Form 9-331 C
(May 1963)

NM OIL ...
Drawer DD
Artesia, N... 8210

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42 R1425

30-015-24051

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: USA NM 22907

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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

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

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Washington Ranch Storage Project WI

2. NAME OF OPERATOR: El Paso Natural Gas Company ✓

RECEIVED

9. WELL NO.: ~~WI Federal~~ 19

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

JAN 11 1982

10. FIELD AND POOL, OR WILDCAT: Washington Ranch Morrow

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 687 FNL 2017 FWL

O. C. D.
ARTESIA, OFFICE

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 34, T25S, R24E
Unit C

At proposed prod. zone: Same

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: New Mexico

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.): 3712 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.
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 300 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 preventer program, if any.

24.

SIGNED A. D. Mulay TITLE Drilling Engineer DATE December 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 1-1-65

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

Operator	Lease	Well No.
El Paso Natural Gas Co.	Washington Ranch Storage Project WF	~~WI#~~19

Unit Letter	Section	Township	Range	County
C	34	25-S	24-E	West

Actual Footage Location of Well:
687 feet from the North line and 2017 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3712	Morrow	Washington Ranch Morrow	N/A Acres

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

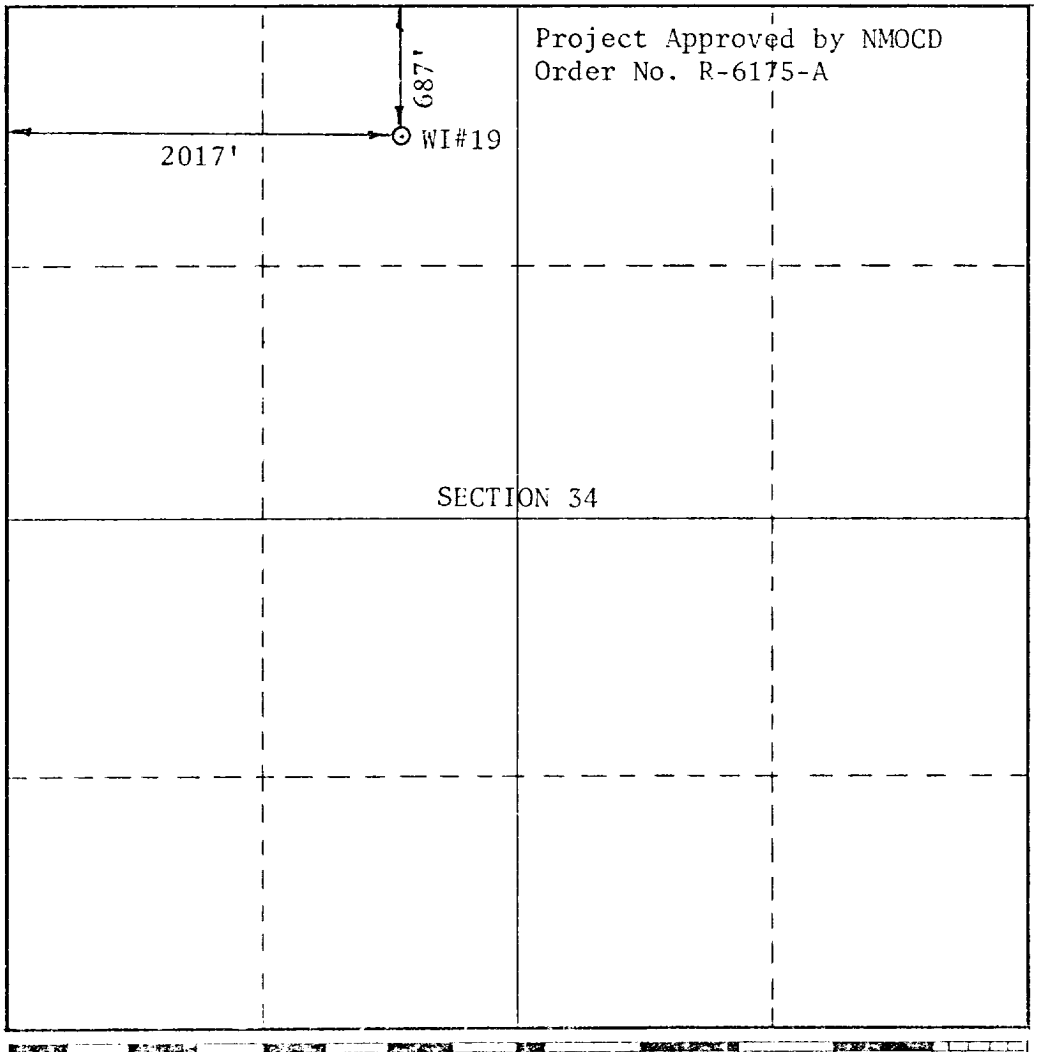
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). NA

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.

