

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

30-015-24052

5. LEASE DESIGNATION AND SERIAL NO.

USA NM 22207

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Washington Ranch Storage

9. WELL NO.

WI Federal 20

10. FIELD AND POOL, OR WILDCAT

Washington Ranch 20

11. SEC., T., R., M., OR BLK.  
AND SURVEY OR AREA

Sec. 34, T25S, R24E

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

## 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

Storage

SINGLE  
ZONE ☒MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

El Paso Natural Gas Company

RECEIVED

3. ADDRESS OF OPERATOR

1800 Wilco Building, Midland, Texas 79701

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

At surface

2736 FSL 1602 FWL

At proposed prod. zone

same

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

6 miles SW Whites City, New Mexico

15. DISTANCE FROM PROPOSED\*

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

NA

16. NO. OF ACRES IN LEASE

NA

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

NA

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

NA

19. PROPOSED DEPTH

±7,050'

20. ROTARY OR CABLE TOOLS

Rotary

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

3715 GR

22. APPROX. DATE WORK WILL START\*

Feb. 1982

23.

## PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT       |
|--------------|----------------|-----------------|---------------|--------------------------|
| 16"          | 13 3/8" cond.  | 29.3 H-40       | 40'           | 30 cu. ft. CIRCULATE     |
| 12 1/4"      | 9 5/8"         | 32.3 H-40       | 800'          | 630 cu. ft. to circulate |
| 8 1/2"       | 7"             | 23.0 H-80       | 7,050'        | 1341 cu. ft.             |

Project approved by NMOCD Order No. R-6175-A.

Selectively perforate and treat the Morrow formation for gas storage.  
A 3000 psi W.P. and 6000 psi test double gate BOP with blind and pipe  
rams will be used for blowout prevention.

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 prevention program, if any.

24.

SIGNED

TITLE Drilling Engineer

DATE Dec. 4, 1981

(This space for Federal or State office use)

PERMIT NO.

APPROVED

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

JAN 7 1982

JAMES A. GILLHAM  
DISTRICT SUPERVISOR

\*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-81

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

|                                     |               |                                                     |               |                                   |
|-------------------------------------|---------------|-----------------------------------------------------|---------------|-----------------------------------|
| Operator<br>El Paso Natural Gas Co. |               | Lease<br>Washington Ranch Storage Project <i>WI</i> |               | Well No.<br><del>WI</del> #20     |
| Section<br>F                        | Section<br>34 | Township<br>25-S                                    | Range<br>24-E | County<br>Eddy County, New Mexico |

Actual Footage Location of Well:

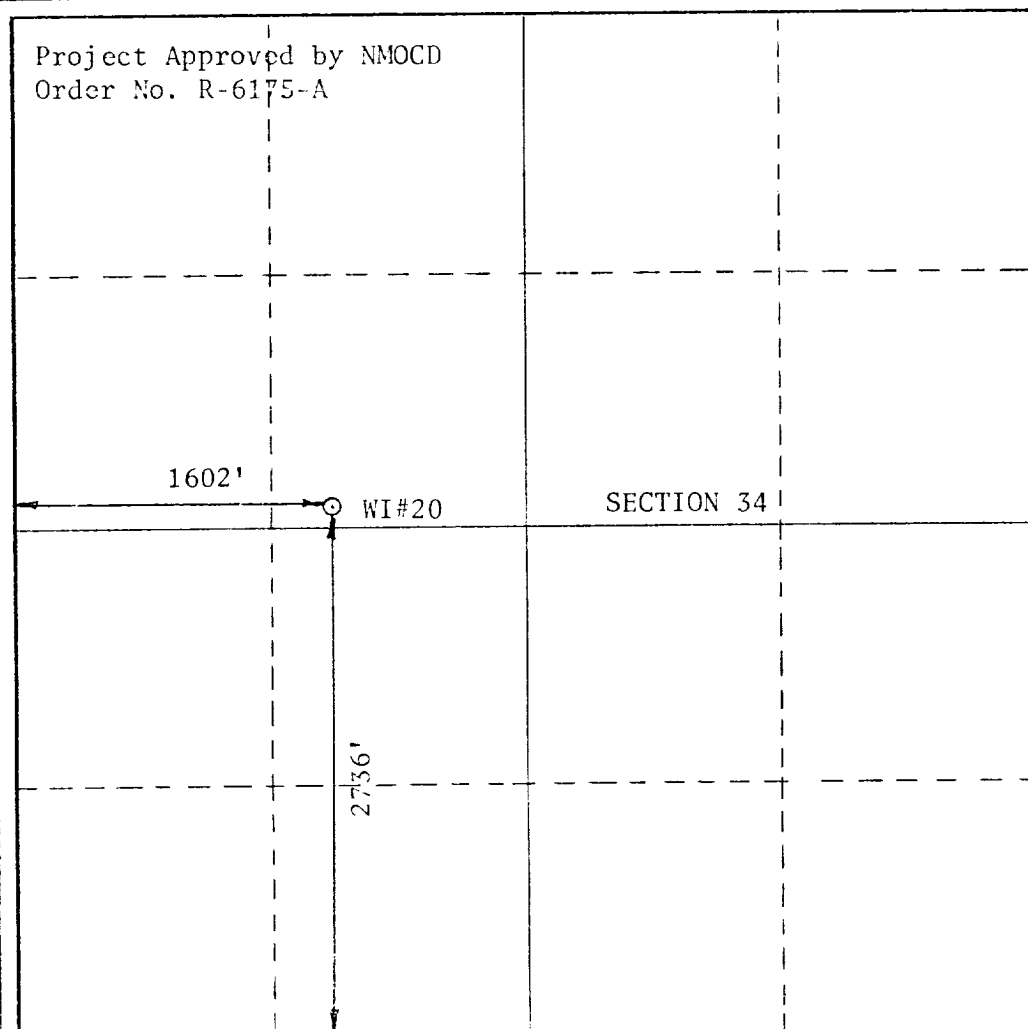
|                            |                               |       |                                         |      |                           |      |      |
|----------------------------|-------------------------------|-------|-----------------------------------------|------|---------------------------|------|------|
| 2736                       | feet from the                 | South | line and                                | 1602 | feet from the             | West | line |
| Ground Level Elev.<br>3715 | Producing Formation<br>Morrow |       | Pool<br>Washington Ranch <i>Storage</i> |      | Dedicated Acreage:<br>N/A |      |      |

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. NA
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). NA
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? NA

☐ 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  
G. D. Mickey

Position  
Drilling Engineer

Company  
El Paso Natural Gas Co.

Date  
December 4, 1981

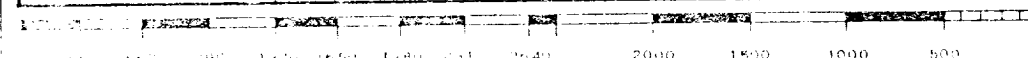
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

