

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

LEASE DESIGNATION AND SERIAL NO
14-20-603-2198
IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo
UNIT AGREEMENT NAME
N/A

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

FARM OR LEASE NAME, WELL NO
Navajo 14 #2
API WELL NO
50 045-30654

FIELD AND POOL, OR WILDCAT
Fruit, Coal & W. Kutz PC

SEC. T, R., M., OR BLK.
AND SURVEY OR AREA
14-29n-14w NMPM

COUNTY OR PARISH | STATE
San Juan | NM

NO. OF ACRES IN LEASE
1,784
NO. OF ACRES ASSIGNED TO THIS WELL
160 & 320
PROPOSED DEPTH
975'
ROTARY OR CABLE TOOLS
Rotary

APPROX. DATE WORK WILL START*
Sept. 10, 2001

1a. TYPE OF WORK
DRILL DEEPEN

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 St., Suite 1700, Denver, Co. 80203

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)
At surface **1948' FNL & 1037' FEL**
At proposed prod. zone **Same**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* BY **MJ**
1 air mile SW of Farmington

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any)
≈ 400'

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
1,684'

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
5,200' ungraded

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8-3/4"	K-55 7"	20	120'	≈36 cu. ft. & to surface
6-1/4"	K-55 4-1/2"	10.5	975'	≈185 cu. ft. & to surface

This action is subject to internal and procedural review pursuant to 43 CFR 3166.3 and appeal pursuant to 43 CFR 3165.4.

2001 APR 18 PM 1:52

ENTERED

ATTACH "GENERAL REQUIREMENTS"

BY sm

Fischer
BFC
Case # 12410
8/22/07

High - San Juan River

cc: BIA, BLM, Colby, OCD (via BLM), Tribe

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.

SIGNED [Signature] TITLE **Consultant (505) 466-8120** DATE **4-15-01**

PERMIT NO. _____ APPROVAL DATE **5/23/02**

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 thereunder.

APPROVED BY [Signature] TITLE **AFM** DATE **5/23/02**

*See Instructions On Reverse Side
FARMINGTON COPY

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

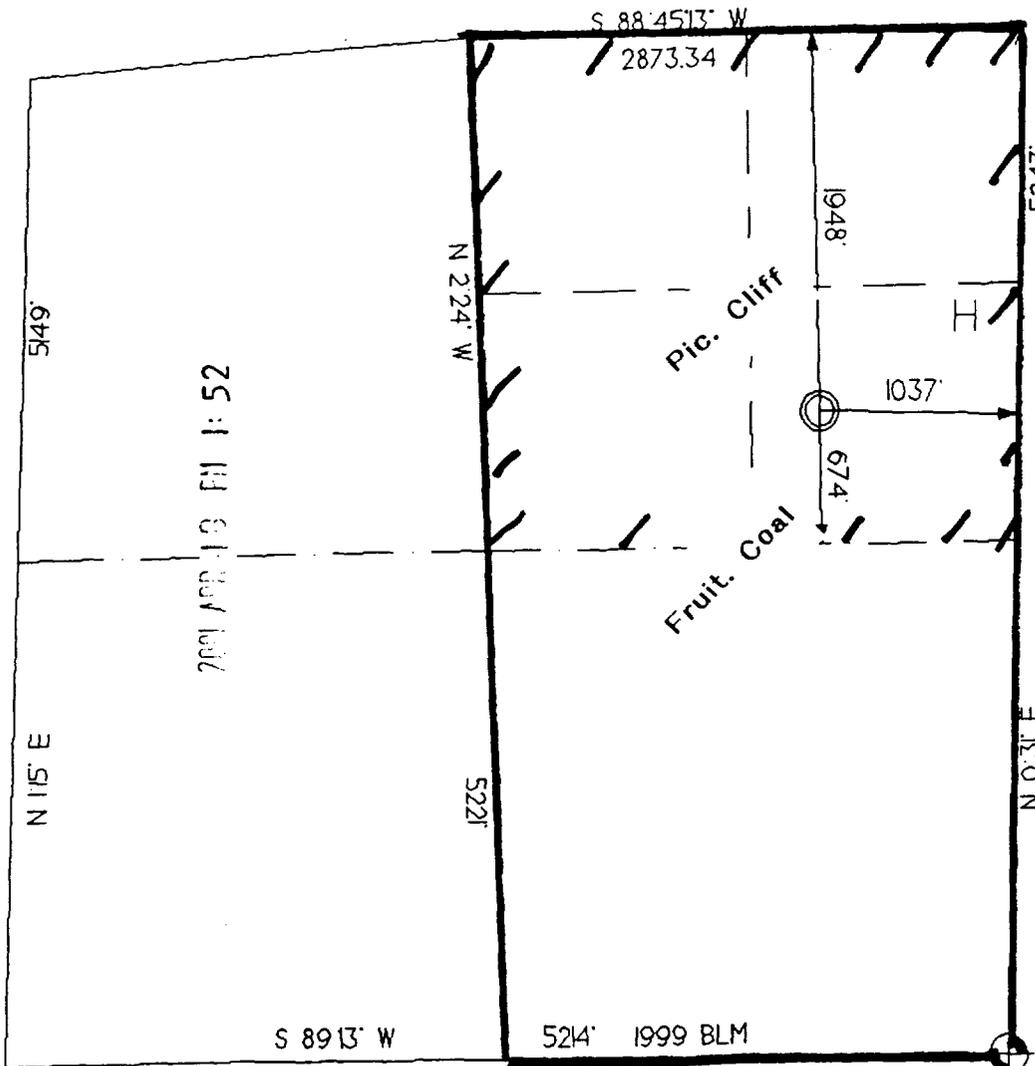
APA Number	Pool Code	Pool Name
.	71629 & 79680	BASIN FRUIT. COAL & WEST KUTZ PC
Property Code	Property Name	Well Number
.	WF NAVAJO	14 - 2
OGRD No.	Operator Name	Elevation
019219	RICHARDSON OPERATING COMPANY	5200'

