

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

## b. TYPE OF WELL

OIL  
WELL ☒GAS  
WELL ☐OTHER ☐SINGLE  
ZONE ☒MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

## 3. ADDRESS OF OPERATOR

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

At surface

At proposed prod. zone

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

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any)18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

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

## 23.

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/2"	New 8 3/8"	24 #	1,000'	600 SX Circ.
7 7/8"	New 5 1/2"	16.5 # + 17 #	8250'	1345 SX

IT IS Proposed to drill a straight hole to a  
Total depth of 8250' and complete as a West Lindrith  
Gallup Dakota Oil well.

See attached for B.O.P. Program

See Attached Proposed Well Plan for Formation Taps, Logging, ETC.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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

TITLE

DATE

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

DATE

MAR 16 1978

\*See Instructions On Reverse Side

U. S. GEOLOGICAL SURVEY  
DENVER, COLO.

USGS. Durango (6), G25 CO. N.M., EXXON, MJL, BEA, File (2)

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

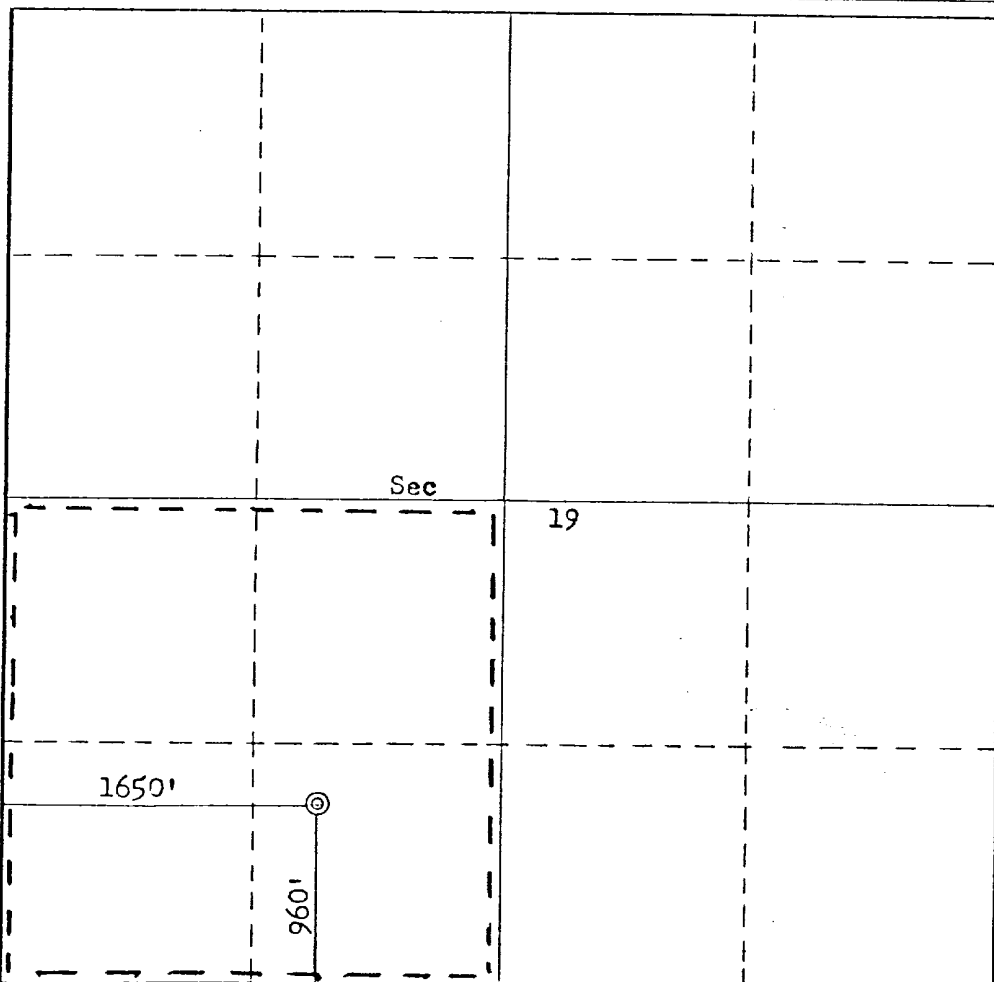
Operator <b>CONTINENTAL OIL COMPANY</b>			Lease <b>Jicarilla 20</b>		Well No. <b>6</b>
Unit Letter <b>N</b>	Section <b>19</b>	Township <b>25N</b>	Range <b>4W</b>	County <b>Rio Arriba</b>	
Annual Footage Location of Well:					
<b>960</b>		feet from the <b>South</b>	line and	<b>1650</b>	feet from the <b>West</b> line
Ground Level Elev. <b>7320</b>	Producing Formation <b>Gallup Dakota</b>		Pool <b>West Lindrith</b>	Dedicated Acreage: <b>160 1/2</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name  
**Wm. A. Butterfield**  
Position  
**ADMIN. SUPERV.**  
Company  
**CONTINENTAL OIL CO.**  
Date  
**MARCH 13, 1978**

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 knowledge and belief.

