

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

30-039-21437

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  
 Northwest Pipeline Corporation

3. ADDRESS OF OPERATOR  
 P.O. Box 90 - Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)  
 At surface  
 790' FNL & 1850' FEL

At proposed prod. zone  
 As above

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

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)  
 790'

16. NO. OF ACRES IN LEASE  
 NA

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 160.22 160.22

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

19. PROPOSED DEPTH  
 3791'

20. ROTARY OR CABLE TOOLS  
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 6663' GR

22. APPROX. DATE WORK WILL START\*  
 Sept. 15, 1977

5. LEASE DESIGNATION AND SERIAL NO.  
 SF 078410

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
 San Juan 29-5 Unit

8. FARM OR LEASE NAME  
 San Juan 29-5 Unit

9. WELL NO.  
 78

10. FIELD AND POOL, OR WILDCAT  
 ULLONEC  
 Blendo-Pictured Cliffs

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 Sec. 6, T29N, R5W

12. COUNTY OR PARISH 13. STATE  
 Rio Arriba New Mexico

23. PROPOSED CASING AND CEMENTING PROGRAM

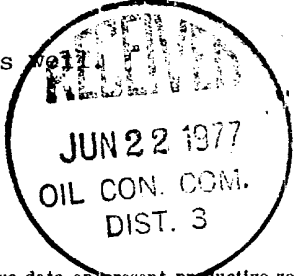
| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|----------------|-----------------|---------------|--------------------|
| 12 1/4"      | 8 5/8"         | 24# K-55        | 120'          | 85 sks.            |
| 6 3/4"       | 2 7/8"         | 6.4# K-55       | 3791'         | 250 sks.           |

Selectively perforate and stimulate the Pictured Cliffs formation.

A BOP will be installed after the surface casing has been run and cemented. All subsequent operations will be conducted through the BOP.

The NE/4 of section 6 is dedicated to this well.

Gas is dedicated.



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 J.P. Slattery TITLE Drilling Engineer DATE June 17, 1977  
 (This space for Federal or State office use)

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

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY:

JPS/ch

*St*  
 \*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.

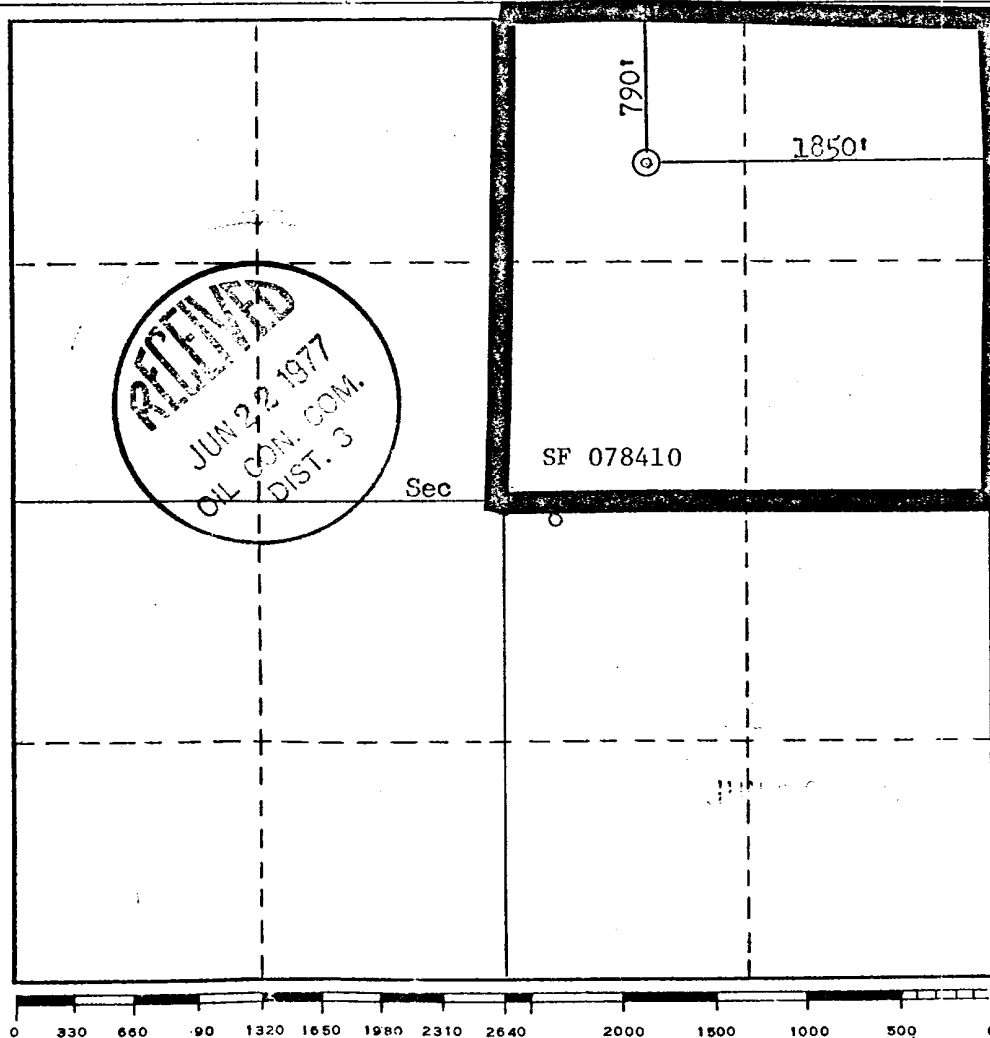
|   |  |   |                                    |                      |                |
|---|--|---|------------------------------------|----------------------|----------------|
| Operator<br>Northwest Pipeline Corporation  |  |   | Lease<br>San Juan 29-5 Unit        |                      | Well No.<br>78 |
| Unit Letter<br>B  | Section<br>6                           | Township<br>29N                             | Range<br>5W                        | County<br>Rio Arriba |                |
| Actual Footage Location of Well:<br>790 feet from the North line and 1850 feet from the East line |  |   |                                    |                      |                |
| Ground Level Elev.<br>6663  | Producing Formation<br>Pictured Cliffs | Pool<br><del>Blanco</del> - Pictured Cliffs | Dedicated Acreage:<br>160.22 Acres |                      | 160.66         |

