

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 Corporation3. ADDRESS OF OPERATOR  
P.O. Box 90, Farmington, New Mexico 874014. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
At surface 1000' FNL & 1800' FEL Sec 21 T30N R5W

At proposed prod. zone Same as above

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

25 Miles East of Navajo Dam

15. DISTANCE FROM PROPOSED\*  
LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any) 1000'

16. NO. OF ACRES IN LEASE

N/A 2320

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

19. PROPOSED DEPTH

7800'

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

E/320

20. ROTARY OR CABLE TOOLS

Rotary

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

6414' GR

22. APPROX. DATE WORK WILL START\*

Sept 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#	350'	185 sks CIRC
8-3/4"	7"	20#	3800'	150 sks
6-1/4"	4-1/2"	10.5# & 11.6#	7800'	350 sks

Selectively perforate and stimulate the Dakota 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 21 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 Paul C. Thompson TITLE Drilling Engineer DATE June 2, 1980  
Paul C. Thompson  
(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY  
CONDITIONS OF APPROVAL, IF ANY:TITLED  
APPROVED  
APPROVED

\*See Instructions On Reverse Side

APPROVED  
AS AMENDEDJUL 24 1980  
JAMES F. SIMS  
DISTRICT ENGINEER

## OIL CONSERVATION DIVISION

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088  
SANTA FE, NEW MEXICO 87501Form C-102  
Revised 10-1-78

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

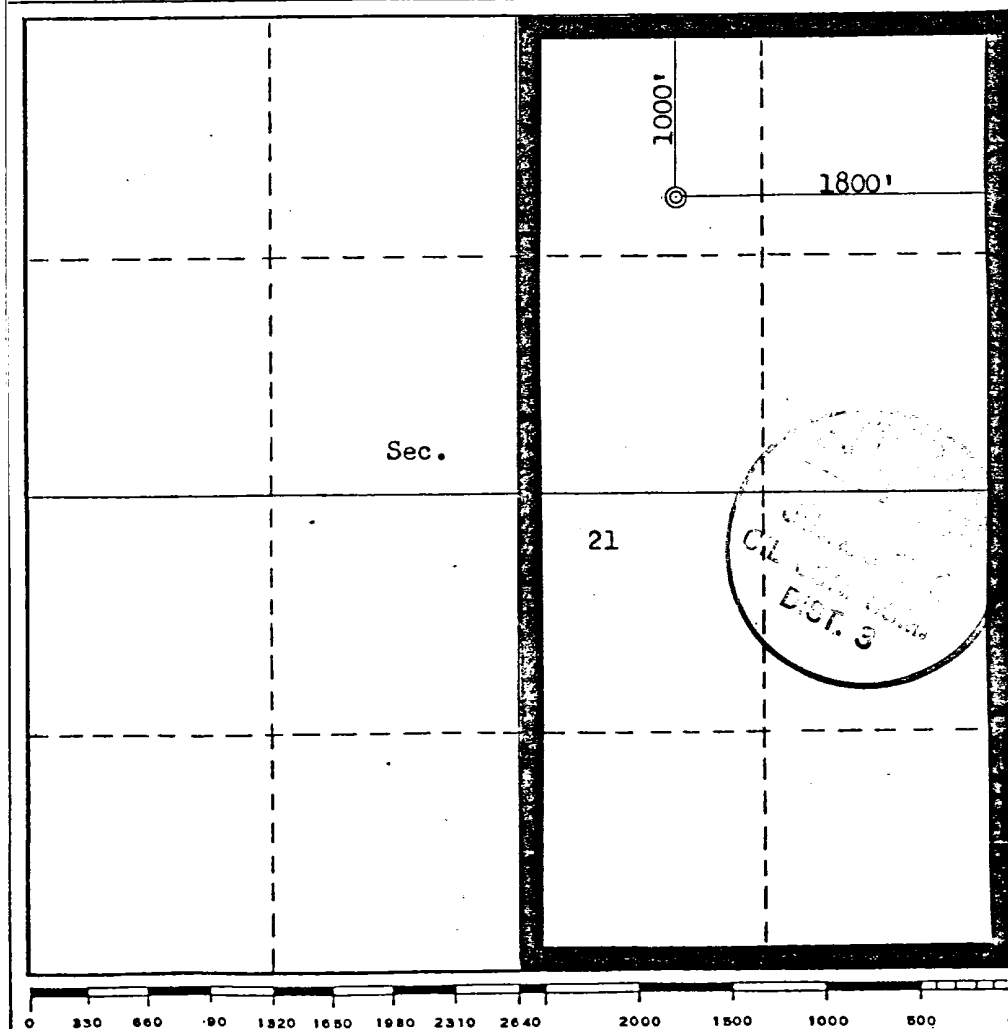
Operator <b>NORTHWEST PIPELINE CORPORATION</b>			Lease <b>SAN JUAN 30-5 UNIT</b>		Well No. <b>51</b>
Unit Letter <b>B</b>	Section <b>21</b>	Township <b>30N</b>	Range <b>5W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>1000</b> feet from the <b>North</b> line and <b>1800</b> feet from the <b>East</b> line					
Ground Level Elev. <b>6414</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 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 Unitization **PRODUCTION AND DRILLING**

