

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

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

1714' FWL, 139' PSL, Section 34

At proposed prod. zone

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

Same

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

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

NA

16. NO. OF ACRES IN LEASE

NA

19. PROPOSED DEPTH

+ 7,050'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

NA

20. ROTARY OR CABLE TOOLS

Rotary

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

3731 GR

22. APPROX. DATE WORK WILL START*

July 1, 1981

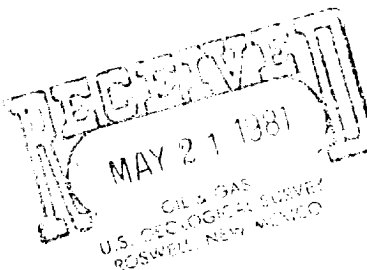
23.

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.
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 NMCCD Order No. R-6175-A.

Selectively perforate and treat the Morrow formation for gas storage.

A 3000 psi W.P. and 5000 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

Area Drilling Engineer

DATE

May 18, 1981

(This space for Federal or State office use)

PERMIT NO.

APPROVED

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

JUN 9 1981

FOR

JAMES A. GILLHAM
DISTRICT SUPERVISOR

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form 1-1-1
Supersedes C-120
Effective 1-1-80

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

Operator El Paso Natural Gas Co.		Lease Washington Ranch Storage Project		Well No. WI #11
Unit Letter N	Section 34	Township 25-S	Range 24-E	County Eddy County, New Mexico
Actual Well Location of Well:				
1714	feet to the West	139	feet from the	South
Ground Level Elev. 3731 Ft.	Producing Formation Morrow	Pool Washington Ranch	Dedicated Acreage NA	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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.

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

SECTION 34

1714'
WI #11
139'

CERTIFICATION

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

Name
G. D. Morris
Position
Area Drilling Engineer
Company
El Paso Natural Gas Co.
Date
May 18, 1981

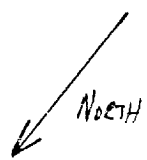
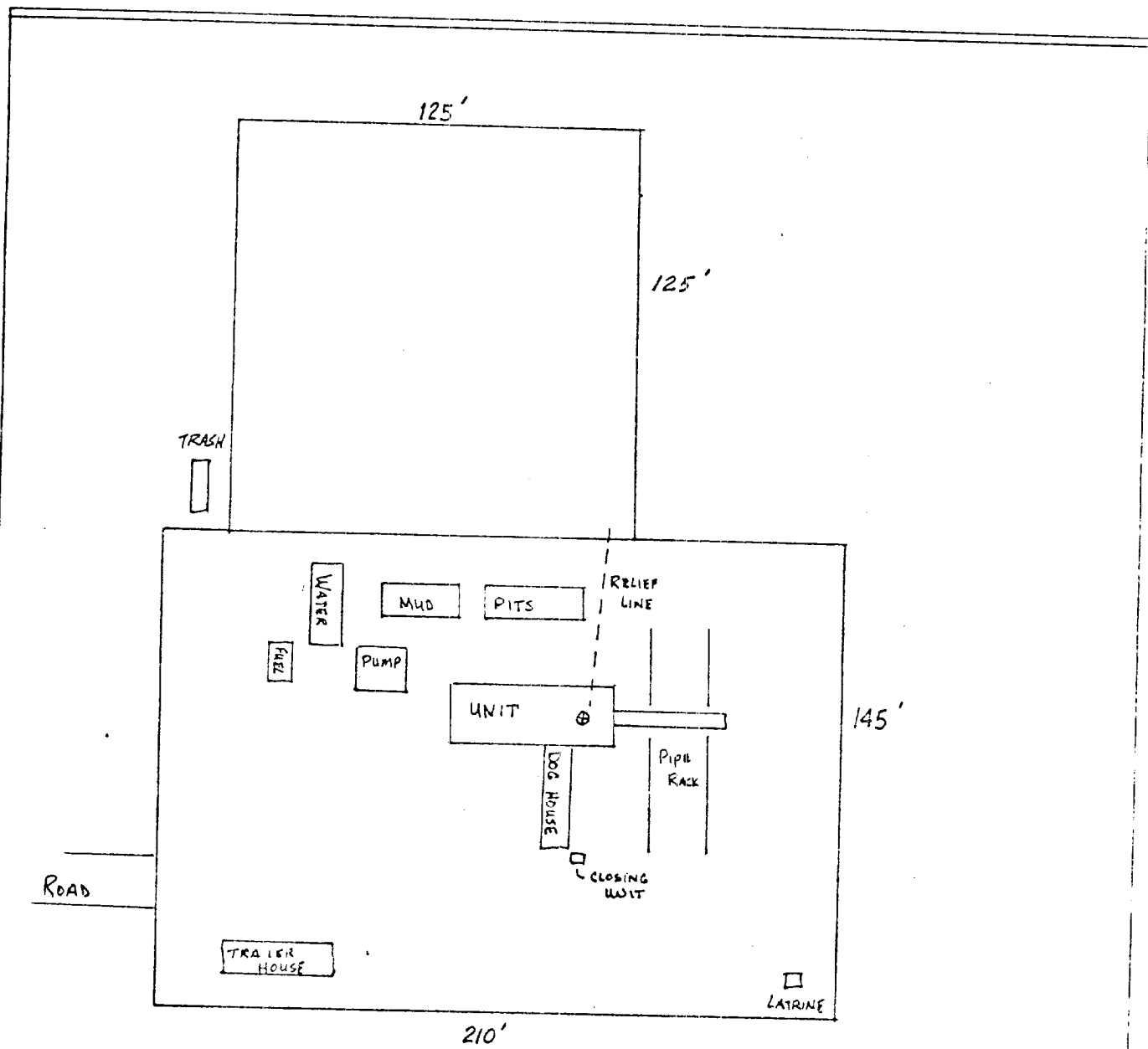
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
4-25-81

