CITIES SERVICE COMPANY
ENERGY RESOURCES GROUP

Box 1919
Midland, Texas 79702
(915) 684-7131

September 13, 1979

United States Department of the Interior
Geological Survey
P. O. Box 1157
Hobbs, New Mexico 88240

Gentlemen:

Re: Application for Permit to Drill - Southeast Maljamar Grayburg-San Andres Unit Tract 1 Well No. 5, Lea County, New Mexico

Cities Service Company respectfully requests permission to drill our Tract 1 Well No. 5 in the S. E. Maljamar Grayburg-San Andres Unit located 2490' FSL, 1595' FEL, Section 30-17S-33E, Lea County, New Mexico.

The location, work area, access road and flowline have been staked and flagged. It is approximately five (5) miles southeast of Maljamar, New Mexico.

In accordance with requirements stipulated in the National Environmental Policy Act as stated in NTL-6 Section II B, our application for permit to drill and supporting evidence is hereby submitted:

I. Application for Permit to Drill

1. Form 9-331C

2. Form C-102 Location and Acreage Dedication Plat certified by John W. West, Registered Land Surveyor #676 in the State of New Mexico.

3. The elevation of the unprepared ground is 4050.4 feet above sea level.

4. The geologic name of the surface formation is Tertiary Ogallala.

5. Rotary drilling equipment will be utilized to drill the hole to TD 4350' and run casing. The drilling rig will then be moved off and the well will then be completed with a pulling unit.

6. Proposed total depth is 4350'.

7. Estimated tops of important geologic markers:

Surface	Tertiary Ogallala
Top of Salt	1310'
Yates	2500'
Queen	3480'
San Andres	4210'
Total Depth	4350'

8. Estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered:

Shallow ground water	100-200'
Oil, gas or water in Yates	2500'
Oil, gas or water in Queen	3480'
Oil, gas or water in San Andres	4210'

9. The proposed casing program is as follows:

Conductor pipe: 13-3/8" OD 48# H40 ST&C new casing
Surface: 8-5/8" OD 32# K55 ST&C new casing
Intermediate: 5-1/2" OD 15.5# K55 ST&C new casing
Production Liner: 4" OD 9.5# N80 FJ40 new casing

10. Casing setting depth and cementing program:

A. 13-3/8" OD conductor pipe set at 30' with rat hole machine and cemented with five (5) yards Redi-Mix.

B. 8-5/8" OD surface casing set at 1300'. Cement with 450 sacks Halco Lite with 5# Gilsonite and 1/4# Flocele/sack followed by 200 sacks Class "C" with 2% CaCl. Circulate cement to surface.

C. 5-1/2" OD intermediate casing set at 3950'. Cement with 1000 sacks Halco Lite with 15# salt and 1/4# Flocele/sack followed by 200 sacks Class C with 2% CaCl. Circulate cement to surface.

D. 4" OD production liner 3750-4350'. Cement with 75 sacks Class C with 2% CaCl.

11. Pressure Control Equipment

0-1300' None

1300-4350' 10"/3000# hydraulic BOP with blind and pipe rams with both floor and remote operating stations.

Blowout prevention equipment will be installed, tested and in working order before drilling below the surface casing and shall be maintained ready for use until drilling operations are completed.

A kill line will be properly installed and will not be used as a fill-up line.

Drill string safety valve (s) to fit all pipe in the drill string to be maintained on the rig floor while drilling operations are in progress.

Blowout prevention drills are to be conducted as necessary to assure that equipment is operational and that each crew is properly trained to carry out emergency duties.

Auxiliary equipment is an upper kelly cock and a drill pipe float.

12. Mud Program

0-1300' fresh water mud. Gel flocculated with lime, paper for seepage loss of fluid.

1300-3950' add brine water to help minimize washouts in salt section. Paper for seepage loss of fluid.

3950-4350' to the existing fluid, mud up with salt gel for a viscosity of 34-36 seconds/1000 cc and lower the fluid loss to 10 cc or less with starch. Use paper for seepage loss of fluid.

