

N. M. O. C. C. COPY
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPPLICATE*
(Other Instr. is on reverse)Form approved.
Budget Bureau No. 42-R1425.

30-015-21931

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

Cities Service Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 1919 - Midland, Texas 79701

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

At surface

660' FNL, 1980' FWL of Sec. 34-T-21-S, R-27-E, Eddy
County, New Mexico

At proposed prod. zone

same as above

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

2-1/2 miles East of Carlsbad, New Mexico

15. DISTANCE FROM PROPOSED*

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

3300'

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

4950'

16. NO. OF ACRES IN LEASE

4932 acres

19. PROPOSED DEPTH

11,710'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320

20. ROTARY OR CABLE TOOLS

Rotary

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

3167.95' GR

22. APPROX. DATE WORK WILL START*

October 1, 1976

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	48	600'	500 sacks (circulation)
12-1/4"	8-5/8"	24 & 32	3000'	1300 sacks (Circulation)
7-7/8"	5-1/2"	17 & 20	11,710'	720 sacks (TC @ 8200')

It is proposed to drill this well to a T.D. of 11,730' and test the morrow formation.

The blowout prevention program is as follows:

1. One set of blind rams.
2. One set of drill pipe rams.
3. One Hydril.
4. One rotating head.

The acreage assigned to this well is not dedicated to any gas purchases.

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ARTESIA, NEW MEXICO

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OCT 6 1976

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 location and measured and true vertical depths. Give blowout prevention program, if any.

24.

SIGNED

*E. Spiller*TITLE Region Operation ManagerDATE 9-7-76

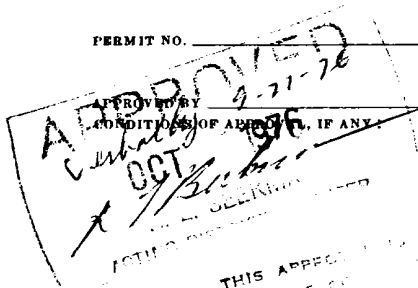
(This space for Federal or State office use)

PERMIT NO. _____

APPROVAL DATE _____

TITLE _____

DATE _____

THIS APPROVAL IS VALID FOR 12 MONTHS.
SEE INSTRUCTIONS ON REVERSE SIDE
JAN - 5 1977DECLARED WATER BASIN
1334
834
CASHING MUST BE CIRCULATEDNOTIFY USGS IN SUFFICIENT TIME TO
ALLOW FOR CASHING OF THE
834
CASHING

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

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

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All distances must be from the outer boundaries of the Section

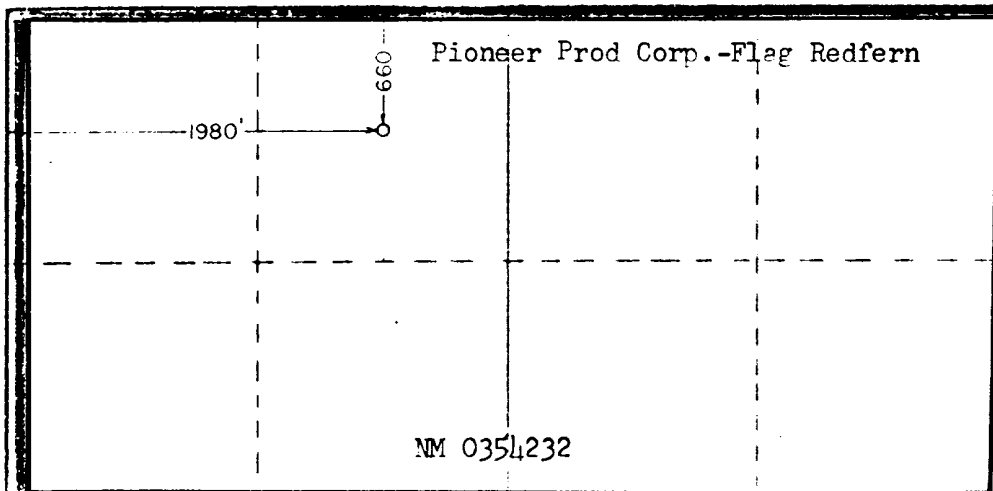
CITIES SERVICE OIL COMPANY		Elizando Federal		SEP 09 1976	
Section	Township	Range	County	U.S. GEOLOGICAL SURVEY ARTESIA, NEW MEXICO	
C	34	21 South	27 East	Eddy	
Actual Footage Location of Well:					
660	feet from the	North	line and	1980	feet from the West
Ground Level Elev 3167.95	Producing Formation Morrow	Pool Und. Burton Flat Morrow	Dedicated Acreage 320 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 Unitization (See reverse side)

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

E. Spiller

Region Operation Manager

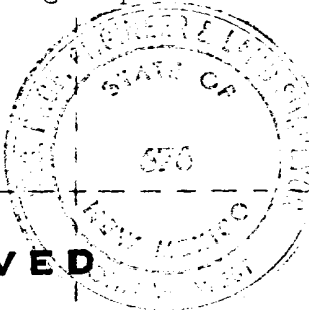
Cities Service Oil Company

September 7, 1976

Date

Unit block consists of 4932 acres. Working interests of participating companies in this proposed well are as follows:

Cities Service Oil	36.69185%
Amoco Production Co.	22.18587%
Pioneer Prod. Corp.	16.63940%
Rosalind Redfern and Flag-Redfern Oil Co.	16.63940%
Union Oil of Calif.	4.43026%
Champlin Petr. Co.	1.70661%
Patoil Corp.	1.70661%
	100.00000%



