

UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

30-039-21565

5. LEASE DESIGNATION AND SERIAL NO.
SF 080379-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
San Juan 29-6 Unit

8. FARM OR LEASE NAME
San Juan 29-6 Unit

9. WELL NO.
20A

10. FIELD AND POOL, OR WILDCAT
Blanco Mesa Verde

11. SEC., T., R., M., OR B.L.K. AND SURVEY OR AREA
Sec. 8, T29N, R6W

12. COUNTY OR PARISH
Rio Arriba

13. STATE
N.M.

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, N.M. 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface 860' FNL & 1140' FWL
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 PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 860'

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 6054'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6804' GR

22. APPROX. DATE WORK WILL START*

23. PROPOSED CASING AND CEMENTING PROGRAM

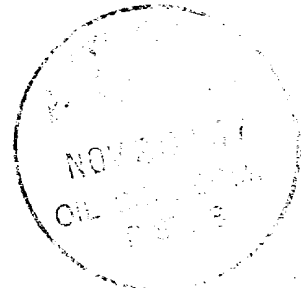
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	9 5/8"	32.3#	200'	125 sks.
8 3/4"	7"	20#	4010'	150 sks.
6 1/4"	4 1/2"	10.5#	3860'-6054'	210 sks.

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 W/2 of Section 8 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 D.E. Richardson TITLE Drilling Engineer DATE 11/8/77
D. E. Richardson
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:
DER/ch Okal

RECEIVED
NOV 22 1977

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

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

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

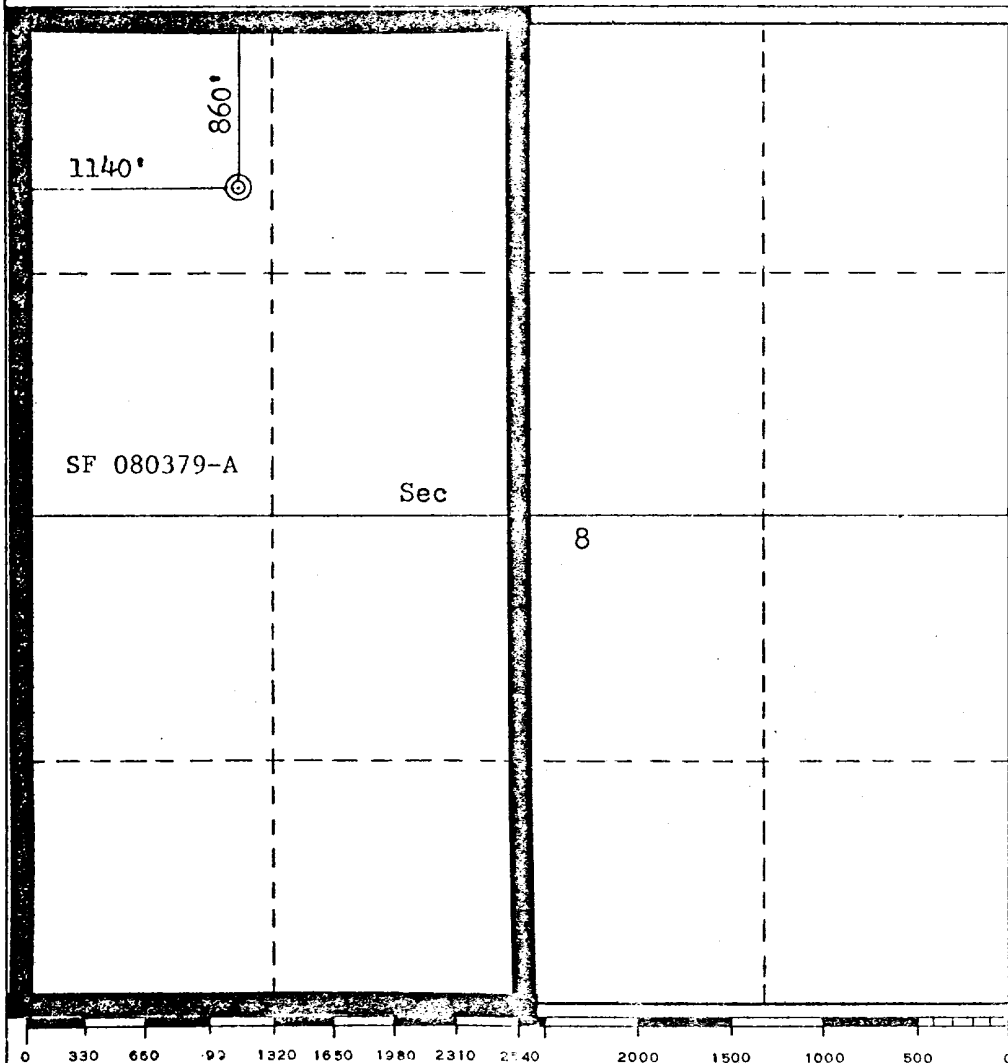
Operator Northwest Pipeline Corporation			Lease San Juan 29-6 Unit		Well No. 20A
Unit Letter D	Section 8	Township 29N	Range 6W	County Rio Arriba	
Actual Footage Location of Well: 860 feet from the North line and 1140 feet from the West line					
Ground Level Elev. 6804	Producing Formation Mesa Verde	Pool Blanco ✓		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 _____

