Form 9-331 C
(May 1963)

SUBMIT IN T ICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-015-23857

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM22207

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK
DRILL [XX] DEEPEN [ ] PLUG BACK [ ]

7. UNIT AGREEMENT NAME:

b. TYPE OF WELL
OIL WELL [ ] GAS WELL [ ] OTHER Storage SINGLE ZONE [XX] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: Washington Ranch Storage Project

2. NAME OF OPERATOR: El Paso Natural Gas Company

9. WELL NO.: ~~WI Federal~~ #10

3. ADDRESS OF OPERATOR: 1800 Wilco Bldg - Midland, Texas 79701

RECEIVED

10. FIELD AND POOL, OR WILDCAT: Washington Ranch

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2209' FEL, 935' FNL, Sec. 34

JUL 6 1981

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: H-B Sec. 34, T-25-S, R-24-E

At proposed prod. zone: Same

U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 6 miles SW Whites City, New Mexico

12. COUNTY OR PARISH: Eddy

13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
NA	NA	NA
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
NA	± 7,050'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3696' GR

22. APPROX. DATE WORK WILL START*: July 1, 1981

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'	640 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.

RECEIVED
MAY 21 1981
OIL & GAS
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

API + NL Bro

7-10-81

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 L. D. Mackey TITLE Drlg. Engr. DATE May 20, 1981

(This space for Federal or State office use)

APPROVED
(Orig. Sgd.) GEORGE H. STEWART

PERMIT NO. _____ APPROVAL DATE _____

JUL - 1 1981

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

JAMES A. GILLHAM
DISTRICT SUPERVISOR

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION

WELL L(.TION AND ACREAGE DEDICATION PL

Supersedes C-128
Effective 1-1-65

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

Operator	Lease	Well No.
El Paso Natural Gas Co.	Washington Ranch Storage Project	#10

Unit Letter	Section	Township	Range	County
B	34	25-S	24-E	Eddy County, New Mexico

Actual Footage Location of Well:
2209 feet from the East line and 935 feet from the North line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3696 Ft.	Morrow	Washington Ranch - [illegible]	NA Acres

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

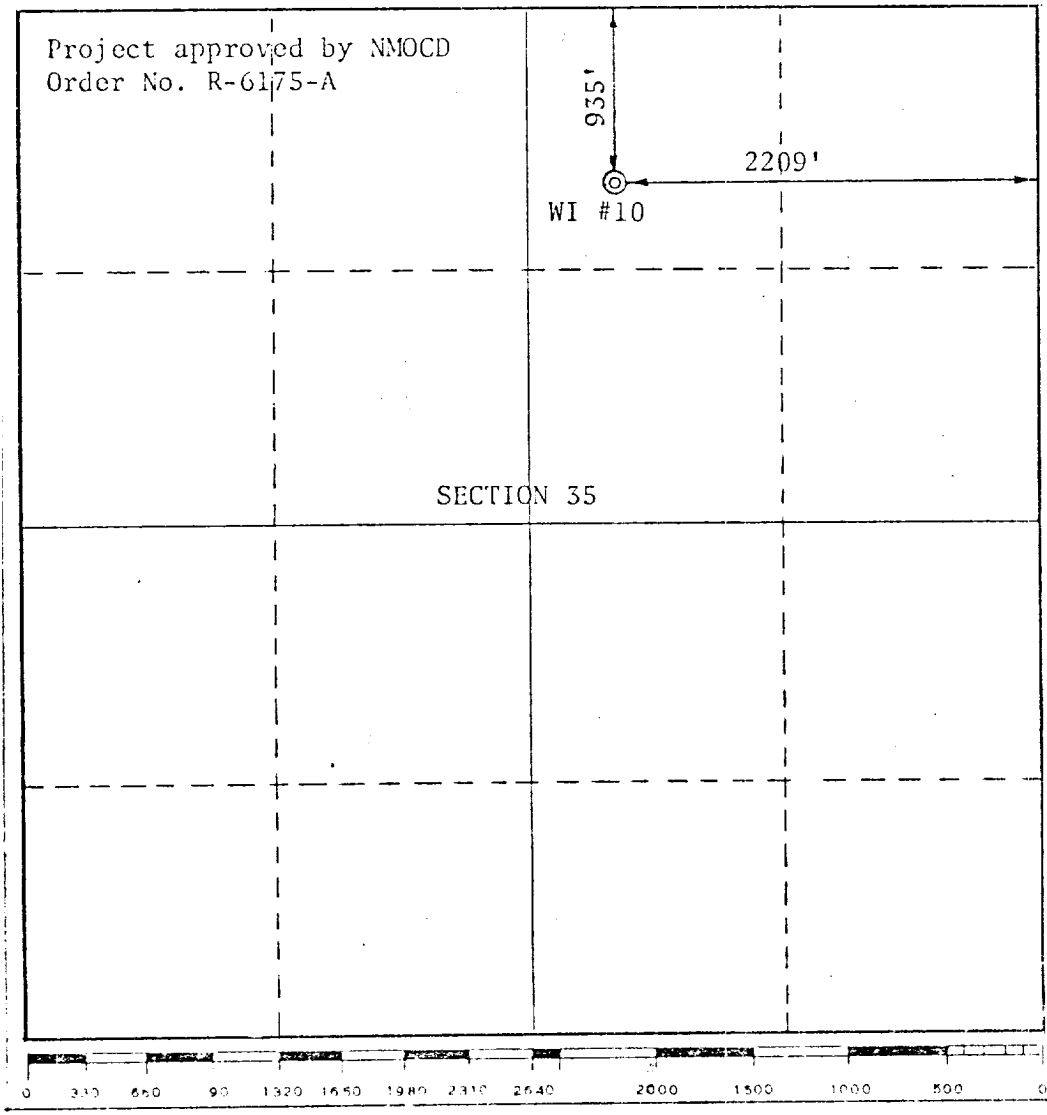
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). NA