13. Testing, Logging and Coring Program

    A. Testing - no DST's are planned.

    B. Mud Logging Program - none.

    C. Electric Logging Program (1) CNL-GR-Cal, (2) FDC, (3) DLL-Micro SFL. (Schlumberger logs).

    D. Coring Program - none.

14. No abnormal temperatures or H_2S gas is anticipated.

15. Anticipated starting date is one week to one month after this application is approved by the Geological Survey. It should take approximately nine days to drill the well to TD and another nine days to complete.

16. If the District Engineer needs additional information to support this application, please contact me at the above address.

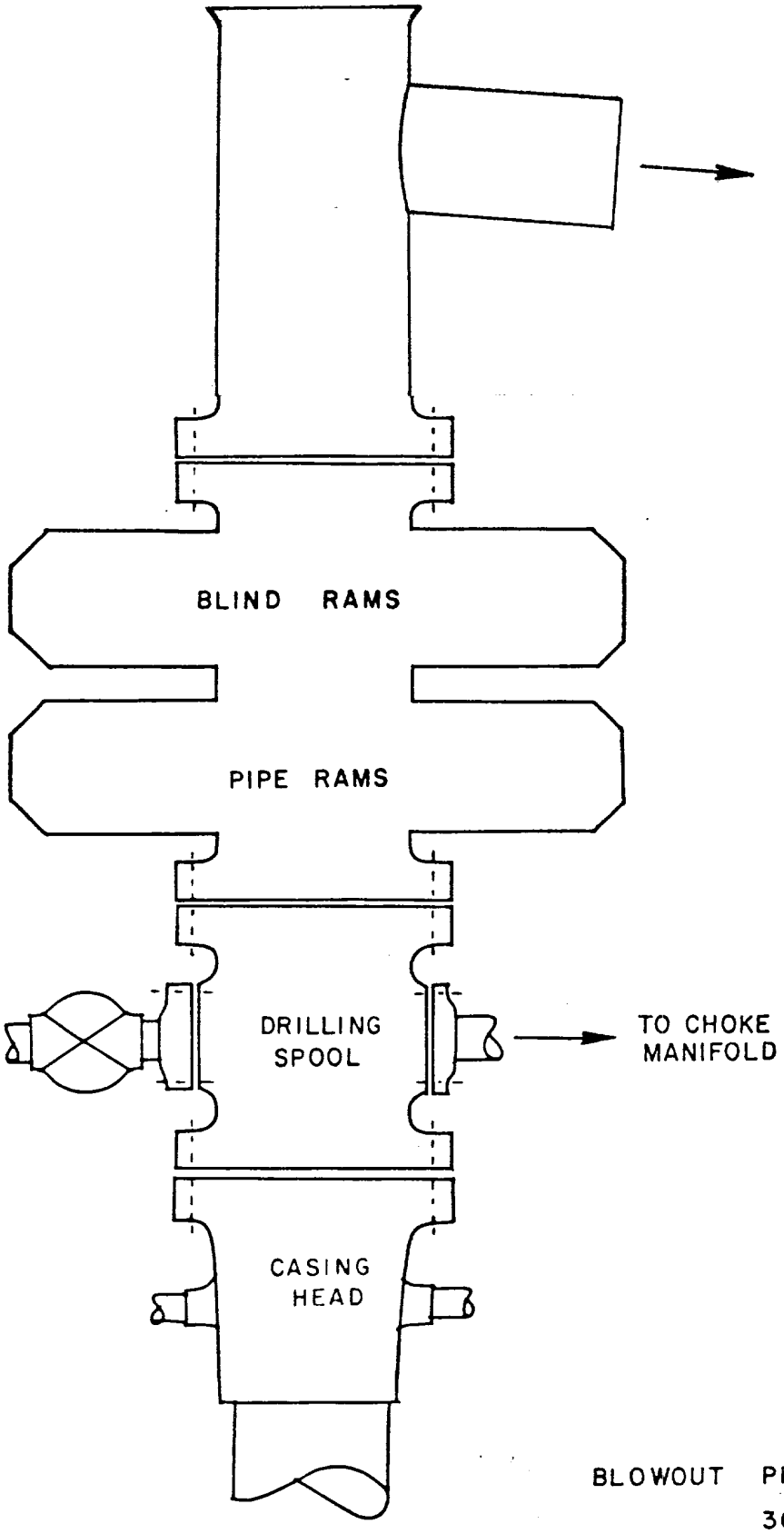
17. The Multi-Point Surface Use and Operation Plan for submission to the Bureau of Land Management is attached.

