



NMOCC COPY

# United States Department of the Interior

GEOLOGICAL SURVEY  
P. O. Drawer U  
Artesia, New Mexico 88210

January 17, 1979

Anadarko Production Company  
P. O. Box 67  
Loco Hills, New Mexico 88255

ANADARKO PRODUCTION COMPANY	
Friend Federal No. 1	
660 FSL 1980 FEL	Sec. 20, T13S, R31E
Chaves County	Lease No. NM-17594

Above Data Required on Well Sign
----------------------------------

Gentlemen:

Your APPLICATION FOR PERMIT TO DRILL the above-described well to a depth of 2,550 feet to test the Queen formation is hereby approved subject to compliance with the OIL AND GAS OPERATING REGULATIONS (30 CFR 221) and the following conditions:

1. Drilling operations authorized are subject to compliance with the GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL LEASES, dated July 1, 1978.
2. Prior to commencing construction of road, pad, or other associated developments, operator will provide the dirt contractor with a copy of the SURFACE USE PLAN and this approval including the GENERAL REQUIREMENTS.
3. Submit a Daily Report of Operations from spud date until the Well Completion Report (form 9-330) is filed. The progress report should be not less than 8" x 5" in size and each page should identify the well.
4. All permanent above-ground structures and equipment shall be painted in accordance with the attached Painting Requirements. The color used should simulate sandstone brown (Federal Standard Color #595A, color 20318 or 30318).

Sincerely yours,

(Orig. Sgd.) ALBERT R. STALL

Albert R. Stall  
Acting District Engineer

UNMOC  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY(Other instructions  
reverse side)

## 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

Anadarko Production Company

## 3. ADDRESS OF OPERATOR

P. O. Box 67, Loco Hills, New Mexico 88255

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

At surface

660' FSL &amp; 1980' FEL Sec. 20, T13S, R31E

At proposed prod. zone

Same

Chaves County, New Mexico

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

25 miles North of Maljamar, New Mexico

## 15. DISTANCE FROM PROPOSED\*

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

660'

## 16. NO. OF ACRES IN LEASE

480

## 17. NO. OF ACRES ASSIGNED

TO THIS WELL

40

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

5600'

## 19. PROPOSED DEPTH

2550'

## 20. ROTARY OR CABLE TOOLS

Rotary

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

4230.8 G. L.

## 22. APPROX. DATE WORK WILL START\*

4-1-79

## 23.

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
11"	7-5/8"	26.40#	350'	150 SX
6 1/2"	4-1/2"	10.5#	2550'	250 SX

1. Rig up rotary tools.
2. Drill to approximately 350', set and circulate or ready-mix cement to surface on 7-5/8" casing. Install and test Series 900 Double Ram Hydraulic Blowout Preventor.
3. Drill to T. D. - approximately 2550', run open hole log.
4. Set and cement 4 1/2" casing on T. D.
5. Perforate, acidize and fracture treat well.
6. Run 2-3/8" tubing, bottom-hole pump and rods.
7. Install pumping equipment and place well on production.

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ARTESIA, NEW MEXICO

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 James E. Buckles TITLE Area Supervisor DATE December 28, 1978

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form 1  
Supersedes O.C.C. Form 1-1-67

All distances must be from the outer boundaries of the Section

Operator <b>ANADARKO PRODUCTION COMPANY</b>		Lease <b>Friend Federal</b>		Map No. <b>1</b>	
Well Letter <b>NO</b>	Section <b>20</b>	Township <b>13 South</b>	Range <b>31 East</b>	County <b>Chaves</b>	
Actual Plotage Location of Well: <b>660</b> feet from the <b>South</b> line and <b>1980</b> feet from the <b>East</b> line					
Ground Level Elev. <b>4230.8</b>	Producing Formation <b>Queen</b>	Pool <b>Caprock Queen</b>	Dedicated Acreage <b>40</b> Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure 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 been consolidated by communitization, unitization, force-pooling, etc?