Surface Location									
UL or Lot	Sec.	Top.	Rge.	Lot Idn.	Feet from >	North/South	Feet from >	East/West	County
H	14	29.N.	14. W.		1948'	NORTH	1037'	EAST	SAN JUAN

Bottom Hole Location if Different From Surface									
UL or Lot	Sec.	Top.	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	APR. 15, 2001
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	
Signature and Seal of Professional Surveyor	<i>Paul D. Hubbard</i>

Richardson Operating Co.
Navajo 14 #2
1948' FNL & 1037' FEL
Sec. 14, 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>Subsea Elevation</u>
Kirtland Shale	000'	5'	+5,200'
Basal Fruitland Coal	635'	640'	+4,565'
Pictured Cliffs Ss	800'	805'	+4,400'
Total Depth (TD)*	975'	980'	+4,225'

* all elevations reflect the ungraded ground level of 5,200'

2. NOTABLE ZONES

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland Coal (635')	Fruitland Coal (635')	Fruitland Coal (635')
Pictured Cliffs (800')		

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.

Richardson Operating Co.
Navajo 14 #2
1948' FNL & 1037' FEL
Sec. 14, T. 29 N., R. 14 W.
San Juan County, New Mexico

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 kelly cock, floor safety valve, and choke manifold all rated to 2000 psi. Maximum expected pressure is \approx 390 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	975'