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  
April 29, 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  
April 23, 1980  
Registered Professional Engineer  
and/or Land Surveyor

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

Certificate No. **B. KERR.**

3950

## DRILLING PROGNOSIS

San Juan 30-5 Unit #51

Date: May 23, 1980

I. Location: 1000' FNL & 1800' FEL  
Sec. 21, T30N, R5W  
Rio Arriba County, NM

Surface: BLM  
Minerals: Fed-SF-078739

Field: Basin Dakota

Elevation: 6414' GR.

II. Geology: Surface: San Jose

A.	<u>Formation</u>	<u>Depth</u>	<u>Formation</u>	<u>Depth</u>
	Ojo Alamo:	2597'	Point Lookout:	5579'
	Kirtland:	2685'	Mancos:	5864'
	Fruitland:	2995'	Gallup:	6689'
	Pictured Cliffs:	3155'	Greenhorn:	7579'
	Lewis:	3364'	Graneros:	7629'
	Cliff House:	5384'	Dakota:	7759'
			Total Depth:	7860'

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

C. Coring Program: None

D. Natural Gauges: Gauge @ 5579', 6689', 7629', 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. Contractor:

B. Mud Program: Mud, water & gas will be furnished by Northwest Pipeline Corporation from surface to total depth.

a) Spud Mud: Water, Gel & Lime

b) Surface Casing to Intermediate Casing depth: Water, Gel, Lime & Barite

c) From Intermediate casing depth to T.D. will be drilled with gas.

C. While drill pipe is in use, pipe rams shall be actuated to test proper functioning not less than once each day.

Once each trip, the blind rams shall be actuated to test proper functioning.

Record all tests on Northwest Pipeline tour report, with time each test was conducted.

IV. Materials:

A. Casing Program:

Hole Size	Depth	Casing Size	Wt. & Grade		Depth Set
12-1/4"	350'	9-5/8"	36#	K-55	350'
8-3/4"	3564'	7"	20#	K-55	3564'
6-1/4"	7860'	4-1/2"	10.5#	K-55	0' - 6800'
		4-1/2"	11.6#	K-55	6800' - T.D.

B. Float Equipment:

Surface Casing: 9-5/8" - Larkin Guide Shoe and Self-fill insert float valve.

Intermediate Casing: 7" Dowell Guide Shoe.  
Dowell Self-fill insert float valve.  
Dowell Centralizers (5).

Production Casing: 4-1/2" Larkin Geyser Shoe.  
Larkin Flapper type float collar.

C. Tubing: 7810' of 2-3/8", 4.7#, J-55. 8 RD EUE tubing with common seating nipple above bottom joint.

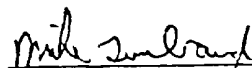
D. Well Head Equipment: Gray Tool Company drawing No. E-5533, or equivalent. Well head representative to set slips on intermediate and production strings.

V. Cementing:

A. Surface Casing: 9-5/8" - Use 185 sks of Class "B" cmt with 1/4# gel flake per sk and 3% Calcium Chloride, (100% excess to circulate 9-5/8" casing). WOC 12 hrs. Test to 600 PSI for 30 min.