Name: G. D. Mickey

Position: Drilling Engineer

Company: El Paso Natural Gas Co.

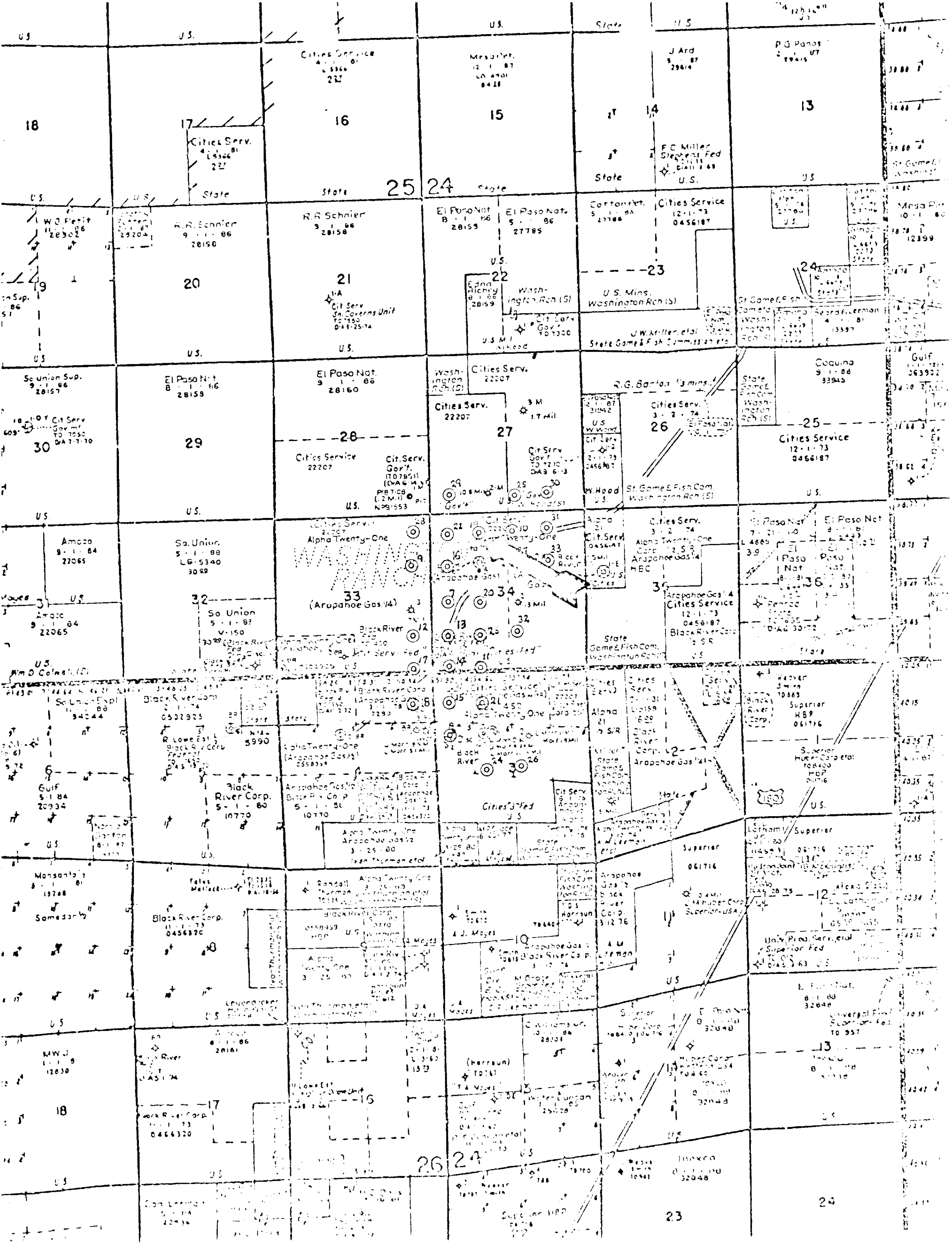
Date: December 4, 1981

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.