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

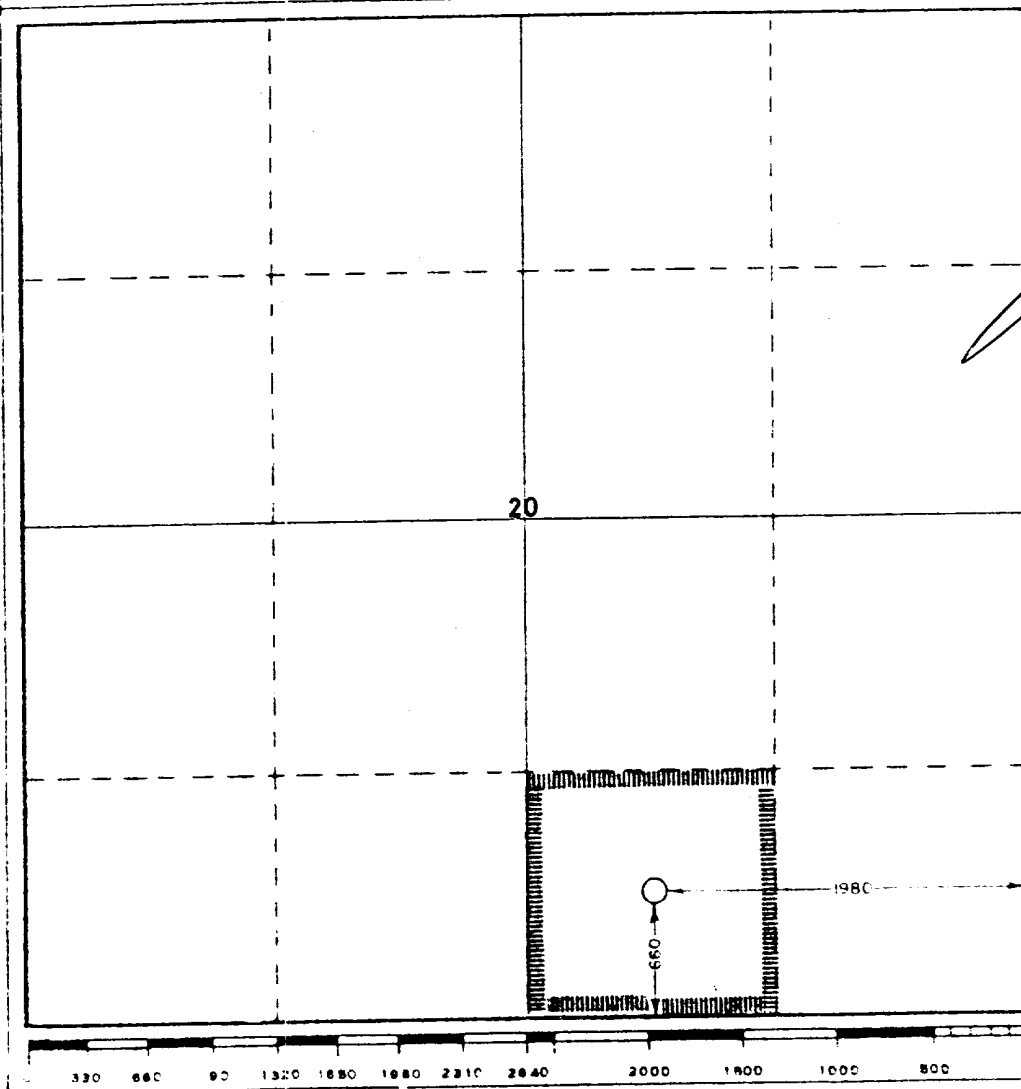
If answer is "no," list the owners and tract descriptions which have actually been consolidated (reverse side of this form if necessary.) \_\_\_\_\_

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.

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ARTESIA, NEW MEXICO**



**CERTIFICATION**

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

*Jerry E. Duckles*  
**Area Supervisor**

Company  
**Anadarko Production Co.**

Date  
**Dec. 5, 1978**

Date

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.

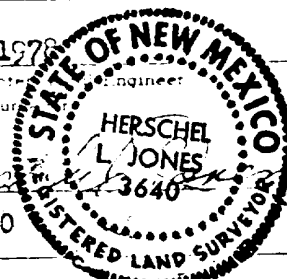
Date Surveyed

**Dec 2, 1978**

Registered Engineer  
and/or Land Surveyor

*Herschel L. Jones*  
**3640**

Certificate  
**3640**



## DATA SHEET

This Data Sheet is provided as a Supplement to our "Application for Permit to Drill Friend Federal Well No. 1.