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OCT 5 1976

O. C. C.

ARTESIA, NEW MEXICO

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

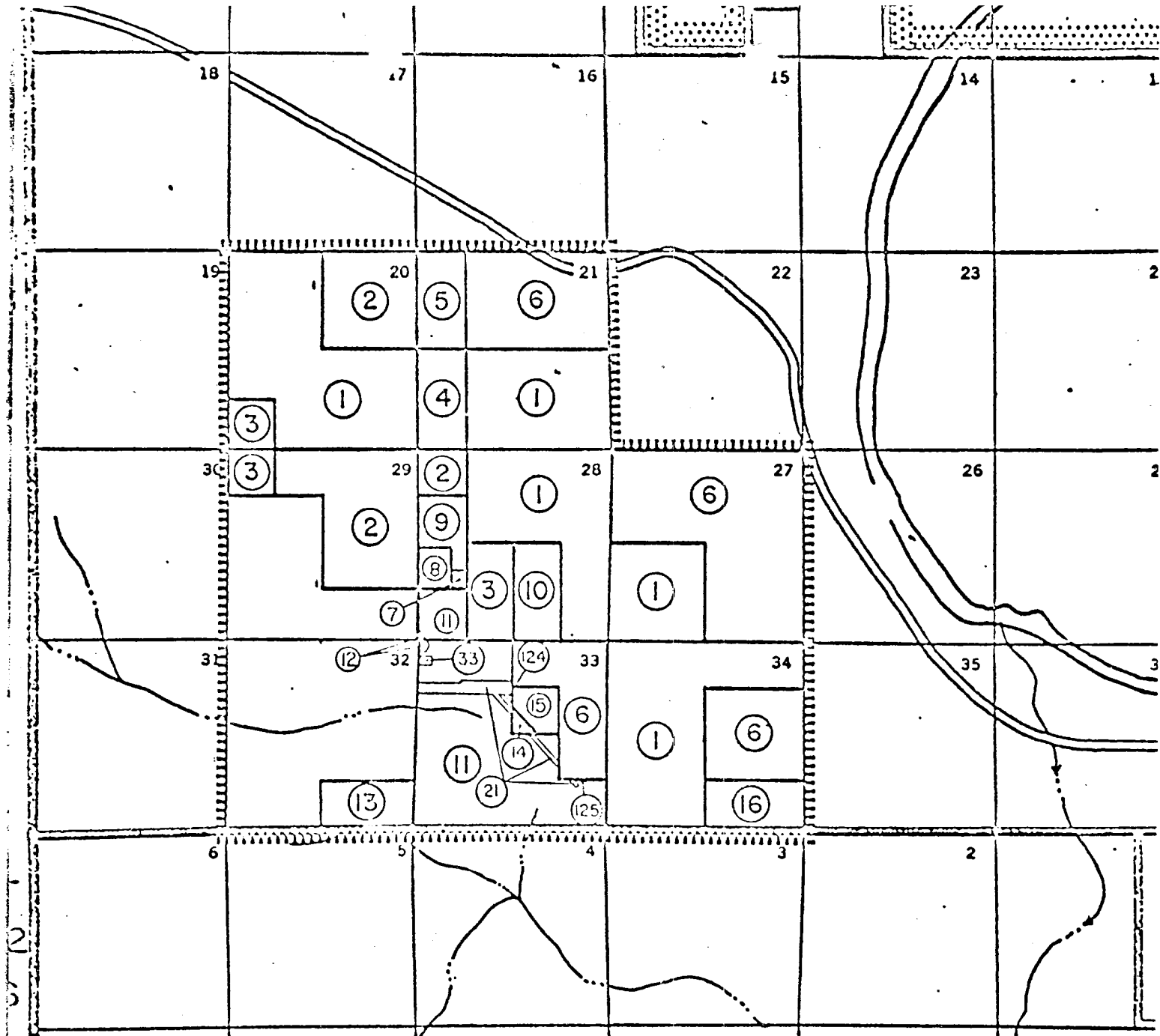
Date Surveyed

August 26, 1976

Registered Professional Engineer and/or Land Surveyor

John W. West

676



TRACT NO. WORKING INTEREST OWNER
 1 Pioneer Prod. Corp.-Flag-Redfern Oil Co.

2,3,4,5,7,
 10,14,21 & 33 Cities Service Oil Co.

6 Amoco Production Company

9 J.M. Huber, Pierce & Davis

11 Union Oil Co. of Calif. OPERATING AGREEMENT DATED SEPT. 22 1972

13 Patoil Corp.

16 Champlin Petro. Co.

12,15,124

125

Unleased Acreage

PLAT OF UNIT AREA

UNIT AREA

② TRACT NUMBERS

SCALE: 1" = 4000'

EXHIBIT "A" PART IV



CITIES SERVICE OIL COMPANY

Box 1919
Midland, Texas 79701
Telephone (915) 684-7131

September 8, 1976

United States Department of the Interior
Geological Survey
Artesia, New Mexico 88210

Gentlemen:

Re: Application for Permit to Drill
Elizondo-Federal "A" No. 4
Eddy County, New Mexico

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SEP 09 1976
U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

In accordance with requirements stipulated in the National Environmental Policy Act of 1969 as stated in NTL-6 Section II. A. a Preliminary Environmental Review was submitted on August 23, 1976 requesting permission to stake Cities Service Oil Company's Elizondo-Federal "A" No. 4 located 660' FNL and 1980' FWL Section 34-21S-27E, Eddy County, New Mexico.

The location has since been staked and we respectfully request your approval of our Application for Permit to Drill.

The Elizondo-Federal "A" No. 4 is within the boundary of the Cities Service operated Magruder Unit adjacent to and northeast of the City of Carlsbad, New Mexico.