Date Surveyed: 4-22-81

Registered Professional Engineer and/or Land Surveyor

Certificate No.: LS #1317



Cities Service
Mesa Pet.
J. Ard
P.G. Panos
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13
Cities Serv.
F.C. Miller
Stephens Fed
State
U.S.
25
24
W.D. Petit
R.R. Schnier
El Paso Nat.
Cities Service
Mesa Pet.
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Cit Serv.
So. Covens Unit
Wash-ington Rch (S)
U.S. Mins.
Washington Rch (S)
State Game & Fish Commission etal
So. Union Sup.
El Paso Nat.
Cities Serv.
Coquina
Gulf
R.G. Barton
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Cities Service
Cit. Serv. Gov't.
St. Game & Fish Com.
Washington Rch (S)
Amoco
So. Union
Alpha Twenty-One
WASHINGTON RANCH
(Arapahoe Gas 1/4)
33
34
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36
El Paso Nat
Black River
Cities Service
Black River Corp.
State Game & Fish Com.
Washington Rch (S)
So. Union Expl
Black River Corp.
Alpha Twenty-One
Cities Service
Alpha Twenty One
Superior
Gulf
Black River Corp.
Arapahoe Gas 1/4
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Monsanto
Somedan
Black River Corp.
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Arapahoe Gas
Black River Corp.
Superior
El Paso Nat.
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Inexco
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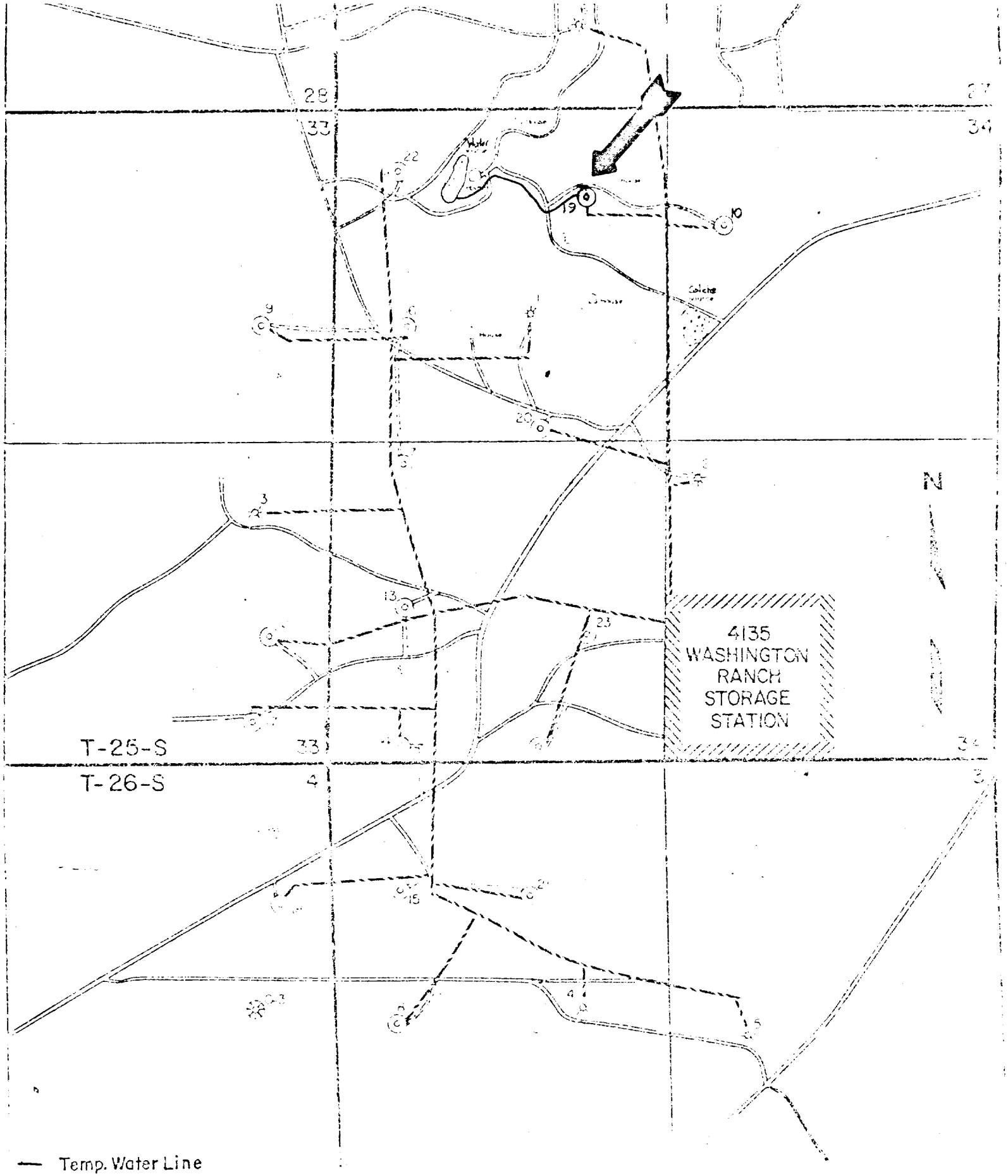