1. Location: 660' FSL & 1980' FEL Sec. 20, T13S, R31E, Chaves County, New Mexico
2. Elevation: 4230.8 G. L.
3. Geological Name of Surface Formation: Recent - (Quaternary)
4. Type of Drilling Tools to be Utilized: Air - Rotary
5. Proposed Drilling Depth: 2550'
6. Tops of Important Geological Markers:

Anhydrite	870'
Salt - Top	965'
Salt - Bottom	1540'
Yates	1695'
Queen	2446'
7. Estimated Depths of Anticipated Water, Oil or Gas: 2446' - Queen - Oil
8. Casing Program:

7-5/8", 26.40#, N-80, LT&C @ 350' (New)
4-1/2", 10.50#, N-80, LT&C @ 2550' (New)
9. Setting Depth of Casing Strings & Amount & Type of Cement:

7-5/8" - 350' - 150 sx Class C w/2% CaCL
4-1/2" - 2550' - 250 sx Class C 50/50 posmix w/6# Salt/sx
10. Specifications for Pressure Control Equipment: BOP will consist of an 8" 900 Series Rucker-Acme BOP, annular packoff, 2" discharge line and flow nipple mounted on a 7" braidenhead. See attached BOP Exhibit #5
11. Mud System: 0' - T. D. - Air and/or foam. No drilling mud is anticipated unless unexpected formation water is encountered in sufficient quantities to prevent foaming operations.
12. Testing, Logging & Coring Program:

a. <u>Testing:</u>	No drill stem tests are planned.
b. <u>Coring:</u>	No coring is planned.
c. <u>Logging:</u>	Dual Laterolog, Formation Density and Caliper log will be run when T. D. is reached.
13. Potential Hazards: If gas is encountered it will be flared to prevent an explosion. BOP will control any flow.
14. Anticipated Starting Date & Duration: Construction of drillsite pad is planned during March, 1979. The spud date will be approximately April 1, 1979. Approximately six days will be required to complete the drilling operations. Another 30 days will be required for completion work.
15. Other Facets: Collier & Collier of Riverside, New Mexico will probably furnish this rig. If they are unavailable or unable to drill this well, it might be necessary to obtain the services of WEK Drilling Co. If so, another "Surface Use Plan" will be submitted since a more extensive location and mud program will be needed.

**Anadarko**  
PRODUCTION COMPANY

A  
Panhandle  
Eastern  
Company

P. O. Box 67 • Loco Hills, New Mexico 88255 • (505) 677-2411

December 28, 1978

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United States Geological Survey  
P. O. Drawer U  
Artesia, New Mexico 88210

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ARTESIA, NEW MEXICO

Gentlemen:

Following is the "Surface Use and Operation Plan" for the drilling of the following three wells:

- I. Dalport Federal B Well No. 1 located 1980' FSL & 660' FEL Sec. 19, T13S, R31E, Chaves County, New Mexico.
- II. Dalport Federal Well No. 1 located 660' FSL & 660' FWL Sec. 20, T13S, R31E, Chaves County, New Mexico.
- III. Friend Federal Well No. 1 located 660' FSL & 1980' FEL Sec. 20, T13S, R31E, Chaves County, New Mexico.

1. Existing Roads - A small scale map is attached (Exhibit #1). It shows the location of these wells in relation to Maljamar, New Mexico Townsite. A larger scale map (Exhibit #2) shows State Highway #171 in blue. The existing caliche lease roads are shown in orange.

2. Planned Access Roads - Only short access roads will be needed since an existing caliche road is located nearby. These proposed roads are shown in green on Exhibit #2.

3. Location of Existing Wells - Existing wells are shown on enclosed map (Exhibit #2). There are no existing wells within two miles. No exploratory wells are being drilled within a two mile radius.

4. Location of Tank Batteries, Production Facilities and Lines - Exhibit #3 is a plat showing the proposed location of production facilities. Each well will have its own production facility which will be located on the drillsite pad.

5. Location and Type of Water Supply - Only a small amount of fresh water will be required since drilling will be done with air or foam. This fresh water supply is approximately 8 miles Southeast of location and consists of Ogallala formation fresh water. This water will be trucked to location as needed.

6. Source of Construction Material - Source of Caliche will be an existing Federal caliche pit located in Sec. 5 - approximately 2½ miles South of this drillsite. This pit is shown on Exhibit #2 in green.

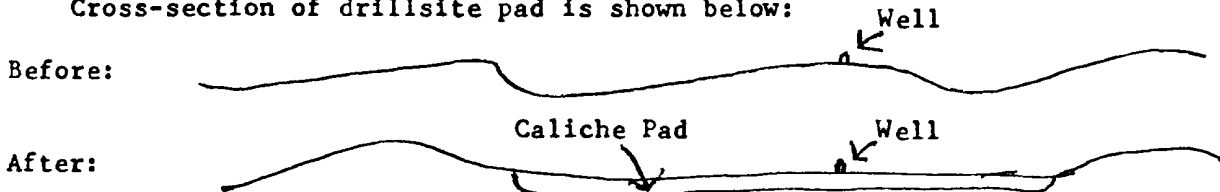
7. Methods for Handling Waste Disposal - Enclosed drill site plat (Exhibit #4) indicates location of reserve and rubbish pit. After sufficient time has passed to allow drilling fluids to dry, this pit will be closed and leveled.