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.

G. D. Mickey

Name
G. D. Mickey

Position
Drilling Engineer

Company
El Paso Natural Gas Co.

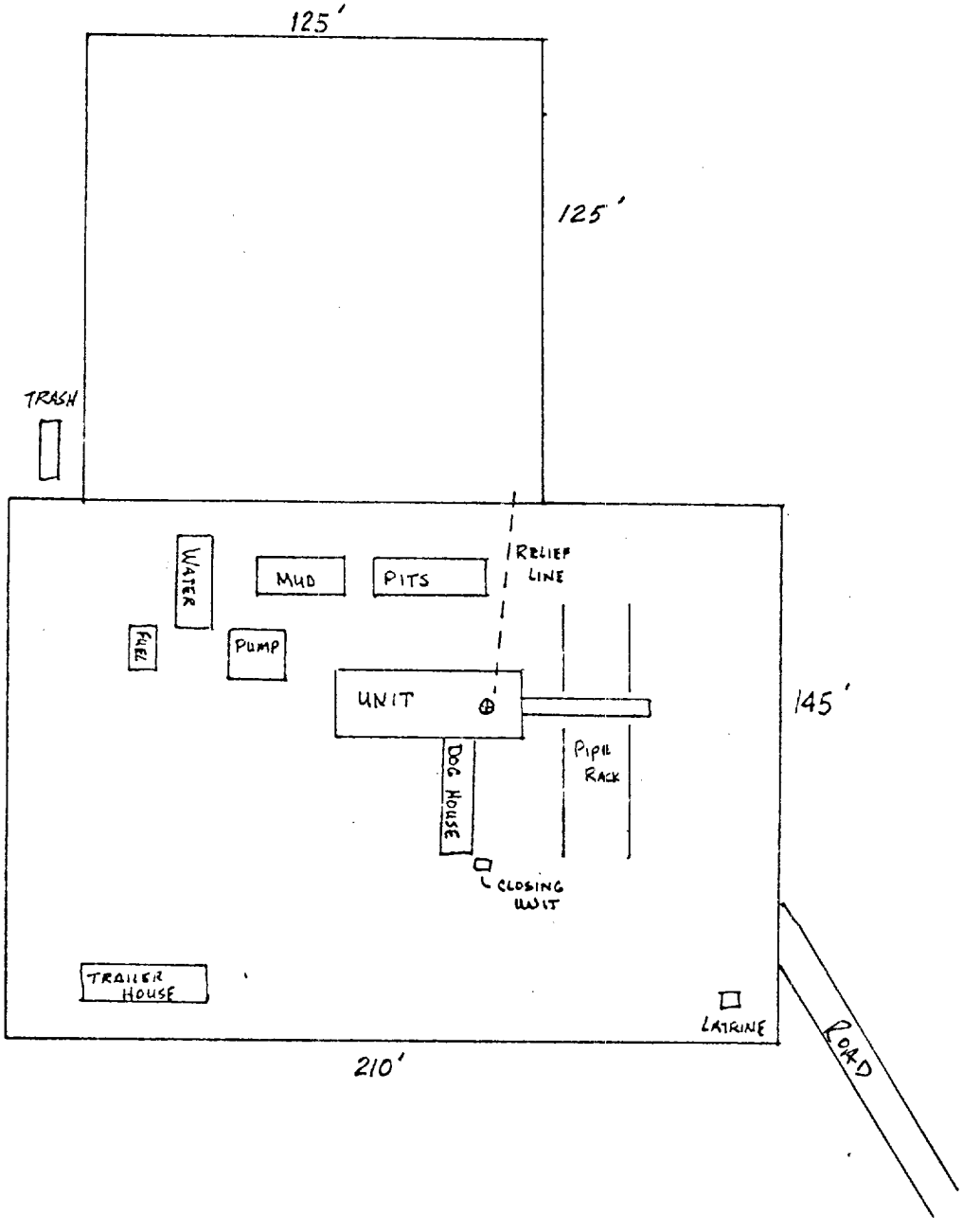