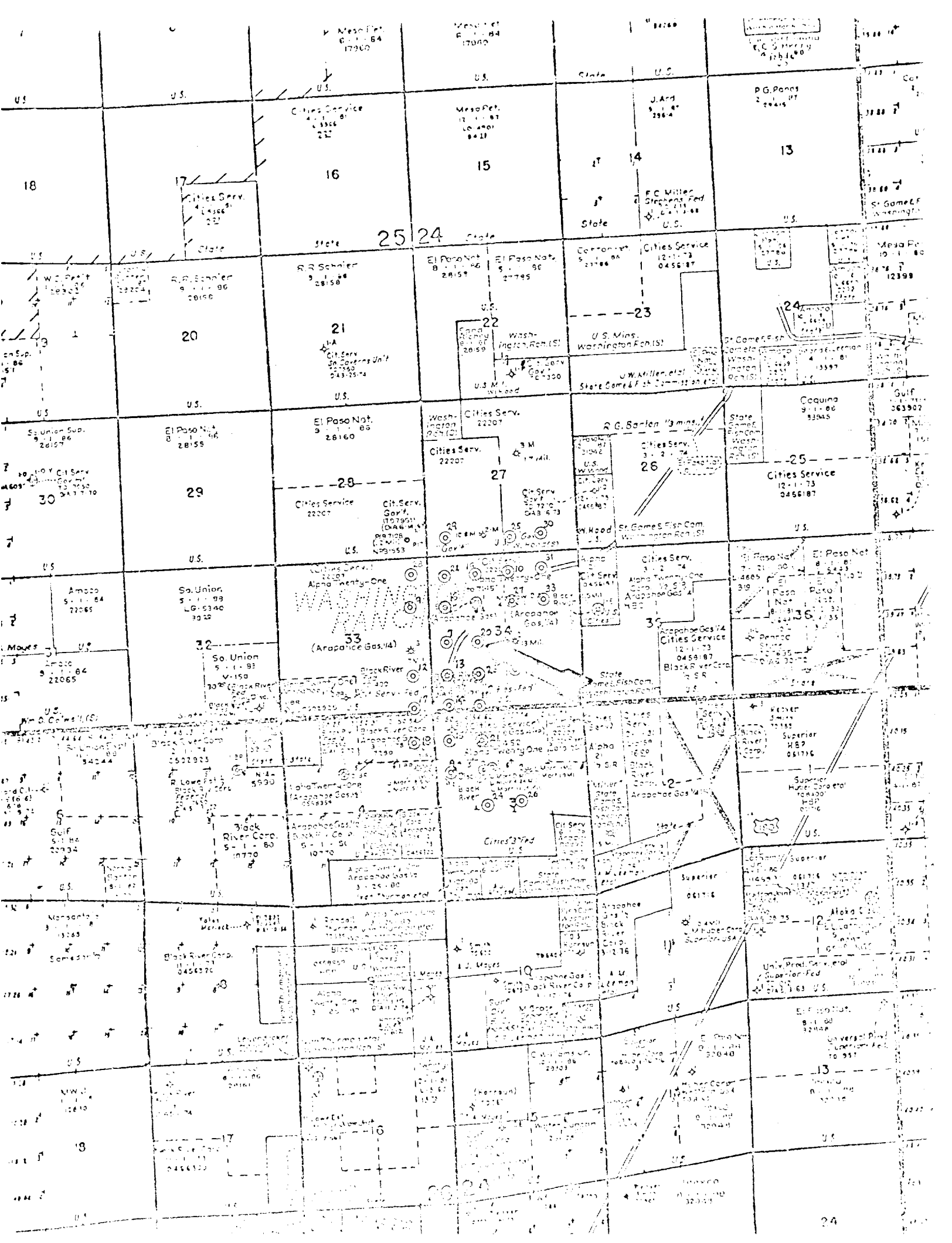
4-22-81

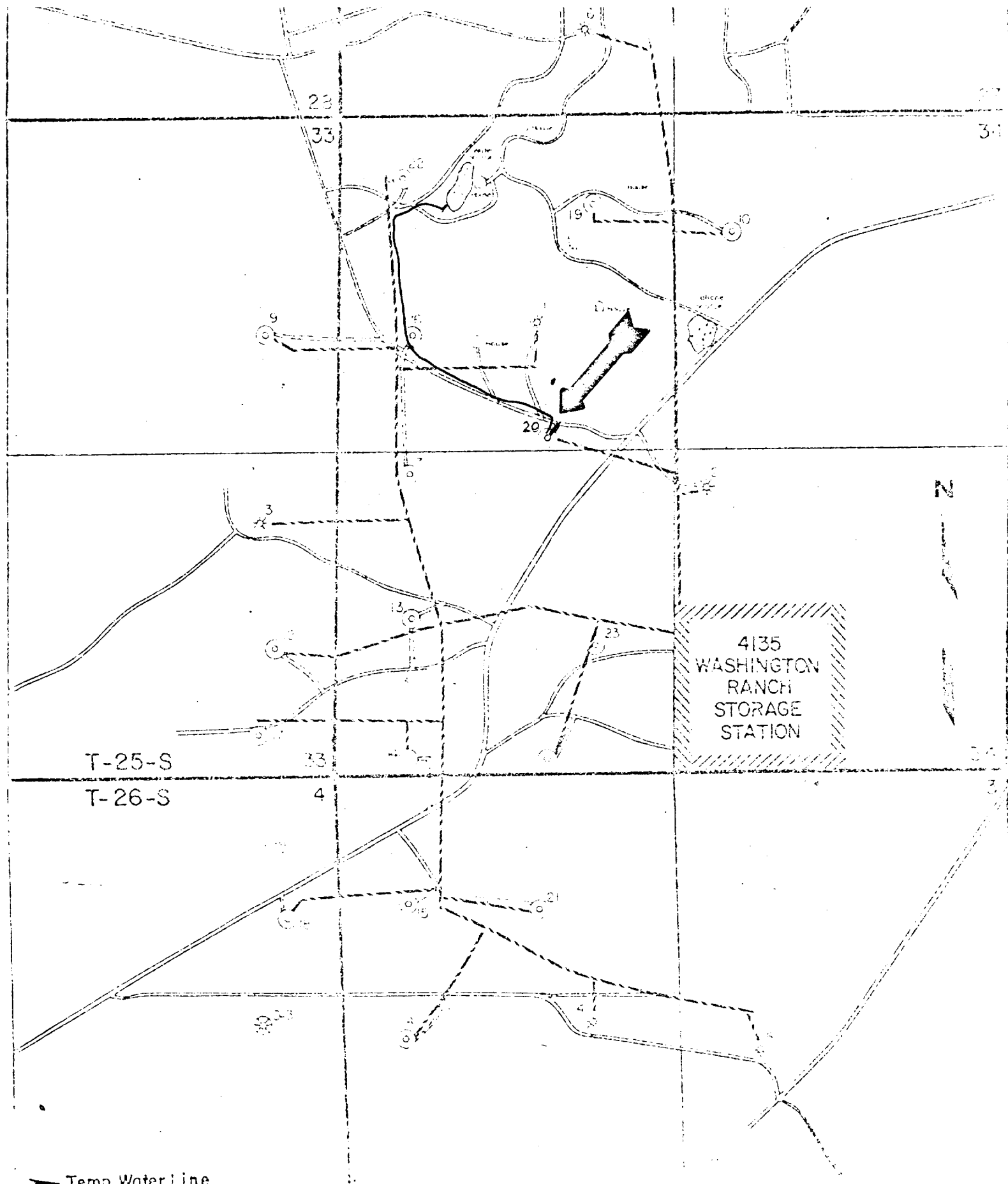
Date Surveyed

Registered Professional Engineer and/or Land Surveyor

*[Signature]*  
Certified by  
LS #1317







- Temp. Water Line
- - - Existing Roads
- - - Proposed Roads
- - - Proposed Pipeline
- o Existing Wells
- o Proposed Wells

OPERATIONS PLAN

Washington Ranch Storage Project W.I.

I. Location:

Section , T- -S, R-24-E  
Eddy County, New Mexico

Field:

Washington Ranch

Elevation:

GR

II. Geology:

A. Formation Tops:

| Surface         | Quaternary |
|-----------------|------------|
| Castile         | 180        |
| Lamar           | 500        |
| Dela. Ss        | 575        |
| Cherry Cn       | 1,475      |
| Bone Spring     | 3,550      |
| Wolfcamp        | 5,550      |
| Strawn          | 5,685      |
| Atoka           | 6,950      |
| Morrow Ls       | 6,500      |
| Morrow Clastics | 6,620      |
| T.D.            | ± 7,050    |

B. Logging Program:

FDC-CNL  
Dual Induction - SPL @ SP & GR curves  
BHC-Sonic

C. Coring:

None

III. Drilling:

A. Mud Program:

Fresh water non-dispersed mud from surface  
to coring point.  