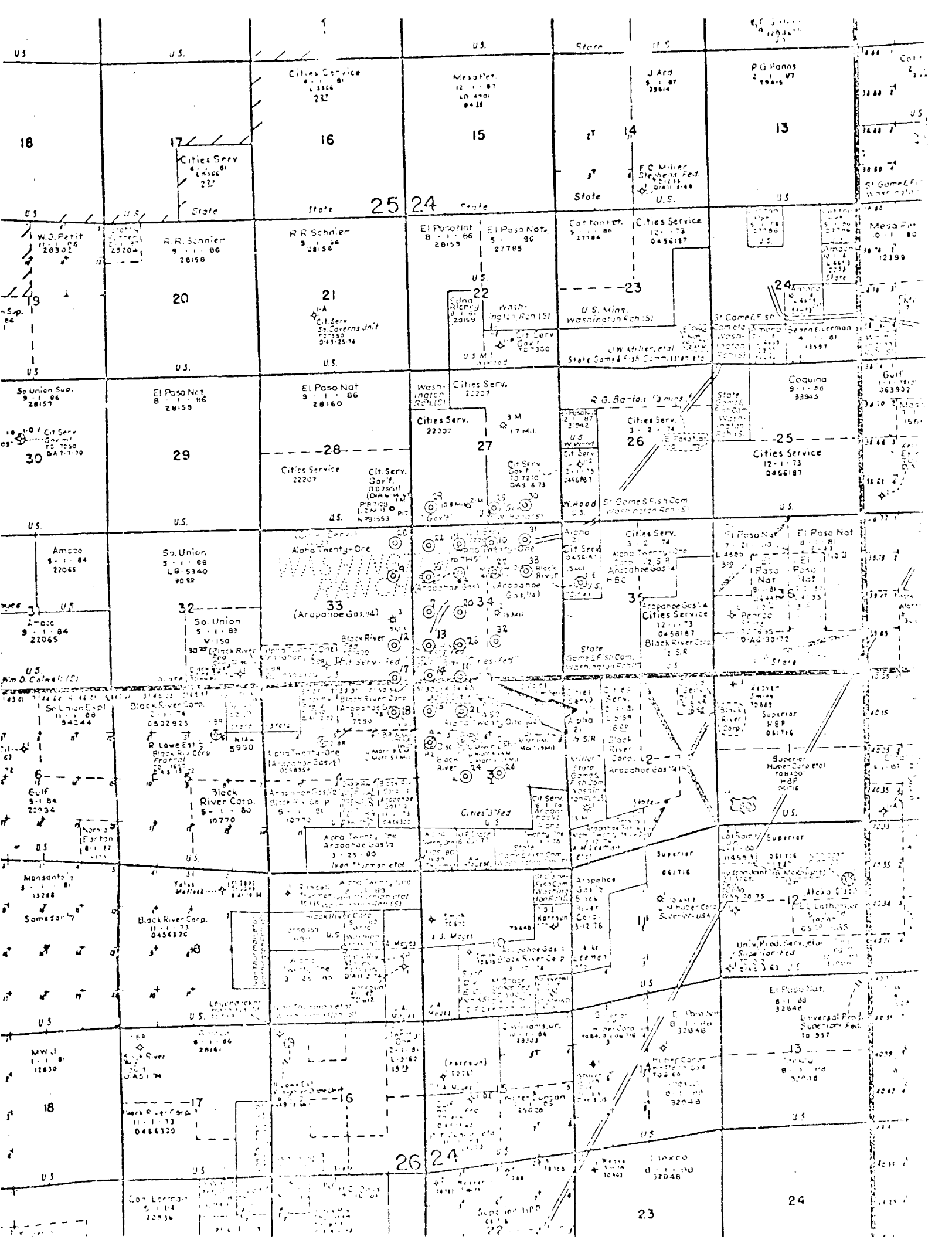
Registered Professional Engineer or
under State Surveyor