8. Ancillary Facilities - There are no camps or airstrips planned.

9. Well Site Layout - Well sites (Exhibit #4) have been staked and are indicated by red areas on enclosed map (Exhibit #1). Drilling site is a sandy area covered by sparse native vegetation. Drilling pads will be leveled and only a minimum amount of caliche will be used initially when the wells are drilled. Later, if a productive well is obtained, additional caliche will be added to support travel during all weather conditions.

Drilling sites will essentially blend with the relatively flat terrain.

Cross-section of drillsite pad is shown below:



10. Plans for Restoration of Surface - Commercial Well:

Reshaped Topography - Rubbish will be buried upon completion of well. All future trash will be removed by the individual generating same.

Caliche Pad - Caliche drilling pad will be essentially only a scrapeout until commercial production is established. Then it will be improved and consist of a total of 6" of caliche. This pad will remain intact until the well is abandoned.

Road - This road will initially be scraped out and then improved with additional caliche only if commercial production is established.

Timetable - The well should produce for several years.

Plans for Restoration of Surface - Plugged & Abandoned Well:

Surface damage will be kept to a minimum. This is one of the main advantages of using a small air rig rather than a much larger conventional rig that uses mud. Existing caliche road will require little or no repairs. New roads and locations can be scraped off and small amounts of caliche used only where necessary. These can easily be ripped up after the well is plugged.

11. Other Information - Topography is generally flat, surrounded by small sand dunes.

Soil Characteristics - Unconsolidated sand.

Flora - Sparse grass and weeds.

Fauna - Rabbits, rats, mice, birds and snakes.

Other Surface Use Activities - Leased grazing land.

Surface Ownership - Federal land.

Water Wells - None.

Lakes, Streams and Ponds - None.

Dwellings - A ranchhouse is located approximately 3 miles Southeast of these locations.

Other Facilities - None.

Archaeological Sites - None - Cleared by New Mexico Archaeological Services, Inc.

Historical Sites - None.

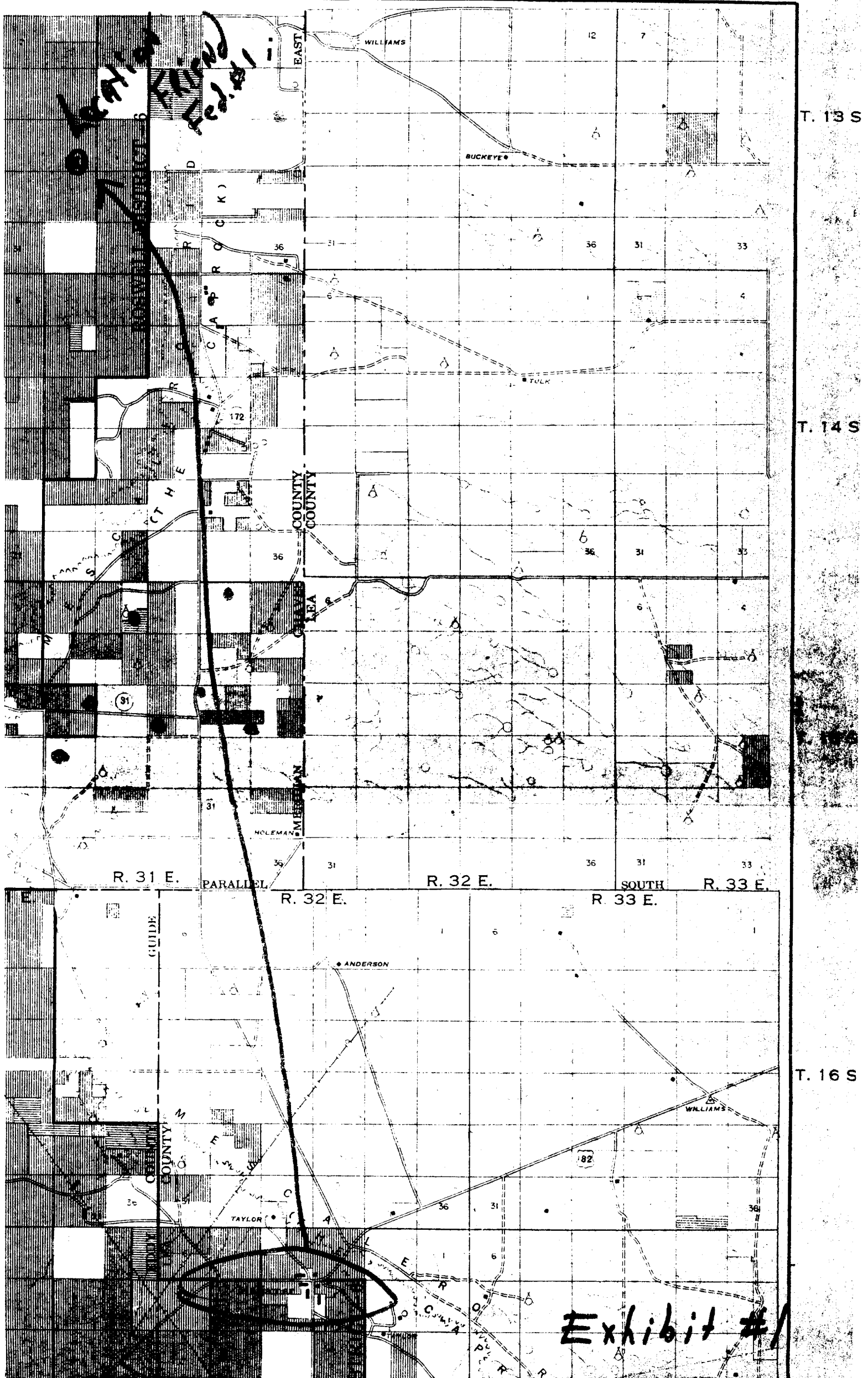
Cultural Sites - None.