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.

D.E. Richardson
Name

D.E. Richardson

Position
Drilling Engineer

Company
Northwest Pipeline Corp.

Date
November 8, 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 5, 1977

Registered Professional Engineer and/or Land Surveyor

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

Certificate No.
3950

OPERATIONS PLAN

San Juan 29-6 #20A

I. LOCATION: NW/4 NW/4 Sec. 8, T29N, R6W
Rio Arriba County, N.M.

LEASE NUMBER: SF 080379-A

FIELD: Blanco Mesa Verde

ELEVATION: 6804' GR

II. GEOLOGY:

A. Formation Tops:

Ojo Alamo:	2816'	Cliff House:	5486'
Kirtland:	2979'	Menefee:	5590'
Fruitland:	3419'	Point Lookout:	5854'
Pictured Cliffs:	3706'	Total Depth:	6054'
Lewis:	3810'		

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

C. Coring Program: None

D. Natural Gauges: Gauge at last connection above 5590, 5854' 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: 1-1-78, 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 3810'.

Viscosity: 32-38 sec/qt.

Weight: 8.8-9.2 #/gal.

Water Loss: 8-20 cc

Ph: 8.5-9.5

c) From 3810' to 4010'.

Viscosity: 36-45 sec/qt.

Weight: 8.5-9.5 #/gal.

Water Loss: 8-20 cc

Ph: 8.5-9.5

d) from 4010' to total depth with gas.

IV. MATERIALS:

A. Casing Program:

<u>Hole Size</u>	<u>Depth O.H.</u>	<u>Casing Size</u>	<u>Wt. & Grade</u>	<u>Depth Set</u>
12 14/16"	200'	9 5/8"	32.3# H-40	200'
8 3/4"	4010'	7"	20# K-55	4010'
6 1/4"	2194'	4 1/2"	10.5# K-55	3860'-6054'

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) Liner 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: 5850', 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.

NORTHWEST PIPELINE CORPORATION

MULTI - POINT SURFACE USE PLAN

for the San Juan 29-6 Unit

Well Number 20A

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.

Multi-Point Surface Use Plan

San Juan 29-6 #20A

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.

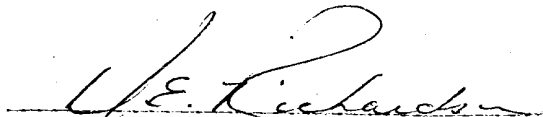
12. Operator's Representative: D.E. Richardson, P.O. Box 90 - Farmington, New Mexico 87401. Phone: 327-5351 Extension #38.

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.

11-18-77

Date



D.E. Richardson
Drilling Engineer

DER/ch

November 14, 1977

RE: Rehabilitation Agreement, for Fee Land.

Dear Sir:

Northwest Pipeline Corporation will submit a standard Rehabilitation Agreement as soon as surface ownership is determined. Northwest is presently in the process of determining ownership, and should have the necessary information available within two (2) weeks, at which time we will submit the proper form.