E. A. Montoya
LS #1317

0 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800 5000 5200 5400 5600 5800 6000 6200 6400 6600 6800 7000 7200 7400 7600 7800 8000 8200 8400 8600 8800 9000 9200 9400 9600 9800 10000



WASHINGTON RANCH STORAGE PROJECT
WELLSITE PLAT
WELL NO. 11



OPERATIONS PLAN

Washington Ranch Storage Project W.I. Fed. #11

I. Location: 1714' FWL, 139' FSL
Section 34, T-25-S, R-24-E
Eddy County, New Mexico

Field: Washington Ranch Elevation: 3731' 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	6,520
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% CaCl₂ and 5 lbs Kolite and 1/4# Cellulose 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.

MULTI-POINT SURFACE USE PLAN

Washington Ranch Storage Project W.I. Fed. #11

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 Patteries, 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 watershed. 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 location 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

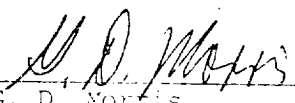
The terrain is slightly rolling hills. Deer and small rodents are occasionally seen on the proposed project site. Vegetation is sparse, mostly cactus, grass and greasewood.

12. Operator's Representatives

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

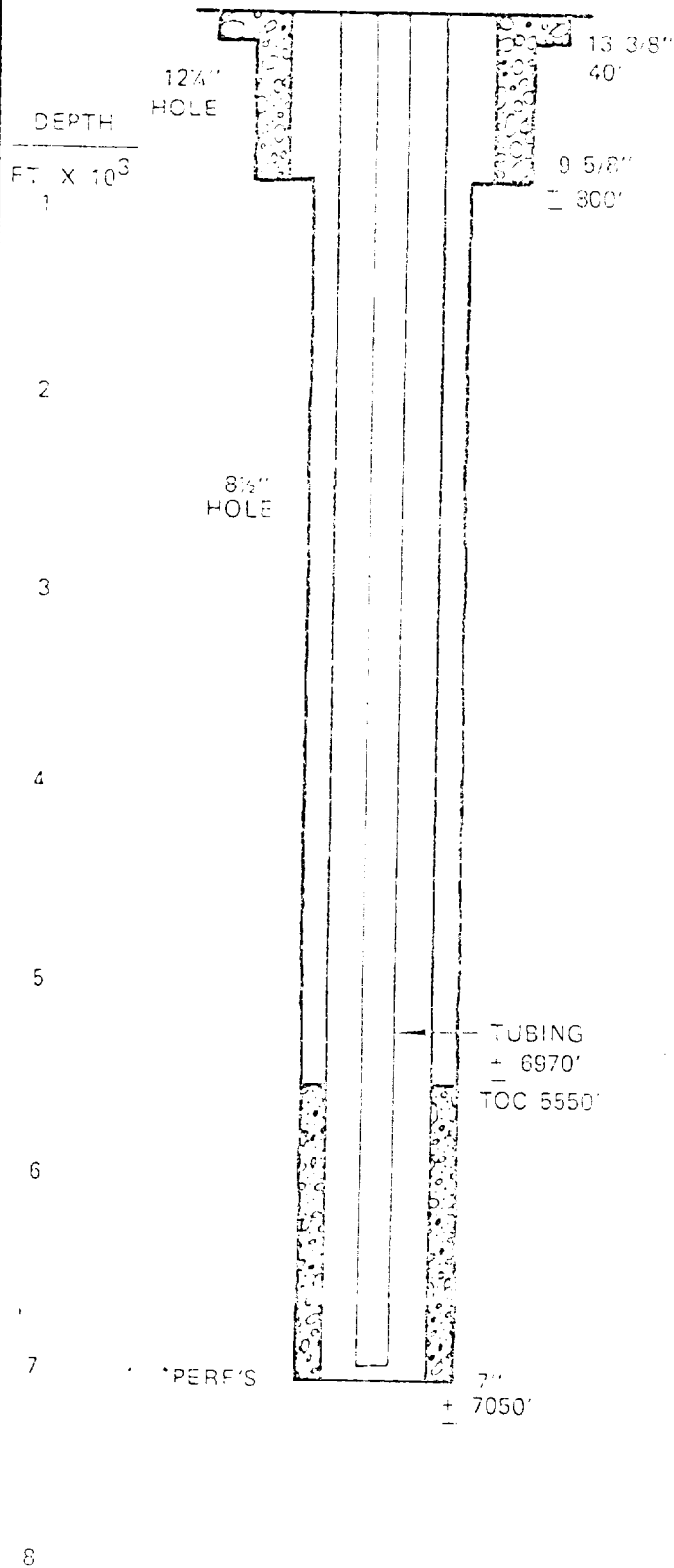
13. Certification

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

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	6.845
7"	K-55	23	4360	3270	6.241
2 7/8"	J-55	6.5	7260	7680	2.441
N-60					

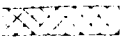
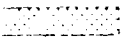
*AVG. MID. PERF. 6970'

T-25-S

T-26-S

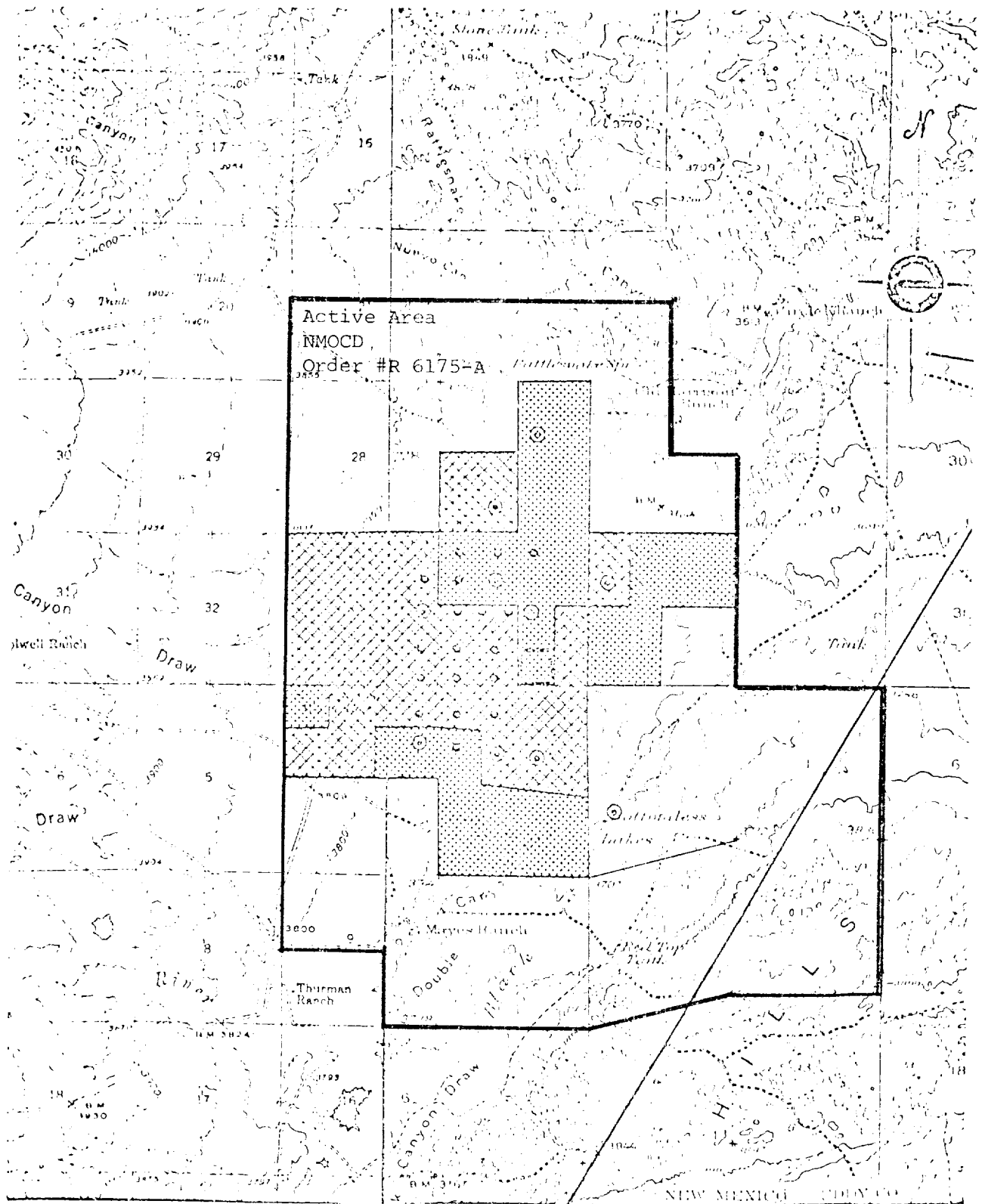
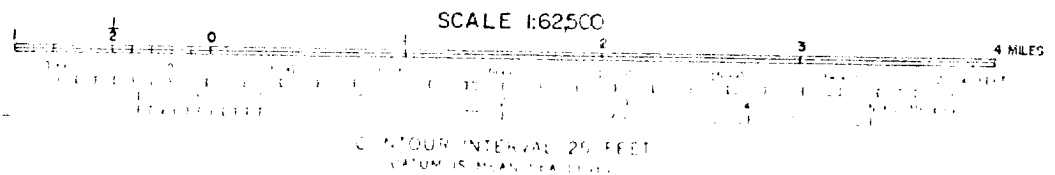
R-24-E