12. Operator's Representative - Ozie W. Farris, Field Foreman for Anadarko.  
- Office Phone - 677-2411  
- Home Phone - 677-3230

13. Certification - I hereby certify that I, or persons under my direct supervision, have inspected the proposed drilling 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 Sweatt Construction Company or Jabo Rowland Construction Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

December 28, 1978  
Date

  
Jerry E. Buckles, Area Supervisor  
Title





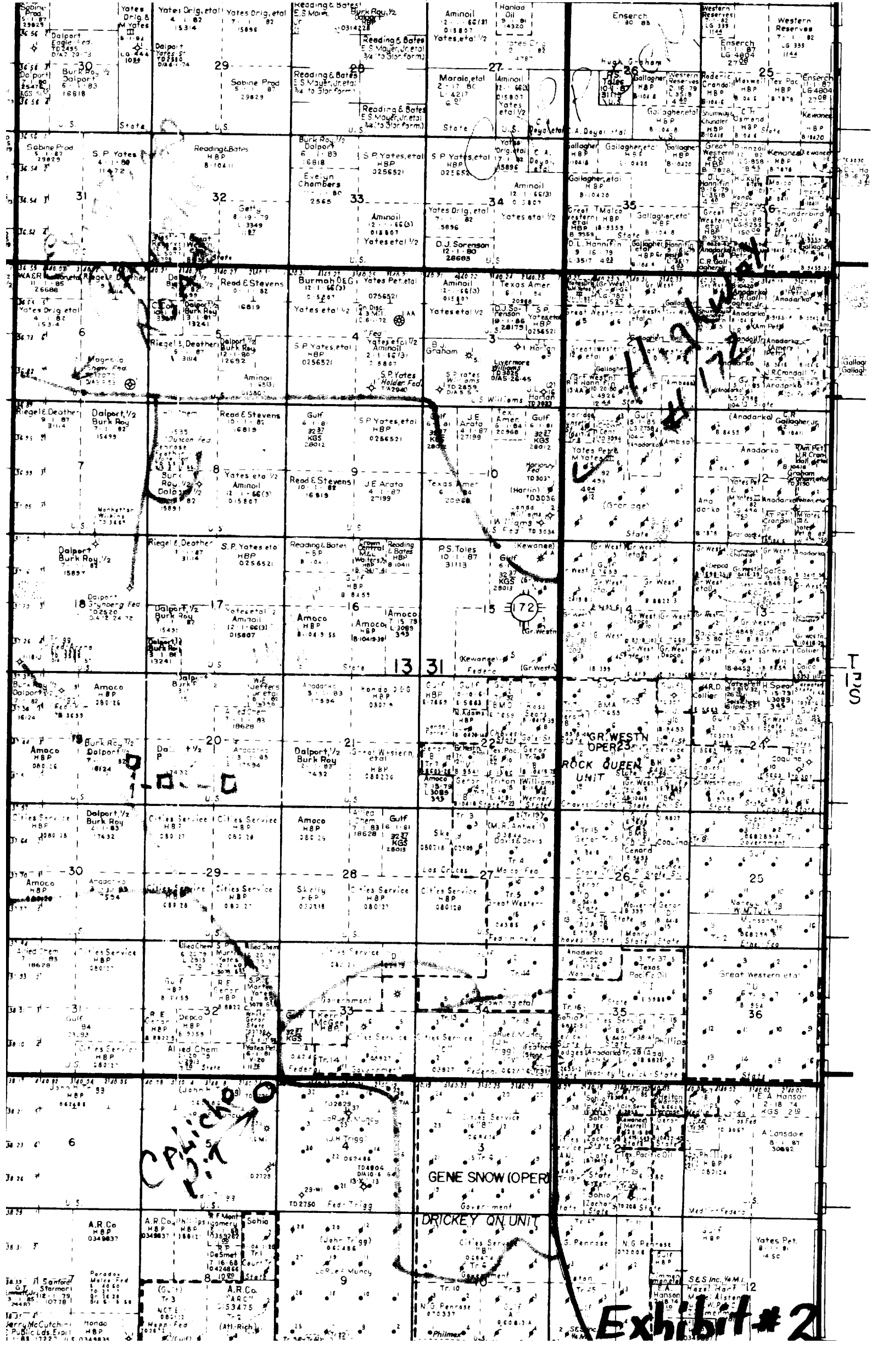
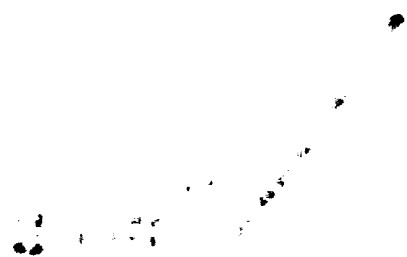
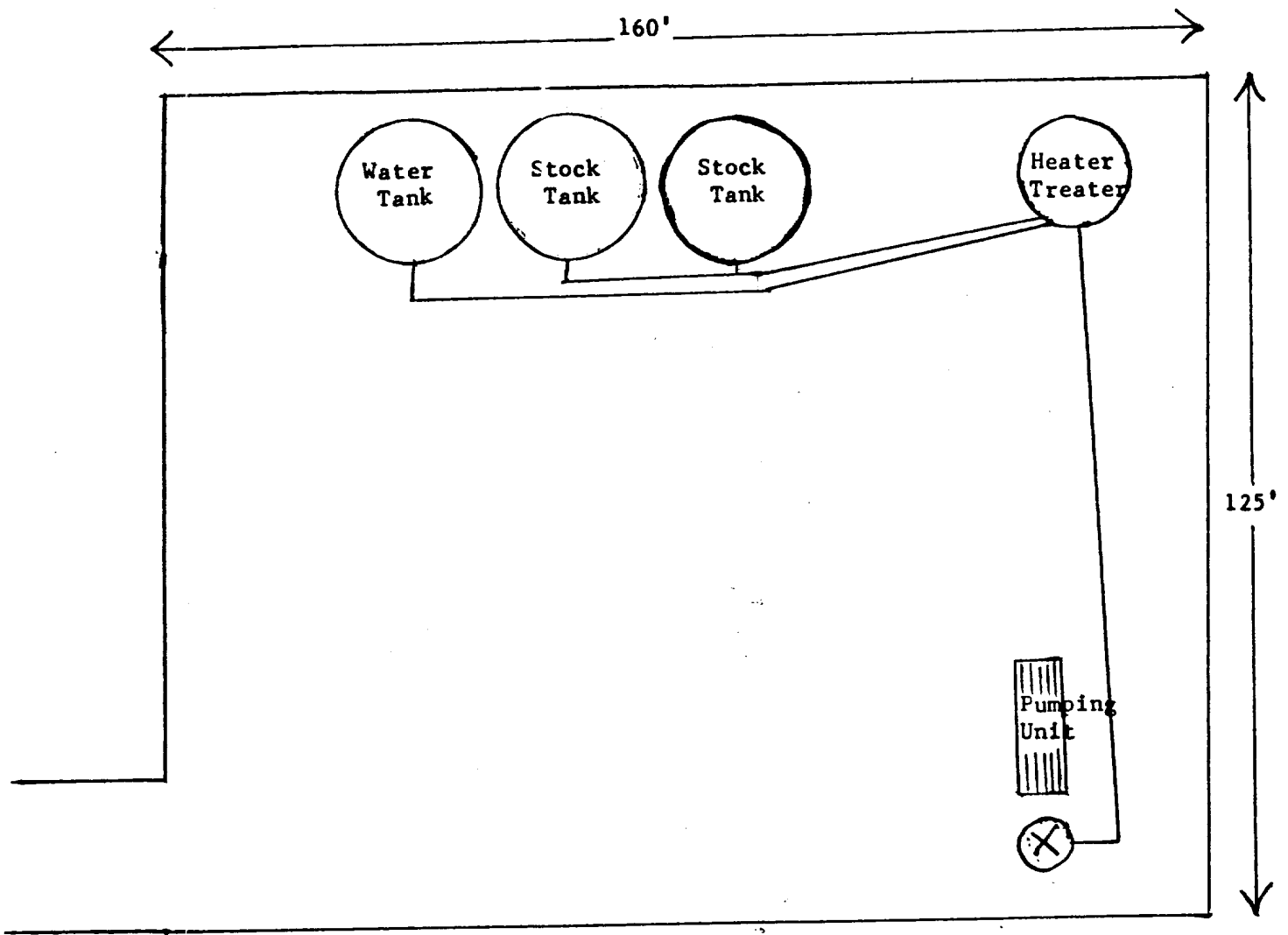