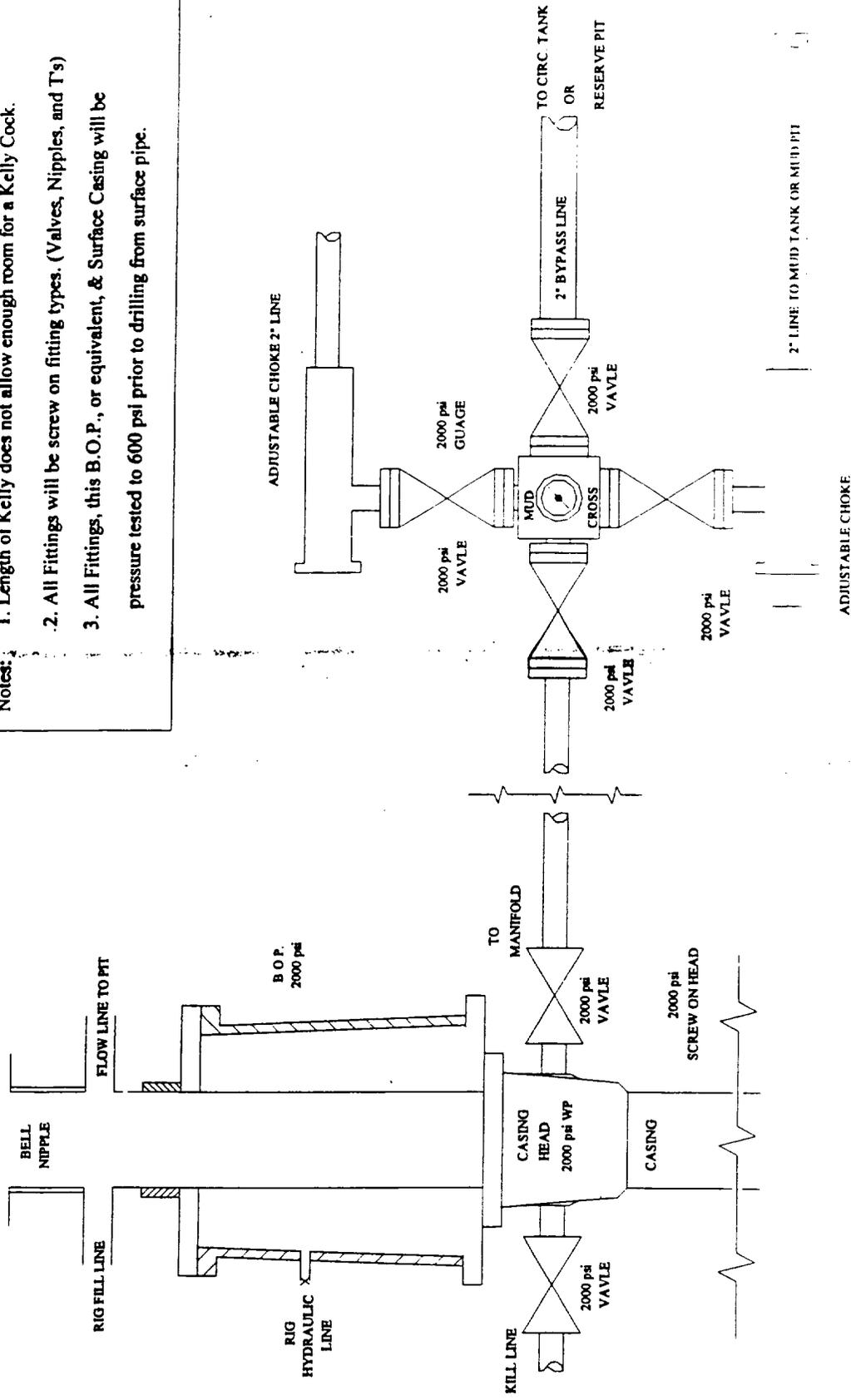
Surface casing will be cemented to surface with \approx 36 cu. ft. (\approx 30 sx) Class B + 2% CaCl₂. Volume is based on 100% excess, yield of 1.18 cu. ft./sk, and slurry weight of 15.6 PPG. WOC = 12 hours. Pressure test surface casing to 600 psi for 30 minutes.

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 \approx 115 cu. ft. (\approx 56 sx) of Class B with 2% metasilicate (yield = 2.06 cu. ft./sk, slurry weight = 12.5 PPG). Tail with \approx 70 cu. ft. (\approx 60 sx) of Class B with 2% CaCl₂ (yield = 1.18 cu. ft./sk, slurry weight = 15.6 PPG). Total cement volume is \approx 185 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.

