

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NMSF-079968	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A	
2. NAME OF OPERATOR Richardson Operating Co. (303) 830-8000		7. UNIT AGREEMENT NAME N/A	
3. ADDRESS AND TELEPHONE NO. 1700 Lincoln, Suite 1700, Denver, Co. 80203		8. FARM OR LEASE NAME, WELL NO. WF Fed. 3 #2	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 2495' FSL & 1290' FWL At proposed prod. zone Same		9. AM WELL NO. 30-045-3068	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 3 air miles NE of Kirtland, NM		10. FIELD AND POOL, OR WILDCAT Basin Fruit. Coal	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1,175'	16. NO. OF ACRES IN LEASE 2,523.72	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 3-29n-14w NMPM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. >1 mi.	19. PROPOSED DEPTH 1,200'	12. COUNTY OR PARISH San Juan	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5,435' ungraded ground		13. STATE NM	
20. ROTARY OR CABLE TOOLS Rotary		22. APPROX. DATE WORK WILL START* Mar. 20, 2000	

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8-3/4"	7" (K-55)	20#	120'	≈36 cu ft & to surface
6-1/4"	4-1/2" (K-55)	10.5#	1,200'	≈220 cu ft & to surface



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directional'y, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Consultant (505) 466-8120 DATE 3-5-00

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that 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:

APPROVED BY /s/ Jim Lovato TITLE _____ DATE MAY 24 2000

*See Instructions On Reverse Side

District II

PO Drawer DD, Artesia, NM 88211-0719

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

PO Box 2088, Santa Fe, NM 87504-2088

OIL CONSERVATION DIVISION

PO Box 2088

Santa Fe, NM 87504-2088

Instructions on back
Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

* APT Number 30-045-30/68		* Pool Code 71629	* Pool Name BASIN FRUITLAND COAL
* Property Code 25983	* Property Name WF Federal		* Well Number 3-2
* OGRID No. 019219	* Operator Name RICHARDSON OPERATING COMPANY		* Elevation 5435'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
L	3	29 N	14 W		2495	South	1290	West	San Juan

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County

* Dedicated Acres 318.15 1/2	* Joint or Infill	* Consolidation Code	* Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature BRIAN WOOD Printed Name CONSULTANT Title MAR. 5, 2000 Date
	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown 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 of Professional Surveyor Certificate Number

Richardson Operating Co.
WF Federal 3 #2
2495' FSL & 1290' FWL
Sec. 3, 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>Subsea Elevation</u>
Kirtland Sh	000'	5'	+5,435'
Fruitland Coal	930'	935'	+4,505'
Pictured Cliffs Ss	1,070'	1,075'	+4,365'
Total Depth (TD)*	1,200'	1,205'	+4,235'

* all elevations reflect the ungraded ground level of 5,435'

2. NOTABLE ZONES

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland Coal (930')	Fruitland Coal (930')	Fruitland Coal (930')
Pictured Cliffs (1,070')		

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 ≈ 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'