Exhibit # 2



North

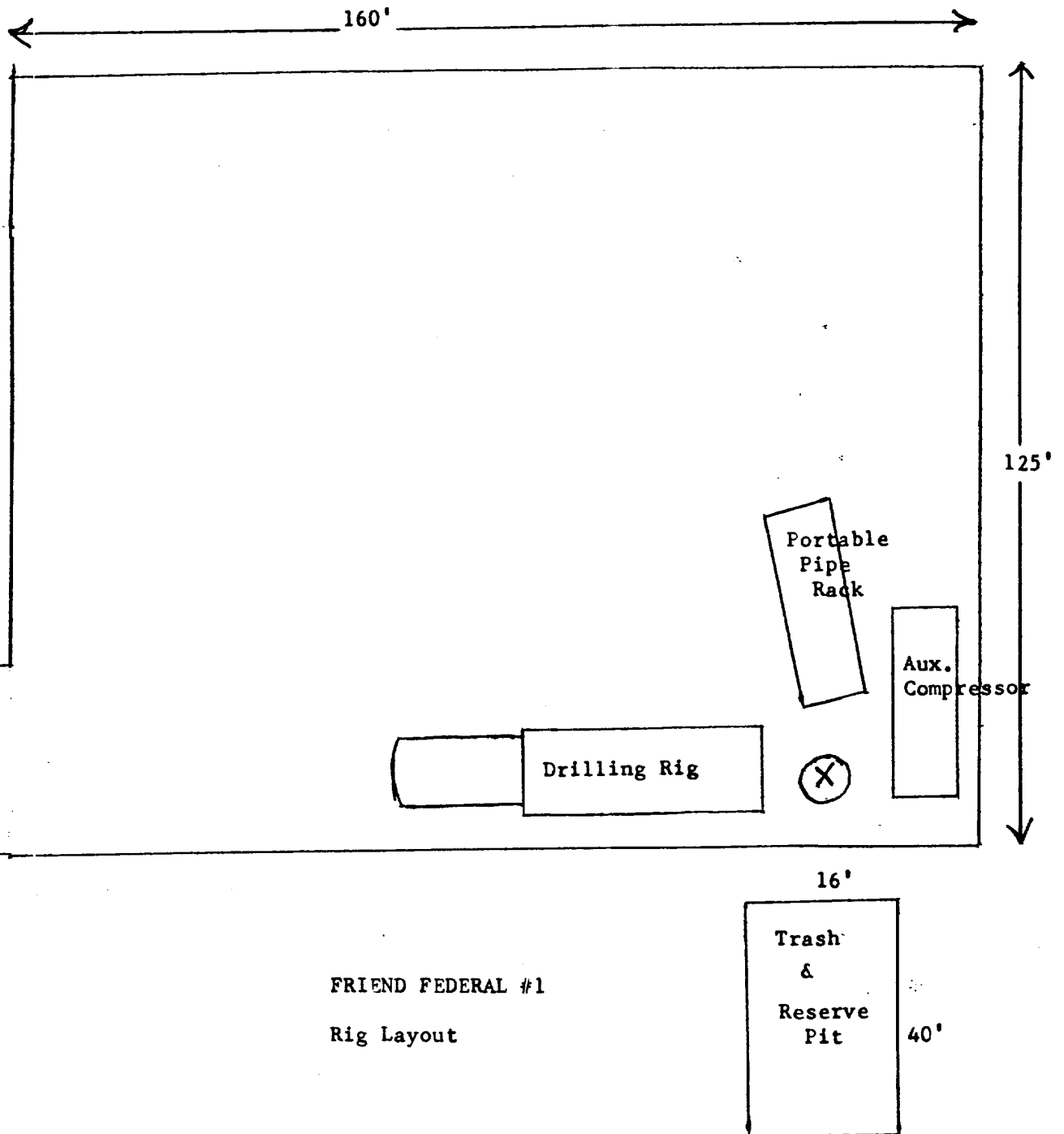


FRIEND FEDERAL #1

Production Facilities Layout

