

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-039-22470

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

2. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

3. NAME OF OPERATOR

Northwest Pipeline Corporation

4. ADDRESS OF OPERATOR

P.O. Box 90, Farmington, New Mexico 87401

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

At surface ~~1600'~~ FNL & 1090' FEL Sec 33 T29N R5WAt proposed prod. zone ~~1700'~~ Same as above

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

35 miles East of Blanco New Mexico

7. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT. 1090'
(Also to nearest drilg. unit line, if any)8. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

9. NO. OF ACRES IN LEASE

N/A

10. PROPOSED DEPTH

8150'

11. NO. OF ACRES ASSIGNED
TO THIS WELL

E/320

12. ROTARY OR CABLE TOOLS

Rotary

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

6730' GR

14. APPROX. DATE WORK WILL START*

15.

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
8-3/4"	7"	20#	3990'	130 sks
6-1/4"	4-1/2"	10.5# & 11.6#	8150'	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.

The East half of Section 33 is dedicated to this well.

Gas is dedicated.

RECEIVED
JUN 20 1980DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

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.

16.

SIGNED Paul C. Thompson
Paul C. ThompsonTITLE Drilling EngineerDATE June 6, 1980

(This space for Federal and State office use)

APPROVED
AS AMENDED

APPROVAL DATE

APPROVED James F. Sims
JAMES F. SIMS
DISTRICT ENGINEER

TITLE

DATE

*See Instructions On Reverse Side

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

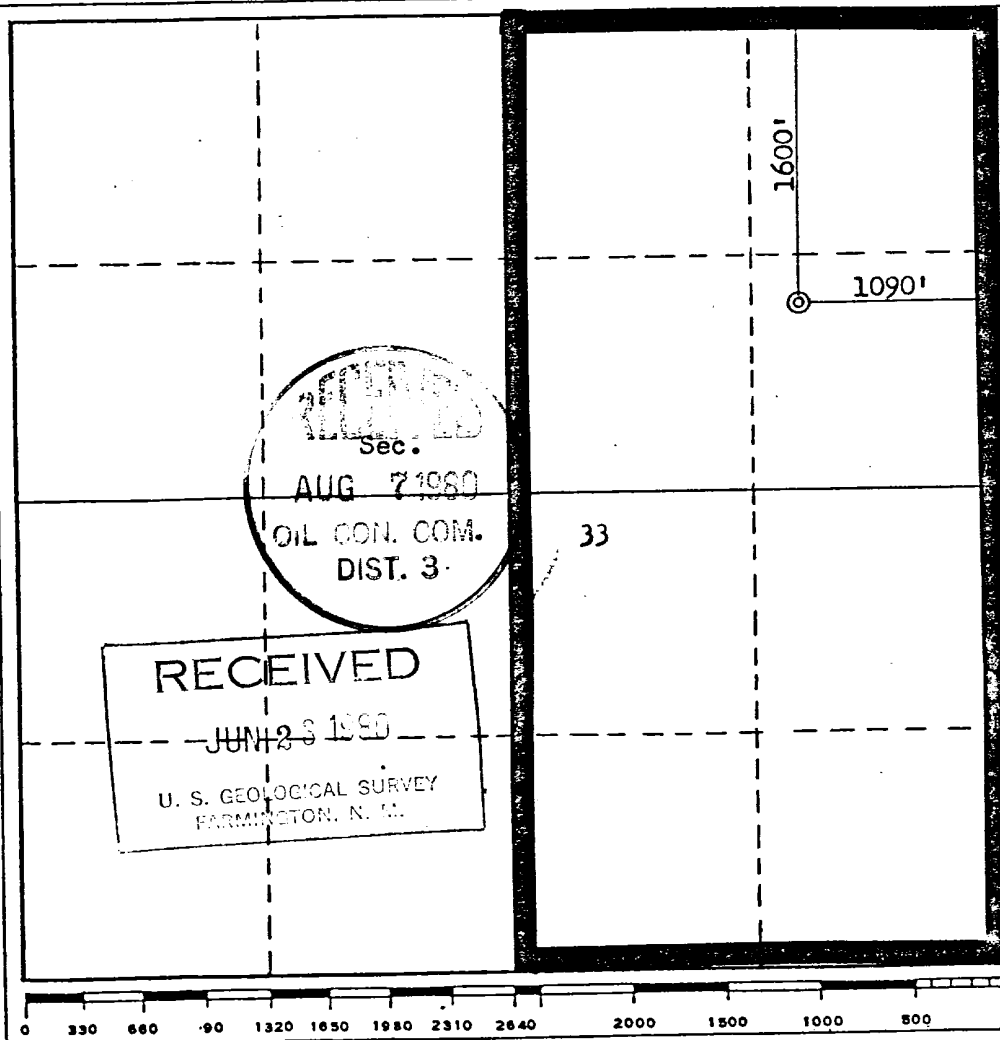
Operator NORTHWEST PIPELINE CORPORATION			Lease SAN JUAN 29-5 UNIT		Well No. 98
Unit Letter H	Section 33	Township 29N	Range 5W	County Rio Arriba	
Actual Footage Location of Well: 1600 feet from the North line and 1090 feet from the East line					
Ground Level Elev. 6730	Producing Formation Dakota		Pool Basin Dakota	Dedicated Acreage: 320 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 Unitization

