

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

2003 FEB 26 AM 11:26

070 Farmington, NM

1a. Type of Work: ☒ DRILL☐ REENTER1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other☐ Single Zone ☒ Multiple Zone

2. Name of Operator

RICHARDSON OPERATING COMPANY

3a. Address 3100 LaPLATA HIGHWAY
FARMINGTON, NM 874013b. Phone No. (include area code)
(505) 564-3100

4. Location of Well (Report location clearly and in accordance with any State requirements.)

At surface 725' FSL & 1940' FEL

At proposed prod. zone SAME

14. Distance in miles and direction from nearest town or post office*

1 AIR MILE SW OF FARMINGTON

15. Distance from proposed*
location to nearest
property or lease line, ft.

1,940'

(Also to nearest drig. unit line, if any)

16. No. of Acres in lease

1,784

17. Spacing Unit dedicated to this well

S2 (320 acres to Fruitland Coal)
SE4 (160 acres to Pictured Cliff)18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.

1,871'

19. Proposed Depth

1,200'

20. BLM/BIA Bond No. on file

158-293-308

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

5,295' 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.

Comments

Previously known as WF Navajo 13 #3, Ropco 13 #3, and Navajo 13 #3

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

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

25. Signature

Name (Printed/Typed)

BRIAN WOOD

Date

2-20-03

Title

CONSULTANT

PHONE: 505 466-8120

FAX: 505 466-9682

Approved by (Signature)

Name (Printed/Typed)

Date

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.

NMOCD

State of New Mexico
Energy, Minerals & Mining Resources Department

Form C - 102

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

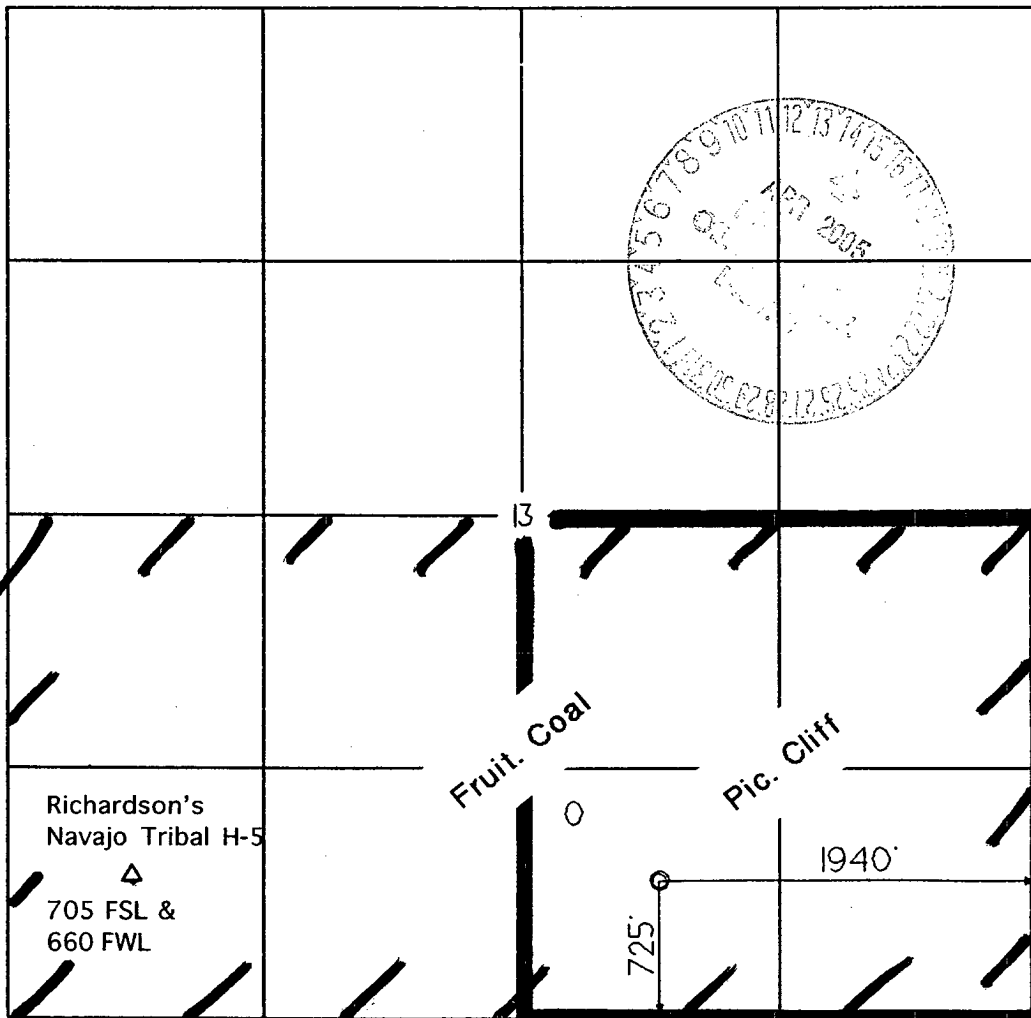
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

APA Number 30-045-31422	Pool Code 71629 & 79680	Pool Name BASIN FRUIT. COAL & WEST KUTZ PC
Property Code 34799	Property Name NV Navajo 13	Well Number #4
OGRO No. 019219	Operator Name 229938 RICHARDSON OPERATING COMPANY	Elevation 5295'

Surface Location									
UL or Lot 0	Sec. 13	Twp. 29 N.	Rge. 14 W.	Lot Idn.	Feet from > 725	North/South SOUTH	Feet from > 1940	East/West EAST	County SAN JUAN
Bottom Hole Location If Different From Surface									
UL or Lot	Sec.	Twp.	Rge.	Lot Idn.	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	FEB. 20, 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 30 OCTOBER 2000	
Signature and Seal of Professional Surveyor	

well pad and section



Richardson Operating Company
NV Navajo 13 #4
725' FSL & 1940' FEL
Sec. 13, 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'	+5,295'
Fruitland Formation	545'	550'	+4,750'
Pictured Cliffs Ss	945'	950'	+4,350'
Lewis Shale	1,135'	1,140'	+4,160'
Total Depth (TD)*	1,200'	1,205'	+4,095'

* all elevations reflect the ungraded ground level of 5,295'

2. NOTABLE ZONES

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland	Fruitland	Fruitland
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.