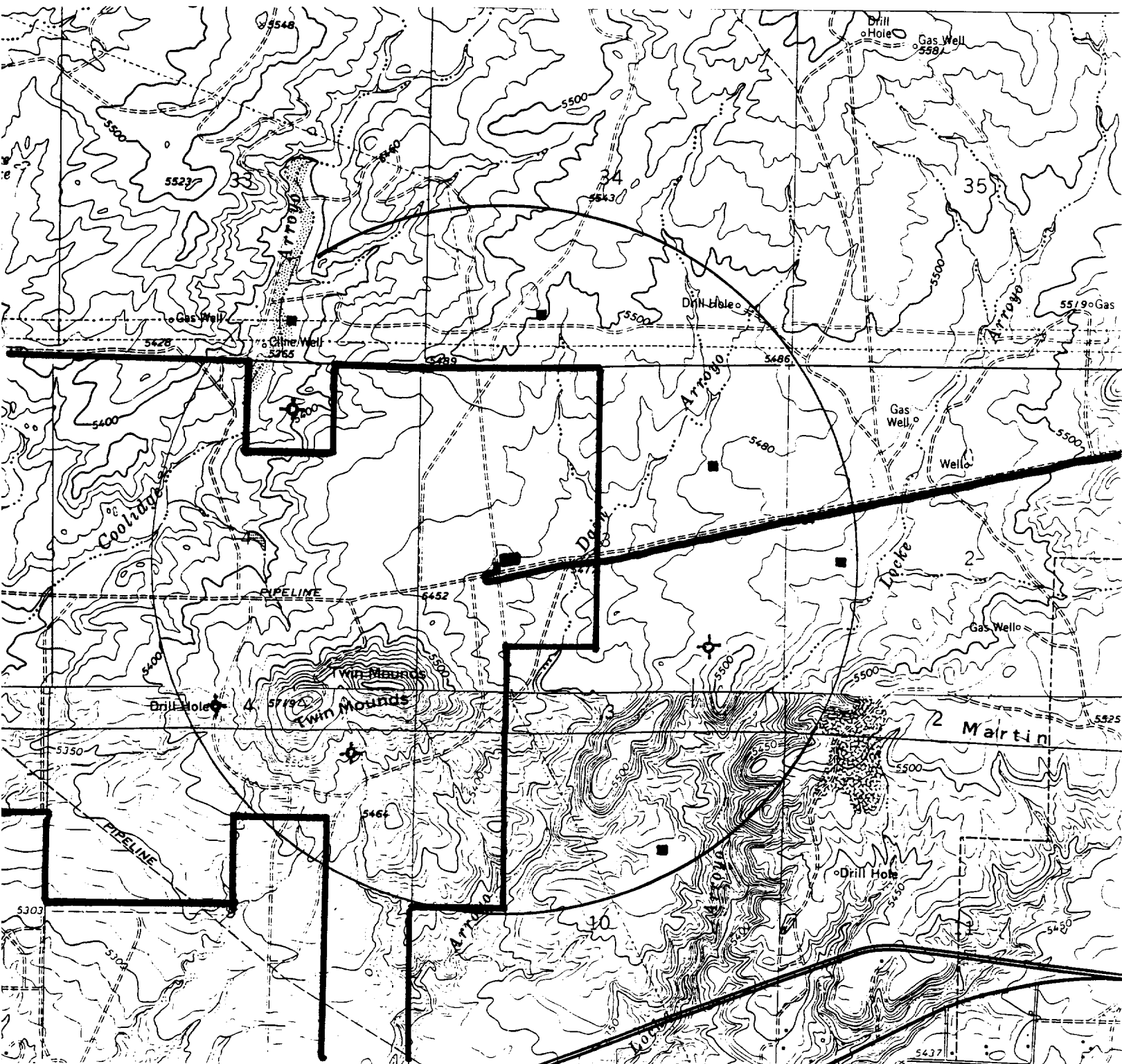
Surface casing will be cemented to surface with ≈ 36 cu. ft. (≈ 30 sx) Class B + 2% CaCl_2 . Volume is based on 100% excess, yield of 1.18 cu. ft./sk, and slurry weight of 15.6 PPG. WOC = 12 hours. Pressure test surface casing to 600 psi for 30 minutes.

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 ≈ 125 cu. ft. (≈ 60 sx) of Class B with 2% metasilicate (yield = 2.06 cu. ft./sk, slurry weight = 12.5 PPG). Tail with ≈ 95 cu. ft. (≈ 80 sx) of Class B with 2% CaCl_2 (yield = 1.18 cu. ft./sk, slurry weight = 15.6 PPG). Total cement volume is ≈ 220 cu. ft. 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.

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PROPOSED WELL: ■
 LEASE LINE: ┌

EXISTING WELL: ■
 EXISTING ROAD: ~

PERMITS WEST INC.
 PROVIDING PERMITS for LAND USERS