Yours very truly,

E. Y. Wilder
Region Operations Manager
Southwest Region
E & P Division

EYW/ls

Attachments



BLOWOUT PREVENTER DIAGRAM
3000# W.P.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Cities Service Company
Tract 1 Well 5, S. E. Maljamar Grayburg-San Andres Unit
2490' FSL, 1595' FEL, Section 30-17S-33E
Lea County, New Mexico
Lease #LC 060967

This plan is submitted with the Application for Permit to Drill the captioned well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operation plan, the magnitude of necessary surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operation.

The well has been staked by a Registered Land Surveyor and the work area, access road and flowline has been staked and flagged. New Mexico Archaeological Services, Inc. (Dr. J. Loring Haskell) has been engaged to make an archaeological reconnaissance of the areas involved. His findings concerning cultural resources will be reported to the Bureau of Land Management.

1. Existing Roads

   A portion of a Lea County highway map is attached which shows the Southeast Maljamar Grayburg-San Andres Unit in relation to Maljamar and Buckeye, including highways and main travelled roads. The Unit is 1/2 mile north of State Highway 529 and five miles southeast of Maljamar, New Mexico.

   To further identify the location, the Unit is spotted on a copy of a USGS "Buckeye, New Mexico" quadrangle map that is also attached.

   The third attached map shows a more detailed view of the Southeast Maljamar Grayburg-San Andres Unit. It shows existing roads, producing and injection wells, the central tank battery and water plant and the proposed location of Tract 1 Well 5.

   Directions to Location:

   Go due south of Maljamar, New Mexico 4.6 miles on State Highway No. 33 to the intersection of State Highway No. 529.

   Turn east on state Highway 529 and go 4.6 miles.

Turn north through cattleguard and go 0.5 mile.

Turn west and go 0.5 mile.

Turn northwest and go 0.5 mile.

Turn north and go 0.2 mile. At this point, the new access road will originate going due west.

2. Planned Access Road

A. The planned access road is staked and flagged. It is approximately 325' long going due west from its originating point on an existing lease road. It will enter the southeast corner of the drilling pad. The new road is color coded red and existing roads are color coded blue on the fourth attached map.

B. Surfacing material: six inches of caliche, watered, compacted and graded.

C. Maximum grade: 3 per cent.

D. Turnouts: none needed.

E. Drainage Design: new road will have a drop of 6 inches from center line to each side.

F. Culverts: none needed.

G. Cuts and fills: none required.

H. Gates or cattleguards: none required.

3. Location of Existing Wells

A. Existing wells are shown on the third attached map which also shows the existing road system.

4. Location of Existing and/or Proposed Facilities

There is one central battery and waterflood plant that serves the entire Southeast Maljamar Grayburg-San Andres Unit.

Oil, water and casinghead gas are routed to the central battery through individual flow lines from each producing well. The majority of these lines are not buried.

Also, there is a system of individual water injection lines running from the waterflood plant to each injection well. These lines are buried.

5. Location and Type of Water Supply

Fresh and brine water will be purchased and trucked to the well site over the existing and proposed roads outlined on the plats.

6. Source of Construction Materials

Caliche for surfacing the road and well pad will be obtained from an existing pit in the NE/4 NE/4 Section 31-17S-33E. The pit is on land owned by George Williams, Lovington, New Mexico. Location of the pit is colored yellow on the fourth attached plat.

7. Methods of Handling Waste Disposal

A. Drill cuttings will be disposed of in the drilling pits.

B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.

C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.

D. Current laws and regulations pertaining to the disposal of human waste will be complied with.

E. Trash, waste paper, garbage and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of trash pit is shown on the well site layout.

F. All trash and debris will be buried or removed from the well site within 30 days after finishing drilling and/or completion operations.