As outlined in NTL-6 Section II. B., our application and supporting evidence is hereby submitted:

I. Application for Permit to Drill

1. Form 9-331C (attached).
2. Form C-102 Well Location and Acreage Dedication Plat certified by John W. West, New Mexico Registered Land Surveyor No. 676 (attached).
3. The elevation above sea level of the unprepared ground is 3167.95'.
4. The geologic name of the surface formation is Permian Rustler.

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5. Rotary drilling equipment will be utilized to drill the well to T.D. and run casing. This equipment will then be rigged down and the well will be completed with a pulling unit.
6. Proposed total depth is 11710'.
7. Estimated tops of important geologic markers:

Bone Spring	5050'
Dean	8470'
Wolfcamp	8770'
Canyon	9910'
Strawn	10150'
Atoka	10770'
Morrow	11050'
Chester	11660'
T.D.	11710'

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

A. Primary objective (top) Morrow Sands	11050'
B. Secondary objectives (top) Strawn	10150'
Atoka	10770'

9. The proposed casing program is as follows:

Surface: 13-3/8" OD 48# H40 ST&C new casing
Intermediate: 8-5/8" OD 24# and 32# K55 ST&C new casing
Production: 5-1/2" OD 17# and 20# N80 LT&C new casing

10. Casing setting depth and cementing program:

- A. 13-3/8" OD surface casing set at 600'. Cement with 300 sacks Class C, 4% gel, 12# Gilsomite and 1/4# Flocele/sack with 2% CaCl followed by 200 sacks Class C with 2% CaCl.
- B. 8-5/8" OD intermediate casing set at 3000'. Cement with 300 sacks Halliburton Thick Set Class C with 10# Gilsomite and 1/2# Flocele per sack and 3% CaCl followed by 800 sacks Halliburton Lite with 5# Gilsomite and 1/4# Flocele per sack followed by 200 sacks Class C with 2% CaCl.

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- C. 5-1/2" OD production casing set at 11710'. Cement with 720 sacks Class H with 0.6 CFR-2 and 5# KCL per sack. Bring cement back to 8200'.

11. Pressure Control Equipment

- 0 - 600' - None
- 600 - 3000' - 12" 3000# BOP with blinds and pipe rams. Tested with rig pump.
- 3000 - 11710' - 10" 5000# BOP with blinds, pipe rams, Hydril and rotating head, 5000# choke manifold, 80 gallon accumulator with floor and remote operation station and auxiliary power system, upper and lower kelly cock, inside BOP's for all size equipment in drill string. The BOP and choke manifold will be tested to rated working pressure 5000# by an independent testing company prior to drilling out cement in the 8-5/8" casing.

The pipe rams and Hydril will be actuated at least once each 24 hours and the blind rams each time the drill pipe is out of the hole.

A drill string safety valve in the open position will be maintained on the rig floor at all times while drilling operations are being conducted.

BOP drills will be conducted as necessary to insure that each drilling crew is properly trained to carry out emergency duties.

Accumulators shall maintain a pressure capacity reserve at all times to provide for repeated operation of hydraulic preventers.

A mud/gas separator will be installed after drilling out from under the 8-5/8" so it will be operable by 7500'.

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12. Mud Program

- 0 - 600' - Fresh water spud mud.
- 600 - 3000' - Fresh water. If lost circulation is encountered in the Capitan Reef, dry drill ahead to casing point using periodic vis. sweeps.
- 3000 - 8500' - Fresh water, detergent, paper for seepage and Lime for pH control.
- 8500 - 11000' - Brine water with caustic for pH control 9.8-10.0#/gal.
- 11000 - 11710' - Drispac 10.0-10.6#/gal., 31-34 vis., 10-12 cc water loss, pH 9-11.

13. Testing, Logging and Coring Program

- A. Two (2) DST's Morrow and Strawn.
- B. Mud Logging Program - one man unit 8800' to T.D.
- C. Electric Logging Program - Compensated Neutron-Formation Density, Dual Laterolog-R_{xo}, Coriband.
- D. Coring Program - none.

14. No abnormal temperatures or H₂S gas is anticipated. Possibility of high pressure zones in Wolfcamp, Strawn and Atoka. Adequate flare lines will be installed off the mud gas separator and testing equipment to insure that gas may be piped away a safe distance from the well where it may be ignited and burned.

In addition to the Pressure Control Equipment described in Item No. 11, the following equipment will be installed and in operation before drilling into the Wolfcamp zone:

- a. Swaco adjustable choke in choke manifold.
- b. Pit volume totalizer.
- c. Flow line sensor.
- d. Degasser.
- e. 100 barrel trip tank with pump.

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15. Anticipated starting date is one week after this Application for Permit to Drill is approved by the Geological Survey. It should take approximately 40 days to drill the well to T.D. and another 7-21 days to complete.
16. Designation of Operator from Flag-Redfern Oil Company and Pioneer Production Corporation (attached).
17. If the District Engineer requires additional information to support Form 9-331C, please contact me at the above address.

II. Multi Point Surface Use and Operations Plan

1. Existing roads.

A portion of an Eddy County highway map is attached which shows the location of the Elizondo-Federal "A" No. 4 in relation to the City of Carlsbad and U. S. Highway 62-180.

Directions to location:

Starting point: Corner of Greene and Canal Streets in Carlsbad, New Mexico.

Go east on Greene Street (U. S. Highway 62-180) 2.9 miles and turn north on "City & County Sanitary Landfill" black topped road.

Follow "City & County Sanitary Landfill" road 0.5 mile. At this point, the location is 600' east and our access road will start at this point.

