

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY30-039-21558
5. LEASE IDENTIFICATION AND SURVEY NO.

SF 073282

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 10 - Farwell, N.M. 87401

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

At surface

1600' FSL & 790' 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
PROPOSED 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

320

18. DISTANCE FROM PROPOSED LOCATION*

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

NA

19. PROPOSED DEPTH

6011'

20. ROTARY OR CABLE TOOL

Rotary

21. ELEVATIONS (Show whether DE, RT, CR, etc.)

6711' GR

22. APPROX. DATE WORK WILL START*

1-1-78

23.

PROPOSED CASING AND CEMENTING PROGRAM

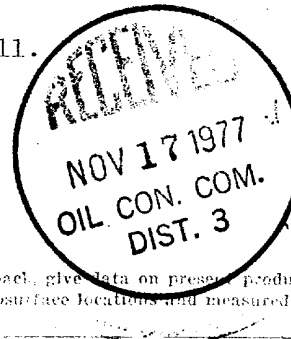
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 3/4"	9 5/8"	32.3#	200'	125 sks.
8 3/4"	7"	20.0#	3921'	150 sks.
6 1/4"	4 1/2"	10.5#	3771'-6011'	210 sks.

Selectively perforate and stimulate the Mesa Verde 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 E/2 of Section 19 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 horizontally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout prevention program, if any.

24.

SIGNED

TITLE

Drilling Engineer

DATE

11-9-77

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

D.R./ch

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form O-102
Supersedes O-128
Effective 1-1-65

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

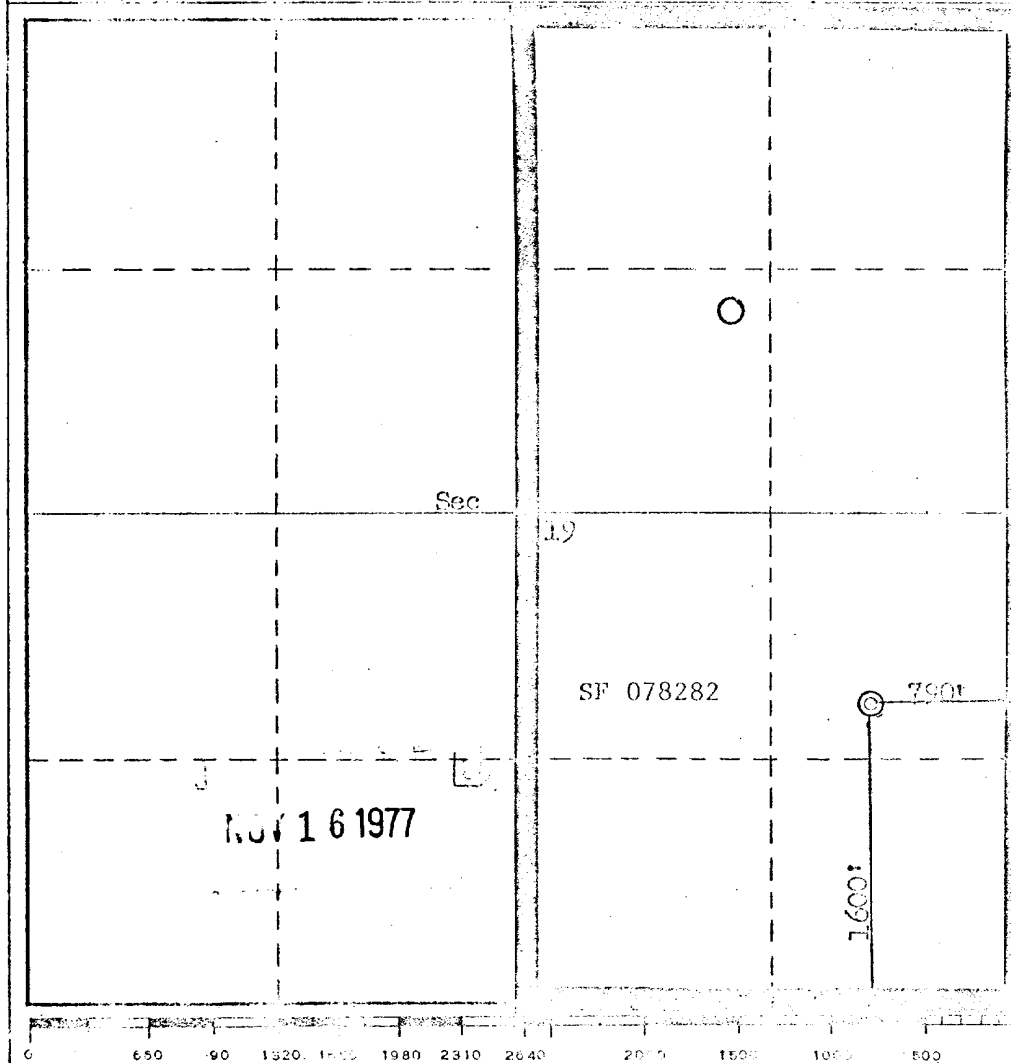
Owner Northwest Pipeline Corporation			Lease San Juan 22-5 Unit		Well No. 224
Well Loc. I	Section 19	Township 29N	Range 5W	County Rio Arriba	
Actual Well Location of Well:					
164	feet from the	South	line and	790'	feet from the
670	feet from the	East	line and	790'	feet from the
Producing Formation Mar. Verde		Pool Blanco		Dedicated Acreage 320	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (begin 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 correct to the best of my knowledge and belief.

