

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

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

1680' FNL & 795' FEL Sec 15 T29N R5W

At proposed prod. zone

Same as above

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

30 Miles East of Blanco, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

795'

16. NO. OF ACRES IN LEASE

N/A

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

N/A

19. PROPOSED DEPTH

6150'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

Mesa Verde #320, PC 160

20. ROTARY OR CABLE TOOLS

Rotary

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

6755' GR

22. APPROX. DATE WORK WILL START*

September 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"	36#	200'	115 sks
8-3/4"	7"	20#	4060'	200 sks
6-1/4"	4-1/2"	10.5#	3860'-6150'	230 sks

Selectively perforate and stimulate the Mesa Verde and Pictured Cliffs Formation. Completion plans will be determined at Total Depth.

A BOP will be installed after the surface casing is set and cemented. All subsequent work will be conducted through the BOP's.

The East half of Section 15 is dedicated to the Mesa Verde well. The Northeast quarter of Section 15 is dedicated to the Pictured Cliffs well.

Gas is dedicated.

RECEIVED
AUG 7 1980
OIL CON. COM.
DIST. 3

U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

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

Paul F. Thompson
APPROVED BY

TITLE Drilling Engineer

DATE July 15, 1980

(This space is for use by the District Engineer)

PERMIT NO.

AUG 6 1980

APPROVAL DATE

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY

James J. Sims
DISTRICT ENGINEER

TITLE

DATE

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

*See Instructions On Reverse Side

PCT/djb

NMOCC

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-107
Revised 10-1-78STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

Operator NORTHWEST PIPELINE CORPORATION			Lease SAN JUAN 29-5 UNIT COM		Well No. 73
Unit Letter H	Section 15	Township 29N	Range 5W	County Rio Arriba	
Actual Footage Location of Well: 1680 feet from the North line and 795 feet from the East line					
Ground Level Elev. 6755	Producing Formation Mesa Verde	Pictured Cliffs	Pool Gobernador Pictured Cliffs	Dedicated Acreage: MV 320 PC 160 Acres	

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

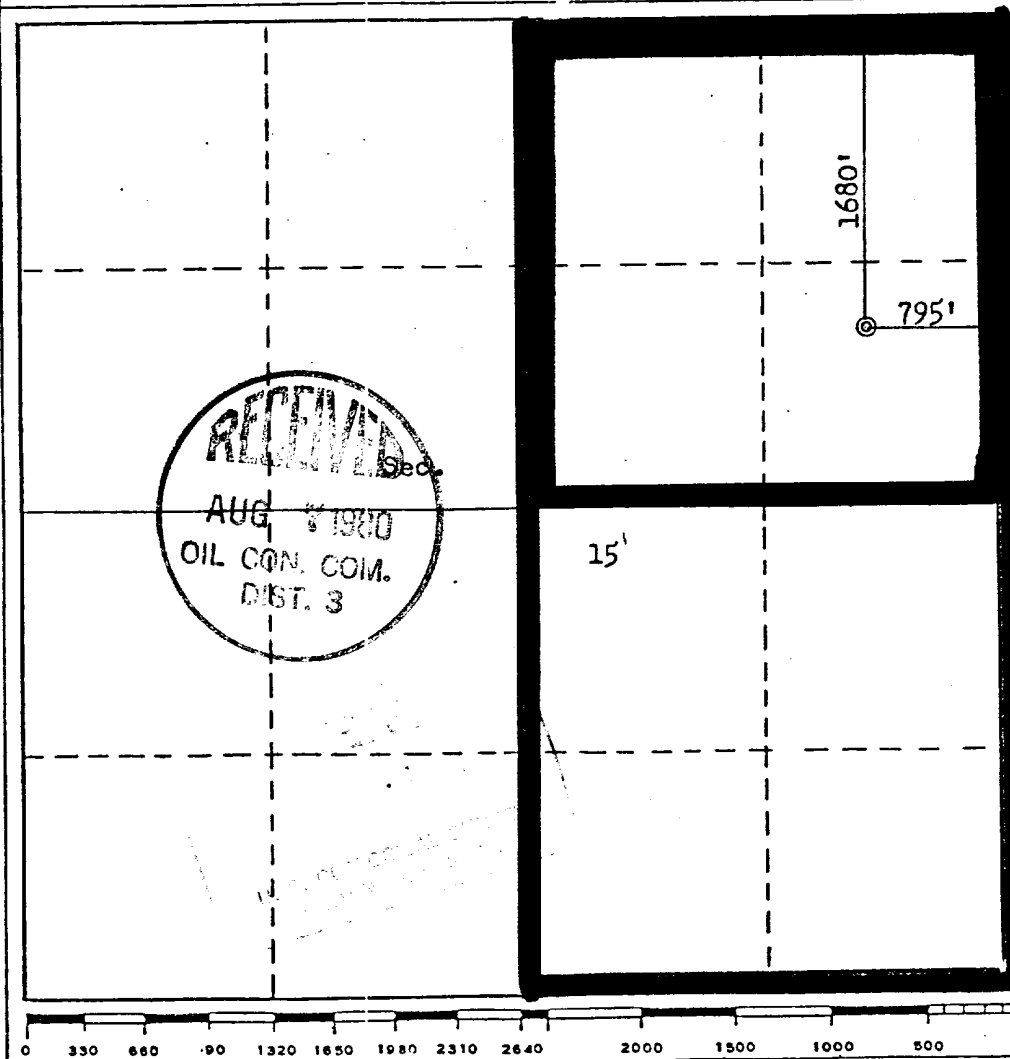
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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 Communitization