8. Ancillary Facilities

A. None required.

9. Well Site Layout

A. A plat of the well site is attached which shows well pad, mud pits, reserve pit, trash pit and location of major rig components.

B. Only minor levelling of the well site will be required. No significant cuts and fills will be necessary.

C. The reserve pit will be plastic lined.

D. The pad and pit area has been staked and flagged.

10. Plans for Restoration of the Surface

A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and location cleaned of all trash and junk to leave the well site in an aesthetically pleasing condition as possible.

B. Any unguarded pits containing fluids will be fenced until they are filled.

C. After abandonment of the well, surface restoration will be in accordance with the agreement with the surface owner. Pits will be filled and location will be cleaned. The pit area, well pad and all unneeded access road will be ripped to promote re-vegetation. Rehabilitation should be accomplished within 90 days after abandonment.

11. Other Information

A. Topography: Land surface is undulating to gently rolling interspersed with shallow blowouts in the thin sandy soil. From an elevation of 4050 feet at the well site, the land surface slopes to the north at 20-30 feet per mile.

B. Soil: Deep fine sand underlain by caliche.

C. Flora and Fauna: The vegetative cover is generally sparse and consists of mesquite, yucca, shinnery oak, sandsage and perennial native range grasses. Wildlife in the area is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, dove, quail and an occasional antelope.

D. Ponds and Streams: There are no rivers, streams, lakes or ponds in the area.

E. Residences and Other Structures: There are no other facilities or occupied dwellings in the area.

F. Archaelogical, Historical and Cultural Sites: None observed in the area.

G. Land Use: Grazing and hunting in season.

H. Surface Ownership: Well site, access road and flow line are on private surface belonging to Mr. Dallas McCasland, P. O. Box 206, Eunice, New Mexico; telephone number 505/394-2581.

Mr. McCasland has been notified of our intent to drill and we have reached an amicable settlement of $250.00 for the location and $2.00/rod for 30 rods of access road. Total damage $310.00. Mr. McCasland asked no damage for the proposed flow line since it will be laid on top of the ground.

We have also reached an agreement with Mr. McCasland concerning rehabilitation requirements which entails:

Upon completion of the well, any plastic material used to line pits or sumps shall be cut off below ground level, as far down as possible, and disposed of before the pits are covered. All unattended pits containing liquid will be fenced and the liquid portion allowed to evaporate before the pits are broken and backfilled.

All waste associated with the drilling operation will be buried in place in a separate trash pit. All garbage and debris left on site will be buried at least 3' deep.

The well "site" if a producer, will be maintained and kept clean of all trash and litter or other foreign material which detracts from the surrounding environment. Equipment will be painted and maintained in accordance with good operating practice.

After the well site is cleaned and pits and sumps backfilled, any obstruction to the natural drainage will be corrected by ditching or terracing. All disturbed areas, including any access road no longer needed, will be ripped. These areas will be reseeded with grass, if in Mr. McCasland's opinion, it is required.

12. Operators' Representatives

The field representatives responsible for assuring compliance with the approved surface use and operations' plan are as follows:

J. L. Bussell, Production Foreman
P. O. Box 69
Hobbs, New Mexico 88240

Office Phone: 505/393-2174
Home Phone : 505/396-4719

E. Y. Wilder, Region Operations Manager
P. O. Box 1919
Midland, Texas 79702

Office Phone: 915/684-7131
Home Phone : 915/694-8626

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 Cities Service Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