B. Intermediate Casing: 7" - Use 100 sks of 65/35 Class "B" poz with 12% gel and 15.52 gal of water per sk. Tail in with 50 sks of Class "B" with 2% Calcium Chloride (250 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 min.

C. Production Casing: 4-1/2" - Precede cmt with 40 barrels of water mixed with 4 sks gel. Cmt with 250 sks of Class "B" cmt with 8% gel, 12-1/2# fine gilsonite per sk and 0.4% HR-4. Tail in with 100 sks of Class "B" cmt with 1/4# fine tuf-plug per sk & 0.4% HR-4 per sk (660 cu.ft. of slurry) (50% excess to fill to intermediate casing). Run temperature survey after 8 hrs. Perforate after 18 hrs.



Mike J. Turnbaugh  
Associate Drilling Engineer

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 NW Rosa Road Waterhole.
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. <sup>Blank</sup> 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.

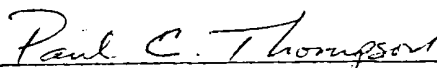
All liquids from the line will be contained at the site unless otherwise specified by the surface agency's representative.

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.

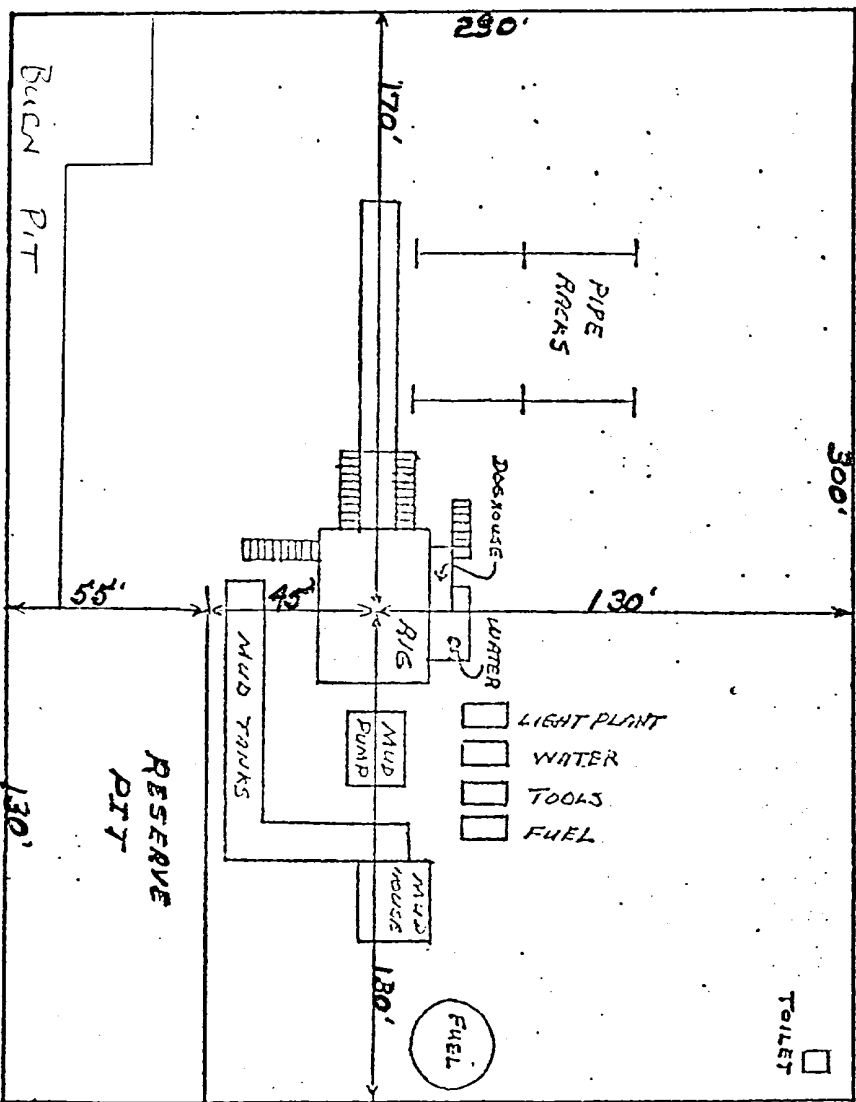
12. Operator's Representative: Paul Thompson - , P.O. Box 90 - Farmington, New Mexico 87401. Phone: 327-5351 Extension # 115
13. Certification:

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.

