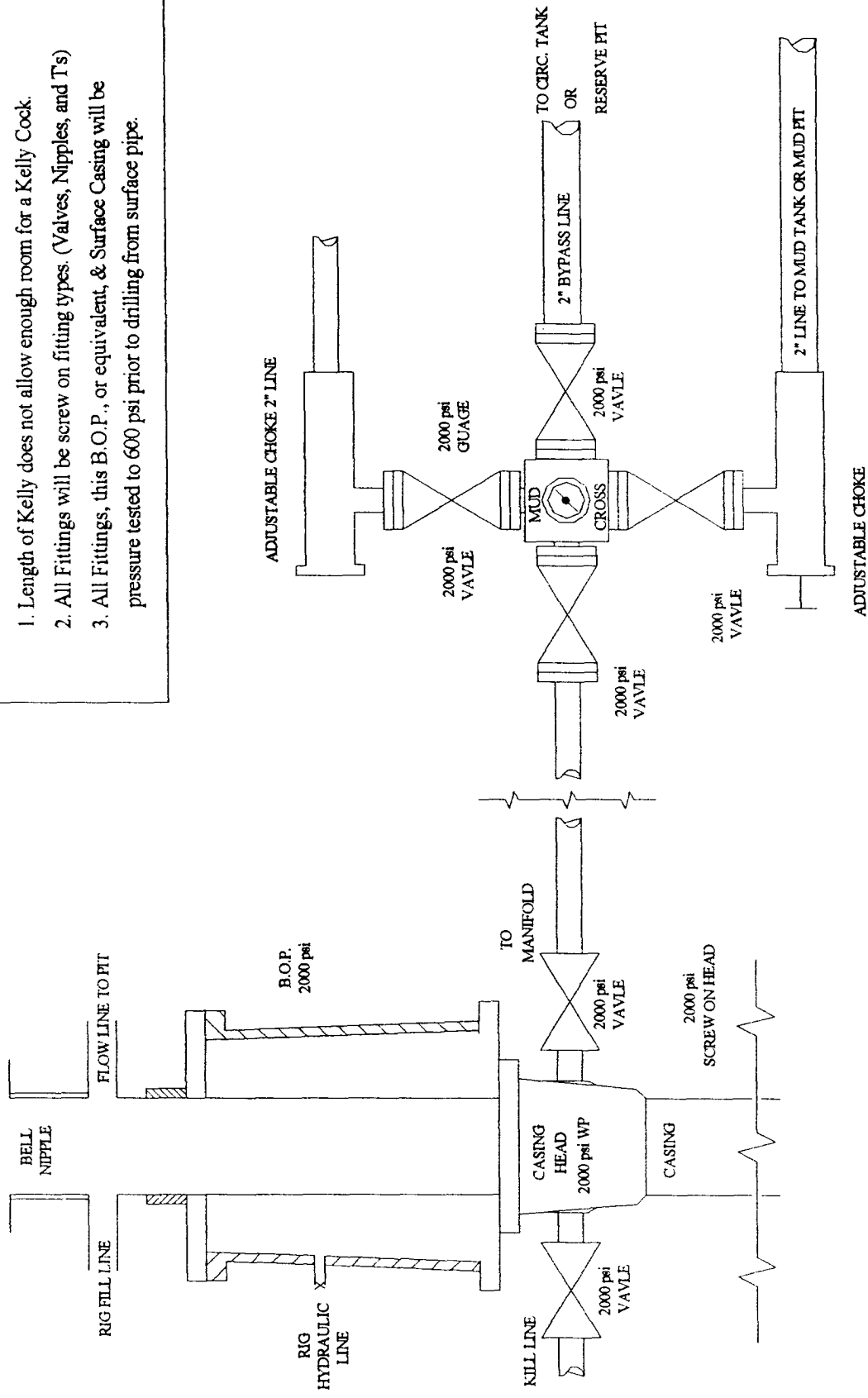
Production casing hole will first be cleaned of rock chips by circulating at least 150% of hole volume with mud to the surface. Thirty barrels of fresh water will next be circulated. Lead with ≈ 160 cubic feet (≈ 78 sacks) Class B with 2% metasilicate (yield = 2.06 cubic feet per sack, slurry weight = 12.5 pounds per gallon). Tail with ≈ 100 cubic feet (≈ 85 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 ≈ 260 cubic feet based on $\geq 75\%$ 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.

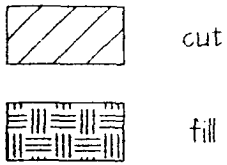
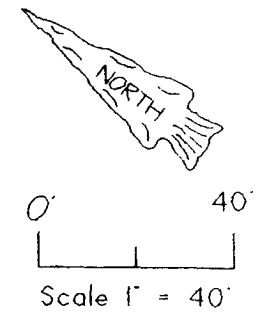
BLOW OUT PREVENTER (B.O.P.)

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.



□ set stake & lath