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

May 21, 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

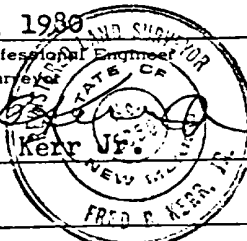
May 14, 1980

Registered Professional Engineer and/or Land Surveyor

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

Certificate No.

3950



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ well gas ☒ well other

2. NAME OF OPERATOR
Northwest Pipeline Corporation

3. ADDRESS OF OPERATOR
P.O. Box 90, Farmington, N.M. 87401

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1700' FNL & 1090' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐
(other) Change Location

SUBSEQUENT REPORT OF:

☐
☐
☐
☐
☐
☐
☐
☐
☐

5. LEASE

NM 011350

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.

#98

10. FIELD OR WILDCAT NAME

Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec 33 T29N R5W

12. COUNTY OR PARISH

Rio Arriba

13. STATE

New Mexico

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)

6730' GR

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

This location has been changed due to archaeological findings on location.

Old Location: 1600' FNL & 1090' FEL

New Location: 1700' FNL & 1090' FEL

Subsurface Safety Valve: Manu. and Type

18. I hereby certify that the foregoing is true and correct

SIGNED Donna Grace TITLE Production Clerk DATE August 7, 1980

(This space for Federal or State office use)

APPROVED BY: 1980
CONDITIONS OF APPROVAL IF ANY:

Donna Grace
DISTRICT ENGINEER

TITLE DATE

NMOCC See Instructions on Reverse Side



OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-107
Revised 10-1-7

STATE 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		Well No. 98
Unit Letter H	Section 33	Township 29N	Range 5W	County Rio Arriba	
Actual Footage Location of Well:					
1700 feet from the North line and		1090 feet from the East line			
Ground Level Elev: 6726	Producing Formation Dakota		Pool Basin Dakota	Dedicated Acreage: 320	Acres

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

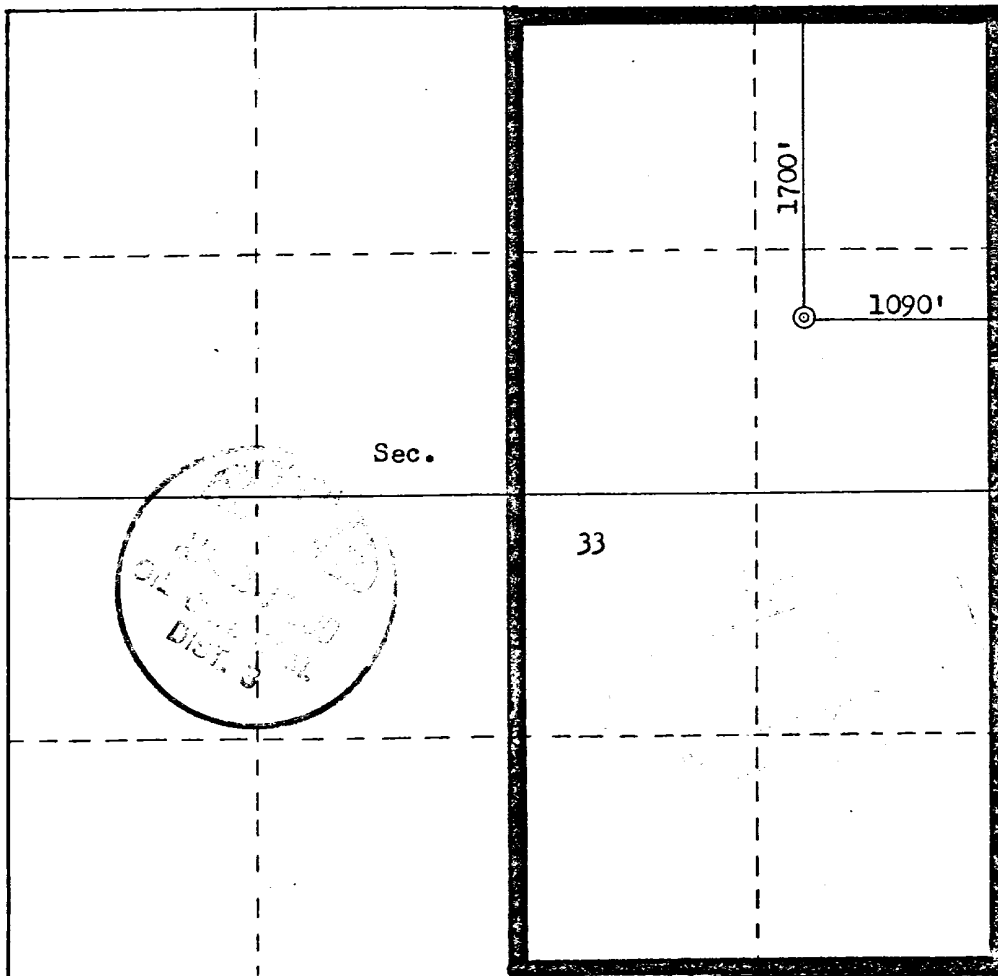
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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 **JUL 21 1980**

