#### **UNITED STATES** DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

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

5. Lease Serial No.

14-20-603-2172

If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO	\\''	NAVAJO			
Ia. Type of Work: 🗹 DRILL 🔲 REI	2002 SEP -4 A	M !O: 10	7. If Unit or CA Agreem	ent, Name and No.	
1b. Type of Well: Oil Well Gas Well Other					
Name of Operator RICHARDSON OPERATING C	<b>30</b> .		9. API Well No. 3/	190	
3a. Address 3100 LaPLATA HIGHWAY FARMINGTON, NM 87401	3b. Phone No. (include area code) (505) 564-3100		0. Field and Pool, or Exp AS. FRUIT. COA		
4. Location of Well (Report location clearly and in accordance	<del></del>	1	1. Sec., T., R., M., or Bi	k. and Survey or Area	
At surface 1968' FNL & 1930' F At proposed prod. zone SAME	EL		36-29n-14w I	NMPM	
14. Distance in miles and direction from nearest town or post office 6 AIR MILES SW OF FARMINGTON		1	2. County or Parish SAN JUAN	13. State NM	
15. Distance from proposed* location to nearest	16. No. of Acres in lease	17. Spacing I	Unit dedicated to this we	1	
property or lease line, ft.  (Also to nearest drig. unit line, if any)  1,930'	2,560	FRUIT: 3	320 AC. (E2) PC	: 160 AC. (NE4)	
18. Distance from proposed location* to nearest well, drilling, completed,	19. Proposed Depth	20. BLM/BL	A Bond No. on file		
applied for, on this lease, ft. 2,601'	1,700'	#1582	93308 (BLM - I	NATIONWIDE)	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,884' GL	22. Approximate date work will sta UPON APPROVAL	1	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 at	ttached to this f	orm:		
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> </ol>	Item 20 above).	•	unless covered by an exi	sting bond on file (see	
<ol> <li>A Surface Use Plan (if the location is on National Forest Syste SUPO shall be filed with the appropriate Forest Service Office</li> </ol>		specific inform	ation and/or plans as may	be required by the	
Comments					
This action is subject to technical and procedural review pursuant to 43 CFR 31 and appeal pursuant te 43 CFR 3165.4	65 a SU	ILLING OPERA BJECT TO CON ENERAL REQUI	TIONS AUTHORIZED AR IPLIANCE WITH ATTACH REMENTS".	E HED	
	C On Carrier St.				
	CC:	BIA, BLN	1 (&OCD), Ricl	nardson, Tribe	
25. Signature	Name (Printed/Typed)	BRIAN \		9-1-02	
Title CONSULTANT	PHONE: 505 466-8120	FAX: 50	5 466-9682		
Approved by (Signature)	Name (Printed/Typed)		1	DadAN - 8 2003	

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.

Office

Conditions of approval, if any, are attached.

Title

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.

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

MENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-045-31190 71629 & 79680		BASIN FRUIT. COAL & WEST KUTZ PC		
Property Code 31905	Proper NV NAV	Wall Number		
00#0 No. 019219	•	NOT NOTE: RATING COMPANY	Bovation 5884	

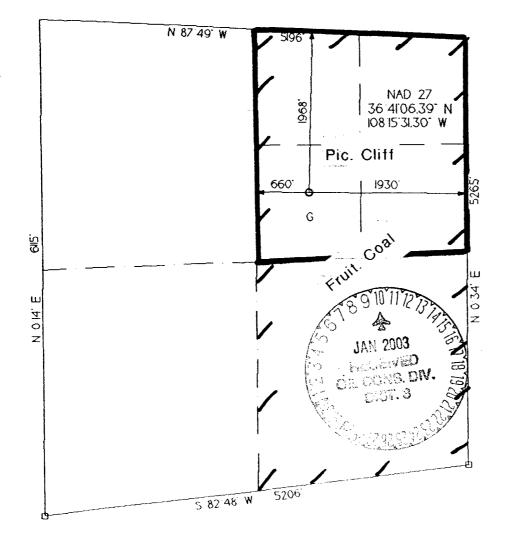
Surface Location

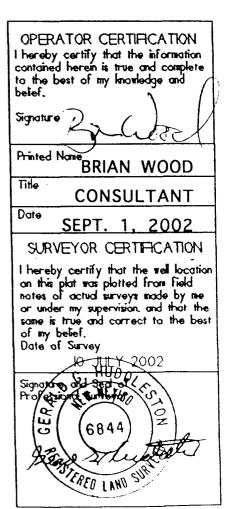
ſ	UL or Lot	Sec	Tup.	Rge.	Lot lon	Feet from>	North/South	Feet from>	East/West	County
	G	36	29 N.	14 W.		1968	NORTH	1930	EAST	SAN JUAN

Bottom Hole Location If Different From Surface

UL or Lat	Sec	Тир	Rge	Lor kar	Fee	et from>	North/South	Feet from>	East/West	County
Dedication	Jo	int?	Consolida	tion				Orde	or 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





Richardson Operating Co. NV Navajo 36 #1 1968' FNL & 1930' FEL Sec. 36, T. 29 N., R. 14 W. San Juan County, New Mexico

# **Drilling Program**

#### 1. ESTIMATED FORMATION TOPS

Formation Name	GL Depth	KB Depth	<u>Elevation</u>
Ojo Alamo Ss	000'	5'	+5,884'
Kirtland Sh	100'	105;	+5,784'
Fruitland Fm	1,175'	1,180'	+4,709'
Pictured Cliffs Ss	1,465'	1,470'	+4,419'
Total Depth (TD)*	1,700'	1,705'	+4,184'

<sup>\*</sup> all elevations reflect the ungraded ground level of 5,884'

# 2. NOTABLE ZONES

Gas Zones	Water Zones	Coal Zones
Fruitland Fm	Ojo Alamo Ss	Fruitland Fm
Pictured Cliffs	Fruitland Fm	

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.



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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  $\approx$ 400 psi.

### 4. CASING & CEMENT

<u> Hole Size</u>	<u>O. D.</u>	Weight (lb/ft)	<u>Grade</u>	<u>Age</u>	GL Setting Depth
8-3/4"	7"	20	K-55	New	120'
6-1/4"	4-1/2"	10.5	K-55	New	1,700'

Surface casing will be cemented to surface with  $\approx 36$  cubic feet ( $\approx 30$  sacks) Class B + 2% CaCl<sub>2</sub>. 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 ≈195 cubic feet (≈95 sacks) of Class B with 2% metasilicate (yield = 2.06 cubic feet per sack, slurry weight = 12.5 pounds per gallon). Tail with ≈115 cubic feet (≈95 sacks) of Class B with 2% CaCl<sub>2</sub> (yield = 1.18 cubic feet per sack, slurry weight = 15.6 pounds per gallon). Total cement volume is ≈310 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.