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.

Paul C. Thompson

Name

Paul C. Thompson

Position

Drilling Engineer

Company

Northwest Pipeline Corp

Date

June 3, 1980

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

May 28, 1980

Registered Professional Engineer and/or Land Surveyor

Fred B. Kerr Jr.

Certificate No. 8. KERR, JR.

3950

NORTHWEST PIPELINE CORPORATION
DRILLING PROGNOSIS

San Juan 29-5 Unit Com #73

DATE: July 15, 1980

I. LOCATION: 795' FEL & 1680' FNL
Sec 15 T29N R5W
Rio Arriba Co., New Mexico

ELEVATION: 6755' GR

FIELD: Blanco Mesa Verde
Gobernador Pictured Cliffs

SURFACE: BLM

MINERALS: FED SF 078642-A

II. GEOLOGY: Surface Formation - San Jose

- | <u>A. Formation Tops:</u> | <u>Depth</u> | <u>Formation Tops</u> | <u>Depth</u> |
|---------------------------|--------------|-----------------------|--------------|
| Ojo Alamo | 2925' | Lewis | 3860' |
| Kirtland | 3195' | Cliff House | 5550' |
| Fruitland | 3395' | Menefee | 5640' |
| Pictured Cliffs | 3665' | Point Lookout | 5885' |
| | | Total Depth | 6150' |
- B. Logging Program: Intermediate Casing: IES; & Gamma Ray Density/Neutron
Production Casing Point: Gamma Ray-Induction and Density
- C. Natural Gauges: Gauge at last connection above 5640', 5885', and at Total
Depth. Gauge any noticeable increases in gas flow @ depth other than
those noted above. Record all gauges on daily drilling and morning
reports.

III. Drilling:

- A. Contractor:
- B. Mud Program: Mud, water and gas will be furnished by Northwest Pipeline
Corporation from Surface to Total Depth.
- a) From Surface to Intermediate casing depth to be drilled with mud.
- b) From Intermediate casing to Total Depth to be drilled with gas.
- C. While drill pipe is in use the pipe rams will be tested not less than once
each day. The blind rams will be tested once each trip. All tests will
be reported in the Northwest Pipeline tour reports as to time and
date.