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.



Scale: 1"=1000'

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

July 21, 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

JUL 25 1980

Registered Professional Engineer and Land Surveyor

Fred B. Kern Jr.

Certification No.

3950

NORTHWEST PIPELINE CORPORATION

DRILLING PROGNOSIS

Well Name: San Juan 29-5 Unit #98

Date: June 13, 1980

I. LOCATION: 1090' FEL & 1600' FNL
 Sec 33 T29N R5W
 Rio Arriba Co., New Mexico

ELEVATION: 6730' GR

SURFACE: BLM

MINERALS: Fed SF - 011348

FIELD: Basin Dakota

II. GEOLOGY: Surface formation: San Jose

<u>A. Formation:</u>	<u>Depth:</u>	<u>Formation:</u>	<u>Depth:</u>
Ojo Alamo	2875'	Mancos	6025'
Kirtland	3095'	Gallup	6904'
Fruitland	3400'	Greenhorn	7815'
Pictured Cliffs	3665'	Graneros	7865'
Lewis	3790'	Dakota	7980'
Cliff House	5494'	Total Depth	8150'
Point Lookout	5914'		

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

C. Neutral Gauges: Gauge @ 5914', 6904', 7865', and @ Total Depth. Record all gauges on daily drilling report and morning report. Gauge all noticeable increases in gas while drilling & report.

III. DRILLING:

A. Contractor:

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

a) From Surface to Intermediate casing depth to be drilled with mud.

b) 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. The blind rams shall be actuated to test proper functioning 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</u>	<u>Casing Size</u>	<u>Wt & Grade</u>
12-1/4"	350'	9-5/8"	36# K-55
8-3/4"	3990'	7"	20# K-55
6-1/4"	8150'	4-1/2"	10.5# K-55 (To 6800')
		4-1/2"	11.6# K-55 (6800' to TD)

B. Float Equipment:

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

b) Intermediate Casing: 7" - Dowell guide shoe, Dowell self fill insert float valve. Dowell centralizers five (5).

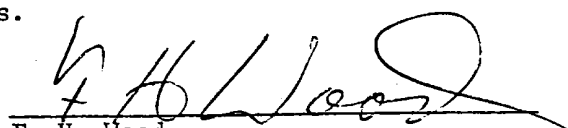
c) Production Casing: 4-1/2" - Larkin Geyser Shoe. Larkin Flapper type float collar.

C. Tubing: 8100' of 2-3/8", 4.7#, J-55, 10 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 C1 "B" cement with 1/4# gel flake per sack and 3% CaCl_2 (100% excess to circulate 9-5/8" casing). WOC 12 hrs. Test to 600² psi for 30 min.
- B. Intermediate Casing: 7" - Use 80 sks of 65/35 Class "B" poz with 12% gel and 15.52 gal of water per sk. Tail in with 50 sacks of Class "B" with 2% CaCl_2 (270 cu.ft of slurry, 60% excess to cover Ojo Alamo). Use top rubber plug only. Run tempreature survey after 8 hrs. WOC 12 hrs. Test casing to 1200 psi for 30 min.
- C. Production Casing: 4-1/2" - Precede cement with 40 bbls of water mixed with 4 sacks gel cement with 250 sks of C1 "B" cement with 8%, 12-1/2# fine gilsonite per sk and 0.4% HR-4. Tail in with 100 sks of C1 "B" cement with 1/4# fine tuf-plug per sack. (640 cu.ft of slurry), (50% excess to fill to intermediate csg). Run temperature survey after 8 hrs. Perforate after 18 hrs.