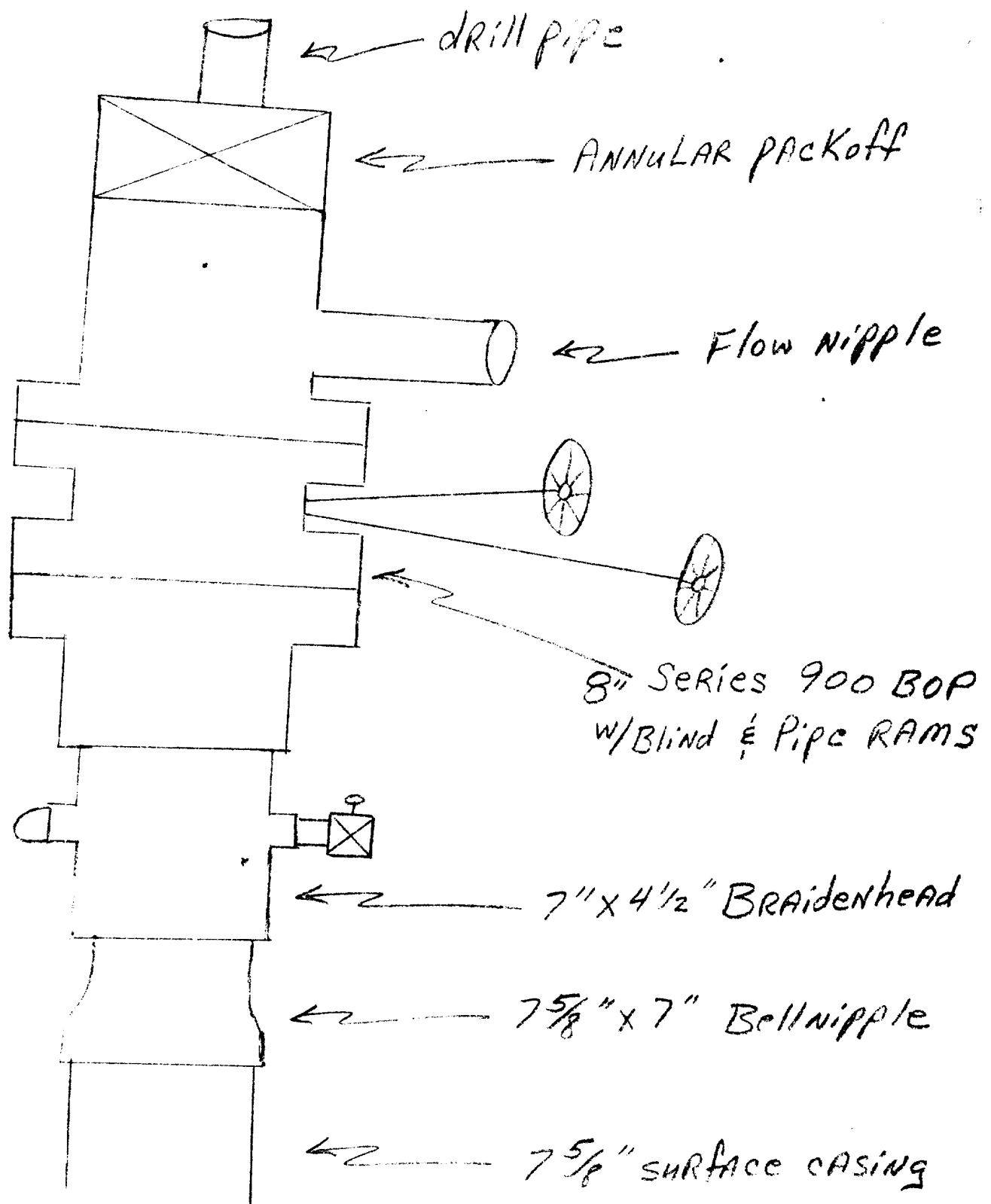
*Exhibit #3*

North



FRIEND FEDERAL #1  
Rig Layout

Exhibit #4



BOP Schematic Exhibit