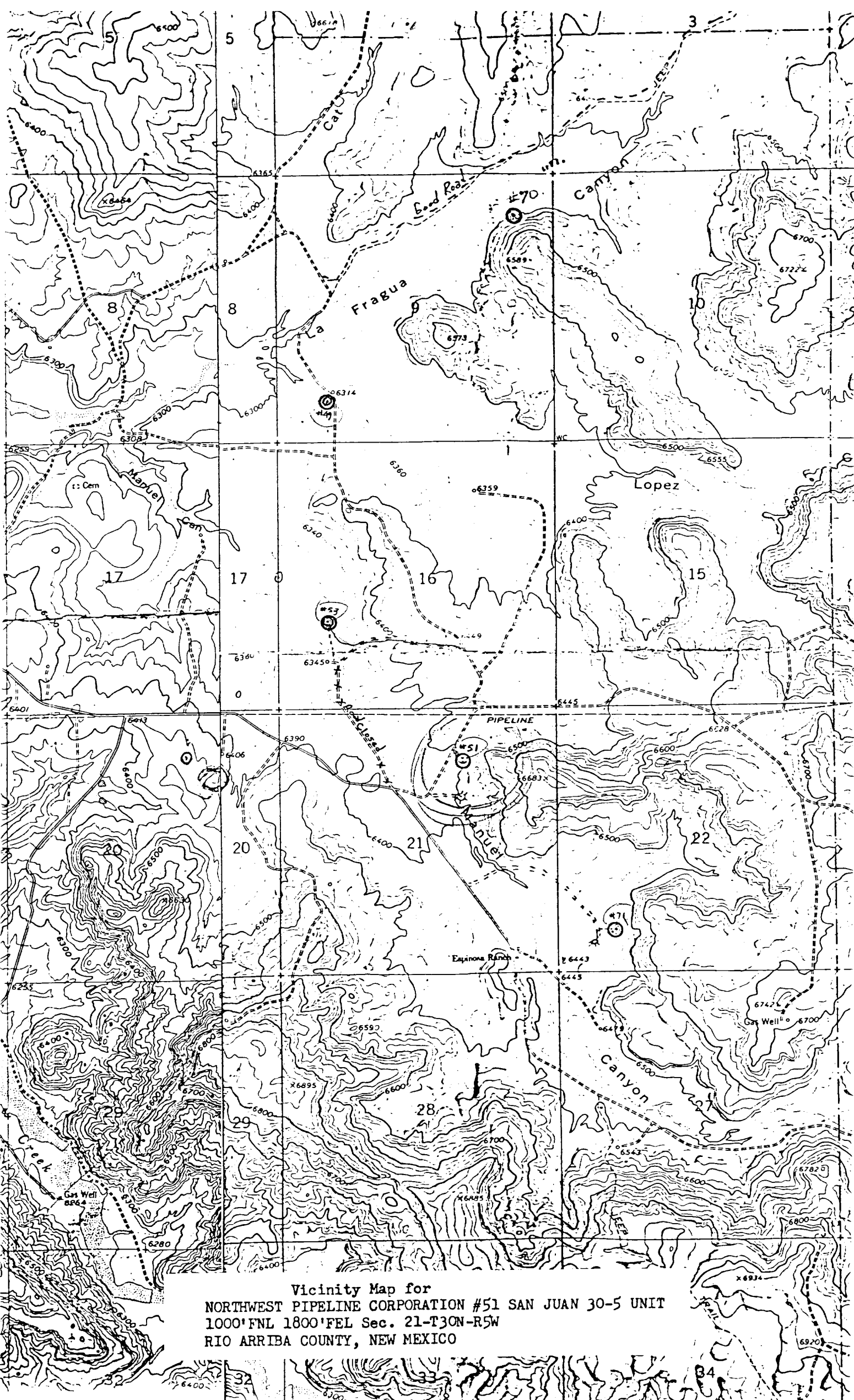
  
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Paul Thompson  
Drilling Engineer