28
33
34
T-25-S
T-26-S
4135
WASHINGTON
RANCH
STORAGE
STATION
N
Temp. Water Line
Existing Roads
Proposed Roads
Proposed Pipeline
Existing Wells
Proposed Wells

El Paso EXPLORATION COMPANY

1800 WILCO BUILDING
MIDLAND, TEXAS 79701

PHONE: 915-684-5701

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 - SFL @ 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" 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.

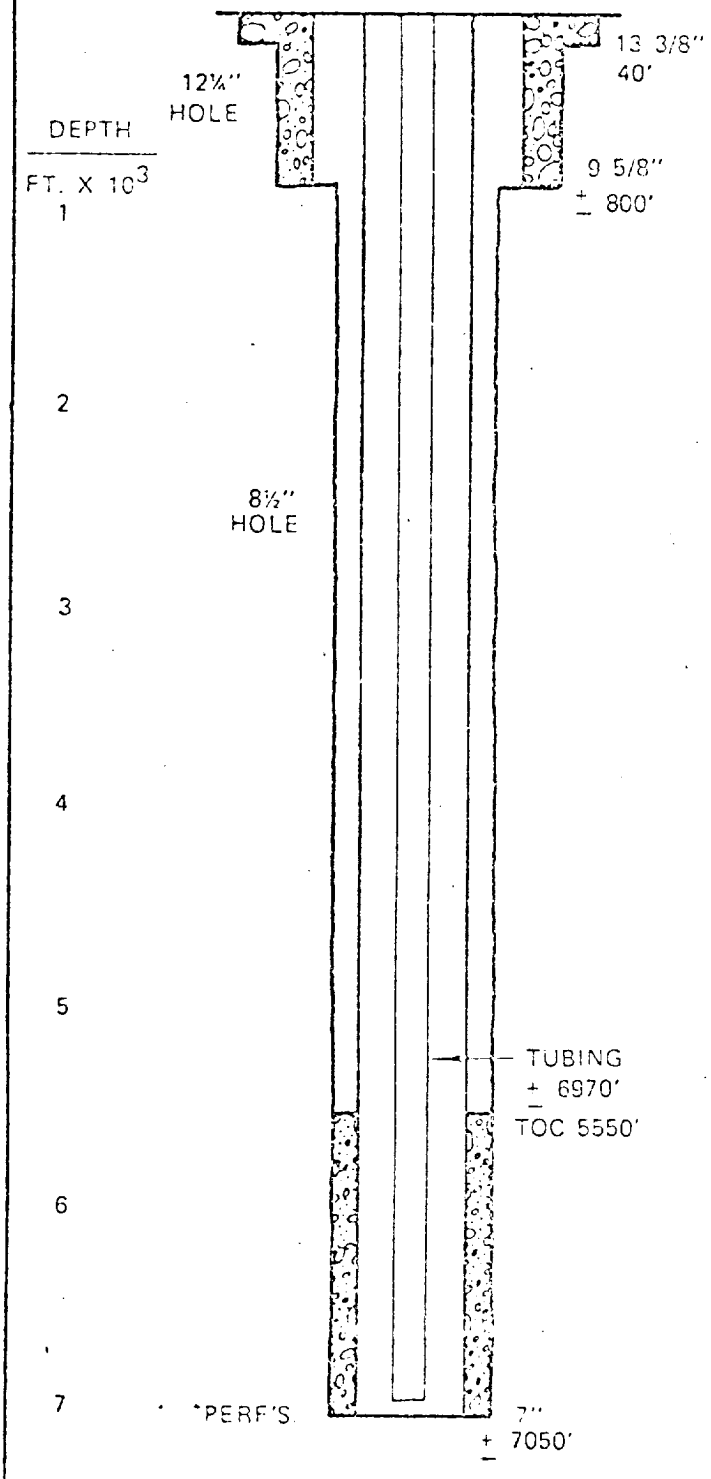
B. Surface Casing (12 1/4" X 9 5/8"):

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.