IV. Materials:

- A. Casing Program:
- | <u>Hole Size</u> | <u>Depth O.H.</u> | <u>Casing Size</u> | <u>WT & Grade</u> |
|------------------|-------------------|--------------------|----------------------------|
| 12-1/4" | 200' | 9-5/8" | 32.3# H-40 |
| 8-3/4" | 4060' | 7" | 20# K-55 |
| 6-1/4" | 6150' | 4-1/2" | 10.5# K-55 (3860' - 6150') |
- 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 centralizers
(Code #56011-070) spaced every other joint above the shoe. Place
float one joint above shoe.
- c) Liner: 4-1/2" - Larkin geyser shoe (Fig 222) and Larkin Flapper type
float collar (Fig 404). Burns liner hanger with neoprene pack off.
- C. Tubing Program: 6100' of 2-3/8", 4.7#, EUE, J-55 tubing with seating
nipple on top of bottom joint. Expendable check valve on bottom.
3700' of 1-1/4", 2.33#, J-55, IJ tubing with expendable check valve
on bottom (PC).

Drilling Prognosis

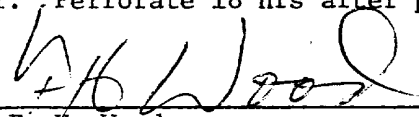
San Juan 21-5 Unit Com #73


Page #2

D. Well Head Equipment: WKM Well Head. WKM representative to set slips and Make cut off.

V. Cementing:

- A. Surface Casing: 9-5/8" - Use 115 sks of Class "B" with 1/4# gel flake per sk and 3% CaCl_2 (100% excess to circulate). WOC 12 hrs. Test surface casing to 600 psi for 30 min.
- B. Intermediate Casing: 7" - Use 80 sks of 65/35 poz with 12% gel. (Yield - 2.72). Tail in with 75 sks Class "G" with 2% CaCl_2 (65% excess to cover Ojo Alamo). WOC 12 hrs. Run temp survey at 8 hrs. Test casing to 600 psi.
- C. Production Liner: 4-1/2" - Use 230 sks of Class "B" with 4% gel and 1/4 cu.ft of fine Gilsonite per sk. Precede cement with 20 bbls water mixed with 3 sks gel. (70% excess to circulate liner). Clean out with 6-1/4" bit to top of liner and pressure test with rig pump. (Test 12 hrs after plug is down). Lay down drill pipe and run 3-7/8" bit on 2-3/8" EUE tubing and clean out liner. Perforate 18 hrs after plug is down.


F. H. Wood


MJT/djb

Original: Well File

sc: Regular Distribution

PLAN VIEW - CHOKE MANIFOLD

Flanged cross with pressure gauge in outside opening

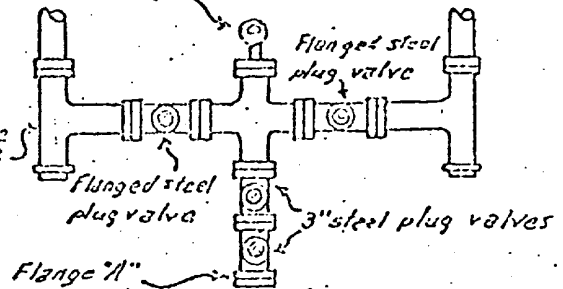
Screw connections are permissible but discouraged.

Drilling Nipple

Flow Line

Fill-up line

Long pipe 1/2 choke



PIPE RAMS

BLANK RAMS

Cameron SS, 2 Q.R.C. or Shafter Hydraulic Double Gate. And in special instances a double Shafter hand operated B.O.P.

Emergency flow line

Flange "A" See plan view

4" valves

2" or 3" valves with latter preferred.

Kill Line - 2" valves

Conductor pipe

- NOTES -

1. BOP hand controls to be extended clear of substructure & ramps.
2. All valves to be same test pressure capacity as BOP's
3. Compare minimum ID of BOP equipment with OD of casing hangers to be passed thru.
4. Everything flanged where shown.
5. Cameron Double-O Rubber Ring Guard gaskets are to be used in flanges indicated by * on sketch.
6. New metal rings are to be used each time a flange is assembled.
7. BOP's to be well braced at all times.

If possible install head so kill line valves will be under BOP's for protection. These valves to be kept closed after BOP's tested & kill line removed (by use of quick union) to fill-up line. When used this way kill line must be high pressure.

SINGLE PIPE RAM BLOWOUT PREVENTOR HOOKUP

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 Conoco Water hole.
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. ^{Blank} 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.