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 Ts)
 3. All Fittings, this B.O.P., or equivalent, & Surface Casing will be pressure tested to 6000 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

Richardson Operating Co.
Navajo 14 #2
1948' FNL & 1037' FEL
Sec. 14, T. 29 N., R. 14 W.
San Juan County, New Mexico

PAGE 4

5. MUD PROGRAM

Surface casing hole will be drilled with fresh water. Production casing hole will be drilled with a fresh water polymer mud. Weighting material will be drill solids or, if needed, barite. Maximum expected mud weight will be 8.7 pounds per gallon. Sufficient material to maintain mud properties, control lost circulation, and contain a blowout will be available at the well while drilling.

6. CORING, TESTING, & LOGGING

No cores or DSTs are planned. Induction/GR and density log will be run from TD to surface.

7. DOWNHOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum pressure will be ≈ 380 psi.

8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take two days to drill and one week to complete the well.

Richardson Operating Co.
Navajo 14 #2
1948' FNL & 1037' FEL
Sec. 14, T. 29 N., R. 14 W.
San Juan County, New Mexico

PAGE 5

Surface Use Plan

1. DIRECTIONS & EXISTING ROADS (See Pages 9 & 10)

From the San Juan River bridge in southwest Farmington ...
Go southwest on NM 371 to the equivalent of Milepost 105.9
Then turn right and go west 2.6 miles on paved N-36
Then turn right onto a wide dirt N road and go north 0.2 mi. across a canal
Then turn right and go east 1,125' along the north canal road to a wire gate
~~Then turn left through the gate and and go northeast 775' on a dirt road~~
Then turn right and go east 375' on a gravel road
Then turn left and go north 150' on a gravel road to the well

Roads will be maintained to a standard at least equal to their present condition.

2. ROAD TO BE BUILT OR UPGRADED

No road will be built. Upgrading will consist of replacing the wire gate with a cattleguard and/or locked gate.

3. EXISTING WELLS (See Page 10)

One oil, one water disposal, three gas, six water wells, and seven plugged and abandoned wells are within a mile radius according to NM Oil Conservation Division records.

4. PROPOSED PRODUCTION FACILITIES (See Page 10)

Richardson Operating Co.
Navajo 14 #2
1948' FNL & 1037' FEL
Sec. 14, T. 29 N., R. 14 W.
San Juan County, New Mexico

PAGE 6

A meter run and separator will be installed on the pad. Surface equipment will be painted a flat juniper green color. Two ≈ 3 " SDR-11 poly pipelines will be buried by Richardson in one ≈ 36 " deep trench. The trench will run southwest for 2,425' along the existing roads and tie into Richardson's existing H-12 pipeline system. All of the route is on lease.

Gas line will operate at ≈ 50 psi. Water line will operate ≈ 60 psi. Test pressure will be ≈ 128 psi. Test medium will be the well's own gas and water. Water will be discharged into the reserve pit. Burst pressure is 630 psi at 60° Celsius. Wall thickness is 0.318". Joints will be heat fused. Route will be **posted with markers.**

5. WATER SUPPLY

Water will be trucked from a private water source in Farmington.

6. CONSTRUCTION MATERIALS & METHODS

NM One Call (1-800-321-ALERT) will be notified before construction starts. Soil and brush will be stripped and stored as a one foot high berm around the pad. No reserve pit will be built. Steel mud tanks will be used instead. Tank contents will be hauled to nearby Richardson reserve pits.

7. WASTE DISPOSAL

All trash will be placed in a portable trash cage and hauled to the county landfill. There will be no trash burning. Once dry, contents of the reserve pit will be buried in place. Human waste will be disposed of in chemical toilets. Toilet contents will be hauled to an approved dump station.

Richardson Operating Co.
Navajo 14 #2
1948' FNL & 1037' FEL
Sec. 14, T. 29 N., R. 14 W.
San Juan County, New Mexico

PAGE 7

8. ANCILLARY FACILITIES

There will be no air strips or camps. Camper trailers may be on location for the company man, tool pusher, or mud logger.

9. WELL SITE LAYOUT

See Pages 11 and 12 for depictions of the well pad, cross section, cut and fill diagram, trash cage, access onto the location, parking, living facilities, and rig orientation.