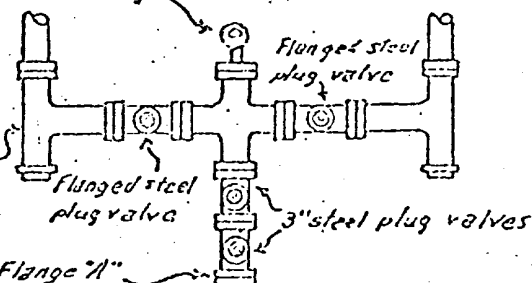

F. H. Wood

mjt
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 positive choke

Flanged steel plug valve

Flanged steel plug valve

3" steel plug valves

Flange "A"

PIPE RAMS

BLANK RAMS

Cameron SS, 2 Q.R.C. or
Shaffer Hydraulic Double Gate.
And in special instances
a double Shaffer
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.
3. All valves to be same test pressure capacity as BOP's
4. Compare minimum ID of BOP equipment with OD of casing hangers to be passed thru.
5. Everything flanged where shown.
6. Cameron Double-O Rubber Ring Guard gaskets are to be used in flanges indicated by * on sketch.
7. New metal rings are to be used each time a flange is assembled.
8. 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.

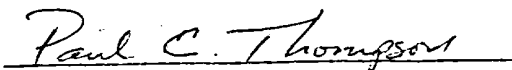
All liquids from the line will be contained at the site unless otherwise specified by the surface agency's representative.

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.

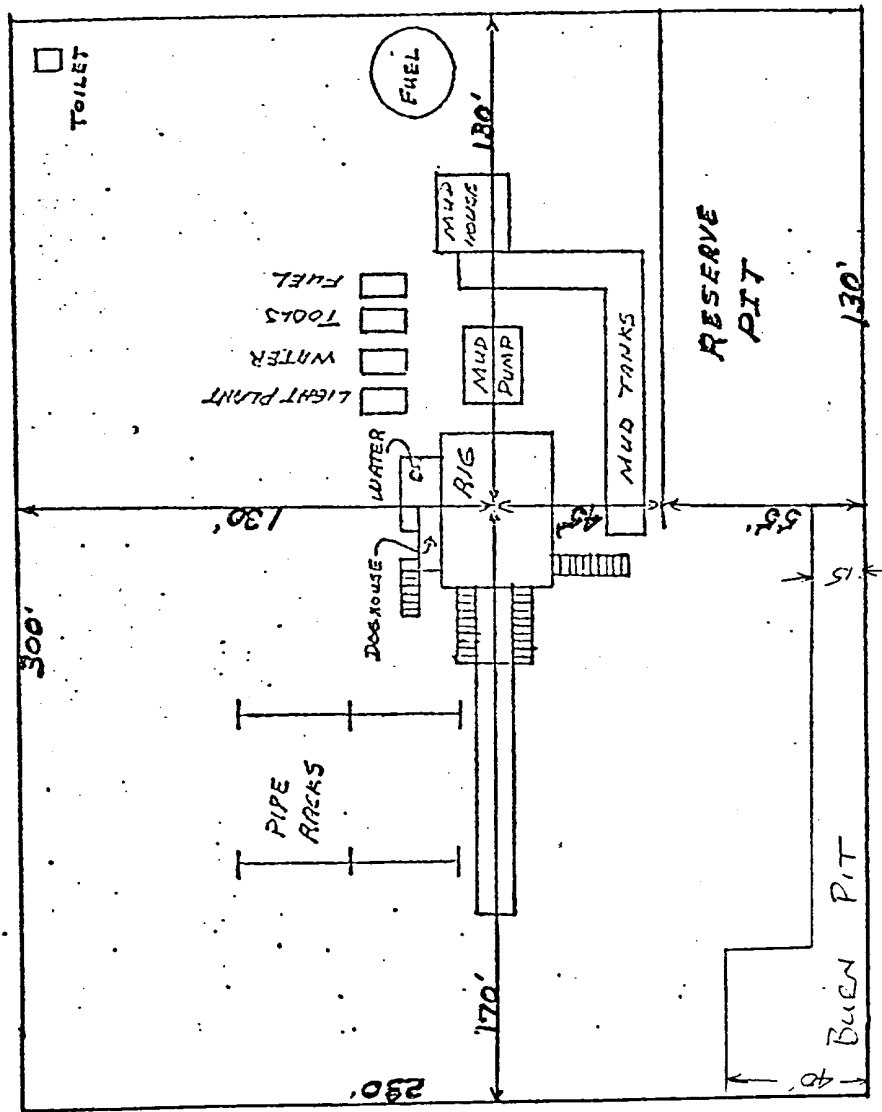
12. Operator's Representative: Paul Thompson - , P.O. Box 90 - Farmington, New Mexico 87401. Phone: 327-5351 Extension # 115
13. Certification:

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 Thompson
Drilling Engineer

NORTHWEST PIPELINE CORPORATION

LOCATION LAYOUT SAN JUAN 29.5 UNIT #98



DATE: 6/11/90
SCALE: 1" = 20'