9/13/79
Date

E. J. Mueller
Region Operations Manager

EYW/ls

Attachments

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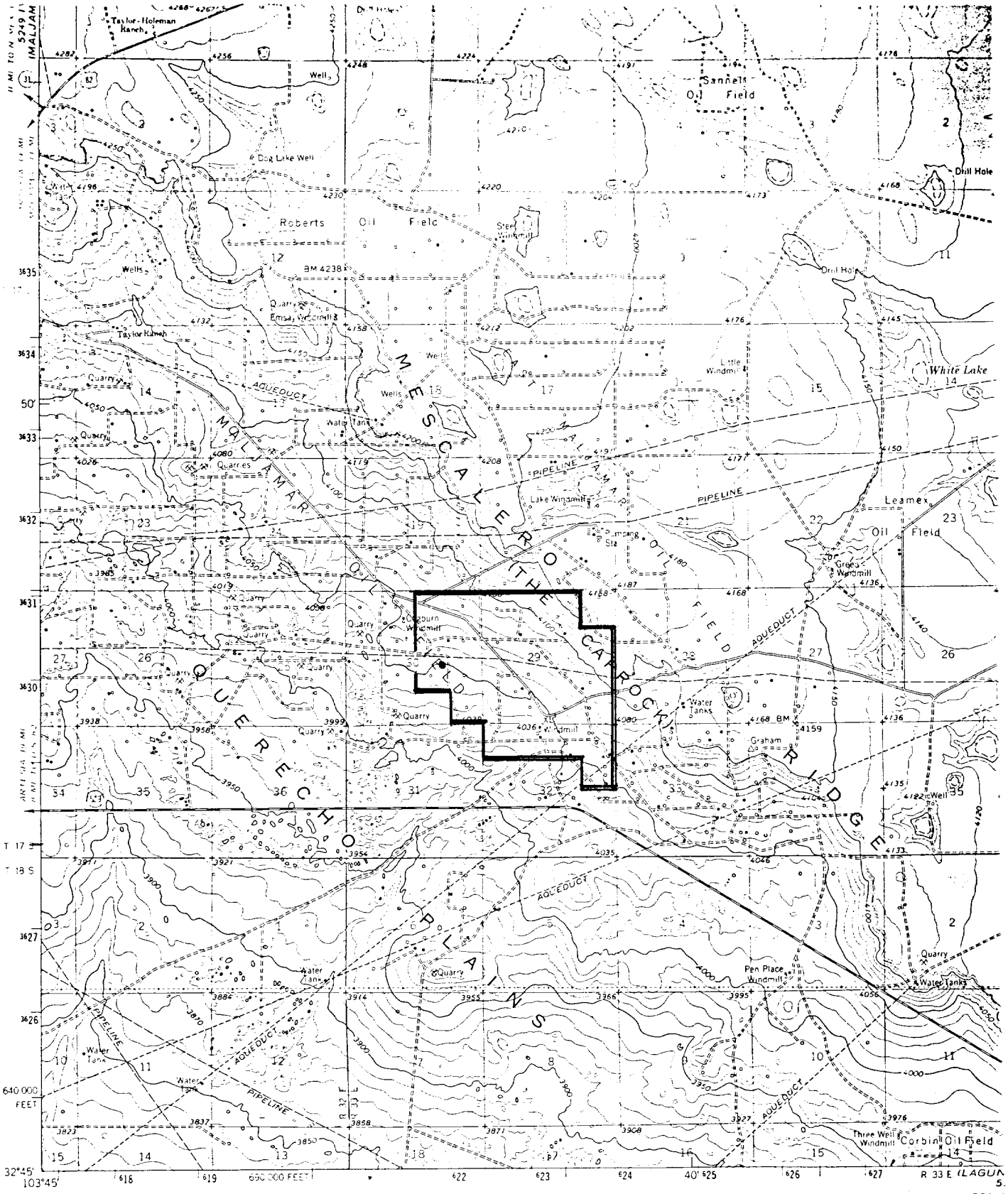

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Planimetry by photogrammetric methods from aerial photographs taken 1957 Topography by planetable surveys 1962

Polyconic projection 1927 North American datum
10,000 foot grid based on New Mexico coordinate system, east zone
1000 meter Universal Transverse Mercator grid ticks, zone 13, shown in blue