10. RECLAMATION

The pad will be recontoured to a natural appearance, brush and soil spread evenly over disturbed areas, and disturbed areas ripped or harrowed. BLM seed mix #2 will be drilled at a depth and time to be determined by BLM. If broadcast, the rate will be increased as determined by BLM. A harrow or cable will be dragged over the area to assure seed cover. If the well is a producer, then the reserve pit and any other areas not needed for workovers will be reclaimed as previously described.

11. SURFACE OWNER

The project is on Navajo Tribal Trust. Tribal Project Review Office phone is (520) 871-7040. Address is P. O. Box 9000, Window Rock, Az. 86515.

12. OTHER INFORMATION

The nearest hospital is a 10 minute drive away in southwest Farmington.

Richardson Operating Co.
Navajo 14 #2
1948' FNL & 1037' FEL
Sec. 14, T. 29 N., R. 14 W.
San Juan County, New Mexico

PAGE 8

13. REPRESENTATION

Anyone having questions concerning the APD should call:

Brian Wood, Consultant
Permits West, Inc.
37 Verano Loop
Santa Fe, NM 87505

(505) 466-8120

FAX: (505) 466-9682

Cellular: (505) 699-2276

Field representative will be:

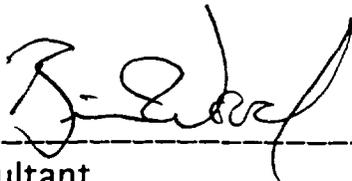
John Durham
Richardson Operating Co.
3100 LaPlata Highway
Farmington, NM 87401

(505) 564-3100

FAX: (505) 564-3109

Cellular: (505) 320-0247

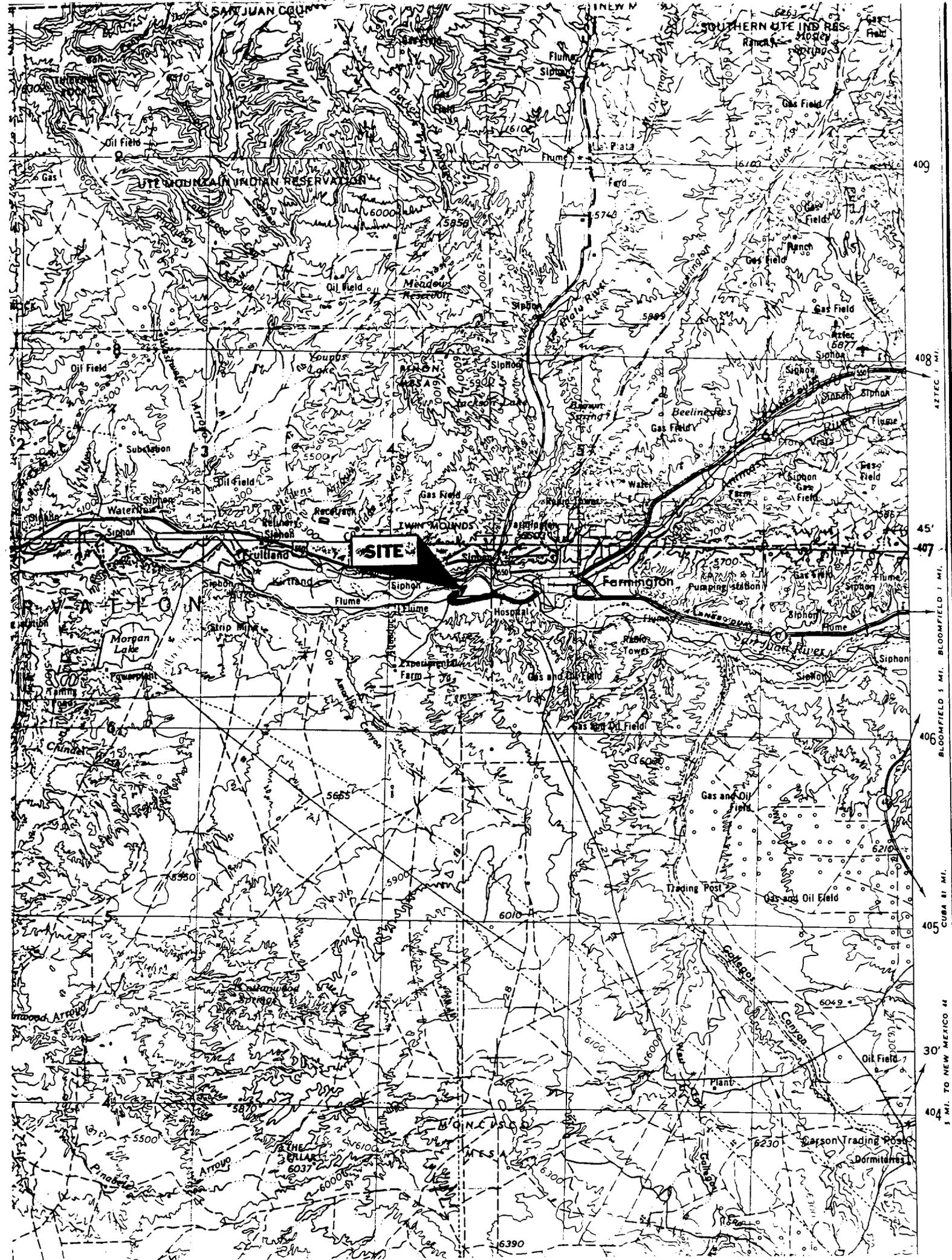
Richardson Operating Co. has the necessary consents from the proper lease owners to conduct lease operations in conjunction with this well. Bond coverage pursuant to 43 CFR 3104 for lease activities and operations is being provided by Richardson Operating Co. I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Richardson Operating Co. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.