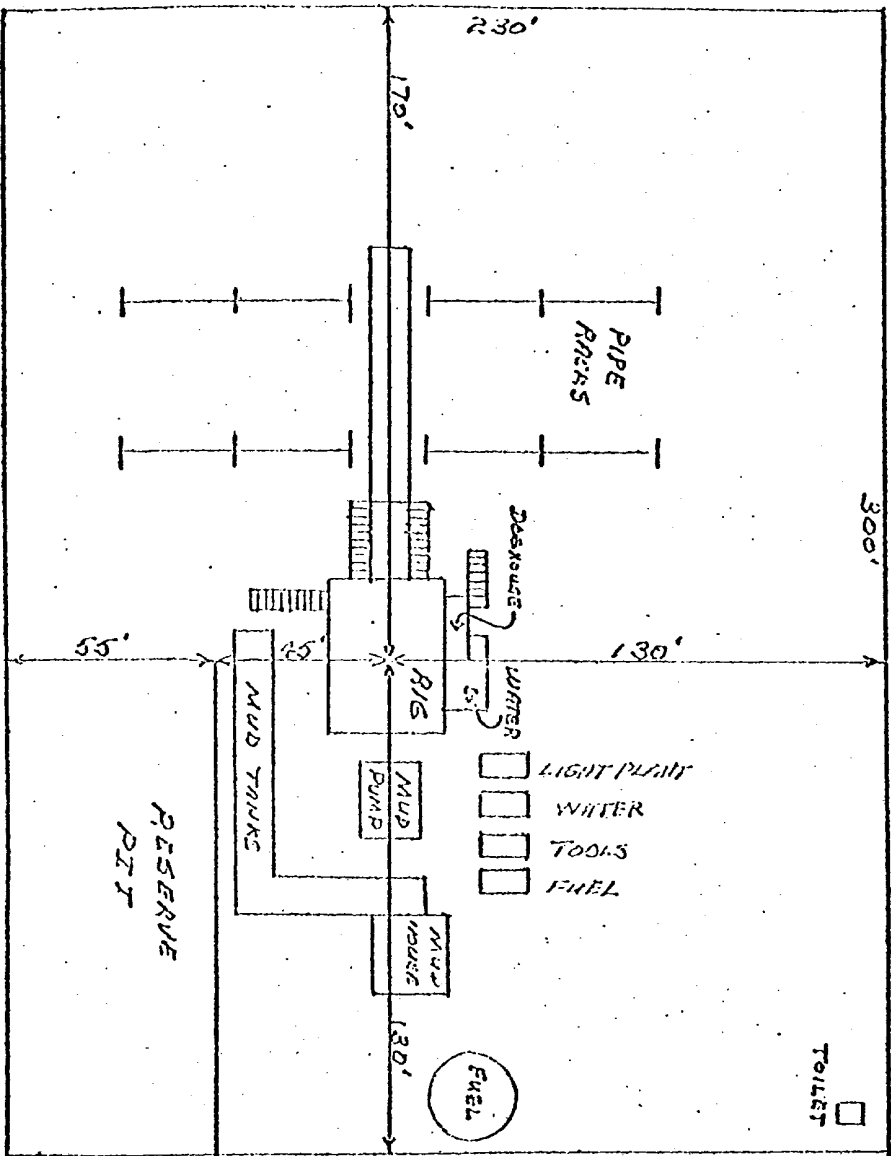
Thank you for your cooperation,

A handwritten signature in cursive script, appearing to read "D. E. Richardson".

D. E. Richardson

DER/br

NORTH WEST PIPELINE CORP. San Juan 29-C Unit No 28A



DATE:

SCALE: 1cm = 20'



T
29
N

R6W

Proposed Access Road
Proposed Location

Vicinity Map for
 NORTHWEST PIPELINE CORP. #20A SAN JUAN 29-6 UNIT
 860' FNL 1140' FWL Sec 8-T29N-R6W
 Rio Arriba County, New Mexico

BLOOD