D.E. Richardson
Name

D.E. Richardson

Position

Drilling Engineer

Company

Northwest Pipeline Corp.

Date

November 9, 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

October 2, 1977

Registered Professional Engineer and/or Land Surveyor

David E. Richardson
Name

Certificate No.

3950



OPERATIONS PLAN

San Juan 29-5 Unit #27A

I. LOCATION: NE/4 SE/4 Sec. 19, T29N, R5W
Rio Arriba County, N.M.

LEASE NUMBER: SF 078282

FIELD: Blanco Mesa Verde

ELEVATION: 6711' GR

II. GEOLOGY:

A. Formation Tops:

Ojo Alamo:	2805'	Cliff House:	5481'
Kirtland:	2886'	Menefee:	5521'
Fruitland:	3326'	Point Lookout:	5811'
Pictured Cliffs:	3606'	Total Depth:	6011'
Lewis:	3721'		

B. Logging Program: Gamma Ray-Neutron at T.D.

C. Casing Program: None

D. Natural Gauges: Gauge at last connection above 5521', 5811' and at total depth. Gauge any noticeable increases in gas flow at depth other than those noted above.

III. DRILLING:

A. Anticipated starting date and duration of activities: Jan. 1, 1978, 2 weeks.

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 3721'.

Viscosity: 32-38 sec/qt.

Weight: 8.8-9.2 #/gal.

Water Loss: 8-20 cc

Ph: 8.5-9.5

c) From 3721' to 3921'.

Viscosity: 36-45 sec/qt.

Weight: 8.5-9.5 #/gal.

Water Loss: 8-20 cc

Ph: 8.5-9.5

d) from 3921' to total depth with gas.

NOV 16 1977

IV. MATERIALS:

A. Casing Program:

Hole Size	Depth O.H.	Casing Size	Wt. & Grade	Depth Set
12 14/16"	200'	9 5/8"	32.3# H-40	200'
8 3/4"	3921'	7"	20# K-55	3921'
6 1/4"	2090'	4 1/2"	10.5# K-55	3771'-6011'

B. Float Equipment:

a) Surface casing 9 5/8" - B & W Regular Pattern Shoe.

b) Intermediate Casing 7" - Dowell guide shoe (Code #50101-070) and self fill insert float collar (Code #53003-070). Seven (7) centralizers (Code #56011-070) spaced every other joint above the shoe.

B. Float Equipment Continued

Place float collar one joint above shoe.

- c) Line 4 1/2" - Larkin geyser shoe (Fig. 222) and Larkin flapper type float collar (Fig. 404). Brown liner hanger with neoprene pack off.

- C. Tubing Program: 5975', of 2 3/8", 4.7#, EUE, K-55 tubing with seating nipple on top of bottom joint. Expendable check valve on bottom.

- D. Well Head Equipment: Gray well head. Gray representative to set slips and make cut off.

V. CEMENTING:

- A. Surface Casing 9 5/8" - Use 125 sks. Class "B" with 1/4# gel flake per sack and 3% CaCl (100% excess to circulate). WOC 12 hours. Test surface casing to 600 PSI for 30 minutes.

- B. Intermediate Casing 7" - Use 100 sacks Class "B" 65/35 poz with 12% gel and 15.52 gal. water per sack. Tail in with 50 sacks Class "B" with 2% CaCl (65% excess to cover Ojo Alamo). WOC 12 hours. Run temp. survey after 8 hours. Test casing to 600 PSI.

- C. Production Liner 4 1/2" - Use 210 sacks Class "B" with 4% gel and 1/4 cu. ft. of fine Gilsonite per sack. Precede cmt. with 20 bbls. water mixed with 3 sks. gel (70% excess to circulate liner). Set liner pack off and reverse out excess cmt. Run 6 1/4" bit to top of liner and pressure test (test 12 hours after plug is down). Lay down DP and run 3 7/8" bit on 2 3/8" EUE tubing to clean out liner. Perforate 18 hours after plug is down.