2. Planned Access Road.

- A. The second attached plat is an ownership map which shows the boundary of our 8 section Magruder Unit outlined in green with all existing wells in the vicinity and our proposed location.

The third map is a portion of a USGS Quadrangle Map showing our location in relation to the surrounding topography.

The fourth map shows the road system in the area of the location. The segments are color coded. Blue denotes highway and city streets. Brown indicates caliche lease roads and red shows the 600' of planned access caliche road to the location. This new road will be 12' wide. The 8 section Magruder Unit is outlined in green.

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- B. Surfacing material: six inches of caliche, watered, compacted and graded.
- C. Maximum grade: 3 per cent.
- D. Turnouts: No turnouts are necessary.
- E. Drainage Design: new road will have a drop of 6" from center line to each side.
- F. Culverts: none required.
- G. Cuts and fills: none required in road. Location will have 3' cut on the south side and 3' fill on the north.
- H. Gates and cattleguards: none needed.

3. Location of Existing Wells.

Existing wells are shown on the ownership map.

4. Location of Existing and/or Proposed Facilities.

At each of the existing wells in the Magruder Unit, production equipment is set on the caliche drilling pad approximately 150' from the well. The equipment consists of two (or more) - 300 barrel tanks to collect condensate and water which is trucked to sale or disposal and a production unit (stack pack). The gas purchaser installs necessary gas measuring equipment and gathering system for gas. All equipment is fenced with chain link fence.

If the Elizondo-Federal "A" No. 4 is a producer, the same type and size equipment will be set on the drilling pad.

5. Location and Type of Water Supply.

Fresh and brine water will be purchased and trucked to the wellsite over the existing and proposed roads.

6. Source of Construction Materials.

Caliche for surfacing the road and well pad will be obtained from an existing pit in the SW/4 SE/4 Section 27-21S-27E just north of our proposed location. The pit belongs to James T. McKinney,

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512 E. Wood St., Carlsbad, New Mexico, telephone number (505) 885-3747. The location of the pit is colored yellow on the fourth map showing the road system.

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

8. Ancillary Facilities.

- A. None required.

9. Wellsite Layout.

- A. A plat of the wellsite is attached which shows well pad, mud pits, reserve pit, trash pit and location of major rig components.
- B. The wellsite is slightly out of level. It will be necessary to make a 3' cut to the south and a 3' fill to the north.
- C. The reserve pit will be plastic lined.

10. Plans for Restoration of the Surface.

- A. After completion of the well, all equipment not needed for operation will be removed.

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- B. All unattended pits containing liquids will be fenced and the liquid portion allowed to evaporate before the pits are broken and backfilled.
- C. All waste associated with the drilling operation will be buried in place in a separate pit. Garbage and debris will be buried at least 3' deep. Any plastic material used to line the pits will be cut off below ground level, as far down as possible, and disposed of before the pits are covered.
- D. Surface restoration will be in accordance with the requirements of the B. L. M.
- E. 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 wellsite 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.

11. Other Information.

- A. Topography: Land surface is undulating to gently rolling and dunny. From an elevation of 3168' at the wellsite, the land surface slopes gently to the southwest toward the Pecos River at about 30-40 feet per mile.
- B. Soil: Soil is a deep fine sand underlain by caliche.
- C. Flora and Fauna: The vegetative cover is generally sparse and consists of mesquite, yucca, shinny 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 and quail.
- D. Ponds and Streams: The Pecos River runs in a southeasterly direction about 2-1/2 miles south of our location at the nearest point.

September 8, 1976

- E. Residences and Other Structures: There are no residences within a mile of the location. The closest business is the Truck Yard and Office of Rowland Trucking Company approximately 3/4 mile southwest on U. S. Highway 62-180.
- F. Archeological, Historical and Cultural Sites: None observed in the area.
- G. Land Use: Grazing.
- H. Surface Ownership: Wellsite and access road is on Federal surface with a grazing lease to the W. W. Simpson Ranch whose administrator is:

Frankie V. Laman
P. O. Box 791
Carlsbad, New Mexico 88220

Mrs. Laman has been notified of our intent to drill.

12. Lessee's or Operator's Representative.

Cities Service Oil Company's representative who is responsible for assuring compliance with the approved surface use and operations' plan is:


E. Y. Wilder
Cities Service Oil Company
Region Operations Manager
Box 1919
Midland, Texas 79701

Telephone Number: (915) 684-7131

13. Certification.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite 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 Oil Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

September 8, 1976
Date

 Region Operations Manager
Name and Title

Application for Permit to Drill Elizondo-Federal "A" No. 4

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Please contact me at the above address if further information is needed to properly evaluate this proposal.