Fine red dashed lines indicate selected fence lines

UTM GRID AND 1962 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE

CONTOUR IN

DATUM IS

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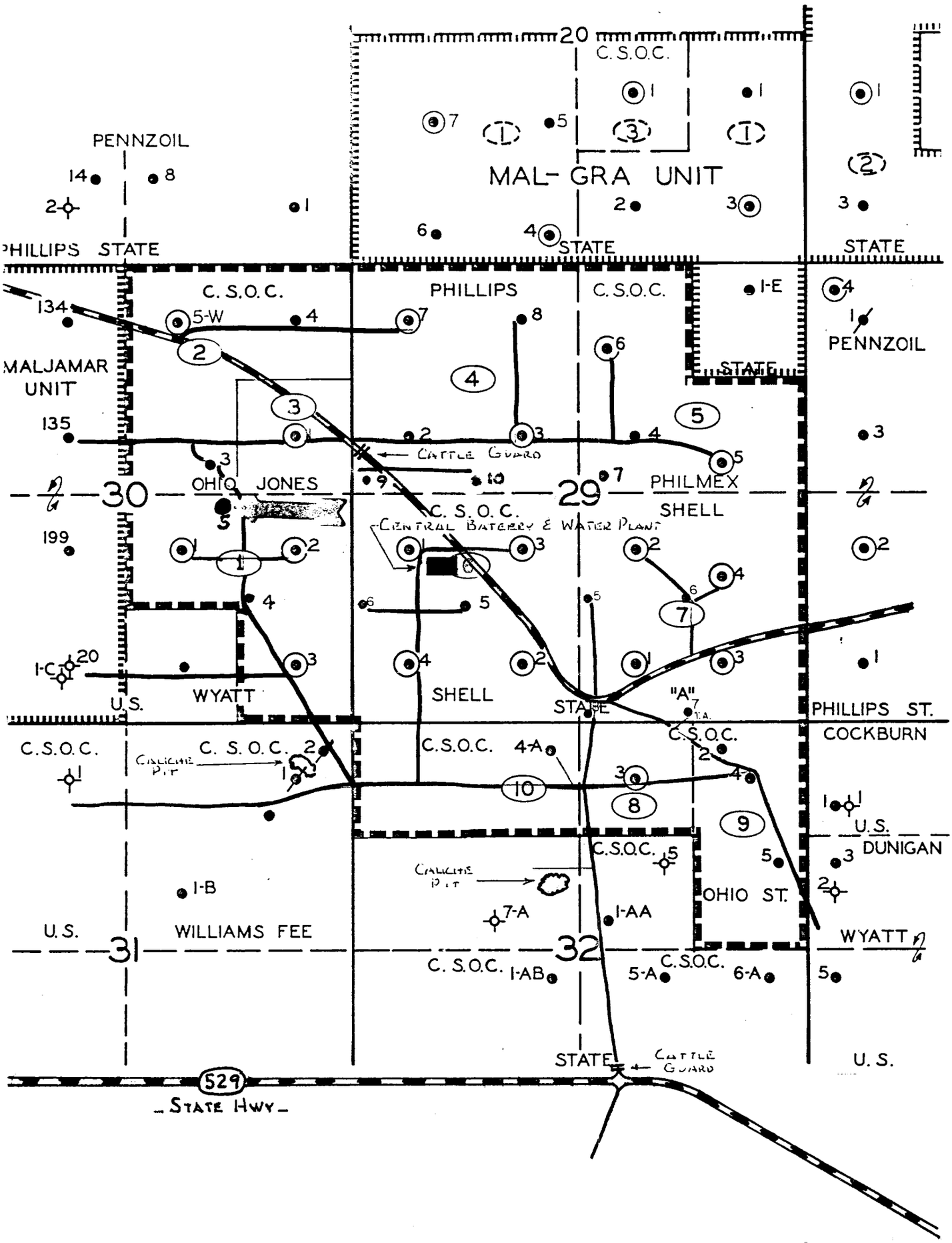