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 owners 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. (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.

*J.P. Slattery*  
Name J.P. Slattery

Position  
Drilling Engineer

Company  
Northwest Pipeline

Date  
June 13, 1977

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  
March 19, 1977

Registered Professional Engineer and/or Land Surveyor  
*Fred B. Kern Jr.*  
Fred B. Kern Jr.

Certificate No.  
3950

OPERATIONS PLAN

Well Name: San Juan 29-5 Unit #78

I. LOCATION: NW/4 NE/4 Sec. 6, T29N, R5W

LEASE NUMBER: SF 078410

FIELD: Blanco - Pictured Cliffs

ELEVATION: 6663' GR

II. GEOLOGY:

A. Formation Tops:

|                  |       |              |       |
|------------------|-------|--------------|-------|
| Ojo Alamo:       | 2756' | Total Depth: | 3791' |
| Kirtland:        | 2919' |              |       |
| Fruitland:       | 3321' |              |       |
| Pictured Cliffs: | 3641' |              |       |

B. Logging Program: I-ES and Density at T.D.

C. Coring Program: None

D. Testing Program: None

III. DRILLING:

A. Anticipated starting date and duration of activities: Sept. 15, 1977

B. BOP: Blind rams and pipe rams, 10', 900 series, double gate, rated at 3000 PSI.

C. Mud Program:

a) Spud Mud: Water, lime and gel.

b) Surface to 3200'

|             |                |
|-------------|----------------|
| Starloss:   | CMC mud        |
| Viscosity:  | 25-30 sec/qt.  |
| Weight:     | 8.9-9.0 #/gal. |
| Water Loss: | 7-12 cc        |
| Ph:         | 8.5-9.5        |

c) From: 3200' To: 3791'

|             |                |
|-------------|----------------|
| Starloss:   | CMC Hy-gel mud |
| Viscosity:  | 38-80 sec/qt.  |
| Weight:     | 9.0-9.5 #/gal. |
| Water Loss: | 6-8 cc         |
| Ph:         | 8.5-9.5        |