Date
May 20, 1981

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.

Date Surveyed
4-25-81

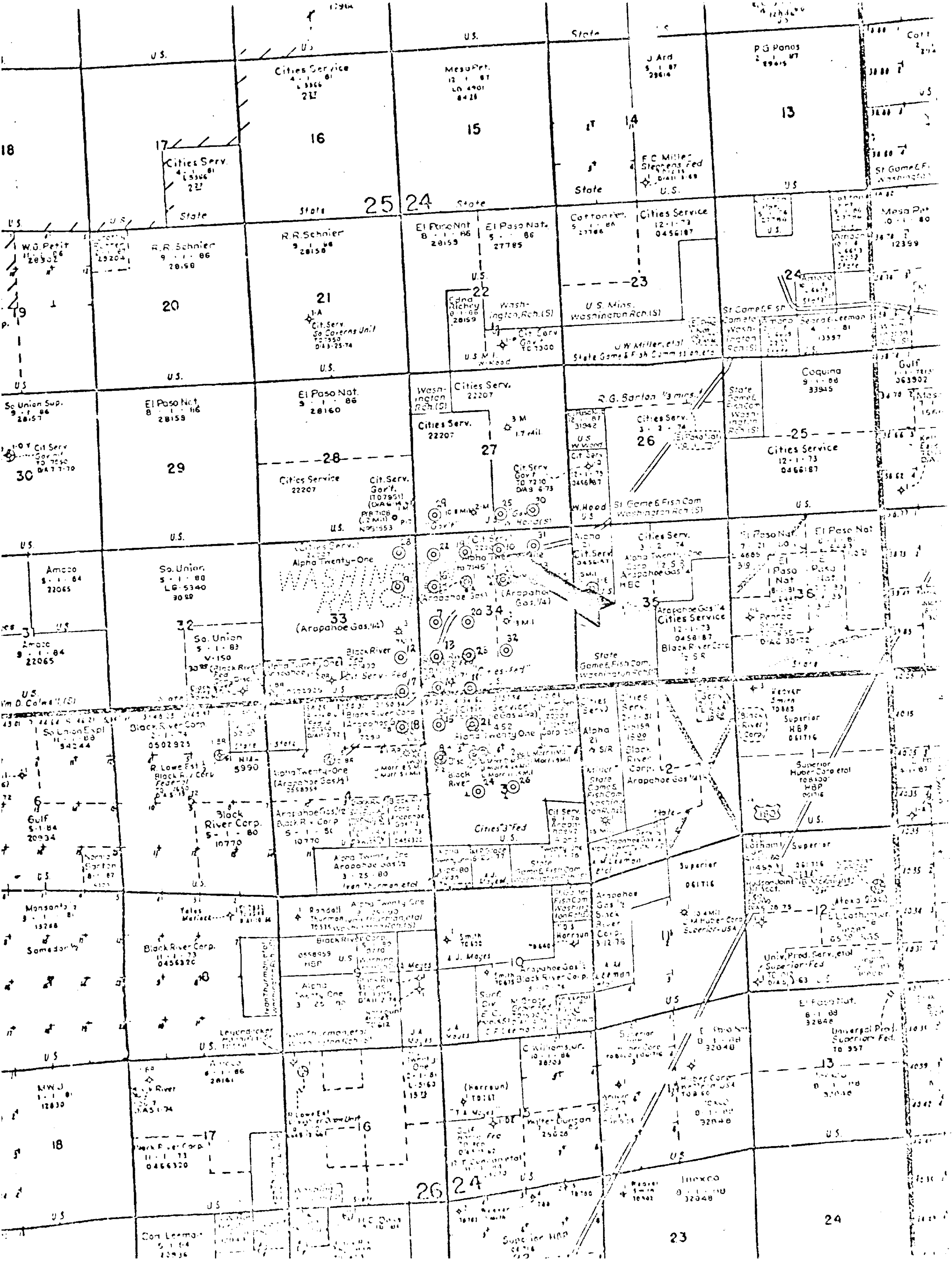
Registered Professional Engineer and/or Land Surveyor