Use low fluid loss non-dispersed mud from  
coring point to T.D.

IV. Materials:

## A. Casing Program:

| HOLE SIZE | DEPTH  | CSG SIZE | WT & GRADE |
|-----------|--------|----------|------------|
| 16"       | 40'    | 13 3/8"  | 29.3# H-40 |
| 12 1/4"   | 800'   | 9 5/8"   | 32.3# H-40 |
| 8 1/2"    | 7,050' | 7"       | 23.0# N-80 |

## B. Float Equipment:

13 3/8" conductor - None  
 9 5/8" surface - Cement guide shoe, orifice fill insert float two jts off bottom, centralizers on jts 1, 3, 5, 7, 9, 11  
 7" production - Cement guide shoe, float collar at top of first jt, one centralizer and four turbolizers per jt for first 16 jts, one centralizer every 3rd jt for 21 jts thereafter. Rough coat bottom 1,500' of casing.

## C. Tubing:

7,000 ft. 2 7/8" 6.5# J-55

## D. Wellhead Equipment:

Bradenhead, 9 5/8" OD slip-on X 11" 3000# W.P.  
 @ 10" X 7" CD hanger  
 Tbg Spool 11" 3000# W.P. X 7 1/16" 5000# W.P.  
 with 6" X 2 7/8" CD hanger  
 Upper Run: 3 1/8" 5000# W.P. master valve and production valves.

V. Cementing:

## A. Conductor Casing (15" X 13 3/8"):

Cement in place with redi-mix aggregate cement (approx. 2 yds), WOC 12 hrs.