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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 \approx 480 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'

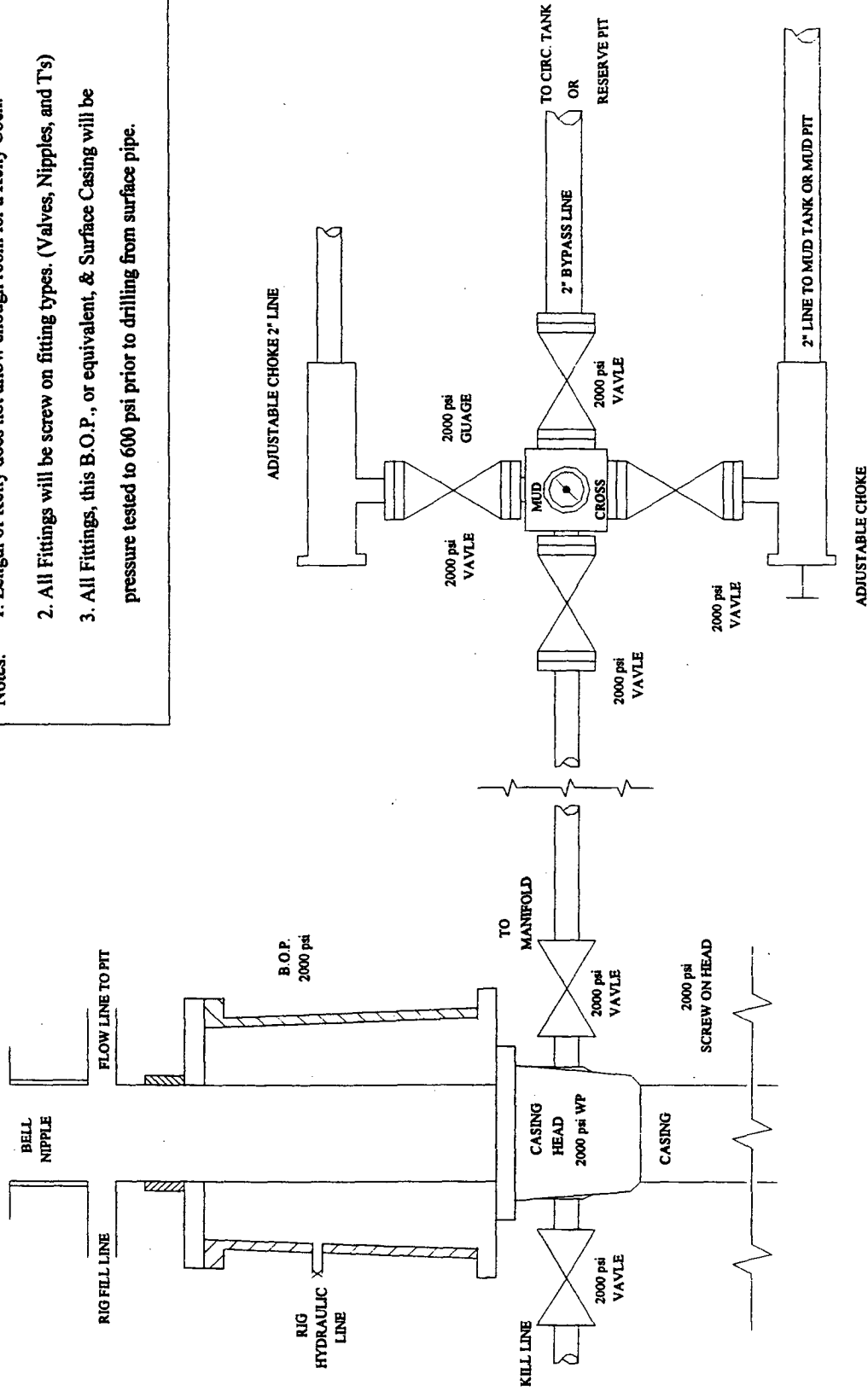
Surface casing will be cemented to surface with \approx 36 cubic feet (\approx 30 sacks) Class B + 2% CaCl_2 . Volume is based on 100% excess, yield of 1.18 cubic feet per sack, and slurry weight of 15.6 pounds per gallon. W. O. C. = 12 hours. Pressure test surface casing to 600 psi for 30 minutes.

Production casing hole will first be cleaned of rock chips by circulating at least 150% of hole volume with mud to the surface. Twenty-five barrels of fresh water will next be circulated. Lead with \approx 140 cubic feet (\approx 70 sacks) of 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 80% 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. Four centralizers will be spaced on every other joint starting above the shoe. Four turbolizers will be placed on every other joint starting from the top of the well.

BLOW OUT PREVENTOR (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 T's)
 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.