SOUTHEAST MALJAMAR UNIT

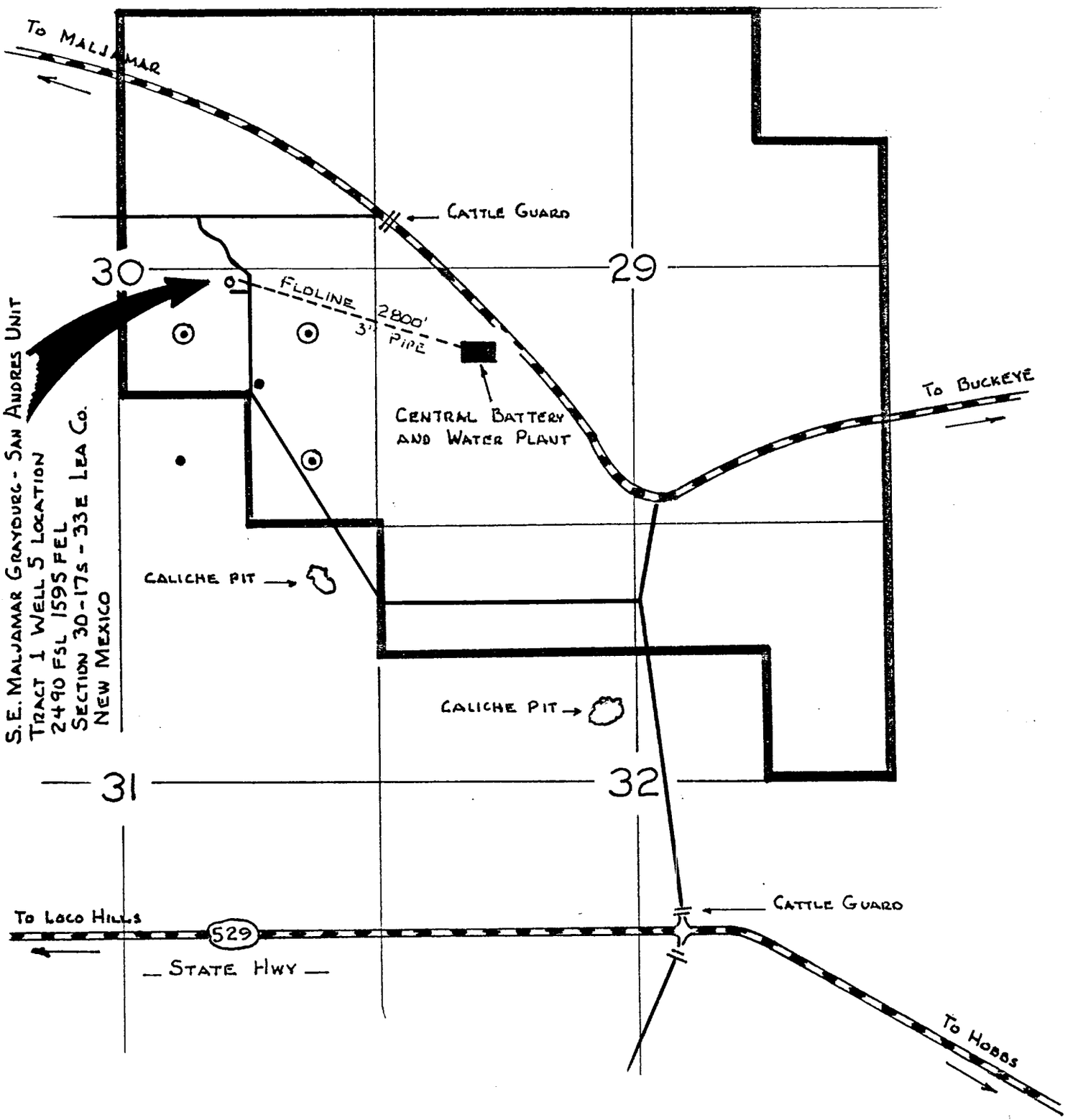
LEA COUNTY, NEW MEXICO

T.-17-S. R.-33-E. JULY, 1973

SCALE: 4"=1 MI.