Date Surveyed

**January 9, 1978**

Registered Professional Engineer and/or Land Surveyor

**Fred B. Kerr Jr.**

Certificate No.

**3950**

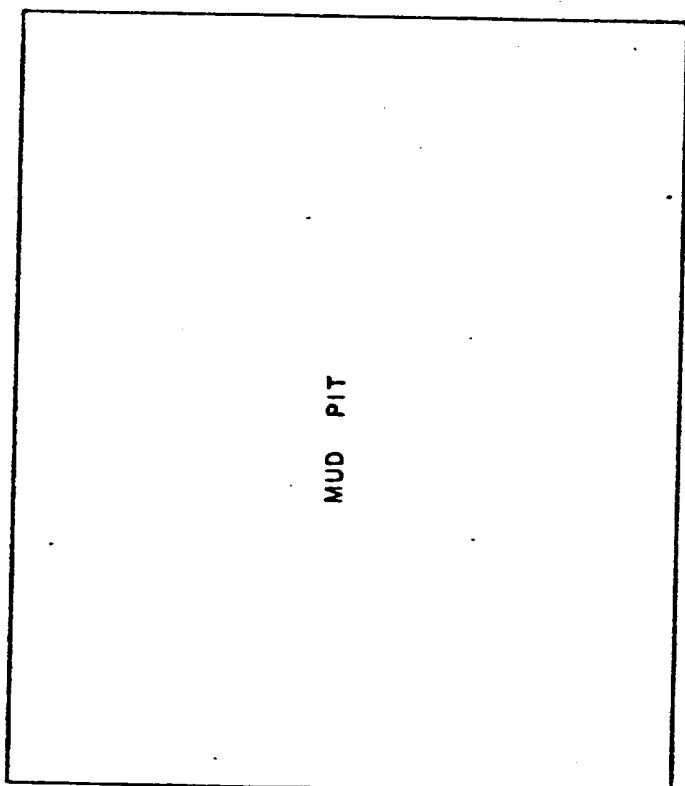
ATTACHMENT TO FORM 9-331 C  
APPLICATION FOR PERMIT TO DRILL

Continental Oil Company  
Jicarilla 20 No. 6 and Jicarilla 30 Nos. 10, 11, and 12  
T-25N, R-4W  
Rio Arriba County, New Mexico

1. The geologic name of the surface formation is Quaternary Sand.
2. The estimated tops of important geologic markers are shown on the attached Proposed Well Plan.
3. The estimated depths at which anticipated water, oil, gas or other mineral-bearing formations to be encountered are shown on attached Proposed Well Plan.
4. The proposed casing program is as follows:

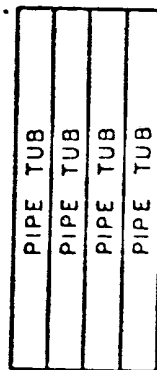
Surface - new 8 5/8" 24# K-55 set at 1000'  
Production - new 5 1/2" 15.5# and 17# K-55 set at TD
5. A drawing of an API Series 900 Blowout Preventer Specification is attached. Pipe rams and blinds will be checked to 1,000 PSI for 30 minutes when BOP is installed. BOP will be checked when casing string is set and operated daily for checks.
6. The proposed mud program is as follows:

0-1000' spud mud	8.5-9.0 pounds per gallon
1000-7500' fresh water gel	8.5-9.0 pounds per gallon
7. The auxiliary equipment to be used is:
  - (1) kelly cocks
  - (2) floats at the bit
8. It is proposed to run SP-IES log from TD to approximately 3200' and GR CAL CNL FDC PDC logs at selected intervals.
9. No abnormal pressures or temperatures are expected to be encountered in this well.
10. The anticipated starting date for the first well is June 12, 1978, with a duration date of approximately 21 days for each well.