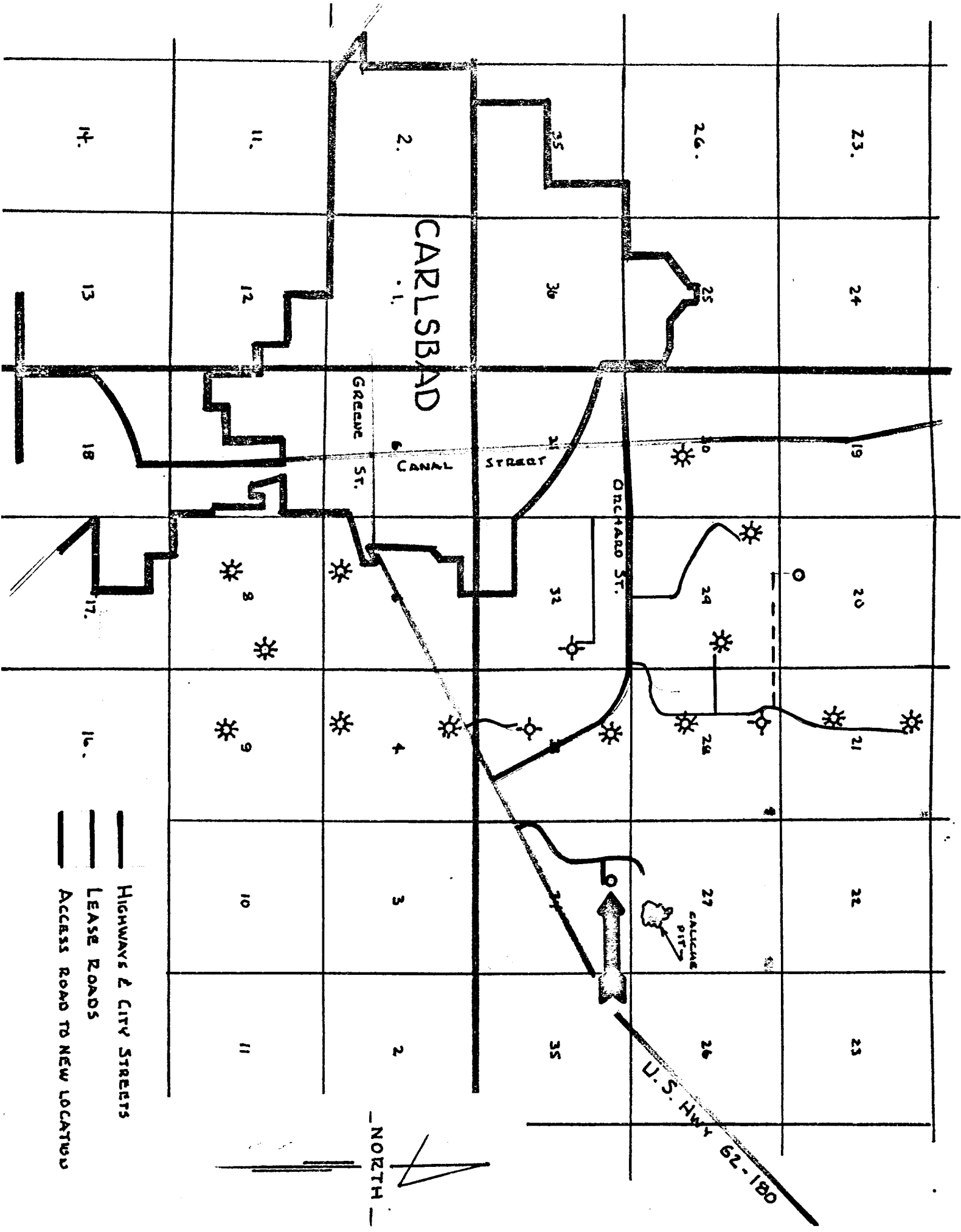
Yours very truly,

A handwritten signature in dark ink, appearing to read "E. Y. Wilder". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