Consultant

April 15, 2001

Date



409

408

45'

407

406

405

30

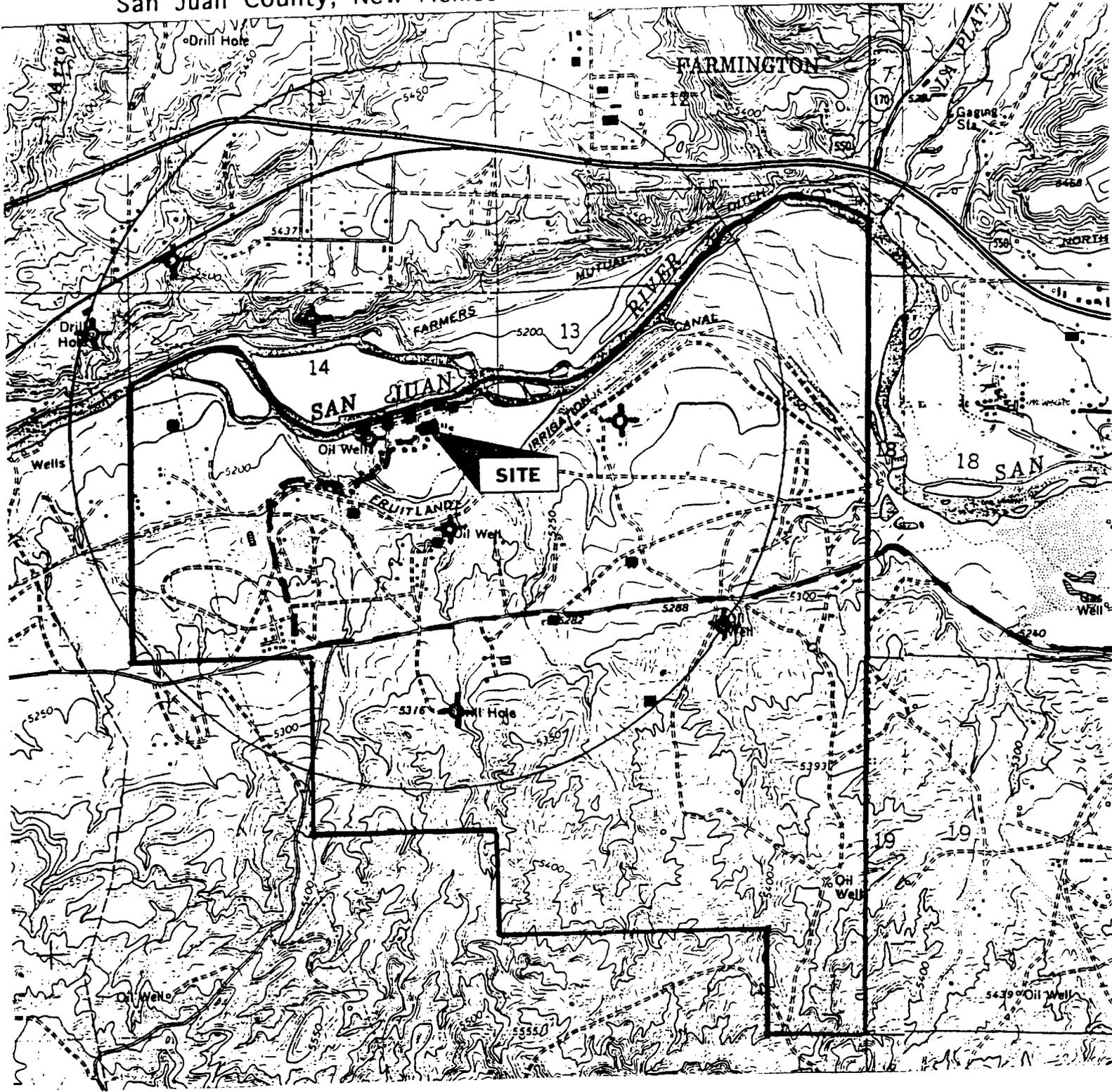
404

BLOOMFIELD 5 MI. BLOOMFIELD 1 MI.

CUBA 81 MI.

1 MI. TO NEW MEXICO 44

Richardson Operating Co.
Navajo 14 #2
1948' FNL & 1037' FEL
Sec. 14, T. 29 N., R. 14 W.
San Juan County, New Mexico