Certificate No.
LS #1317

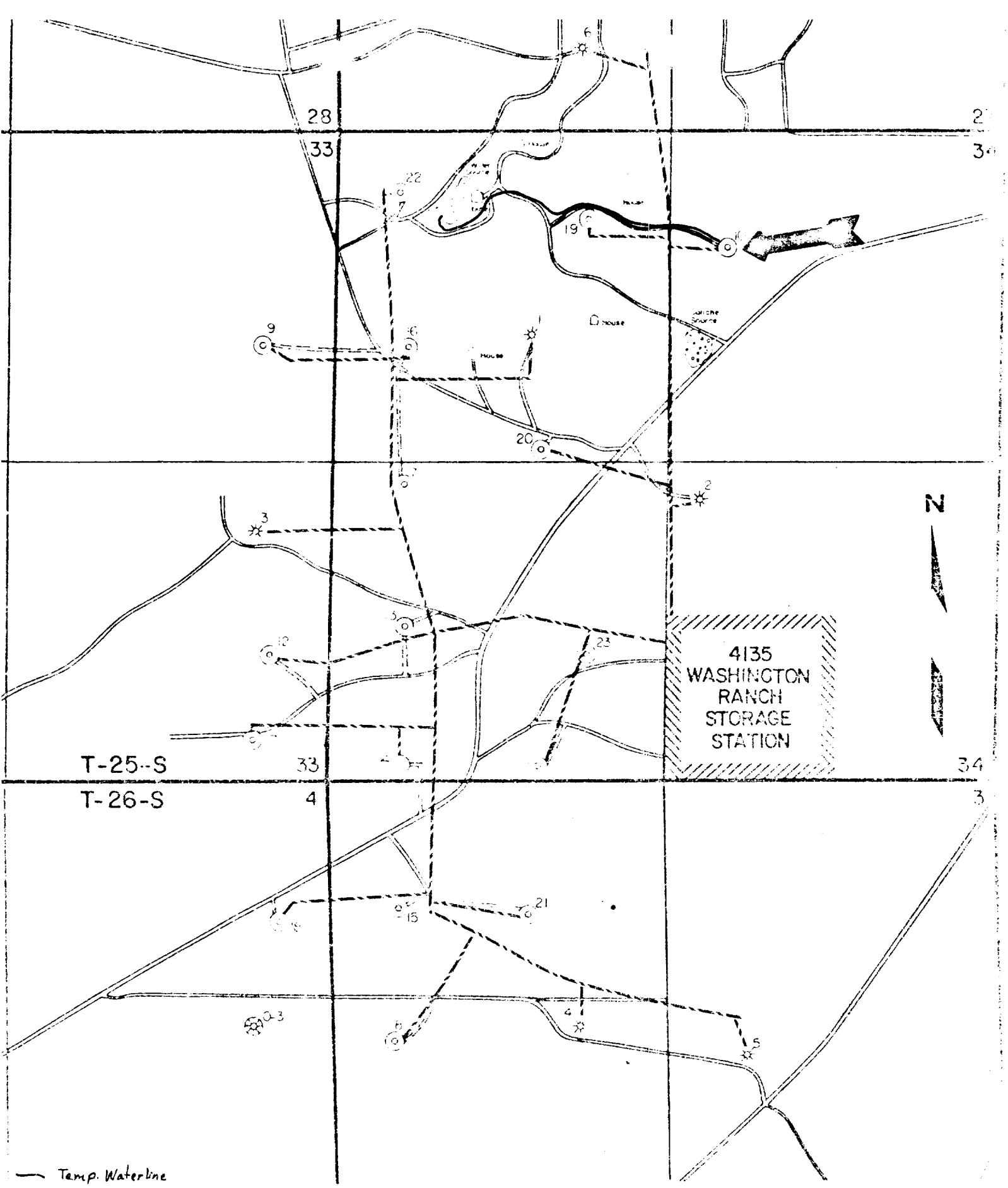


N

WASHINGTON RANCH STORAGE PROJECT
WELLSITE PLAT
WELL NO. WI Federal 10



Cities Service
16
15
14
13
J. Ard
P.G. Panos
Mesa Pet.
17
18
Cities Serv.
State
E.C. Miller
Stephens Fed
25
24
R.R. Schnier
El Paso Nat.
Cotton Pet.
Cities Service
W.D. Petit
19
20
21
22
23
24
Wash-ington Rch.(S)
U.S. Mins.
Washington Rch.(S)
St. Game & Fish
Coquina
Gulf
El Paso Nat.
Cities Serv.
R.G. Barton
Cities Service
So. Union Sup.
30
29
28
27
26
25
Cities Service
Cit. Serv. Gov't.
Alpha Twenty-One
WASHINGTON RANCH
33
34
35
36
(Arapahoe Gas 1/4)
Amoco
So. Union
Black River
32
3
St. Game & Fish Com.
Washington Rch.(S)
Cities Serv.
Black River Corp.
So. Union Expl.
Black River Corp.
Alpha Twenty-One
Superior
HBP
6
Gulf
5
4
2
1
Black River Corp.
Arapahoe Gas 1/4
Superior
El Paso Nat.
Monsanto
Yates
Randall Thurman
Alpha Twenty One
Smith
Black River Corp.
Arapahoe Gas
10
12
11
Univ. Prod. Serv. etal
El Paso Nat.
Universal Prod.
Superior Fed.
Amoco
C. Williams, Jr.
13
18
17
16
15
Walter Duncan
Huber Corp.
26
24
23
24
Inexco
Superior HBP
U.S.
State


28
33
T-25-S
T-26-S
4
34
3
N
4135
WASHINGTON
RANCH
STORAGE
STATION
Temp. Waterline
Existing Roads
Proposed Roads
Proposed Pipeline
Existing Wells
Proposed Wells

El Paso EXPLORATION COMPANY

1800 WILCO BUILDING
MIDLAND, TEXAS 79701

PHONE: 915-684-5701

MULTI-POINT SURFACE USE PLAN

Washington Ranch Storage Project W.I. Fed. 10

1. Existing Road

Please refer to Map No. 1 which shows the existing roads. New roads have been marked on this map. All existing and new roads will be properly maintained during the duration of this project.

2. Planned Access Roads

Please refer to Map No. 1. The grade of the access roads will be consistent with that of the local terrain. The road surface will not exceed twenty feet (20') in width. Upon completion of the project, the access road will be adequately drained to control soil erosion. Drainage facilities may include ditches, water bars, culverts or any other measure deemed necessary by trained company personnel to insure proper drainage. Gates and/or cattleguards will be installed if necessary.

3. Location of Existing Wells

Please refer to attached Map No. 1.

4. Location of Tank Batteries, Production Facilities, and Production Gathering and Service Lines