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

EYW/lis

Attachments

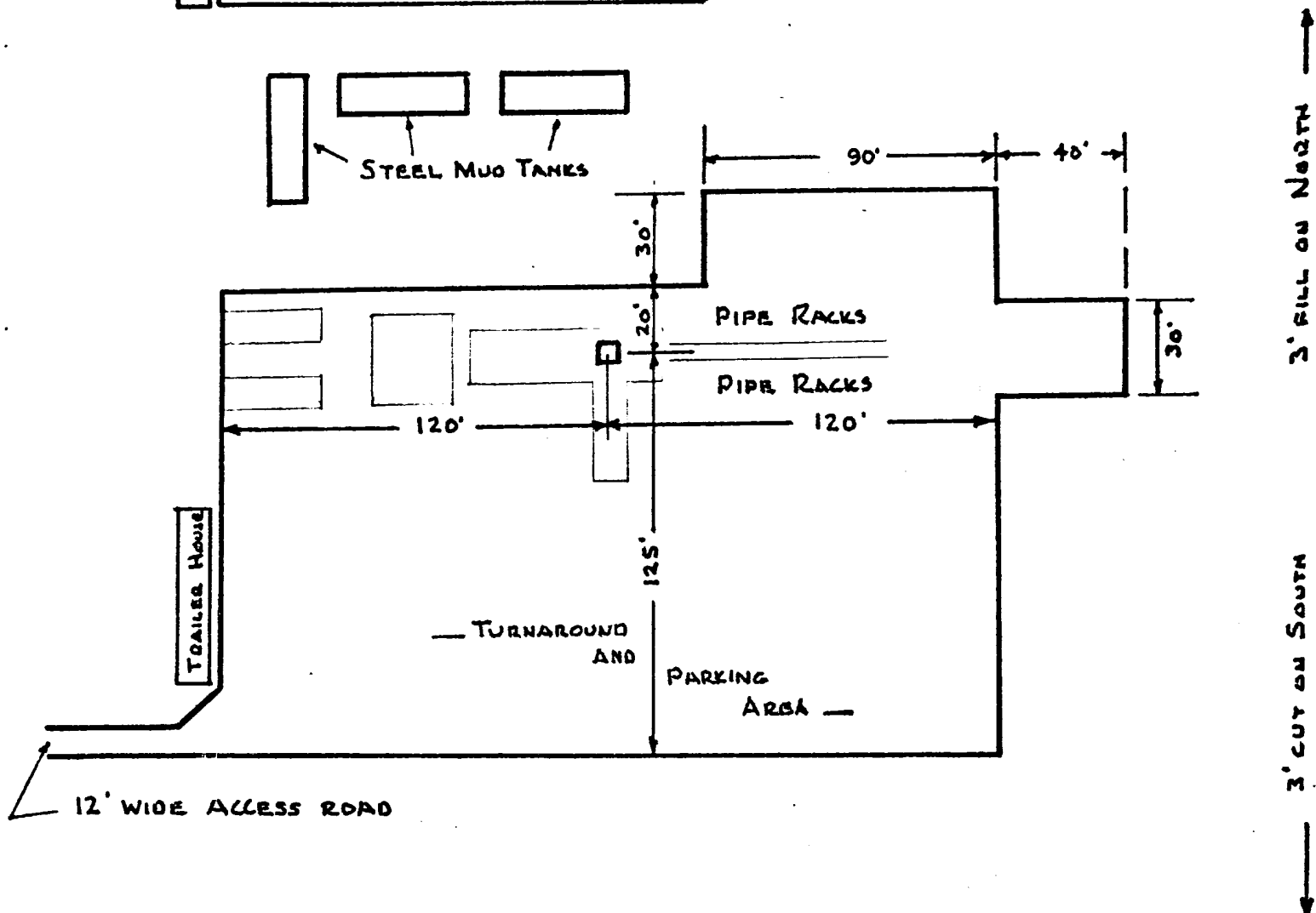


150' x 150' RESERVE PIT
(PLASTIC LINED)