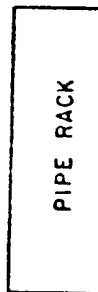


MUD PIT

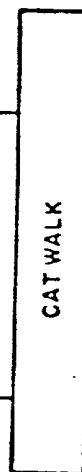
GARBAGE  
PIT



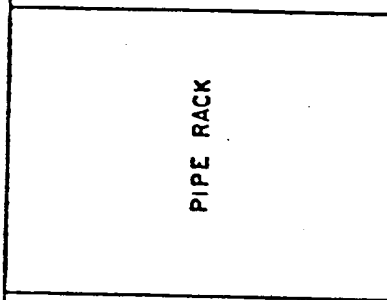
PIPE TUB  
PIPE TUB  
PIPE TUB  
PIPE TUB



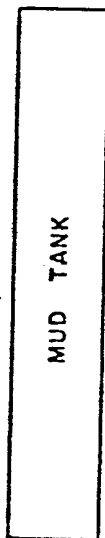
PIPE RACK



CAT WALK



PIPE RACK

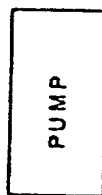


MUD TANK

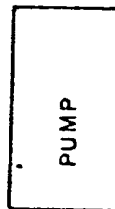


SUB BASE

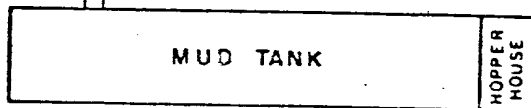
WATER TANK



PUMP



PUMP



MUD TANK

HOPPER  
HOUSE



GEN.

ACC.

WELL  
O



SUB BASE

CHANGE  
HOUSE



DOG  
HOUSE

NOTE  
200' x 400'  
Parking area for  
frac. trucks located  
on East side of  
drill site. →

APPROX. RIG SITE DIMENSIONS  
160' x 200'

CONTINENTAL OIL COMPANY  
PRODUCTION DEPARTMENT



RIG LAYOUT

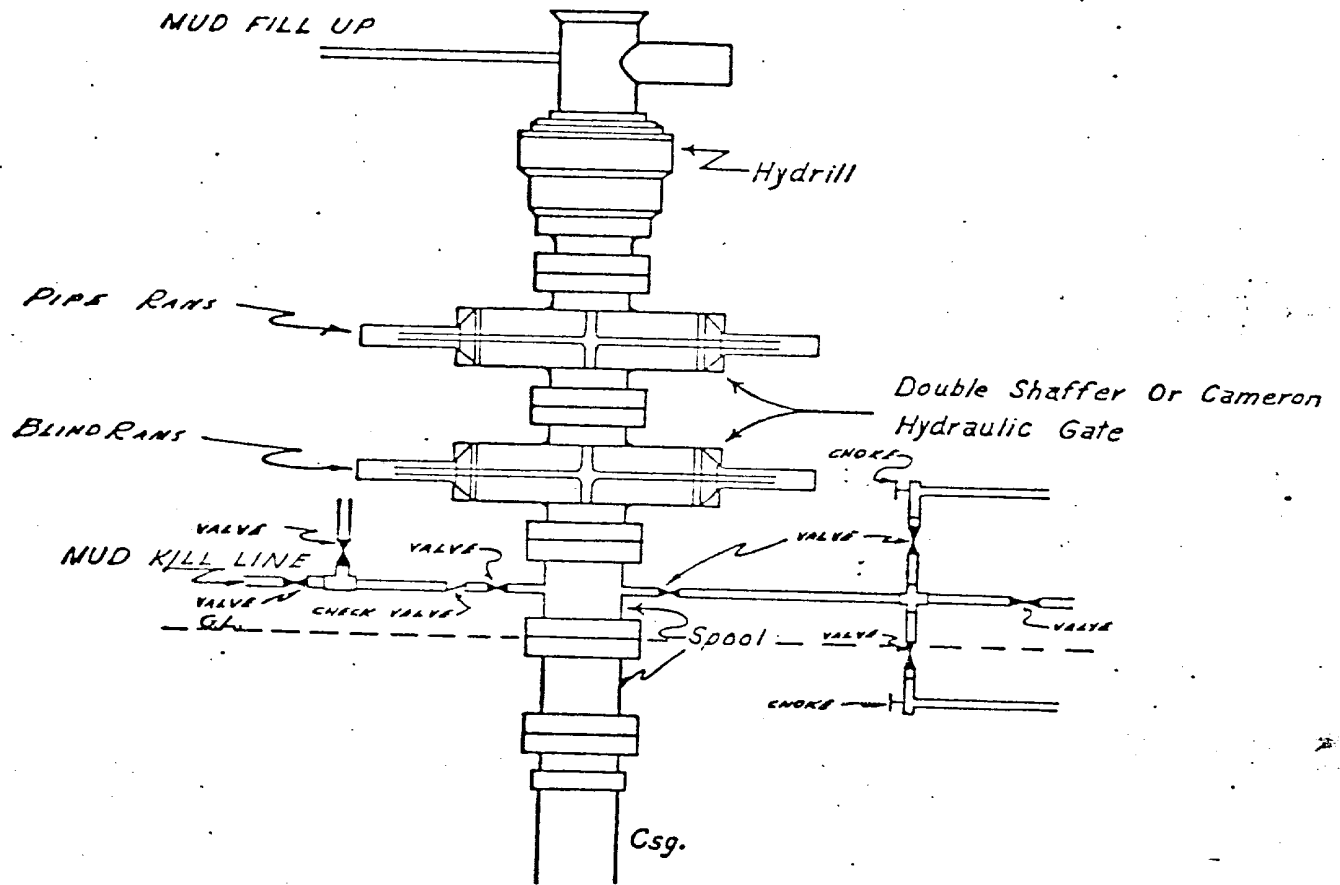
Jicorilla "20" No. 6

EXHIBIT "D"

Engineer:

Draftsman:

CONTINENTAL OIL COMPANY  
Blow-out Preventer Specifications



API Series 900

NOTE:

Manual and Hydraulic controls with closing unit no less than 75' from well head. Remote controls on rig floor.