# NORTHWEST PIPELINE CORPORATION

LOCATION LAYOUT SAN JUAN 30-5 UNIT # 51



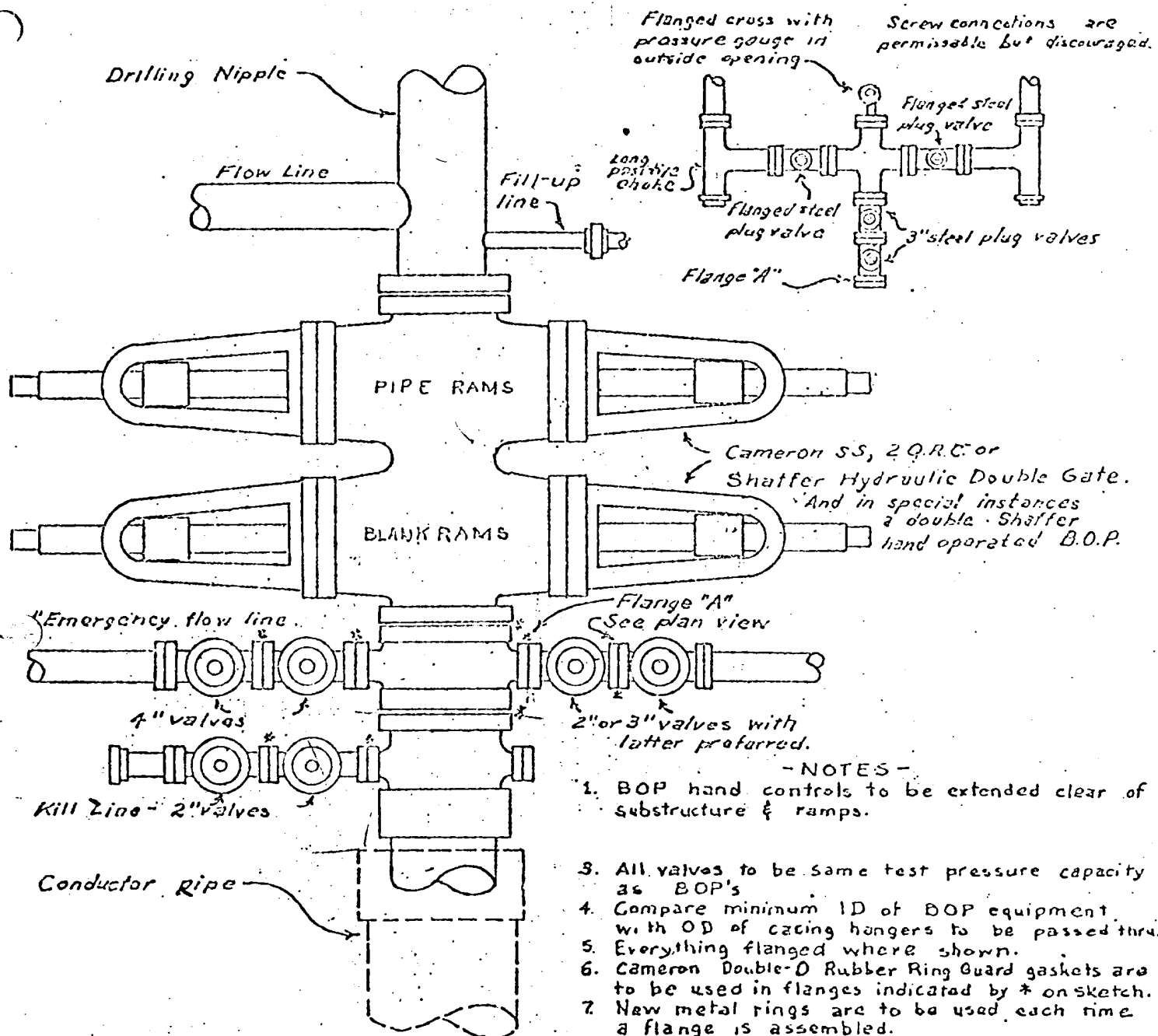
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SCALE: 1 CM = 20'



Vicinity Map for  
NORTHWEST PIPELINE CORPORATION #51 SAN JUAN 30-5 UNIT  
1000'FNL 1800'FEL Sec. 21-T3ON-R5W  
RIO ARriba COUNTY, NEW MEXICO



## PLAN VIEW - CHOKE MANIFOLD



## - 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