DER/ch

NOV 16 1977

NORTHWEST PIPELINE CORPORATION
MULTI - POINT SURFACE USE PLAN
for the San Juan 29-5 Unit
Well Number 27A

NOV 16 1977

1. Existing Roads: See attached topographic map. All existing roads 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 buried 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. There will be a drainage ditch above the cut slope.
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.

NOV 16 1977

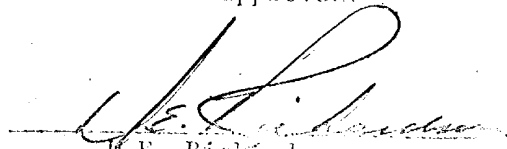
When drilling with gas, the line used to discharge and burn off the gas will be located so as not to damage vegetation in the area, and if necessary an earthen screen will be constructed to protect the vegetation. All liquids from the line will be contained at the site unless otherwise specified by the 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: D.E. Richardson, P.O. Box 90 - Farmington, New Mexico 87401. Phone: 327-5351 Extension #38.
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.

11-14-77
Date


D.E. Richardson
Drilling Engineer

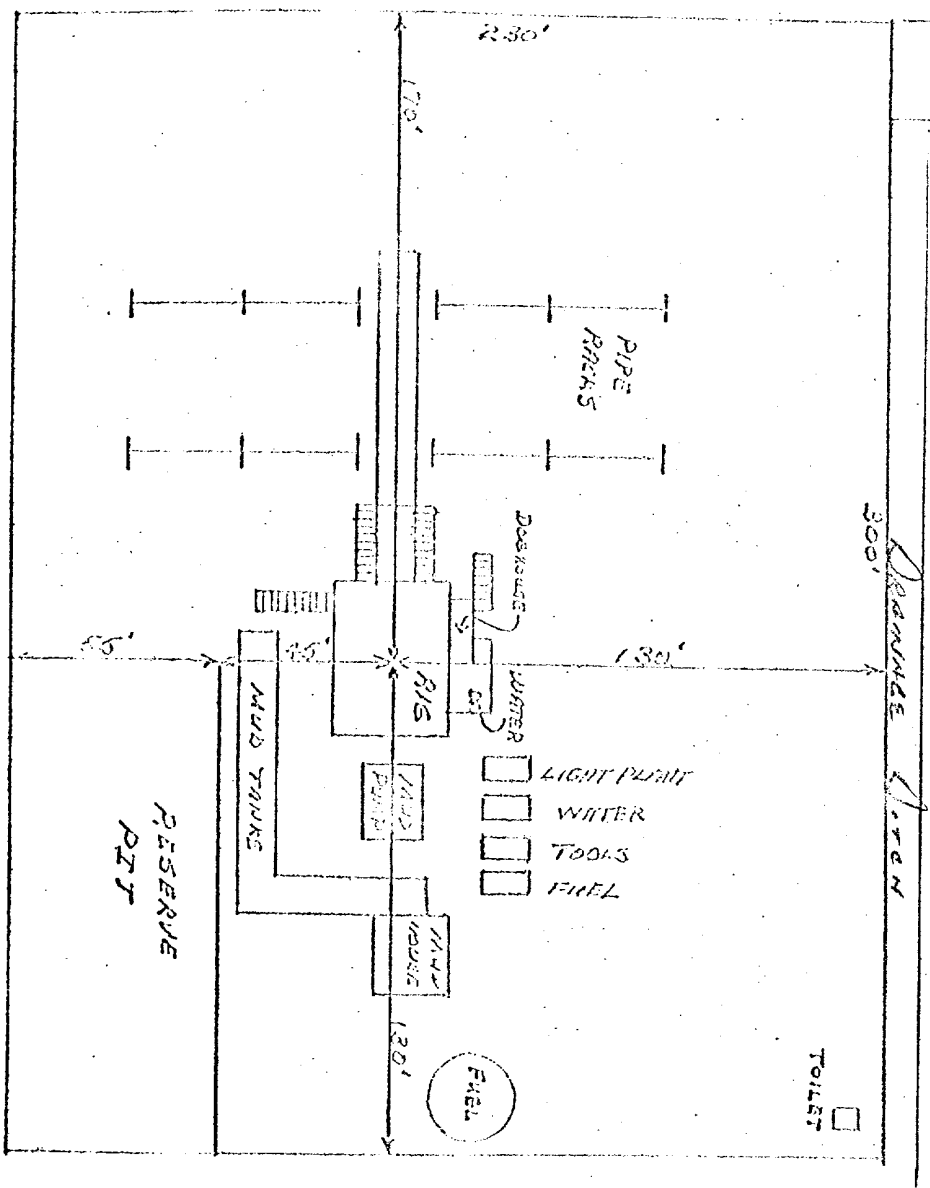
DER/ch

NOV 16 1977

NORTH WEST PIPELINE CORP. San Juan 29-5 # 274

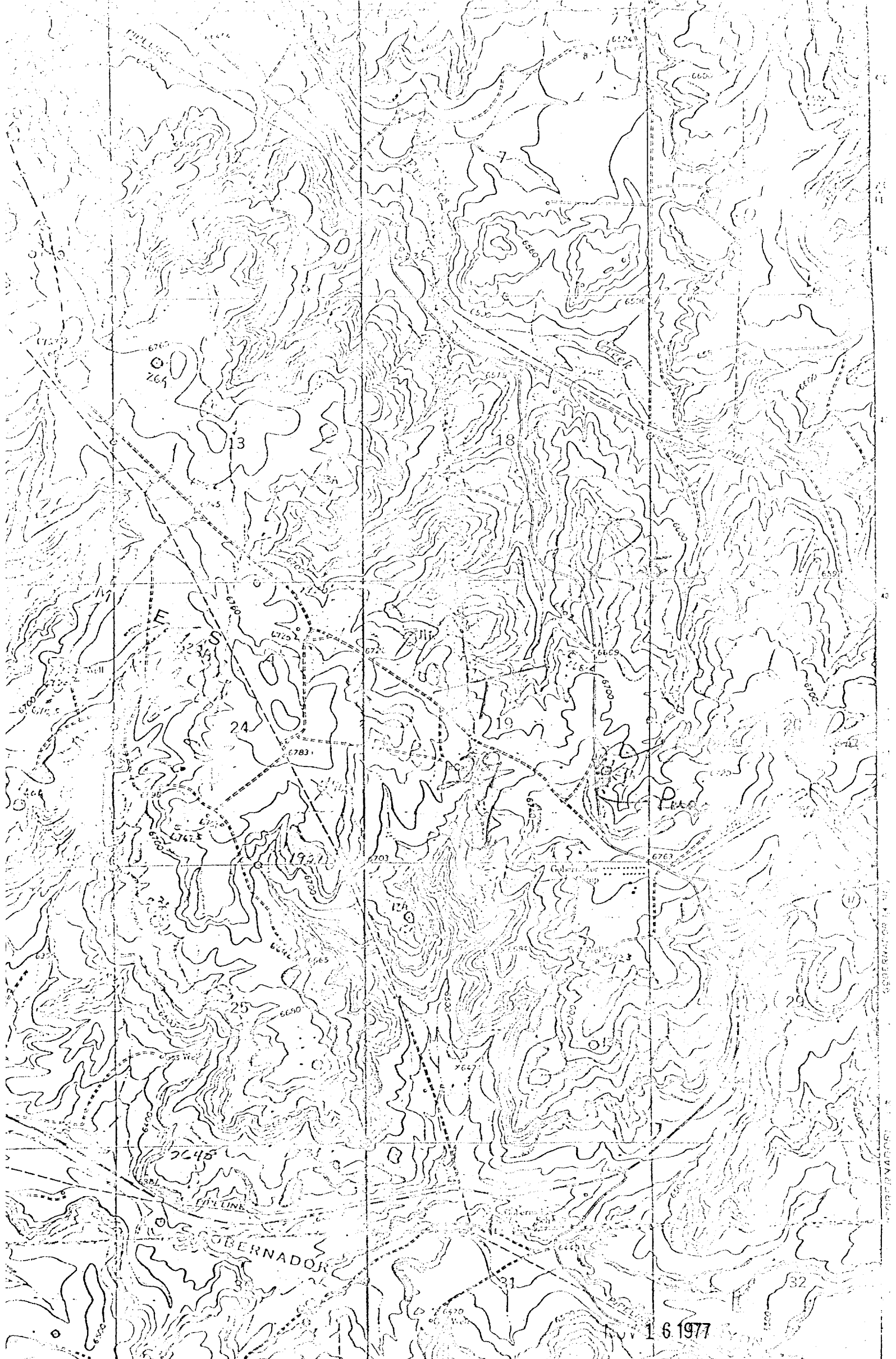
Access Road

9' Cut



DATE: 11-14-77
SCALE: 1cm = 20'

NOV 16 1977



Vicinity Map for
NORTHWEST TITANIC CORP. #27A San Juan 22-5 Unit
1600' TO 790' EBL Sec 19-T29N-R5W
Rio Arriba County, New Mexico