DUE TO SUBSTRUCTURE CLEARANCE, HYDRILL MAY OR MAY NOT BE USED.

Continental Oil Company

Jicaville "20" NO. 6.

STATE: N.M.  
Est. 7335' KB  
7320' GL

DEPTH	FORMATION TOPS & TYPE	DRILLING PROBLEMS	TYPE OF FORMATION EVALUATION	HOLE SIZE	CASING		FRACTURE PRESSURE GRADIENT PPG	FORMATION PRESSURE GRADIENT PPG	MUD	
					SIZE	DEPTH			WEIGHT	TYPE
	Quaternary	Drilling Time Recorder O-T D								
				12 1/4"	8 5/8"	1000'			8.5 9.0	SPUR.
	Ojo Alamo ss, 2660									
	Kirtland sh. 3200									
	Pictured Cliffs ss, 3540									
	Chacra ss, 4450									
	Mesa Verde ss, 5230		SP-IES TD-3300' 2"x5"							
			GR-CAL-CN-L-FDC TD-3300' 2"x5"							
	Gallup ss, 7000		PDC Selected Intervals							
	Dakota ss, 7850						13.0 to 14.0	LESS THAN 8.5	9.5 to 9.0	FRESH GEL - (LOW SOLIDS)
	TD 8250			7 7/8"	5 1/2"	8250'				

Date \_\_\_\_\_

Prepared by: \_\_\_\_\_

Approved \_\_\_\_\_

SURFACE USE PLAN  
Continental Oil Company  
Jicarilla 20 No. 6 and Jicarilla 30 Nos. 10, 11, & 12  
T-25N, R-4W  
Rio Arriba County, N. M.

The plan is to accompany "Application for Permit to Drill" the subject well. The following is a discussion of pertinent information concerning possible effect which the proposed drilling of the well may have on the environment of the well and road sites and surrounding acreage. A copy will be posted on the derrick floor so that all contractors and sub-contractors will be aware of all items of this plan.

1. Existing Roads

A. The proposed well sites are as follows:

Jicarilla 20 No. 6, 960' FSL and 1650' FWL of Section 19  
Jicarilla 30 No. 10, 1640' FSL and 1190' FWL of Section 30  
Jicarilla 30 No. 11, 1500' FNL and 1580' FWL of Section 30  
Jicarilla 30 No. 12, 1450' FNL and 1450' FEL of Section 30

B. Exhibit "A" is a portion of a Jicarilla 20 and or 30 Lease map showing existing roads and proposed new road and location.

C. The access roads are shown on Exhibits "A" and "B".

2. Planned Access Roads

Refer to the attached archaeological report.

3. Location of Existing Wells

See Exhibit "A".

4. Location of Existing and/or Proposed Facilities

A. Tank Batteries: One 400 Bbl. tank and a production unit will be located on each well site.

B. Rehabilitation: Pits will be backfilled and leveled as soon as practical to original condition. Commencement of rehabilitation operations will immediately follow removal of drilling and completion equipment from location and rehabilitation of the surface is planned to be completed within 45 days from commencement.

5. Water Supply

The supply of water will be hauled from Largo Wash (See Exhibit "C").

6. Source of Construction Materials

Not applicable. Drilling pad to be compacted.

7. Methods for Handling Waste Disposal

Waste Disposal: Well cuttings will be disposed in reserve pit. Trash pit is shown on "Rig Layout", Exhibit "D". All detrimental waste will be buried with a minimum cover of 24" of dirt. See Exhibit "D" for location of pits.

8. Ancillary Facilities

None

9. Well Site Layout

Exhibit "D" shows the relative location and dimensions of the well pad, mud pit, reserve pit, trash barrel, etc.

10. Plans for Restoration of Surface

Pits will be backfilled and leveled as soon as practical to original condition. Commencement of rehabilitation operations will immediately follow removal of drilling and completion equipment from location. Surface will be leveled and properly conditioned as required by USGS after consulting with proper surface managing agency.

