

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

200 SEP 26 AM 9:12

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER

SINGLE ZONE

MULTIPLE ZONE ☒

2. NAME OF OPERATOR

Richardson Operating Co. (303) 830-8000

3. ADDRESS AND TELEPHONE NO.

1700 Lincoln, Suite 1700, Denver, Co. 80203

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

835' FNL & 860' FEL

At proposed prod. zone

Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

2 air miles NE of Kirtland, NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.
(Also to nearest drilg. unit line, if any)

668'

16. NO. OF ACRES IN LEASE

2,523.72

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

19. PROPOSED DEPTH

2,581'

17. NO. OF ACRES ASSIGNED TO THIS WELL

160/320FC

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5,425' ungraded ground

22. APPROX. DATE WORK WILL START*

Upon Approval

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#	1,050'	~200 cu ft & to surface -

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

ALL INFORMATION AUTHORIZED ARE
SUBJECT TO THE DISCLOSURE WITH ATTACHED
"TECHNICAL REQUIREMENTS"



cc: BLM (& OCD), Colby

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 directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Bill Wood

TITLE

Consultant (505) 466-8120

DATE

9-21-00

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

5/23/01

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:

Lee Otter

APPROVED BY

TITLE

DATE

*See Instructions On Reverse Side

NMOC

State of New Mexico
Energy, Minerals & Mining Resources Department

Form C - 102

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, NM 87505

200 SEP 26 AM 9:12

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

070 HARRINGTON, NM

APA Number 30-045-30383	Pool Code 71629 & 86620	Pool Name FRUIT. COAL & TWIN MOUND PC
Property Code 26505	Property Name ROPCO	Well Number 9 - 1
OGRID No. 019219	Operator Name RICHARDSON OPERATING COMPANY	Elevation 5425'

Surface Location

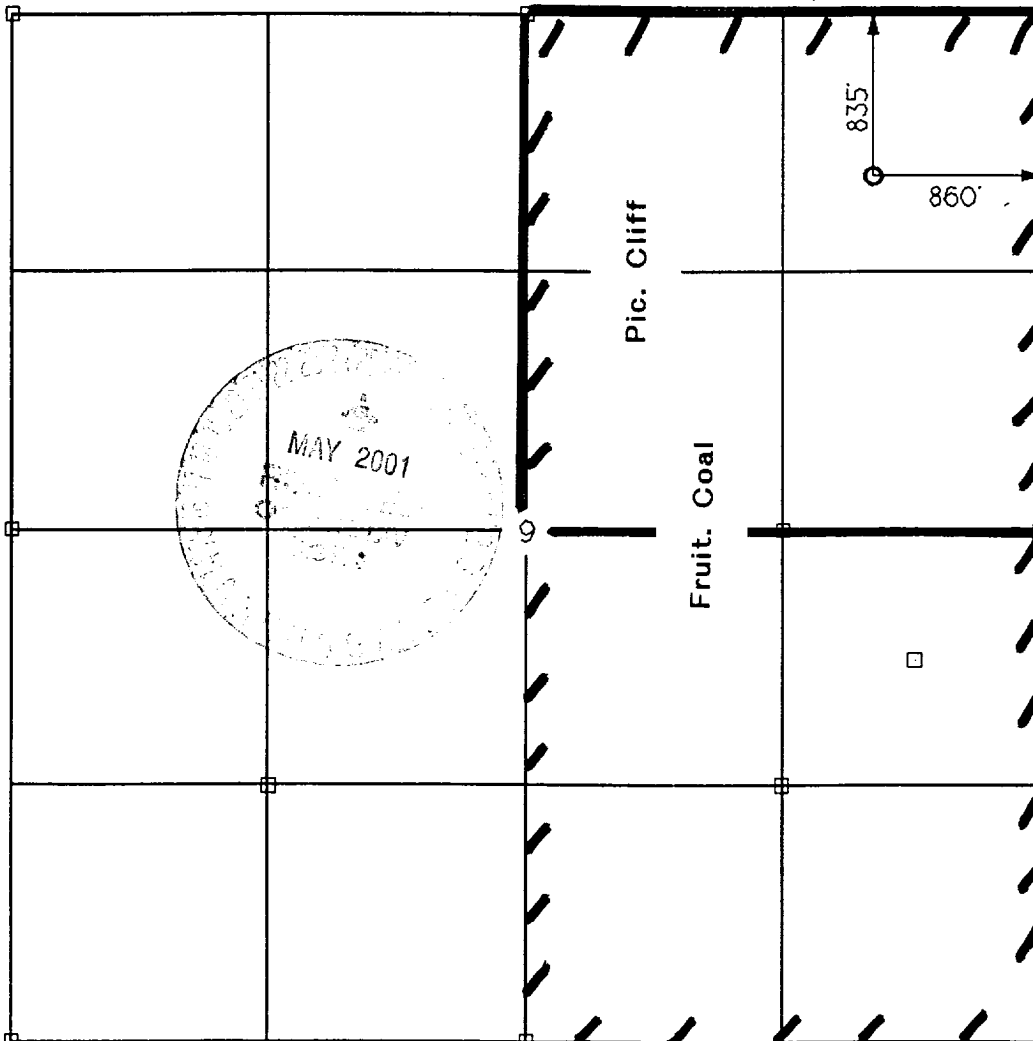
UL or Lot	Sec.	Twp.	Rge.	Lot Lch.	Feet from >	North/South	Feet from >	East/West	County
A	9	29. N.	14. W.		.835	NORTH	860	EAST	SAN JUAN