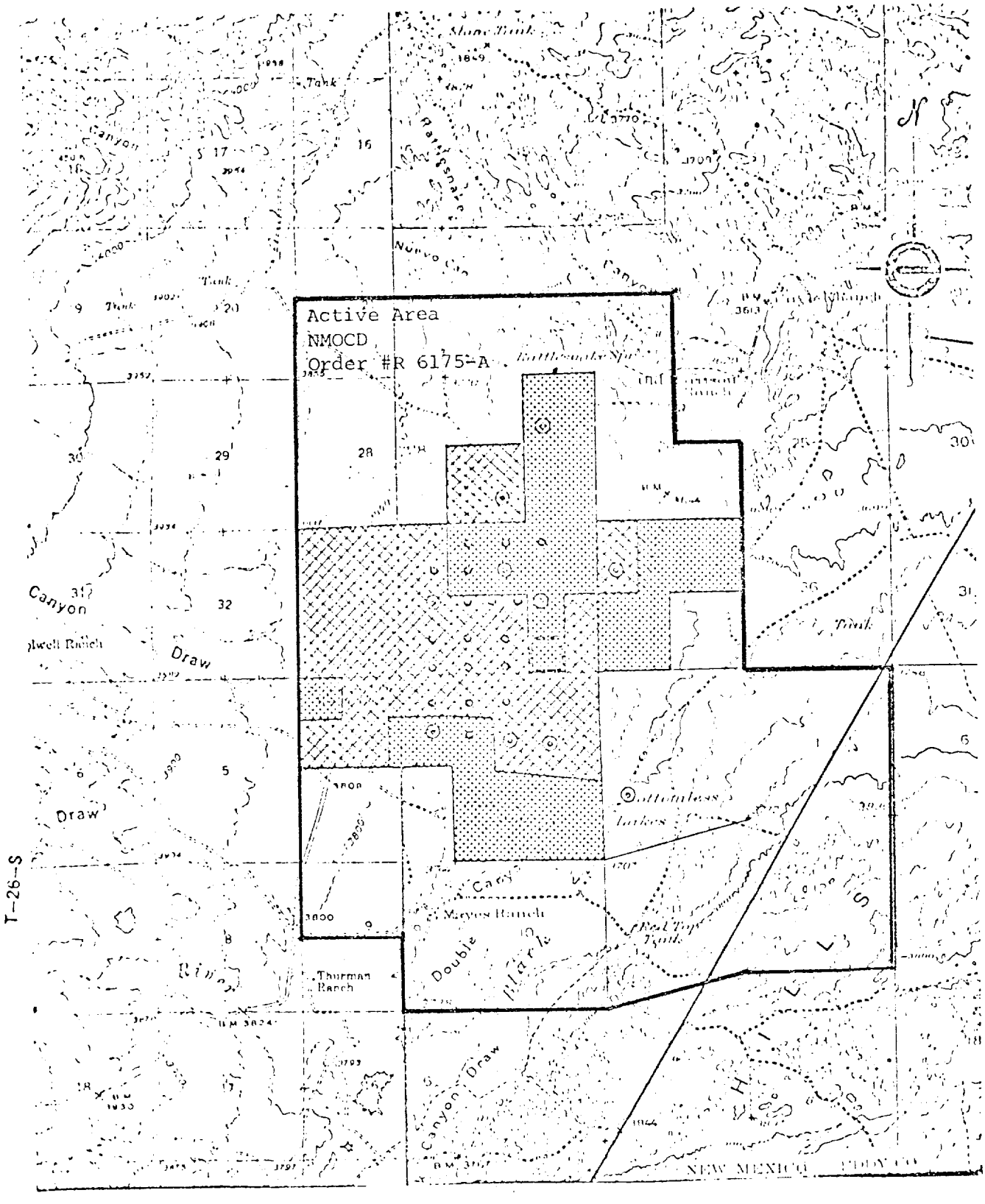
WASHINGTON RANCH
PROPOSED NEW I–W WELL



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. MID PERF. 6970'