IV. MATERIALS:

A. Casing Program:

| <u>Hole Size</u> | <u>Depth O.H.</u> | <u>Casing Size</u> | <u>Wt. &amp; Grade</u> | <u>Depth Set</u> |
|------------------|-------------------|--------------------|------------------------|------------------|
| 12 1/4"          | 120'              | 8 5/8"             | 24# K-55               | 120'             |
| 6 3/4"           | 3791'             | 2 7/8"             | 6.4# K-55              | 3791'            |

V. CEMENTING:

A. Surface Casing 8 5/8" - Use 85 sacks Class "B" cement with 1/4# flocele/sk and 3% calcium chloride (100% excess to circulate). WOC 12 hours. Test surface csg. to 600 PSI for 30 minutes.

V. Cementing con't.

- B. Production Casing 2 7/8" - Use 180 sacks 65/35 poz with 1/4 cu. ft. fine gilsonite/cu. ft. Slurry and tail in with 50 sacks of Class "B" cement with 2% calcium chloride. WOC 24 hours. Run temperature survey after 12 hours.

JPS/ch

NORTHWEST PIPELINE CORPORATION  
MULTI - POINT SURFACE USE PLAN  
for the San Juan 29-5 Unit  
Well Number 78

1. Existing Raods: See attached topographic map. All existing raods used, shall be maintained in a serviceable condition at all times during the drilling operation.
2. Planned Access Roads: See attached topographic map. Maximum grade is approximately 1%. The road surface will not exceed twenty feet in width. Upon completion of drilling operations the access road will be adequately drained to control runoff and soil erosion. Drainage facilities may include ditches, water bars, culverts or any other measure deemed necessary. All activities will be confined to the access road and drill pad.
3. Location of Existing Wells. See attached topographic map.
4. Location of Tank Batteries; Production Facilities; and Production, Gathering and Service lines: See attached topographic map for locations of existing and proposed gas gathering lines.
5. Location and Type of Water Supply: Water needed for the drilling operation will be hauled from the San Juan 29-6 Unit Water Well located in the SW/4 28, T29N, R6W.
6. Source of Construction Materials: No additional materials will be needed.
7. Methods for Handling Waste Disposal: All garbage, debris, and trash will be burried at least three feet deep. A portable toilet will be supplied for human waste. After drilling operations have been completed the reserve pit will be fenced and the liquid portion will be allowed to evaporate before the location is cleaned up and leveled. The earthen pits will not be located on natural drainages and will be constructed in such a manner so that they will not leak. Any evaporator pit containing toxic liquids will be fenced.
8. Ancillary Facilities: There will be no camps or airstrips associated with the drilling of this well.
9. Well Site Layout: See attached location layout sheet.
10. Plans for Restoration of the Surface: Upon completion of drilling, the location will be cleaned, and leveled so that no cut or fill banks will be steeper than 3:1.

All of the area disturbed in connection with the drill site will be seeded as close as possible for any above ground equipment while still allowing for access to the equipment. Seeding will be done within one year after drilling is completed and during the period from July 1 through September 15. Seeding will be done with seed Mixture #1.

All equipment above ground will be painted a non-glare, non-reflective, non-chalking color that simulates the natural color of the site. For this well code number 595-34127, Green.

11. Other Information: If, during operations, any historic or prehistoric ruin, monument or site, or any object of antiquity is discovered, then work will be suspended and the discovery will be reported to the District Manager of the BLM.

11. con't.

When drilling with gas, the line used to discharge and burn off the gas will be located so as not to damage vegetation in the area, and if necessary an earthen screen will be constructed to protect the vegetation. All liquids from the line will be contained at the site unless otherwise specified by the surface agency's representative.

The area covered by the location and proposed access road is gently sloped with scattered brush and some grasses.

