Form 3 60-3 (August 1999)

UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED

OMB No. 1004-0136 Expires November 30, 2000

5. Lease Serial No.

NI	AN	IM.	-11	በኃ	QS

			BUREAU OF	LAND MANAG	EMENT		<i>,</i> – –	NMNM-102885	
						,		6. If Indian, Allottee or Trib	e Name
	APPLICATION FOR PERMIT TO DRILL OR REENTER 7 10 N/A								
la	. Type of Work:	drill		REENTER	070 F	armina	ton, NN	7. If Unit or CA Agreement, N/A	Name and No. 21903
16	. Type of Well:	Oil Well	Gas Well	Other	☐ Single Zone	Multi		8. Lease Name and Well No. F-RPC 30 #4	
/ 2 .			N OPERA	ATING COM	PANY			9. API Well No. 30-045- 3/3	2/
3a	3100		A HIGHV N, NM 87	4	3b. Phone No. (include of \$505) 564	,		10. Field and Pool, or Explora W KUTZ PC & BASIN	•
4.					any State requirements.*)	(25x)		11. Sec., T., R., M., or Blk. an	d Survey or Area
	At surface At proposed pro	241	0' FSL &	1495' FEL	() () () () () () () () () ()			ປົ 30-29n-13w NM	ИРМ
14.	Distance in miles 3 AIR MIL							12. County or Parish SAN JUAN	13. State NM
RL 15.	Distance from prolocation to neare property or lease (Also to nearest	st line.ft.	1.145' to	lease line comm. line	200	se J	-	g_Unit dedicated to this well O AC. (SE4) COAL:	320 AC. (E2)
18.	Distance from pro to nearest well, d	rilling, complete	ed.		19. Proposed Depth			BIA Bond No. on file	
	applied for, on th	is lease, ft.		N/A	1,400'		#15	8293308 (BLM - NA	ATIONWIDE
21.	Elevations (Sho 5,515' GL		KDB, RT, GL,	etc.)	22. Approximate date FEBRUAR			23. Estimated duration 2 WEEKS	
-		· · · · · · · · · · · · · · · · · · ·			24. Attachments				
The	following, compl	eted in accordar	nce with the req	uirements of Onshor	re Oil and Gas Order No.	1, shall be at	tached to thi	s form:	
1. 2. 3.	Well plat certified A Drilling Plan.	by a registered	surveyor. n is on National	l Forest System Land	ds, the 4. Bor Iten 5. Ope 6. Suc	nd to cover the n 20 above). Prator certific	ne operation cation.	ms unless covered by an existing	,
Co	mments	,							
	Notice of	Staking f	iled as "F	RPC 30 4"					

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:BLM (&OCD), Richardson 25. Signature Name (Printed/Typed) Date **BRIAN WOOD** 1-5-03

Title FAX: 505 466-9682 PHONE: 505 466-8120

Approved by (Signal David J. Mankiewicz Date JAN 14 Name (Printed/Typed)

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.

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

APA Number		Pool Code	Pool Name	
30-045-3/32/ 716		71629 & 79680	BASIN FRUIT. COAL & WEST	KUIZ PC
Property Code		Property Name		Well Number
31903		· FRPC 30		4
OGRID No.		Operate	or Name	Bevation
019219		RICHARDSON OPERATING COMPANY		55l5 ⁻

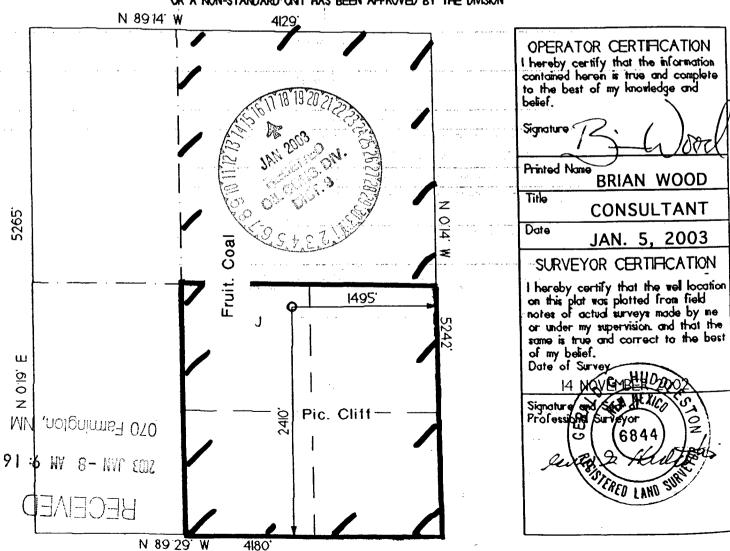
Surface Location Feet from> North/South County UL or Lot Sec. Lot los Feet from> East/West Tvp. Rge. 30 29 N. SAN JUAN 13 W. 2410 SOUTH 1495. **EAST**

Bottom Hole Location If Different From Surface

UL or Lot Sec. Tup. Rge. Lot kin. Feet from> North/South Feet from> East/West County

Dedication Jaint? Canealidation 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 DIMISION



Richardson Operating Company F-RPC 30 #4 2410' FSL & 1495' FEL Sec. 30, T. 29 N., R. 13 W. San Juan County, New Mexico

Drilling Program

1. ESTIMATED FORMATION TOPS

Formation Name	GL Depth	KB Depth	Elevation
Kirtland Shale	000'	5'	+5,515'
Fruitland Fm	865'	870'	+4,650'
Pictured Cliffs Ss	1,165'	1,170'	+4,350'
Total Depth (TD)*	1,400'	1,405'	+4,115'

^{*} all elevations reflect the ungraded ground level of 5,515'

2. NOTABLE ZONES

Gas Zones	<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 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, floor safety valve, and choke manifold all rated to 2000 psi. Maximum expected pressure is ≈560 psi.

4. CASING & CEMENT

Hole Size	<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	1,400'

Surface casing will be cemented to surface with ≈ 36 cubic feet (≈ 30 sacks) Class B + 2% CaCl₂. 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. Forty barrels of fresh water will next be circulated. Lead with ≈ 170 cubic feet (≈ 83 sacks) of Class B with 2% metasilicate (yield = 2.06 cubic feet per sack, slurry weight = 12.5 pounds per gallon). Tail with ≈ 110 cubic feet (≈ 93 sacks) of Class B with 2% CaCl₂ (yield = 1.18 cubic feet per sack, slurry weight = 15.6 pounds per gallon). Total cement volume is ≈ 280 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. Seven centralizers will be spaced on every other joint starting above the shoe. Seven turbolizers will be placed on every other joint starting from the top of the well.