LEGEND

U.S. LAND

FEE LAND

EXISTING WELL

PROPOSED WELL

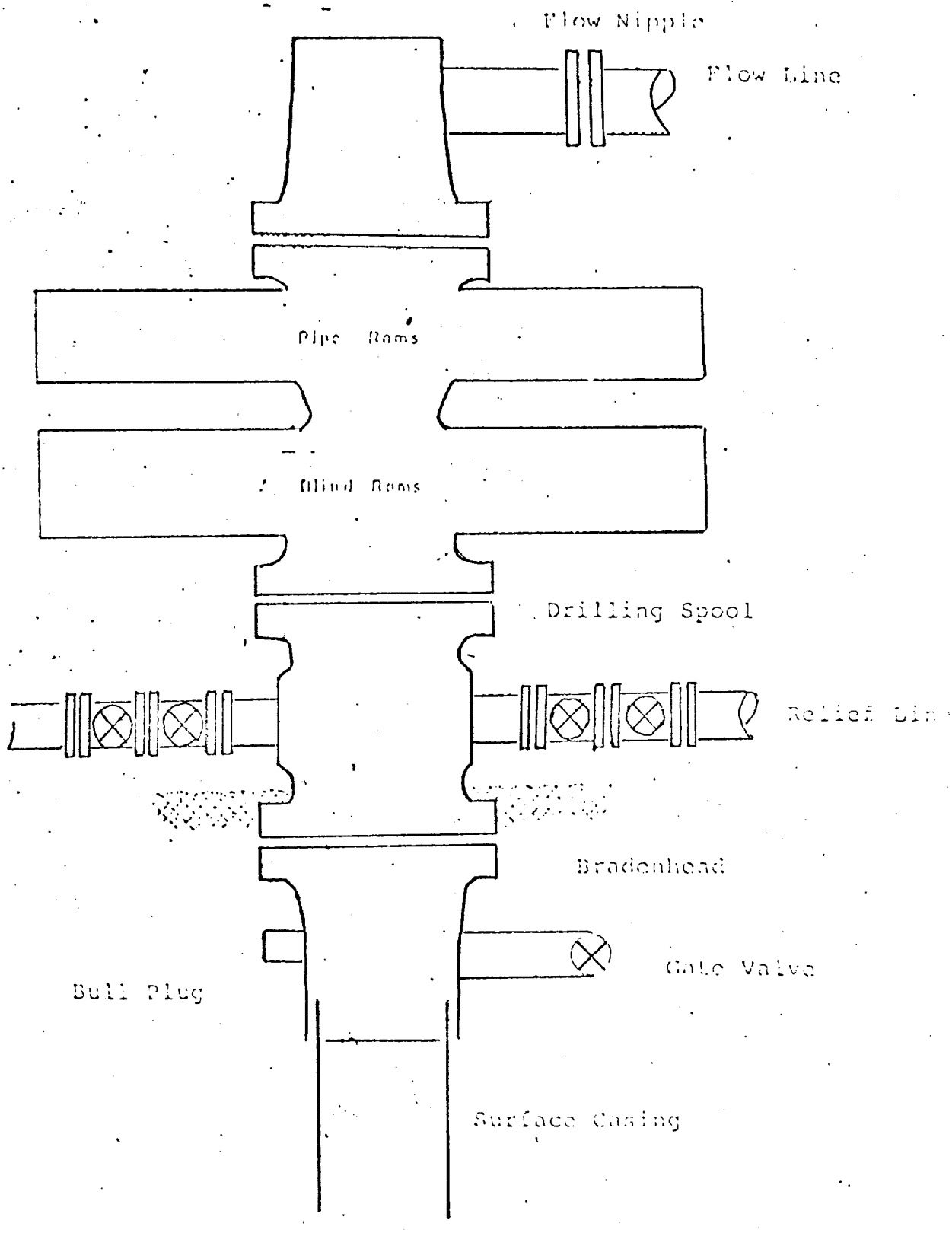
PROPOSED PLANT SITE

WASHINGTON RANCH STORAGE PROJECT

SCALE 1:62500

CONTOUR INTERVAL 25 FEET

Typical B.O.P. Installation



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