All existing pipelines and production facilities will be removed. It is anticipated that no existing surface facilities will be utilized in this project. Adequate clean up and restoration procedures will be followed. The location of gas project storage station is shown on Map 1.

5. Location and Type of Water Supply

Water for the proposed project will be obtained from John A. Ballard. Supply point is located in NW 1/4 of NW 1/4 Section 34,T25S, R24E. Water is to be pumped to location via temporary surface pipeline during drilling and completion operations. The pipeline will follow existing and proposed roadways or pipelines to minimize surface disturbance. Water line to be removed promptly after the well operations are completed. Temporary lines and water source location are shown on the attached Map No. 1.

6. Source of Construction Materials

Caliche for pad construction and road construction is to be supplied by John A. Ballard. Supply point is an existing point located in SW 1/4 of NE 1/4 Section 34, T25S, R24E. The location is indicated on the attached Map No. 1.

7. Methods of Handling Waste Materials

All garbage and trash material will be put into a burn pit shown on the attached Location Plat No. 1. This pit is to be fenced to prevent scattering by the wind. When clean-up operations are begun on the proposed project, the burn pit with its refuse will be buried to a depth of at least three feet (3'). A latrine, the location of which is also shown on Plat No. 1, will be provided for human waste. If large amounts of liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying any of these materials into the water-shed. No earthen pit will be located on natural drainages; all earthen pits will be so constructed and plastic lined as to prevent leakage from occurring, although no salt zones are anticipated. All drill cuttings and drill fluids will be disposed of in the reserve pits.

8. Ancillary Facilities

No camps or airstrips will be associated with this project.

9. Wellsite Layout

Please refer to the attached wellsite plat. Only minor leveling will be required for construction, no significant cuts or fills will be made.

10. Plans for Restoration of the Surface

After completion of the proposed project, the locaton will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeding operation will be performed during the time period set forth by the regulatory body. The location production equipment will be painted as designated by the responsible government agency.