BLACK TOPPED ROADS

CALICHED LEASE ROADS



SOUTHEAST MALJAMAR UNIT

LEA COUNTY, NEW MEXICO

T.-17-S. R.-33-E. JULY, 1973

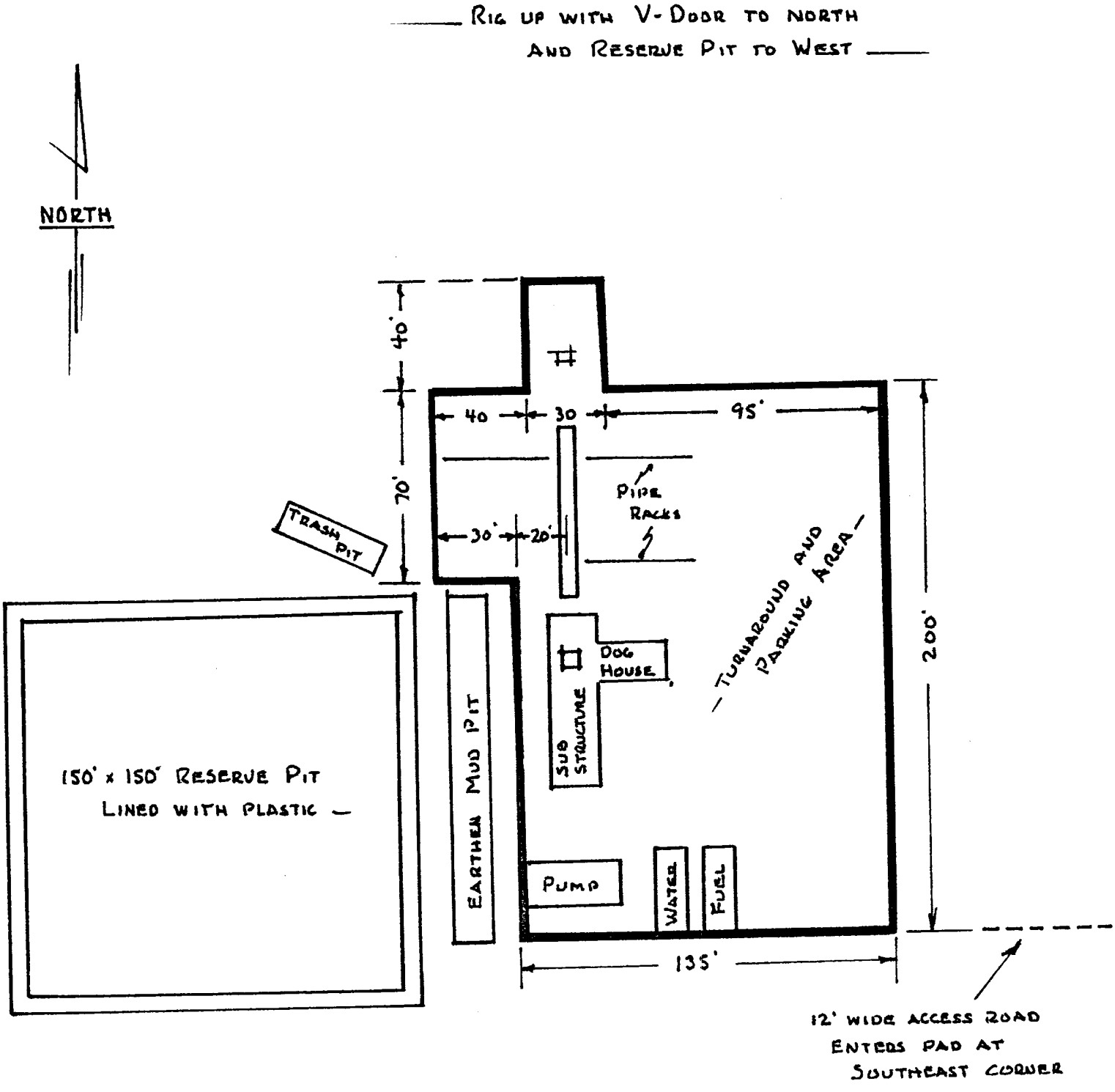
SCALE: 4"=1 MI.

Black Topped Roads

Caliched Lease Roads

Proposed Flow Line

Access Road


Rig up with V-Door to North
And Reserve Pit to West
NORTH
40'
70'
40
30
95'
200'
135'
Pipe Racks
30'
20'
Trash Pit
Turnaround and Parking Area
Dog House
Sub Structure
Earthen Mud Pit
150' x 150' Reserve Pit
Lined with Plastic
Pump
Water
Fuel
12' wide access road
enters pad at
Southeast corner

Rig Layout