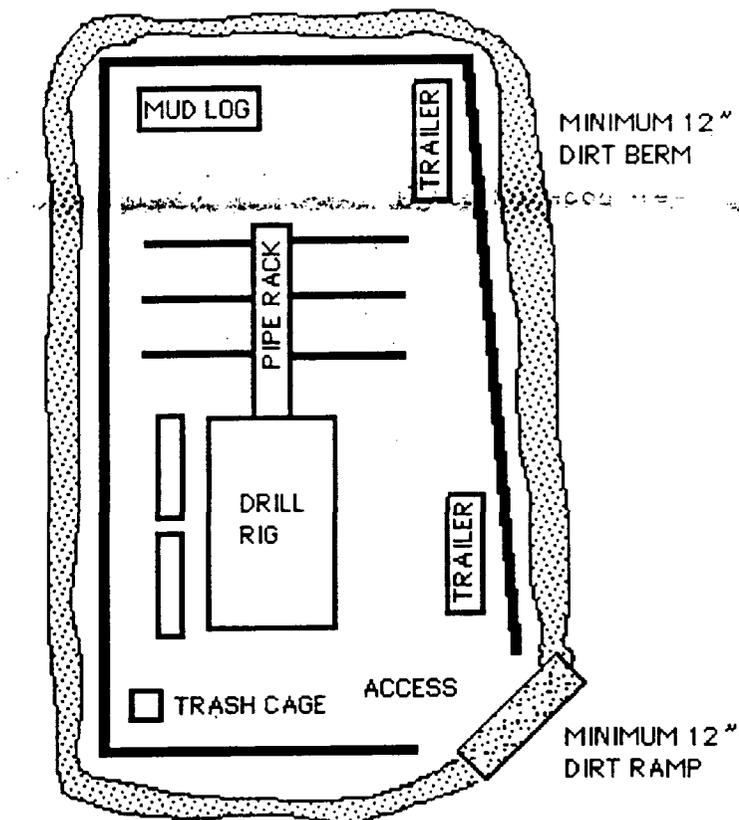


PROPOSED WELL: 
EXISTING WELL: 
P&A WELL: 

PROPOSED PIPELINES: 
EXISTING ROAD: 
LEASE: 

PERMITS WEST .INC.
PROVIDING PERMITS for LAND USERS

Richardson Operating Co.
Navajo 14 #2
1948' FNL & 1037' FEL
Sec. 14, T. 29 N., R. 14 W.
San Juan County, New Mexico