11. Other Information

A. Terrain: "A" through "C" refer to the attached archaeological report.

B. Soil:

C. Vegetation:

D. Surface Use: Suitable for grazing.

E. Ponds and Streams: None within one mile.

F. Water Wells: None within one mile.

G. Residences and Buildings: None within one mile.

H. Arroyos, Canyons, Etc: See attached topographic map, Exhibit "B".

I. Well Sign: Sign identifying and locating well will be maintained at drill site with the spudding of the well.

J. Open Pits: All pits containing mud or other liquids will be fenced.

K. Archaeological Resources: None observed.



12. Operator's Representative

Field personnel who can be contacted concerning compliance of this Surface Use Plan are as follows:

PRODUCTION AND DRILLING

B. E. Anderson  
Petroleum Center Building  
Room 215  
501 Airport Drive  
Farmington, New Mexico  
Phone: (505) 327-9557

L. P. Thompson  
1001 North Turner  
Hobbs, New Mexico 88240  
Phone: (505) 393-4141

E. L. Oshlo  
1001 N. Turner  
Hobbs, New Mexico 88240  
Phone: (505) 393-4141

13. Certification

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 presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Continental Oil Company and its contractors and sub-contractors in conformity with this plan and the terms and conditons under which it is approved.

3/13/78  
Date

E. L. Oshlo  
Asst. Dist. Mgr.

ses

An Archaeological Clearance Survey of  
Six Proposed Well Locations and Access Roads Conducted for  
Continental Oil Company

On January 9, 1978, Dabney Ford of Cultural Resource Management program, San Juan Branch, conducted an archaeological clearance survey at the request of Mr. Andy Anderson; Continental Oil Company. Present during the survey were Mr. Joe McKinney; Superintendant of Atchison Construction Company, Mr. Fred Kerr, Ms. Candy Kerr, and Mr. Dave Medema; all of Kerr Land Surveying. The wells and access roads are on Jicarilla Apache Tribal Lands and surveyed under Federal Antiquities Permit No. 404-NM/77-084.

METHODOLOGY

The wells were surveyed by walking parallel transects, 75 feet apart over the entire location. Access routes were inspected by walking down the centerline the length of the road.

GENERAL RECOMMENDATIONS

No cultural resources warranting location or road changes were found and full archaeological clearance is recommended.

(Jicarilla 20 No.6)

LAND STATUS: Jicarilla Apache Tribal Lands

LOCATION: NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 19, Township 25 North ; Range 4 West, N.M.P.M. Rio Arriba County, N. Mex. The well will be 960 feet from the South line and 1650 feet from the West line of Section 19. A 300 X 300 foot area was surveyed. See Figure 1.

ACCESS: 1500 feet long and 20 feet wide approaching the well from the east.

TERRAIN: Broken terrace on Wild Horse Mesa with northwesterly drainage, alluvial surface deposits and sandstone outcrops.

SOIL: Sandy clay loam

VEGETATION: Juniper, piñon, sagebrush, rabbitbrush, blue grama, tumbleweed, narrowleaf yucca, Yucca baccata, mountain mahogany, bitterbrush, snakeweed

CULTURAL RESOURCES: No cultural resources were found.

RECOMMENDATIONS: Archaeological clearance is recommended.

JICARILLA 30 No.10

LAND STATUS: Jicarilla Apache Tribal Land

LOCATION: SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 30, Township 25 North ; Range 4 West, N.M.P.M., Rio Arriba County, New Mex. The well will be 1640 feet from the South line and 1190 feet from the West line of Section 30. A 300 X 300 foot area was surveyed. See Figure 1

ACCESS: 2100 feet long and 20 feet wide approaching the well from the northeast.

TERRAIN: Broken rim of Wild Horse Mesa with southerly drainage, alluvial surface deposits and abundant sandstone outcrops.

SOIL: Sandy loamy clay

VEGETATION: Juniper, piñon, mountain mahogany, blue grama, Yucca baccata, bitterbrush, sagebrush, snakeweed

CULTURAL RESOURCES: Site SJC-162 was found approximately 200 feet south southeast of the access takeoff from the existing road. The access road will in no way damage the site therefore no changes are required.

RECOMMENDATIONS: The cultural resources (Site SJC-162) found were ample distance from the proposed consturction and no changes were made. Therefore archaeological clearance is recommended.

JICARILLA 30 No.11

LAND STATUS: Jicarilla Apache Tribal Land

LOCATION: NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 30, Township 25

North ; Range 4 West, N.M.P.M. Rio Arriba County, N. MEX. The well will be 1500 feet from the North line and 1580 feet from the West line of Section 30. A 300 X 300 foot area was surveyed. See Figure 1.

ACCESS: 800 feet long and 20 feet wide approaching the well from the North.

TERRAIN: Top of Wild Horse Mesa in broken terrain with southerly drainage, alluvial surface deposits, and sandstone outcrops.

SOIL: Clayey loam

VEGETATION: Juniper, piñon, sagebrush, mountain mahogany, bitterbrush, snakeweed, Yucca baccata, blue grama loco weed, narrow leaf yucca

CULTURAL RESOURCES: No cultural resources were found.

RECOMMENDATIONS: Archaeological clearance is recommended.