11. Other Information

The terrain is slightly rolling hills. Deer and small rodents are occasionally seen on the proposed project site. Vegetation is sparse, mostly cactus, grass and greasewood.

12. Operator's Representatives

W. D. Dawson, G. D. Morris, or G. D. Mickey
1800 Wilco Building
Midland, Texas 79701
Phone: (915) 684-7575

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 El Paso Natural Gas Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

G. D. Morris
Area Drilling Engineer

EL PASO EXPLORATION COMPANY

1500 WILCO BUILDING
MIDLAND, TEXAS 79701
PHONE: 915-684-5701

OPERATIONS PLAN

Washington Ranch Storage Project W.I. Fed. #10

I. Location: 2209' FEL, 935' FNL
Section 34, T-25-S, R-24-E
Eddy County, New Mexico

Field: Washington Ranch Elevation: 3696' 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 - SFL @ SP & GR curves
BHC-Sonic

C. Coring: Full diameter core from 100 ft. above Morrow to 100 ft. below the Morrow Clastics interval. Approximately 6,520' to T.D.

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" OD hanger
Tbg Spool 11" 3000# W.P. X 7 1/16" 5000# W.P. with 6" X 2 7/8" OD hanger
Upper Run: 3 1/8" 5000# W.P. master valve and production valves.

V. Cementing:

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

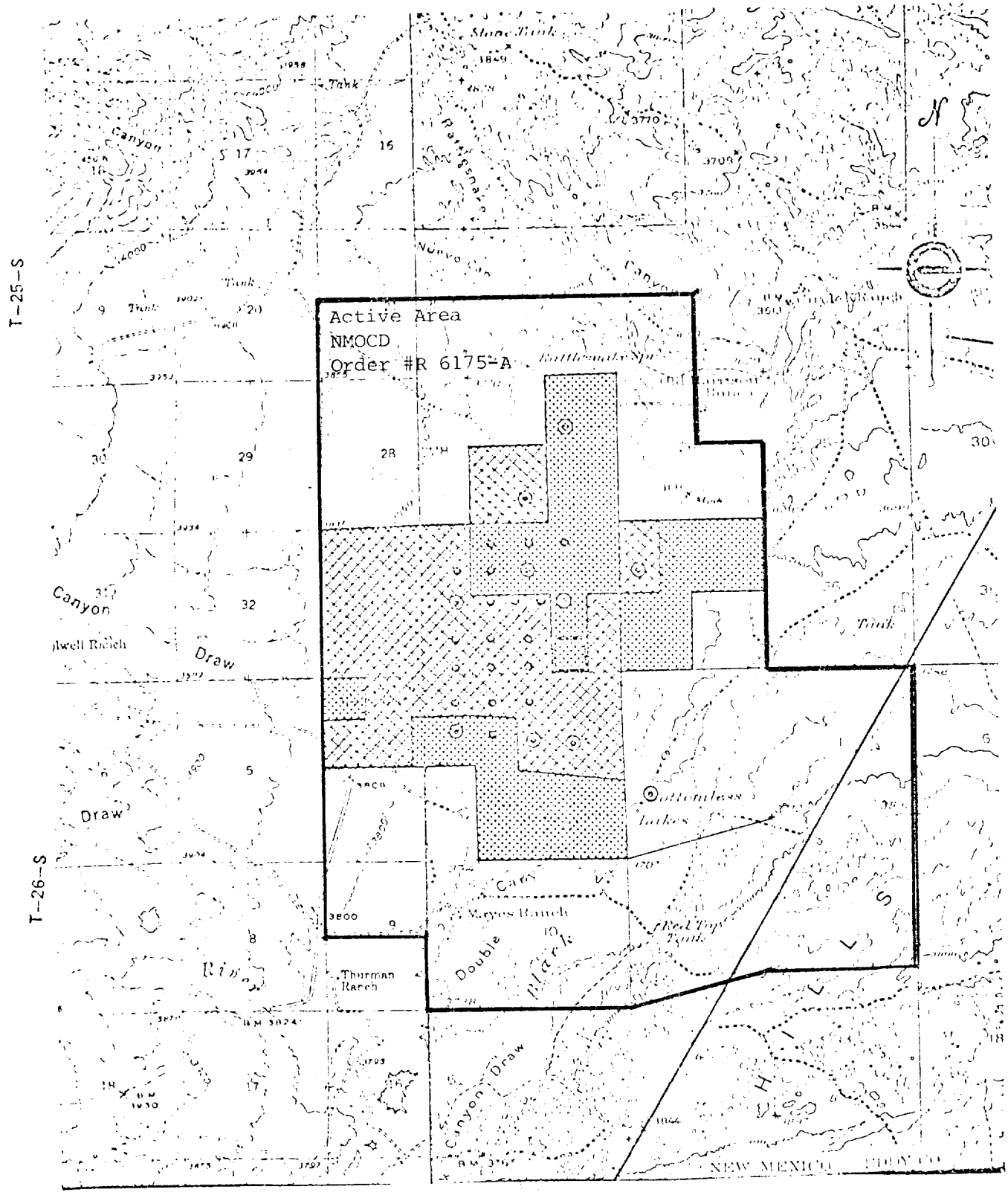
Cement in place with redi-mix aggregate cement (approx. 2 yds), WOC 12 hrs.