Active Area
NMOCD
Order #R 6175-A

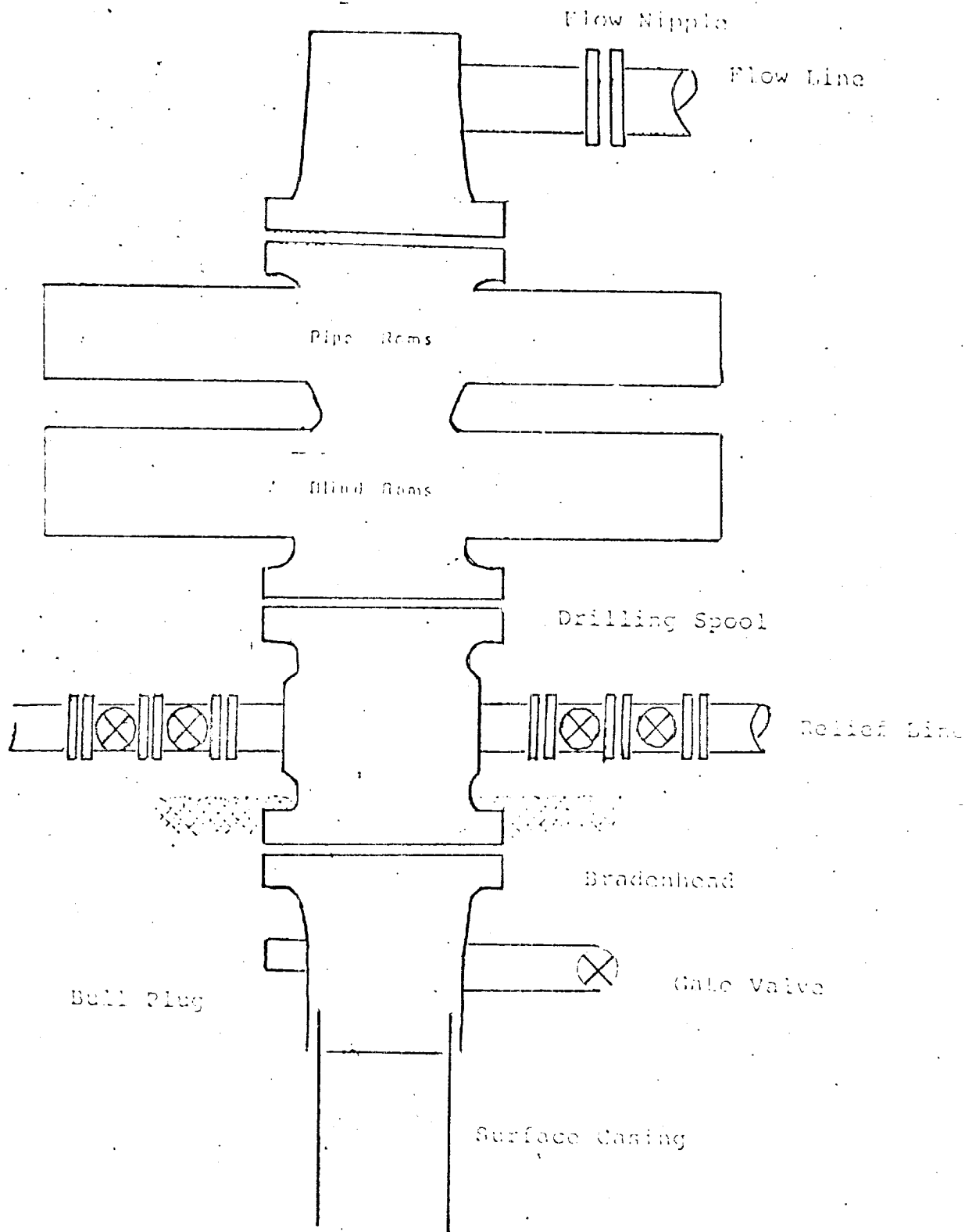
LEGEND
 U.S. LAND
 FEE LAND

 EXISTING WELL
 PROPOSED WELL
 PROPOSED PLANT SITE

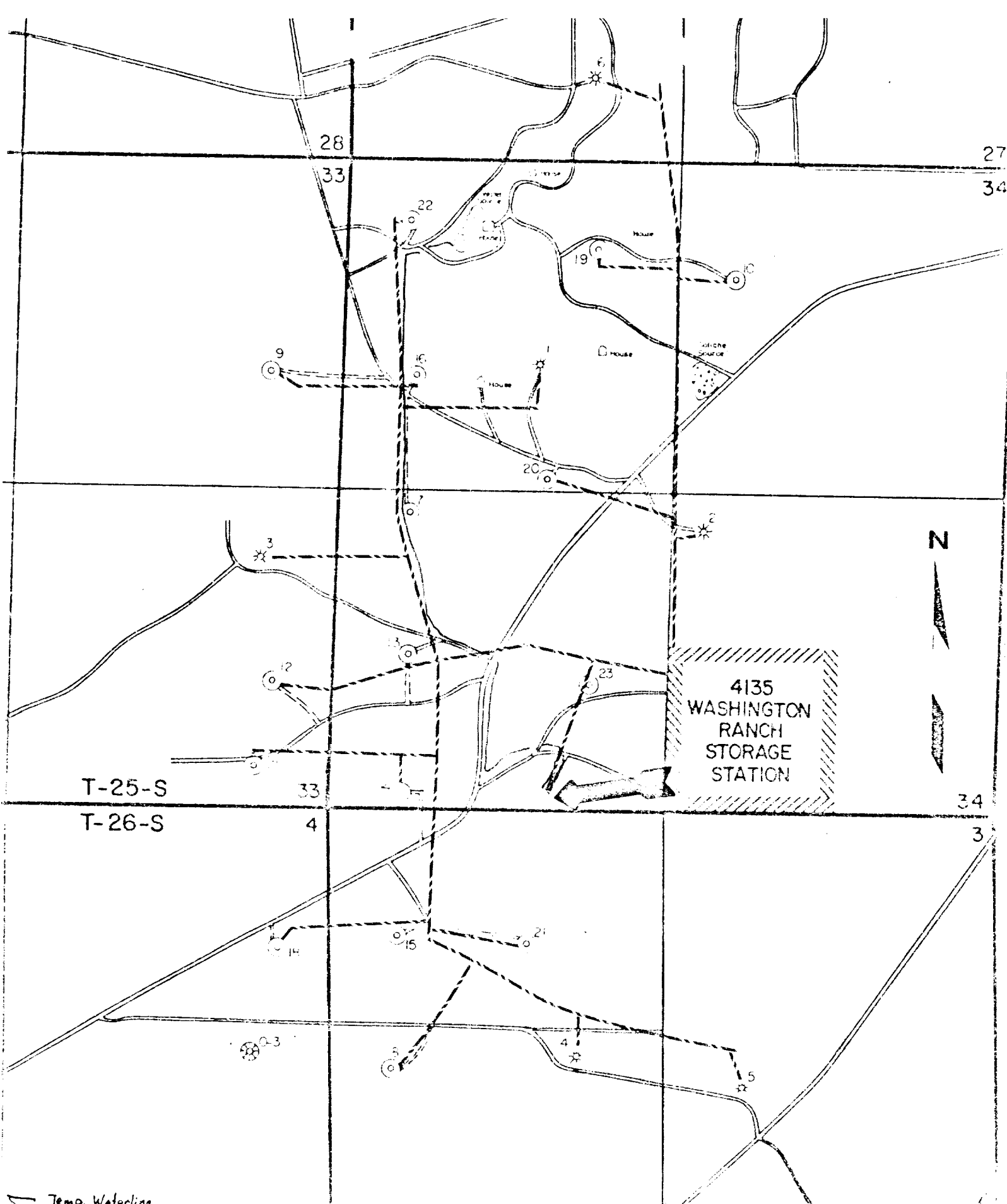
WASHINGTON RANCH STORAGE PROJECT



Typical B.O.P. Installation



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



T-25-S
T-26-S

4135
WASHINGTON
RANCH
STORAGE
STATION

- Temp. Waterline
- Existing Roads
- Proposed Roads
- Proposed Pipeline
- Existing Wells

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COUNTY EDDY FIELD Washington Ranch STATE NM
 OPR EL PASO NATURAL GAS CO. API 30-015-23828
 NO 11 LEASE Washington Ranch Gas Storage / MAP