JICARILLA 30 No.12

LAND STATUS: Jicarilla Apache Tribal Land

LOCATION: Exact center of the NE $\frac{1}{4}$  of Section 30, Township 25 North ; Range 4 West, N.M.P.M. Rio Arriba County, New Mex. The well will be 1450 feet from the North line and 1450 feet from the East line of Section 30. A 300 X 300 foot area was surveyed. See Figure 1.

ACCESS: The west and south edges of the location border on existing locations and no additional access is necessary.

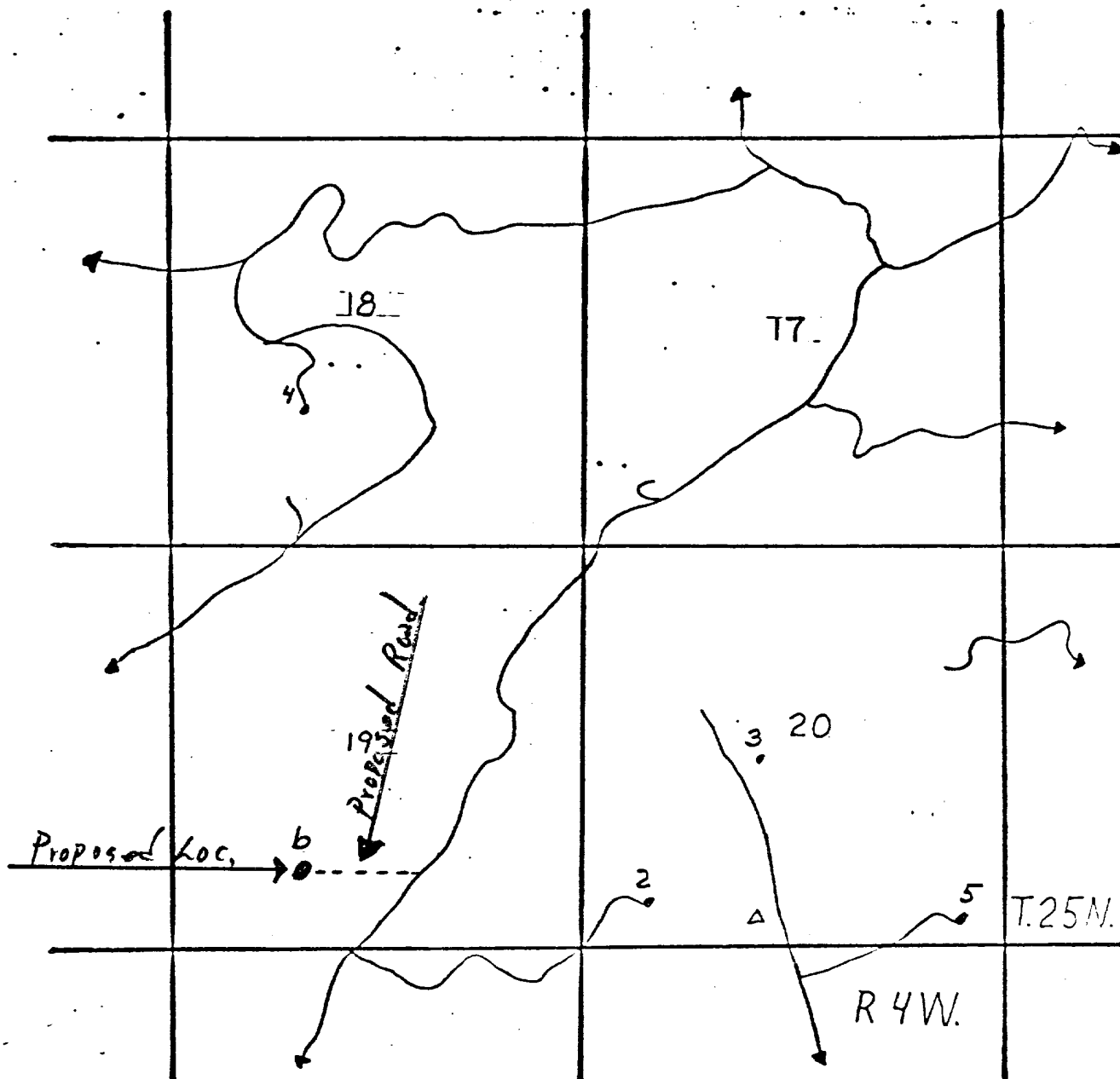
TERRAIN: Arroyo bottom with east southeasterly drainage, alluvial surface deposits and sandstone outcrops.

SOIL: Loamy clayey sand

VEGETATION: Saltbrush, rabbitbrush, snakeweed, tumbleweed, sagebrush, juniper, piñon, Gamble's Oak, seeded grasses, blue grama, galleta

CULTURAL RESOURCES: No cultural resources were found.