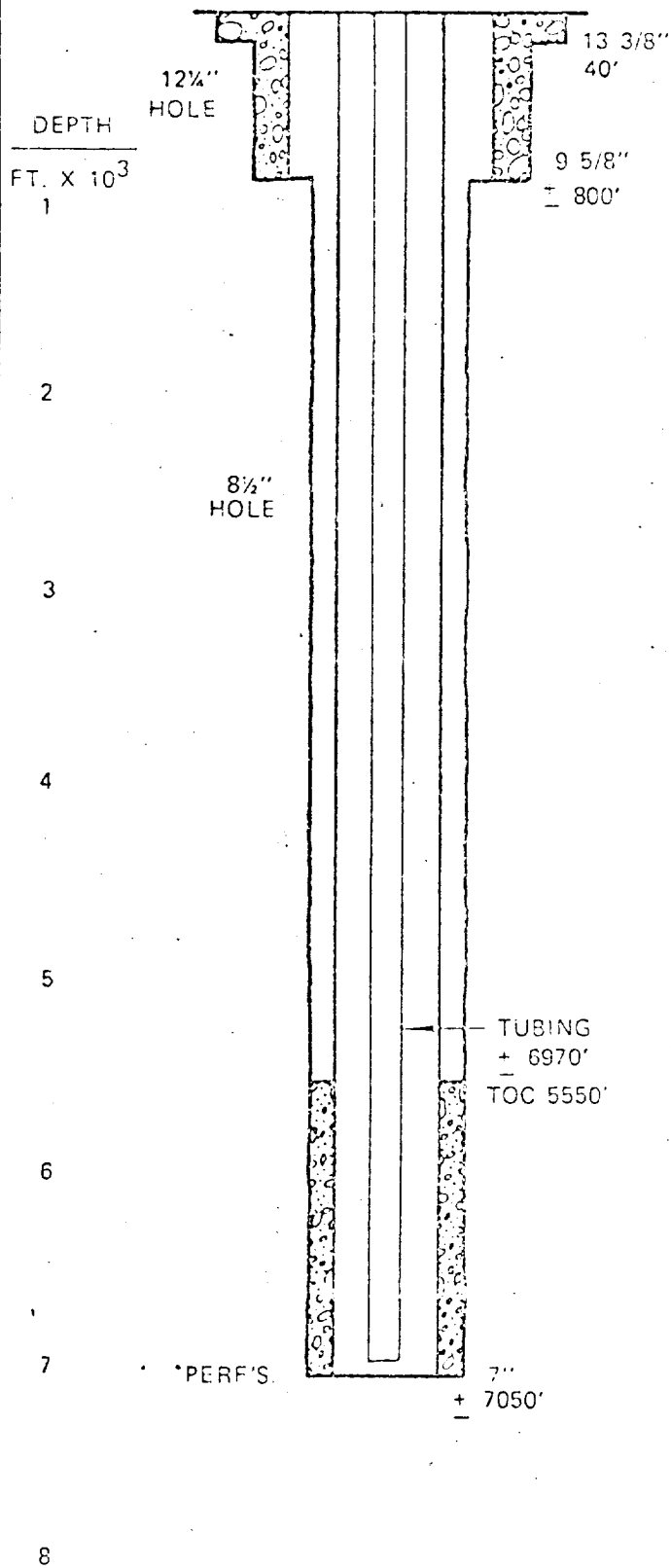
## B. Surface Casing (12 1/4" X 9 5/8"):

Use 480 sx Class "C", 2% CaCl<sub>2</sub> and 5 lbs Kolite and 1/4# Celloflute per sack. (630 cu. ft., 150% excess to circulate to surface). WOC 8 hrs. Test csg to 800 psi for 30 min. before drilling plug.

## C. Production Casing (8 1/2" X 7"):

Use caliper volume plus 20% to fill to approx. 5,550'. Cement with approx. 250 sx Class "H" plus 4% gel and 10% salt, 0.5% D65 and 10 lbs Kolite. WOC 18 hrs. Run temperature survey after 8 hrs.

# WASHINGTON RANCH PROPOSED NEW I-W WELL



| SIZE    | GRADE           | WT   | BURST | COLLAPSE | DRIFT ID |
|---------|-----------------|------|-------|----------|----------|
| 13 3/8" | USED            |      |       |          |          |
| 9 5/8"  | H-40            | 32.3 | 2270  | 1400     | 8.845    |
| 7"      | <del>K-55</del> | 23   | 4360  | 3270     | 6.241    |
| 2 7/8"  | J-55            | 6.5  | 7260  | 7680     | 2.441    |

\*N-80

\*AVG. MID. PERF. 5970'