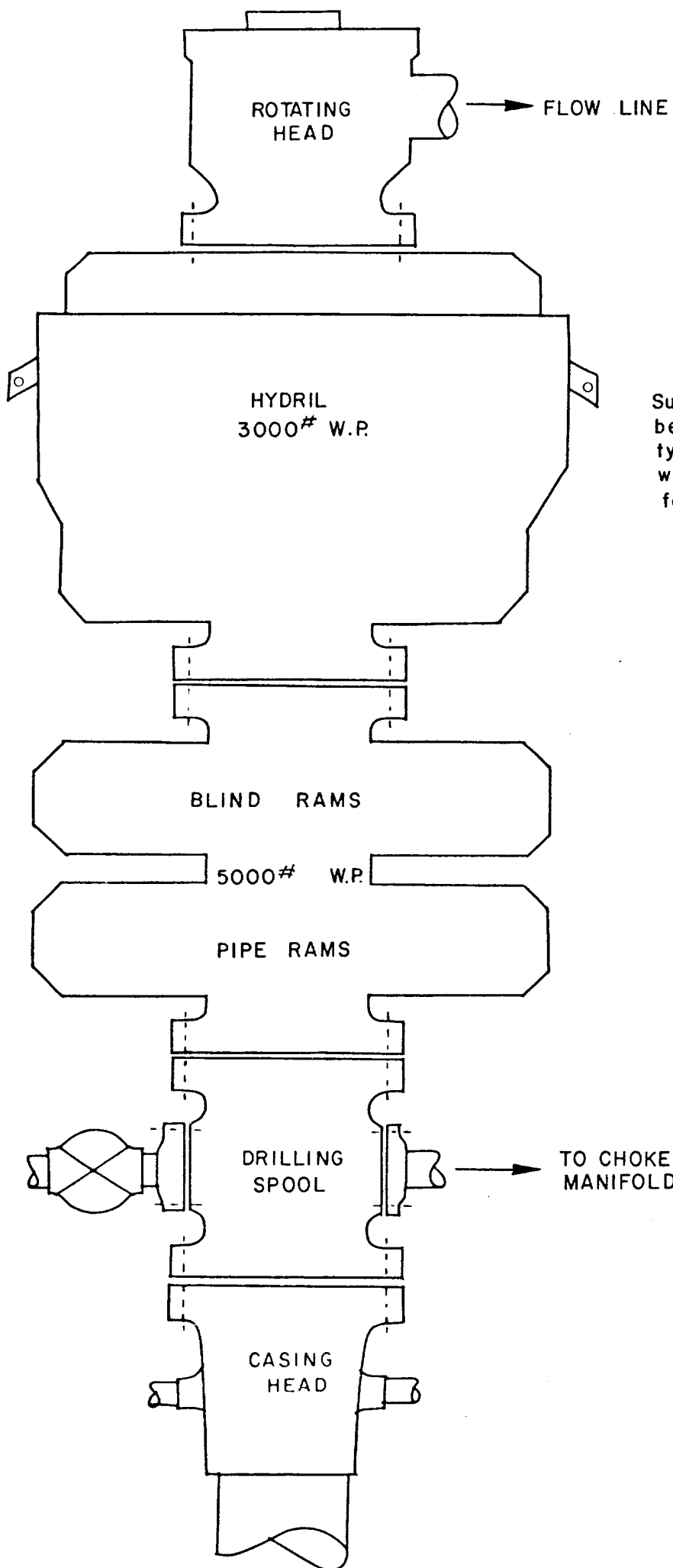
TRASH PIT

BURN PIT

_ NORTH _

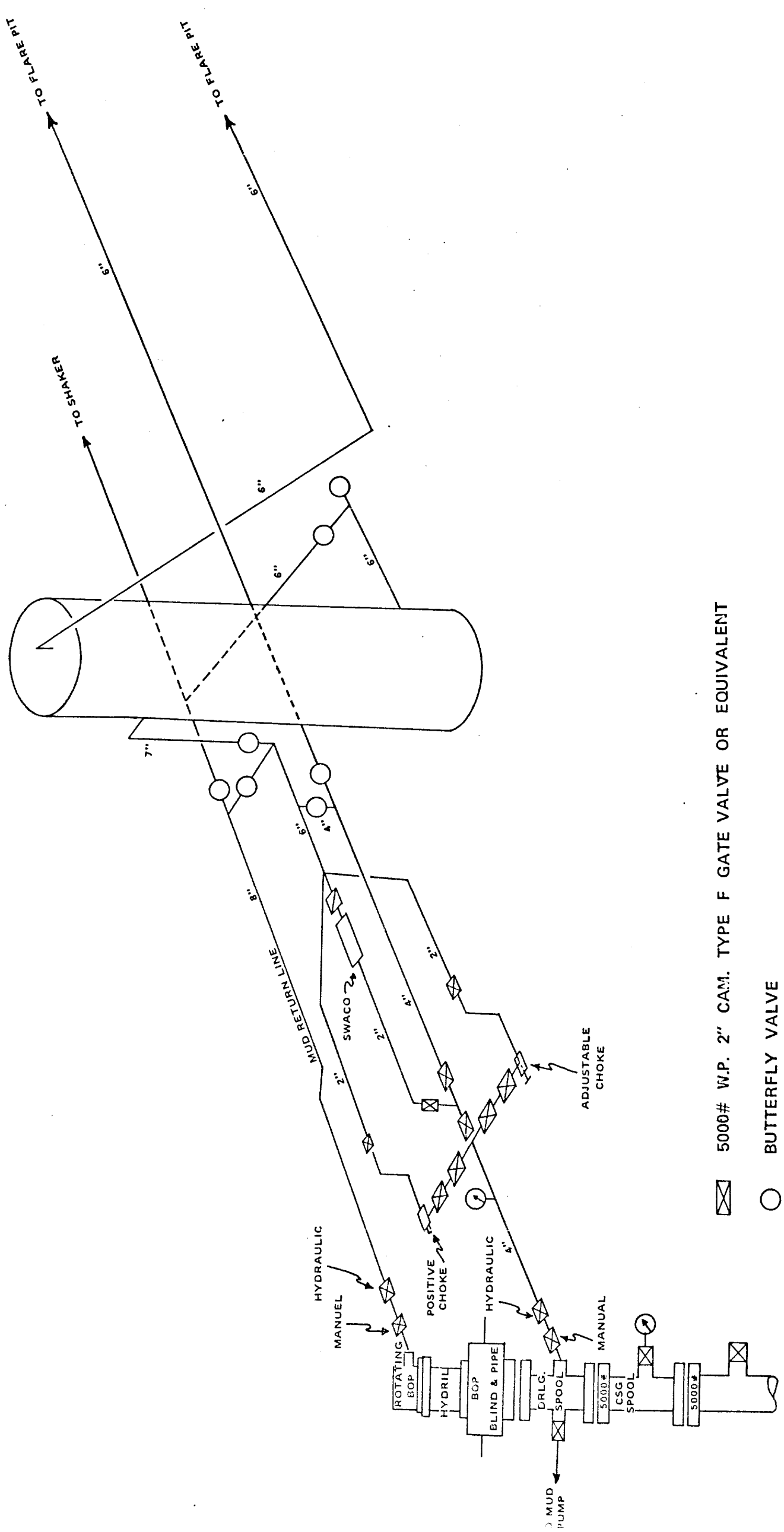


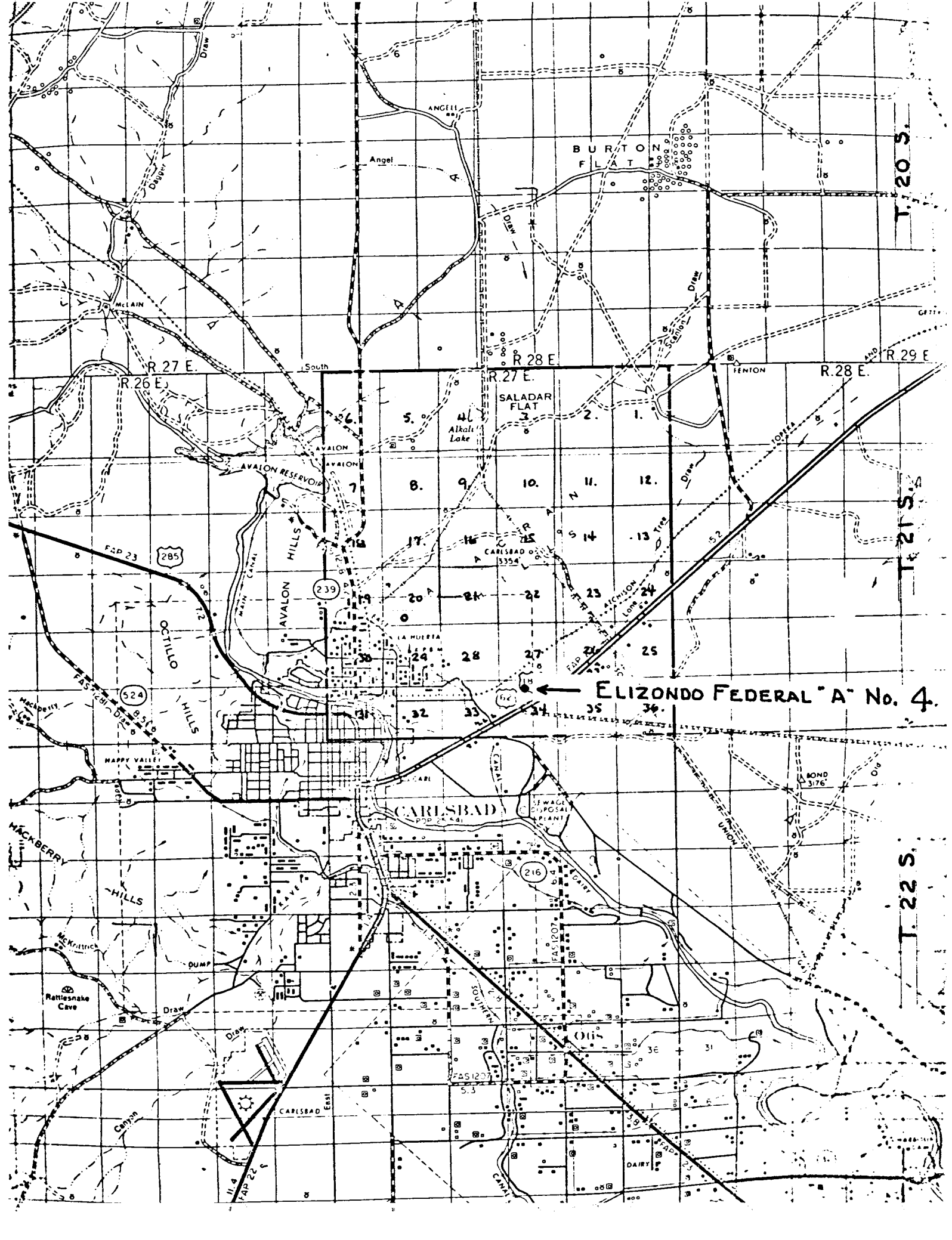
BLOWOUT PREVENTER DIAGRAM



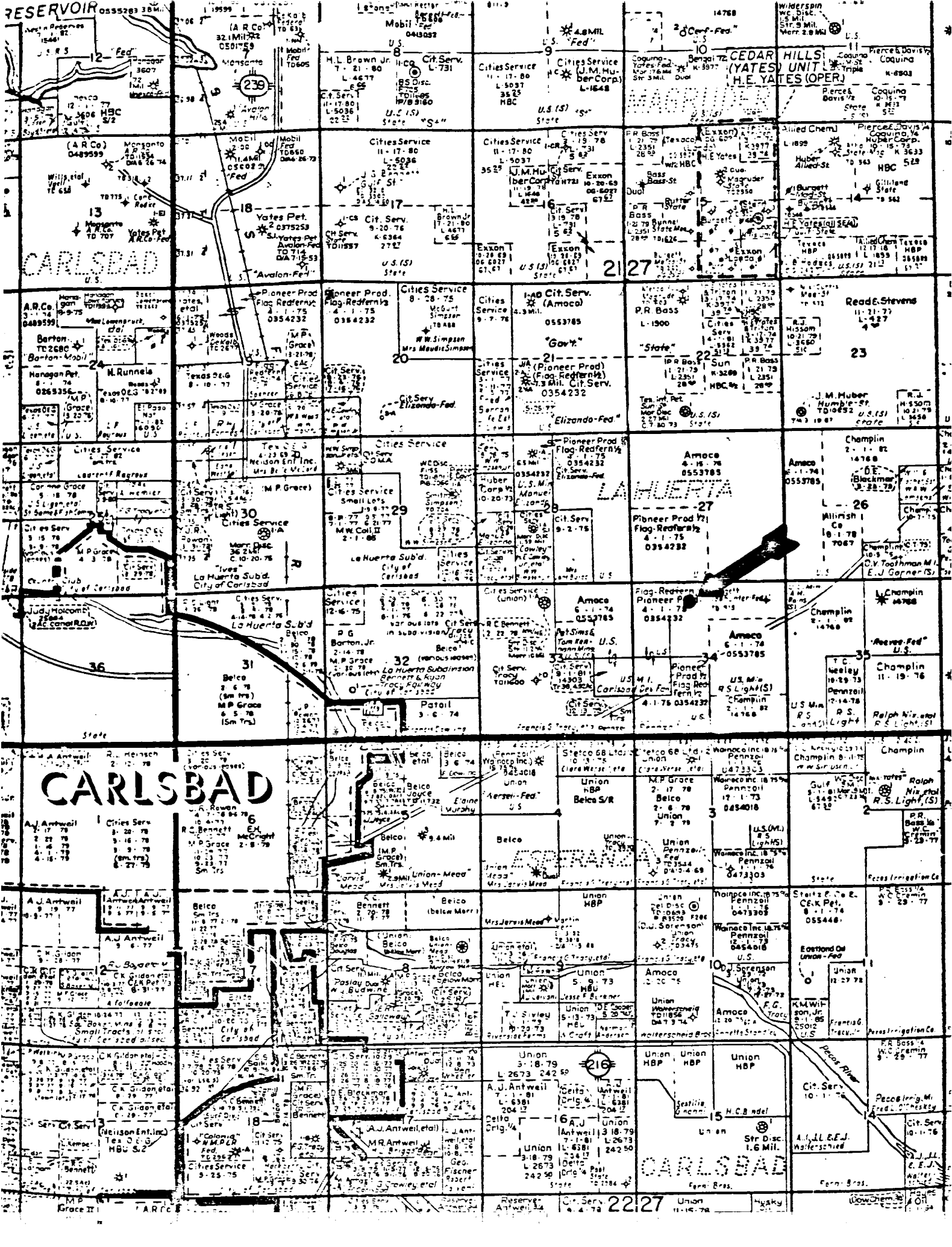
CLOSING METHOD

Sufficient accumulator volume shall be available to operate both the bag type preventer and pipe ram preventer with a snap-action through the following steps: close-open-close.





ELIZONDO FEDERAL "A" No. 4.



5149 III SE
LAKE MC MILLAN SD
124.000