12. Operator's Representative: J.P. Slattery, P.O. Box 90 - Farmington, New Mexico 87401. Phone: 327-5351 Extension #62.

13. Certification:

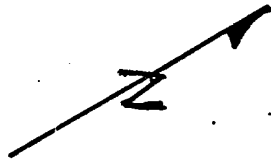
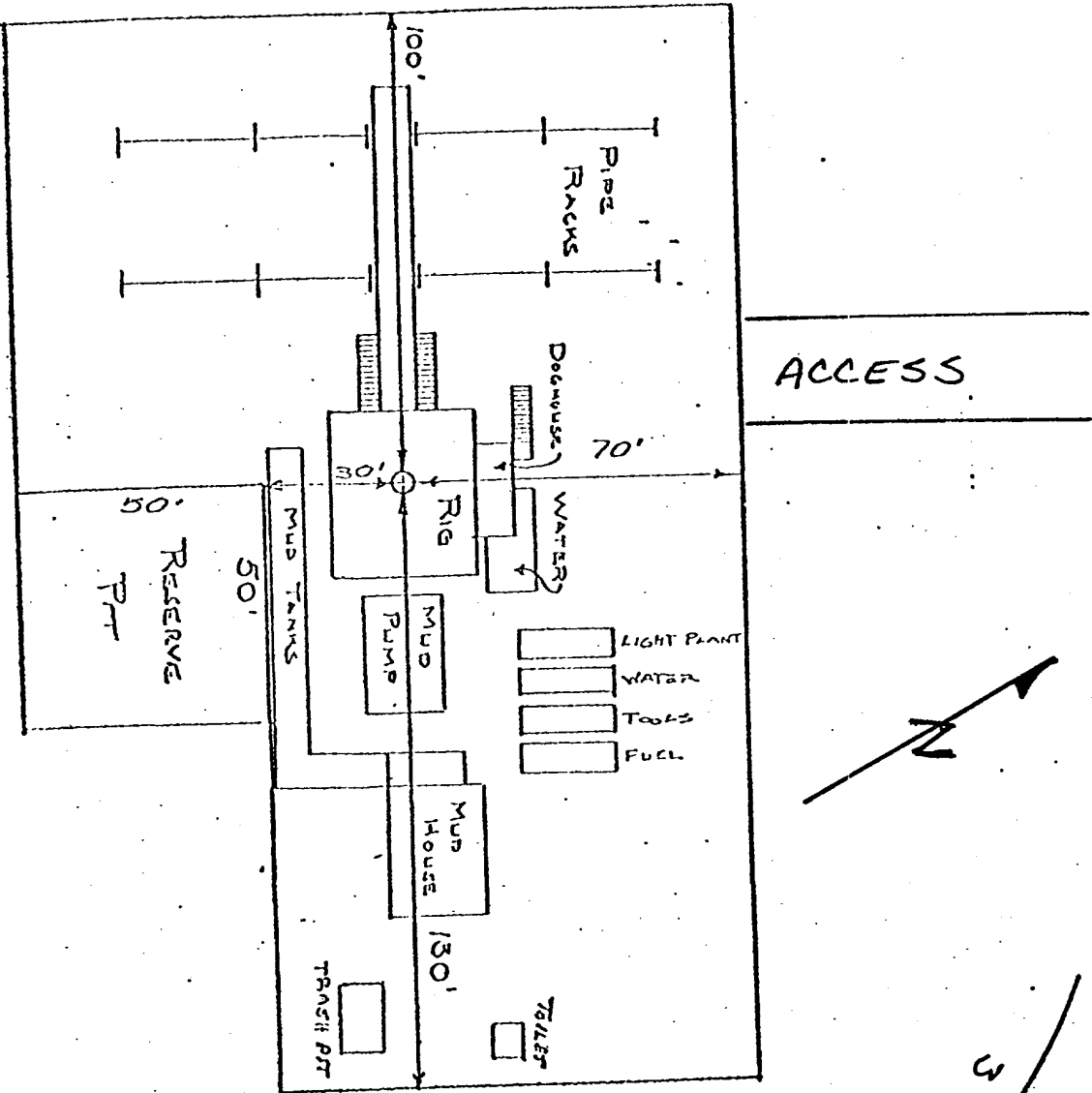
I hereby certify that I have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge true and correct; and, that the work associated with the operations proposed herein will be performed by Northwest Pipeline Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

