

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

reverse side)

30-039-22488

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 505-327-5351

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 845' FNL & 790' FEL

At proposed prod. zone Same

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

N/A

17. NO. OF ACRES ASSIGNED TO THIS WELL

E/320

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

19. PROPOSED DEPTH

7890'

20. ROTARY OR CABLE TOOLS

Rotary

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

6132' GR

22. APPROX. DATE WORK WILL START\*

May 1, 1980

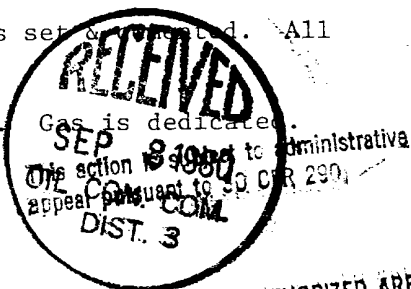
23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	32.3#	350'	185 Sks
8-3/4"	7"	20#	3759'	175 Sks
6-1/4"	4-1/2"	10.5# & 11.6#	7890'	350 Sks

Selectively perforate & stimulate the Dakota Formation. Completion plans will be determined at T.D.

A B.O.P. will be installed after the surface casing is set & cemented. All subsequent work will be conducted through B.O.P.'s.

The East half of Section 27 is dedicated to this well.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on previous operations, zone and proposed productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface location and measure. Give blowout preventer program, if any.

24.

SIGNED Paul C. Thompson  
Paul C. Thompson

TITLE Drilling Engineer

DATE 2-08-80

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

A.

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

B. W. Wynn  
for

ch 300

\*See Instructions On Reverse Side

2-100

djb

state

INDUSTRIAL SURVEY  
BIRMINGHAM, ALA.

All distances must be from the outer boundaries of the Section

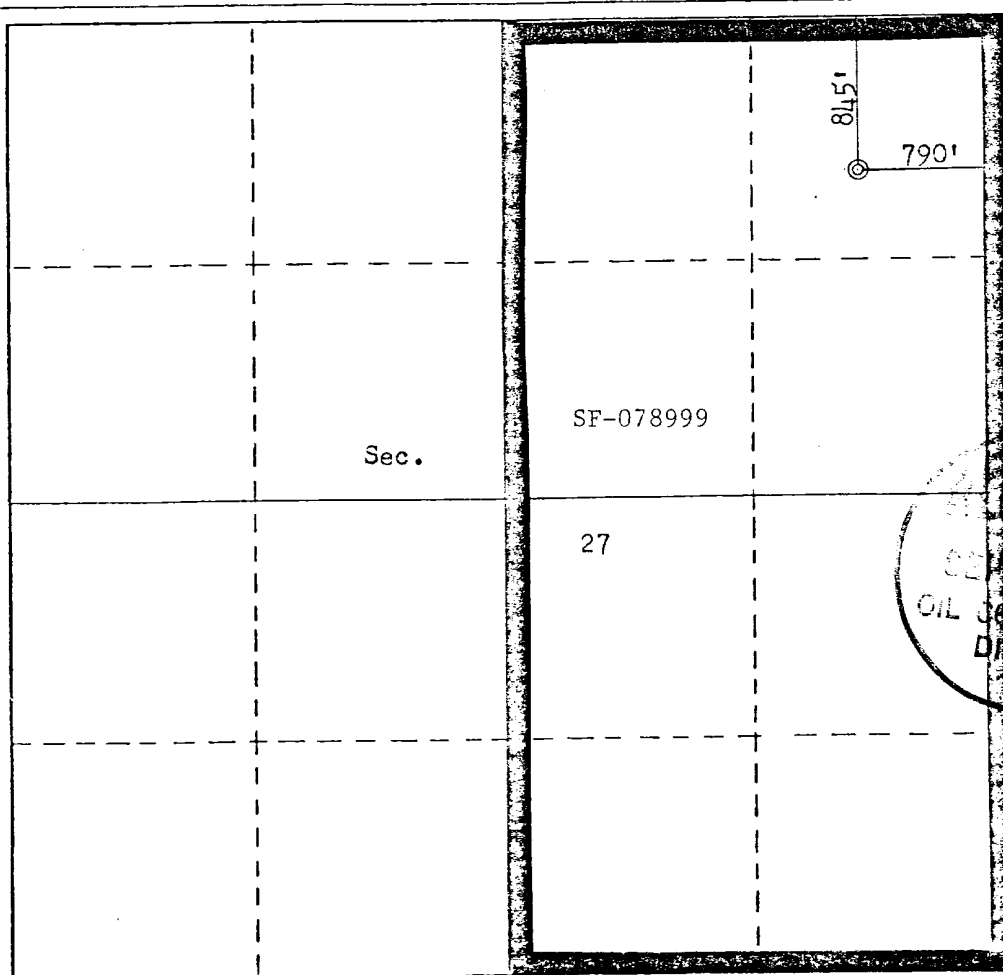
Operator <b>NORTHWEST PIPELINE CORPORATION</b>			Lease <b>SAN JUAN 31-6 UNIT</b>		Well No. <b>36</b>
Unit Letter <b>A</b>	Section <b>27</b>	Township <b>31N</b>	Range <b>6W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>845</b> feet from the <b>North</b> line and <b>790</b> feet from the <b>East</b> line					
Ground Level Elev. <b>6312</b>	Producing Formation <b>Dakota</b>		Pool <b>Basin Dakota</b>		Dedicated Acreage: <b>320</b> Acres

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 (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 Unit

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 **Paul C. Thompson**  
Drilling Engineer

Position  
**Northwest Pipeline Co.**

Company  
**February 1, 1980**

Date  
*Paul C. Thompson*

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  
**January 26, 1980**

Registered Professional Engineer  
and/or Land Surveyor

*Fred B. Kerr Jr.*  
**Fred B. Kerr Jr.**

Certificate No.