Bottom Hole Location If Different From Surface

UL or Lot	Sec.	Twp.	Rge.	Lot Lch.	Feet from >	North/South	Feet from >	East/West	County

Dedication 160 PC 720 PC	Joint ?	Consolidation	Order No.
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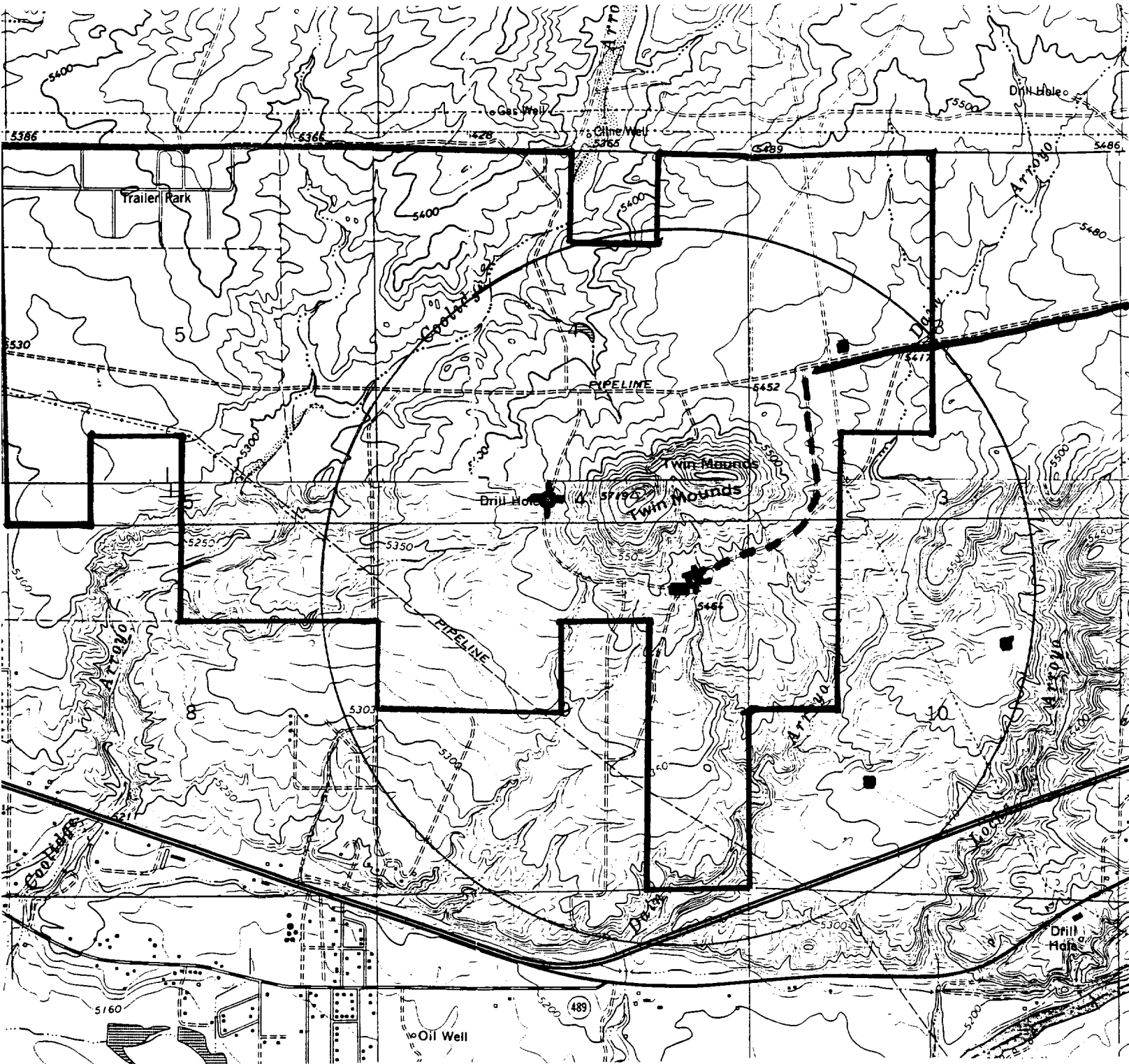
NO ALLOWABLE WELL ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