T-25-S

T-26-S

R-24-E

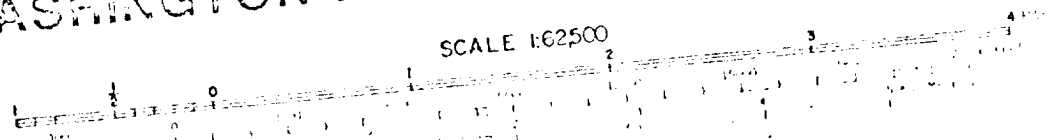
Active Area  
NMOCD  
Order #R 6175-A

LEGEND

- U.S. LAND
- FEE LAND

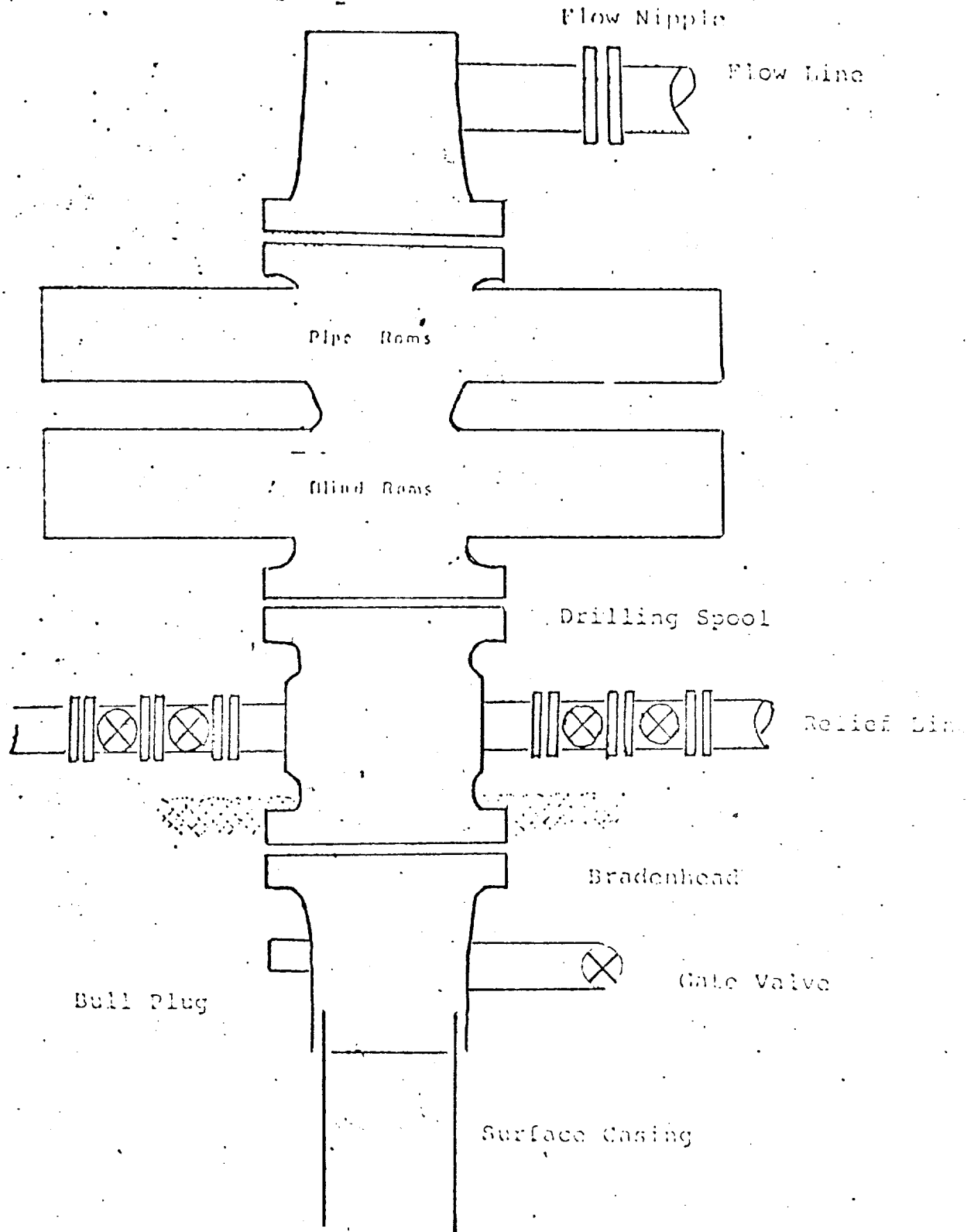
WASHINGTON RANCH STORAGE PROJECT

SCALE 1:62500





# Typical B.G.P. Installation



Series 900 Double Gate BOP, rated  
at 3000 psi Working Pressure