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

Use 480 sx Class "C", 2% $CaCl_2$ and 5 lbs Kolite and 1/4# Celloflate 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.



LEGEND

- U.S. LAND
- FEE LAND
- EXISTING WELL
- PROPOSED WELL
- PROPOSED PLANT SITE

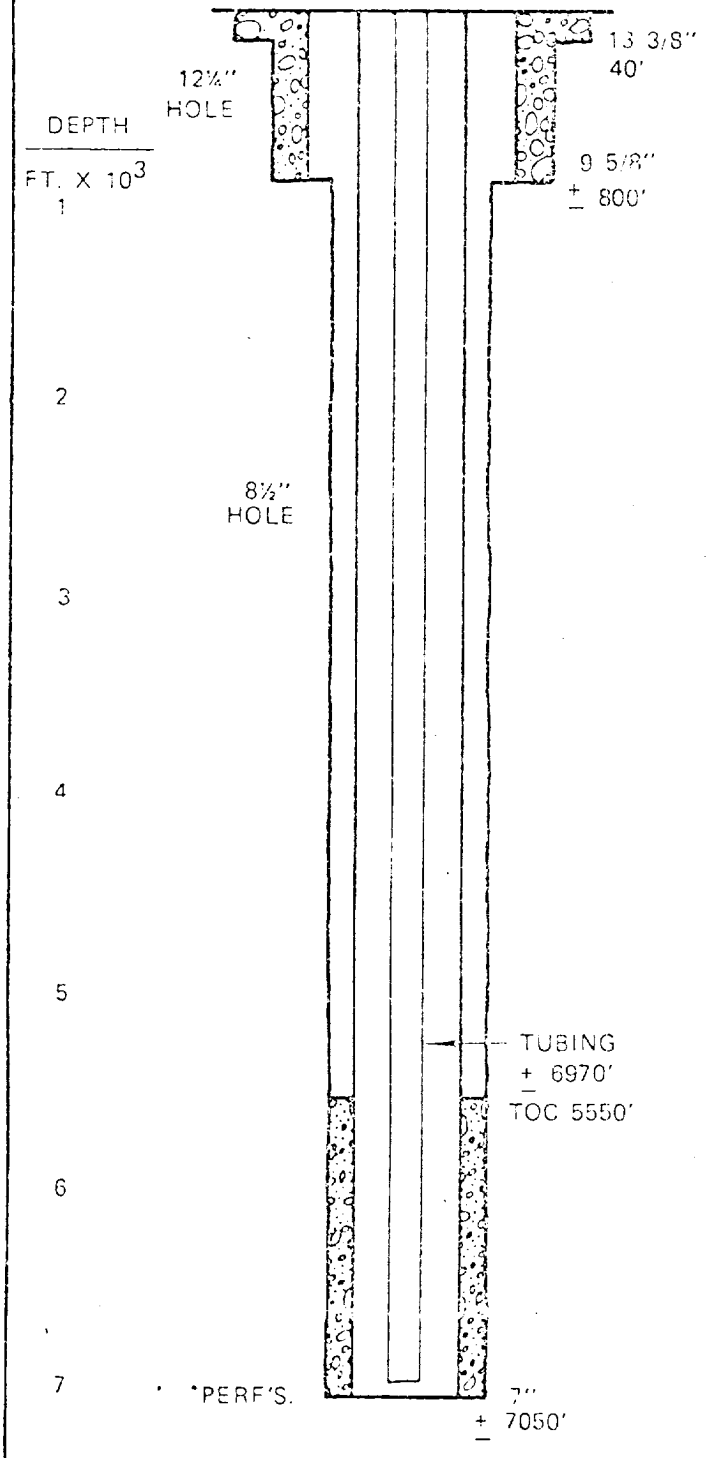
WASHINGTON RANCH STORAGE PROJECT

SCALE 1:62500

1 0 1 2 3 4 MILES