**3950**

NORTHWEST PIPELINE CORPORATION

MULTI - POINT SURFACE USE PLAN

for the

San Juan 31-6 Unit

Well Number #36

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 Pine River.
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. *Blank*
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.

All liquids from the line will be contained at the site unless otherwise specified by the surface agency's representative.

Multi-Point Surface Use Plan

Page 2

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: P.C. Thompson - P.O. Box 90 - Farmington, New Mexico 87401. Phone: 327-5351 Extinsion #115
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.

2-25-80  
Date

Paul C. Thompson  
P.C. Thompson  
Drilling Engineer

PCT/djb



Vicinity Map for  
NORTHWEST PIPELINE CORP. #36 SAN JUAN 31-6 UNIT  
845'FNL 790'FEL Sec 27-T31N-R6W  
SAN JUAN COUNTY, NEW MEXICO

## OPERATIONS PLAN

I. Location: 845' FNL & 790' FEL  
Sec 27, T31N, R6W  
Rio Arriba County, New Mexico  
Date: February 15, 1980  
Lease Number: San Juan 31-6 #36  
Elevation: 6312' GR.  
Field: Basin Dakota

### II. Geology:

A. Formation Tops	Depth	Formation	Depth
Ojo Alamo	2310'	Point Lookout	5597'
Kirtland:	2464'	Gallup:	6560'
Fruitland:	2775'	Greenhorn:	7611'
Pictured Cliffs:	3327'	Graneros:	7669'
Lewis:	3559'	Dakota:	7787'
Cliffhouse:	5317'	Total Depth:	7890'

B. Logging Program: Gamma Ray Induction & Comp. Density at Total Depth.

C. Coring Program: None.

D. Testing Program: Gauge at 5597', 6560', 7669', and Total Depth.  
Record all gauges on daily drilling report and morning report. Gauge all noticeable increases in gas while drilling and report.

### III. Drilling:

A. B.O.P.: Blind rams and pipe rams, 10", 900 series, double gate, rated at 3000 PSI.

#### B. Mud Program:

- a) Spud Mud: Water, lime, and gel.
- b) Surface to 350': low solids system
  - Viscosity: 32-38
  - Weight: 8.9-9.2#/gal
  - Water Loss: 8-20 cc
  - PH: 8.5-9.5
- c) From 350' to 3759'
  - Viscosity: 36-45 sec/qt
  - Weight: 8.5-9.5#/gal
  - Water Loss: 8-16 cc
  - PH: 8.5-9.5
- d) From 3759' to 7890' will be drilled with gas.

### IV. Materials:

#### A. Casing Program:

Hole Size	Depth	Casing Size	WT & Grade	Depth set
13-1/2"	350'	9-5/8"	36# K-55	350'
8-3/4"	3750'	7"	20# K-55	3759'
6-1/4"	0'-6800'	4-1/2"	10.5# K-55	0-6800'
6-1/4"	6800'-T.D.	4-1/2"	11.6# K-55	6800'-T.D.



- B. Float Equipment:  
Surface: 9-5/8" - Larkin guide shoe and self fill insert float valve.  
Intermediate: 7" - Dowell guide shoe, Dowell self filling insert float valve, Dowell centralizers five (5).  
Production: 4-1/2"- Larkin Geyser shoe, Larkin flapper type float collar.
- C. Tubing: 7840' of 2-3/8", 4.7#, J-55, 8RD EUE tubing with a common seating nipple above bottom joint.
- D. Well Head Equipment: Gray Tool Company drawing No. E-5533, or equivalent. Well head representative to set slips on intermediate and production strings.

V. Cementing:

- A. Surface Casing: 9-5/8" - Use 185 sks of C1 "B" Cement with 1/4# gel flake per sk and 3%  $\text{CaCl}_2$ , (100% excess to circulate 9-5/8" casing). WOC 12 hrs. Test to 600 PSI for 30 min.
- B. Intermediate Casing: 7" - Use 125 sks of 65/35 C1 "B" poz with 12% gel and 15.52 gallons of water per sk. Tail in w/50 sks C1 "B" with 2%  $\text{CaCl}_2$  (350 cu.ft. of slurry 60% excess to cover Ojo Alamo). Use top rubber plug only. Run temperature survey after 8 hrs. WOC 12 hrs. Test casing to 1200 PSI for 30 minutes.
- C. Production Casing: 4-1/2" - Precede cement with 40 barrels of water mixed with 4 sks gel. Cmt with 250 sks C1 "B" cmt with 8% gel, 12 1/2# fine gilsonite per sk and 0.4% Hr-4. Tail in w/100 sks of C1 "B" cmt with 1/4% fine tuf-plug per sk and 0.4% HR-4 per sk. Run temperature survey after 8 hrs Perforate after 18 hrs.

Paul C. Thompson  
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PCT  
PCT/djb