RECOMMENDATIONS: Archaeological clearance is recommended.



**CONOCO**

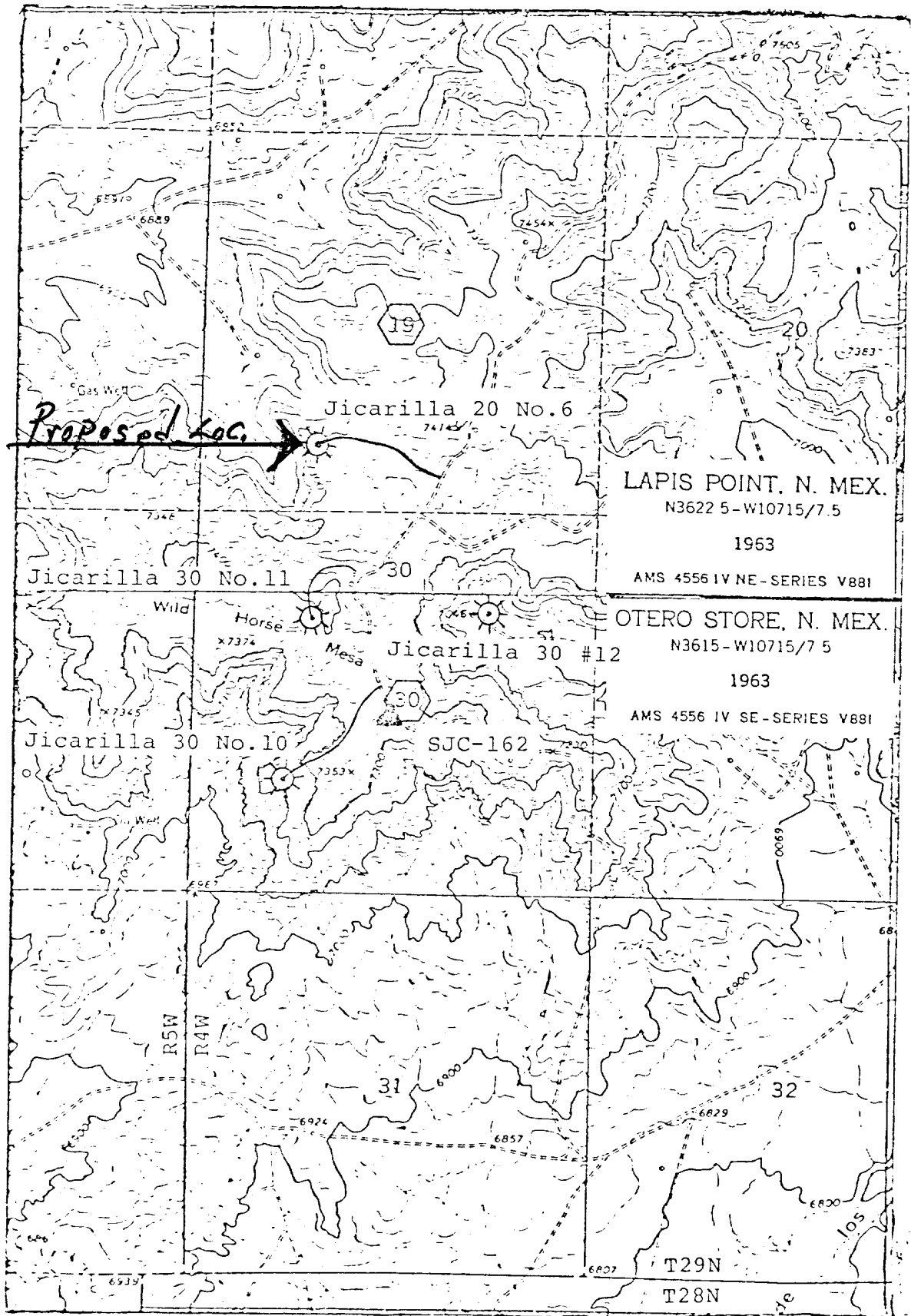
PRODUCTION DEPT. HOBBS DIV.  
JICARILLA "20" LEASE  
Well No. 6