<p>OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature <i>Brian Wood</i></p>	
<p>Printed Name BRIAN WOOD</p>	
<p>Title CONSULTANT</p>	
<p>Date SEPT. 21, 2000</p>	
<p>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.</p> <p>Date of Survey JULY 2000</p>	
<p>Signature and Seal of Professional Surveyor</p> <p>CERD G. HIDDLESTON 6844 REGISTERED LAND SURVEYOR</p>	

Richardson Operating Co.
 Ropco 9 #1
 835' FNL & 860' FEL
 Sec. 9, T. 29 N., R. 14 W.
 San Juan County, New Mexico

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PROPOSED WELL: ■ UPGRADED ROAD: - - -
 EXISTING WELL: ■ EXISTING ROAD: ~~~~~
 P&A WELL: ✕ LEASE: ┌

PERMITS WEST INC.
 PROVIDING PERMITS for LAND USERS

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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'	+5,425'
Fruitland Coal	750'	755'	+4,675'
Pictured Cliffs Ss	890'	895'	+4,535'
Lewis Sh	1,005'	1,010'	+4,420'
Total Depth (TD)*	1,050'	1,055'	+4,375'

* all elevations reflect the ungraded ground level of 5,425'

2. NOTABLE ZONES

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland Coal (750')	Fruitland Coal (750')	Fruitland Coal (750')
Pictured Cliffs (890')		

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 been let, thus the exact BOP to be used is not yet known. A typical 2,000 psi model is on PAGE 3. A similar model meeting BLM standards will be used. Double ram or annular system with a rotating head will be used. All ram preventers and related equipment will be hydraulically tested at NU 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 ≈ 420 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	1,050'

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 ≈ 110 cu. ft. (≈ 55 sx) of Class B with 2% metasilicate (yield = 2.06 cu. ft./sk, slurry weight = 12.5 PPG). Tail with ≈ 90 cu. ft. (≈ 75 sx) of Class B with 2% CaCl_2 (yield = 1.18 cu. ft./sk, slurry weight = 15.6 PPG). Total cement volume is ≈ 200 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.