Sec 34, T25S, R24E /Project "WI Federal COORD
139 FSL, 1714 FWL of Sec 8-2-43 NM
10 mi SW/White City SPD 11-29-81 CMP 2-8-82

CSC 9 5/8-804-500 sx 7-6992-500 sx 2 7/8-6945	WELL CLASS: INIT IW FIN DG LSE. CODE			
	FORMATION	DATUM	FORMATION	DATUM
	7000 (MRRW)		PBD	6957

IP (Morrow) Perfs 6760-6930 F 530 MCFGPD. Pot based on 24
 hr test thru 32/64 chk. GOR Dry; gty (Gas) (NR); CP 87; TP 73

PLC: El Paso Natural Gas Co.

CONTR Young OPR STEV 3731 GL, 3743 KB sub-s 11

F.R. 6-8-81
 PD 7050 RT (Morrow)
 8-14-82 AMEND WELL NUMBER & ADD LEASE DESIGNATION:
 Formerly WI-11
 12-1-81 Drlg 820
 12-8-81 Drlg 4545
 12-15-81 Crg @ 6775
 12-28-81 TD 7000; WOCU
 Cores (NA)
 2-10-82 TD 7000; PBD 6957; Tstg
 Perf (Morrow) 6760-90, 6821-30, 6870-79, 6893-
 6909, 6922-30 w/4 SPF
 Natural
 Flwd @ 246 MCFGPD in 2 hrs thru 15/64 chk
 (6760-6930)
 8-9-82 TD 7000; PBD 6957; Complete
 LOG TOPS: Delaware Sand 530, Cherry Canyon
 8-2-43 NM

EDDY

EL PASO NATURAL GAS CO. 11 Washington
Gas Storage for joint
"WI" Federal
Sec 30, 1255, 242

NM

Page #2

8-9-82

Continued

1440, Bone Spring 3615, W. frame 5548, Strawn
5722, Atoka 5994, Morrow and 6564, Morrow
Clastics 6688

LOGS RUN: CNL, FIC, BAC, I, CBND, PDC, TMPL,
GRL

Will be used as Gas Storage Well

8-14-82

COMPLETION ISSUED

-2-4: NM

C 30-015-70258-81