**LEGEND**

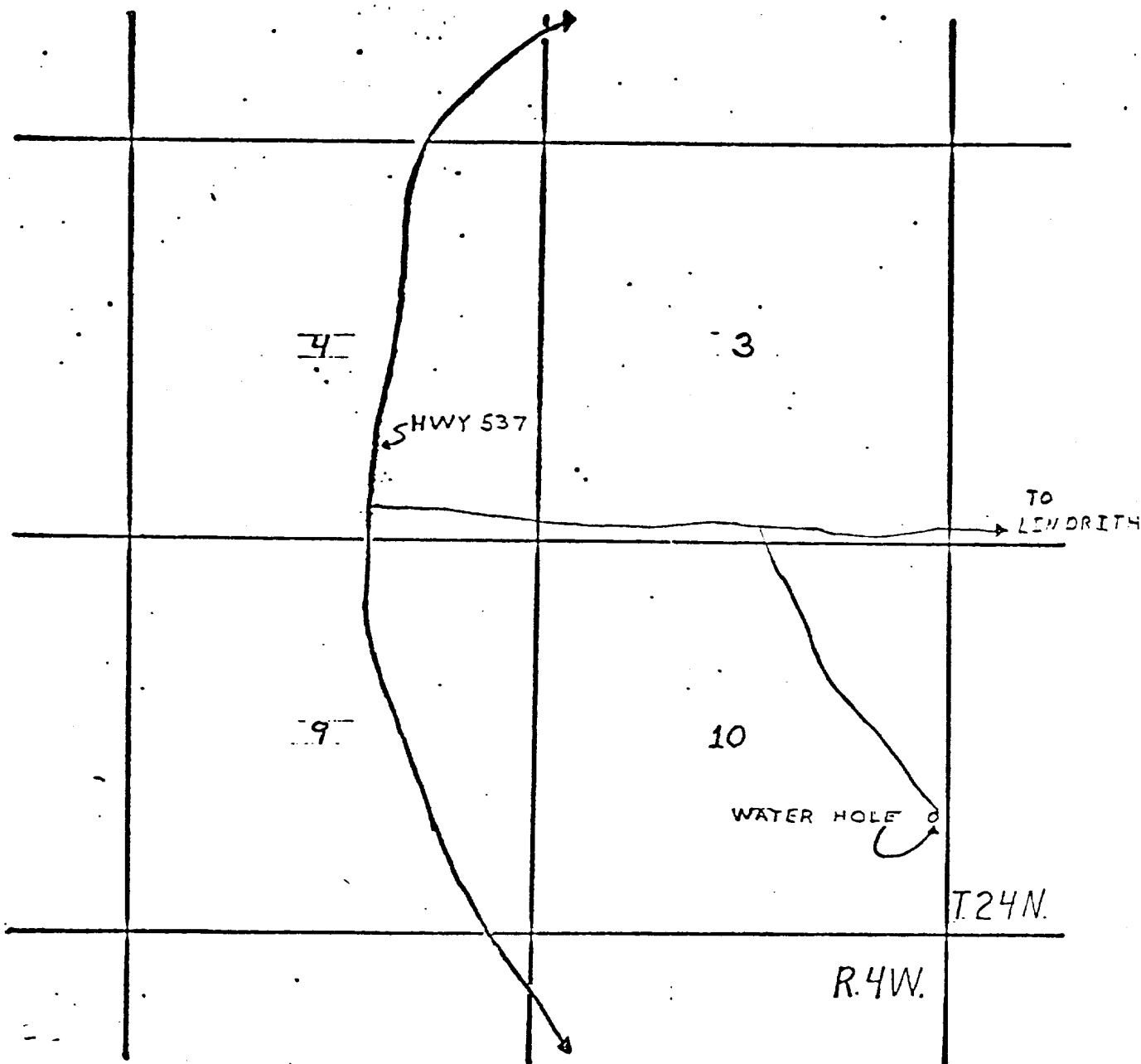
- CONOCO WELL
- △ TANK BATTERY
- LEASE ROAD
- HWY.

**EXHIBIT "A"**

NTS  
CHAVEZ



Jicarilla 20 #6  
EXHIBIT "B"



**CONOCO**

PRODUCTION DEPT. HOBBS DIV.  
LARGO WATER HOLE

LEGEND

- CONOCO WELL
- △ TANK BATTERY
- LEASE ROAD
- HWY.

**EXHIBIT "C"**

NTS  
CHAVEZ

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION  
1000 Rio Brazos Road  
Aztec, New Mexico 87410

March 24, 1978

Continental Oil Co.  
P. O. Box 460  
Hobbs, New Mexico 88240

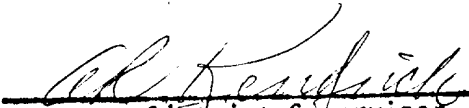
Attention: \_\_\_\_\_

SUBJECT: NON-STANDARD GAS PRORATION UNIT CONSISTING OF 163.16 ACRES  
IN THE West Lindrith Gallup-Dakota GAS POOL DESCRIBED AS  
FOLLOWS:

TOWNSHIP 25 NORTH, RANGE 4 WEST, NMPM

SECTION: 19 SW/4

By authority granted me by Rule 5(B) of Order No. R-1670, as amended, the  
above-described acreage has been approved as a non-standard gas proration  
unit to be dedicated to the Jicarilla 20  
Well No. 6, located 960/S; 1650/W of said  
Section 19.

  
District Supervisor  
District #3

cc: Oil Conservation Commission  
Santa Fe, New Mexico