June 17, 1977  
Date

J.P. Slattery  
J.P. Slattery  
Drilling Engineer

NORTH WEST PIPELINE CORPORATION

LOCATION LAYOUT  
SAN JUAN 29-5 UNIT #78

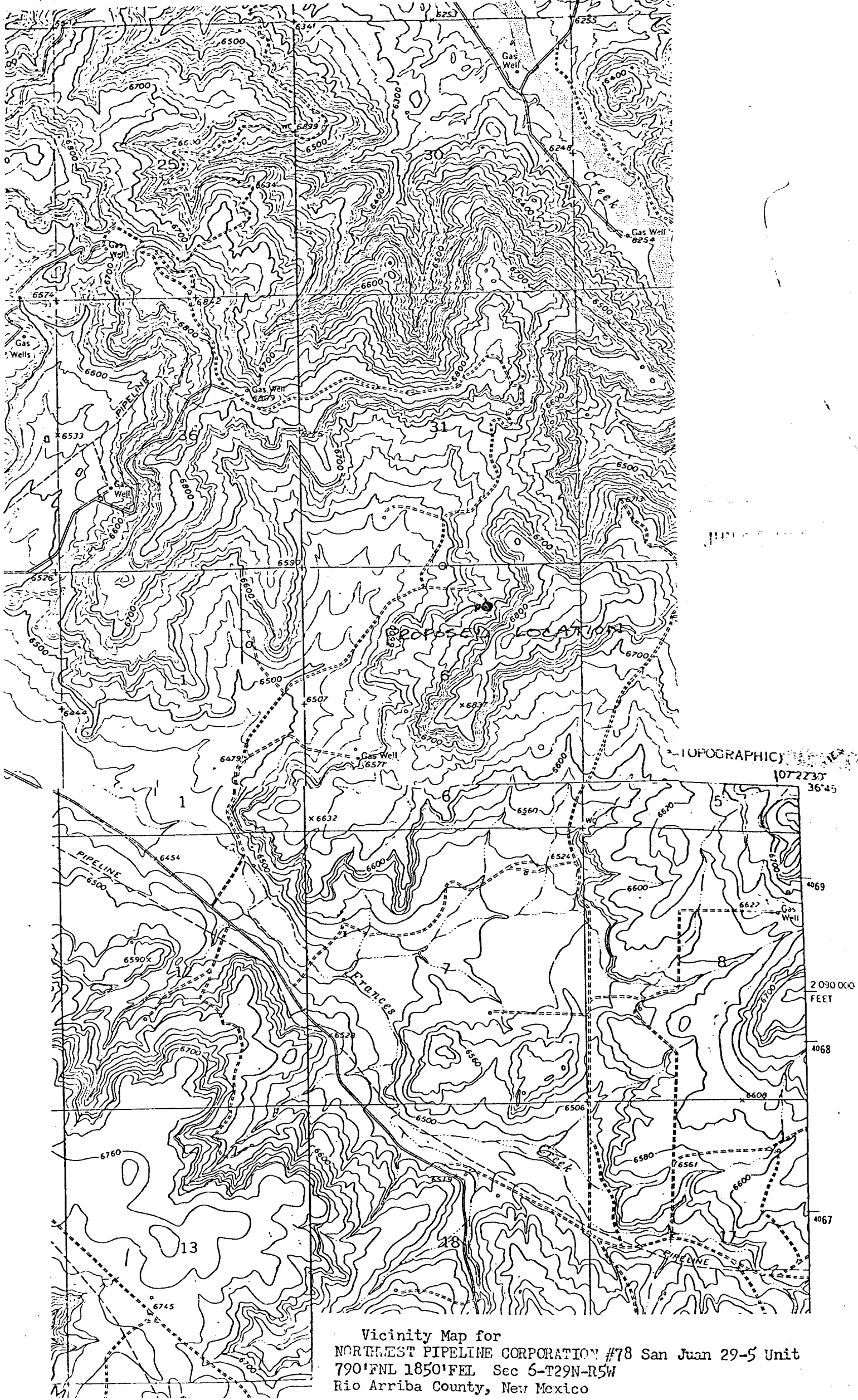


3' cut location  
off old

DATE: June 13, 1977

SCALE: 1cm = 20'





TOPOGRAPHIC  
1072237  
36°45'

2 090 000  
FEET

Vicinity Map for  
 NORTHWEST PIPELINE CORPORATION #78 San Juan 29-5 Unit  
 790'FNL 1850'FEL Sec 6-T29N-R5W  
 Rio Arriba County, New Mexico