NORTH  1" ≈ 40'

PERMITS WEST .INC.
PROVIDING PERMITS for LAND USERS





Scale 1" = 40'



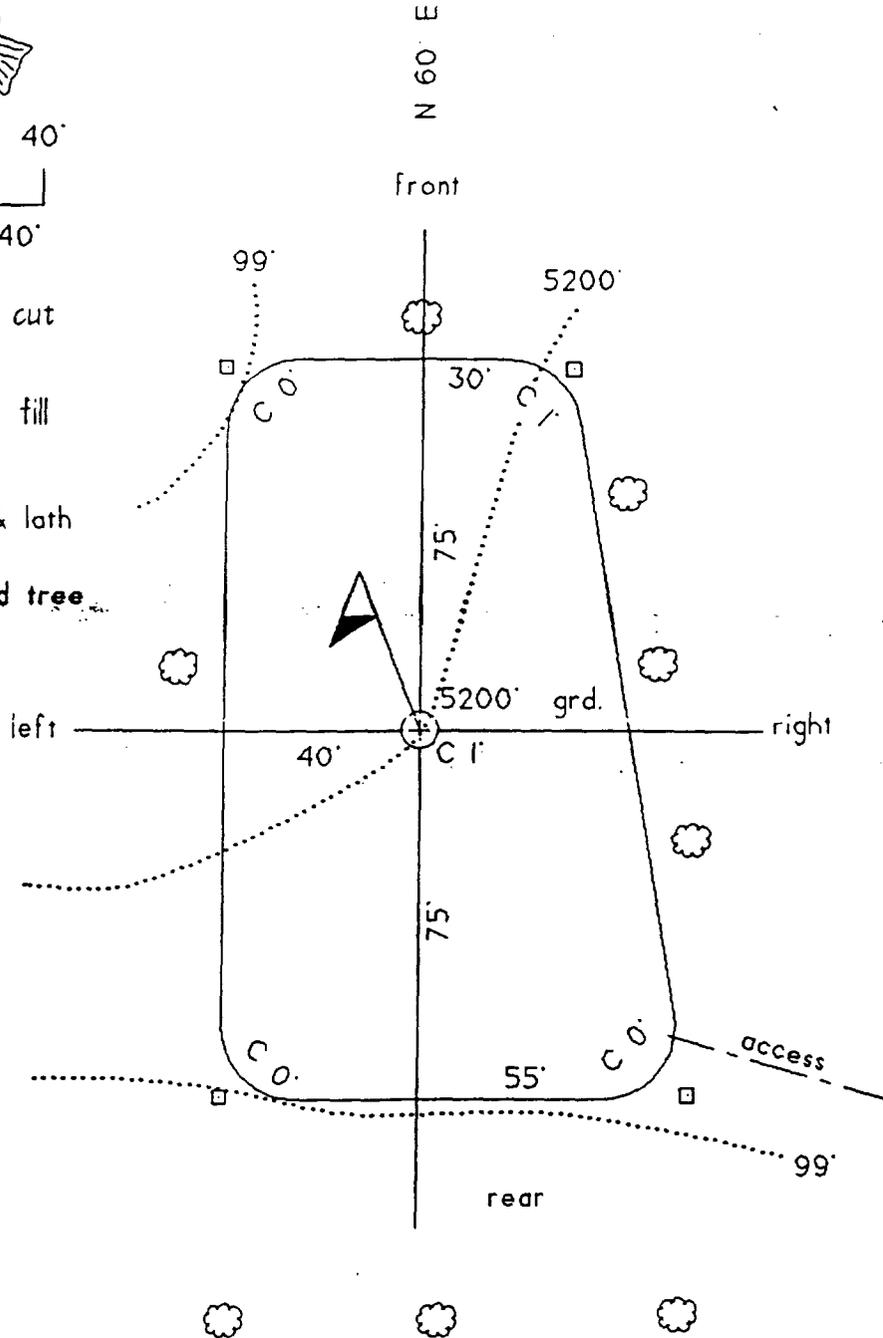
cut



fill

□ set stake & lath

☼ cotton wood tree



section