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

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.

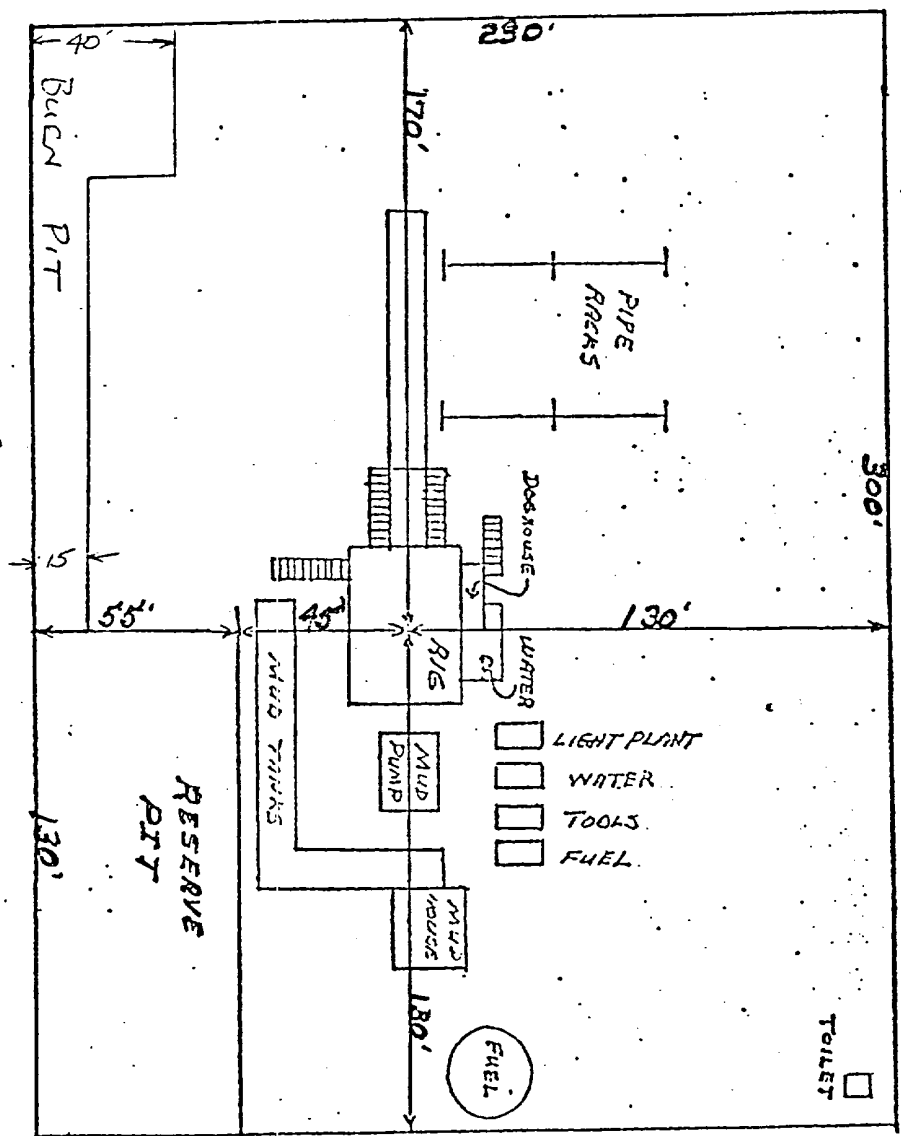
12. Operator's Representative: Paul Thompson - , P.O. Box 90 - Farmington, New Mexico . 87401. Phone: 327-5351 Extension # 115
13. Certification:

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.

Paul C. Thompson
Paul Thompson
Drilling Engineer

NORTHWEST PIPELINE CORPORATION

LOCATION LAYOUT SAN JUAN 29.5 UNIT COM #73



DATE:
SCALE: 1 CM = 20'



Vicinity Map for
NORTHWEST PIPELINE CORPORATION #73 SAN JUAN 29-5 UNIT
1680'FNL 795'FEL Sec. 15-T29N-R5W
RIO ARRIBA COUNTY, NEW MEXICO