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

WASHINGTON RANCH
PROPOSED NEW I–W WELL

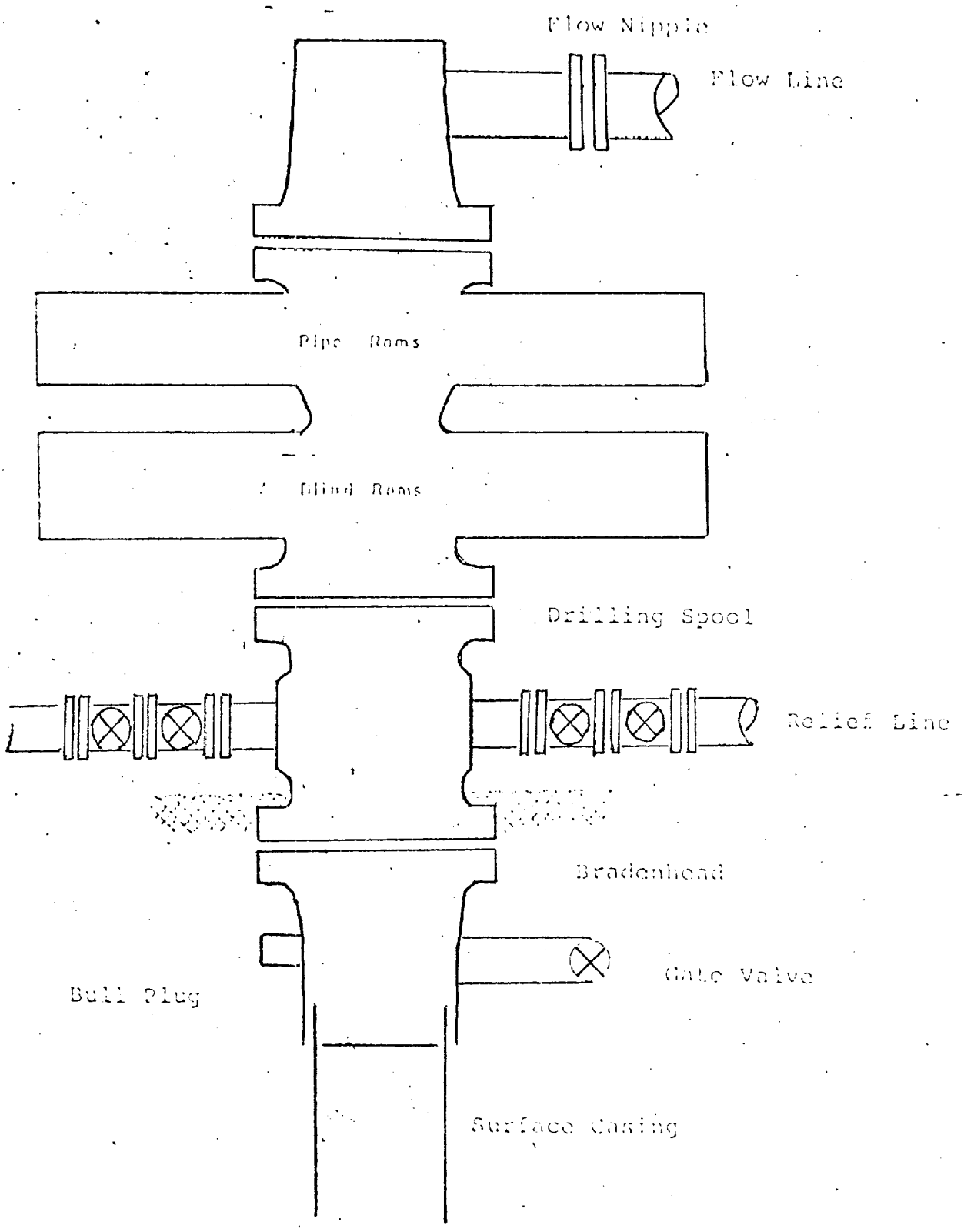


SIZE	GRADE	WT	BURST	COLLAPSE	DRIFT ID
13 3/8"	USED				
9 5/8"	H–40	32.3	2270	1400	8.845
7"	~~K–55~~ *	23	4360	3270	6.241
2 7/8"	J–55	6.5	7260	7680	2.441

* N-80

*AVG. M'D. PERF. 6970'

Typical B.O.P. Installation



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