

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY30-039-21557
5. LEASE DESIGNATION AND SERIAL NO.

SF 078282

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.

11A

10. FIELD AND POOL, OR WILDCAT

Blanco Mesa Verde

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

Sec. 19, T29N, R5W

12. COUNTY OR PARISH 13. STATE

Rio Arriba

N.M.

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

D

1050' FNL & 815' FWL

At proposed prod. zone

As above

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

NA

15. DISTANCE FROM PROPOSED*

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

815'

16. NO. OF ACRES IN LEASE

NA

17. NO. OF ACRES ASSIGNED
TO THIS WELL

W 320

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

NA

19. PROPOSED DEPTH

6007'

20. ROTARY OR CABLE TOOLS

Rotary

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

6712' GR

22. APPROX. DATE WORK WILL START*

1-1-78

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#	3922'	150 sks.
6 1/4"	4 1/2"	10.5#	3772'-6007'	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 19 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 11-9-77

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

OKal

*See Instructions On Reverse Side

DER/ch

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.

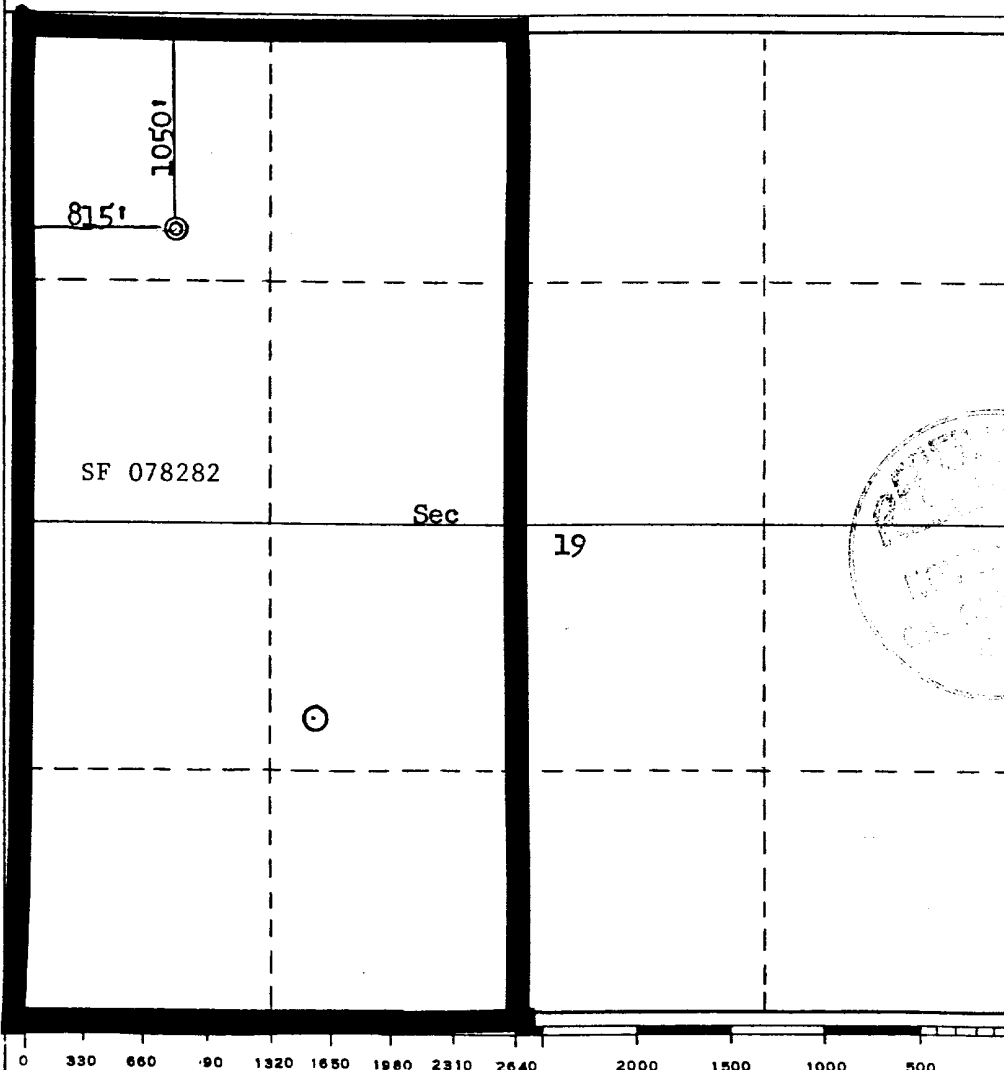
Operator Northwest Pipeline Corporation			Lease San Juan 29-5 Unit		Well No. 11A
Unit Letter D	Section 19	Township 29N	Range 5W	County Rio Arriba	
Actual Footage Location of Well: 1050 feet from the North line and 815 feet from the West line					
Ground Level Elev. 6712	Producing Formation Mesa Verde		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 9, 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 2, 1977

Registered Professional Engineer and/or Land Surveyor

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

Certificate No.

3950

Northwest Pipeline Corporation



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

OPERATIONS PLAN

San Juan 29-5 Unit #11A

I. LOCATION: NW/4 NW/4 Sec.19, T29N, R5W
Rio Arriba County, N.M.

LEASE NUMBER: SF 078282

FIELD: Blanco Mesa Verde

ELEVATION: 6712'

II. GEOLOGY:

A. Formation Tops:

Ojo Alamo:	2724'	Cliff House:	5452'
Kirtland:	2887'	Menefee:	5522'
Fruitland:	3327'	Point Lookout:	5807'
Pictured Cliffs:	3607'	Total Depth:	6007'
Lewis:	3722'		

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

C. Coring Program: None

D. Natural Gauges: Gauge at last connection above 5522', 5807' 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: Jan. 1, 1978, 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 3722'.

Viscosity: 32-38 sec/qt.

Weight: 8.8-9.2 #/gal.

Water Loss: 8-20 cc

Ph: 8.5-9.5

c) From 3722' to 3922'.

Viscosity: 36-45 sec/qt.

Weight: 8.5-9.5 #/gal.

Water Loss: 8-20 cc

Ph: 8.5-9.5

d) from 3922' to total depth with gas.

IV. MATERIALS:

A. Casing Program:

Hole Size	Depth O.H.	Casing Size	Wt. & Grade	Depth Set
12 14/16"	200'	9 5/8"	32.3# H-40	200'
8 3/4"	3922'	7"	20# K-55	3922'
6 1/4"	2085'	4 1/2"	10.5# K-55	3772'-6007'

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 neopreme pack off.

- C. Tubing Program: 5950', 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.

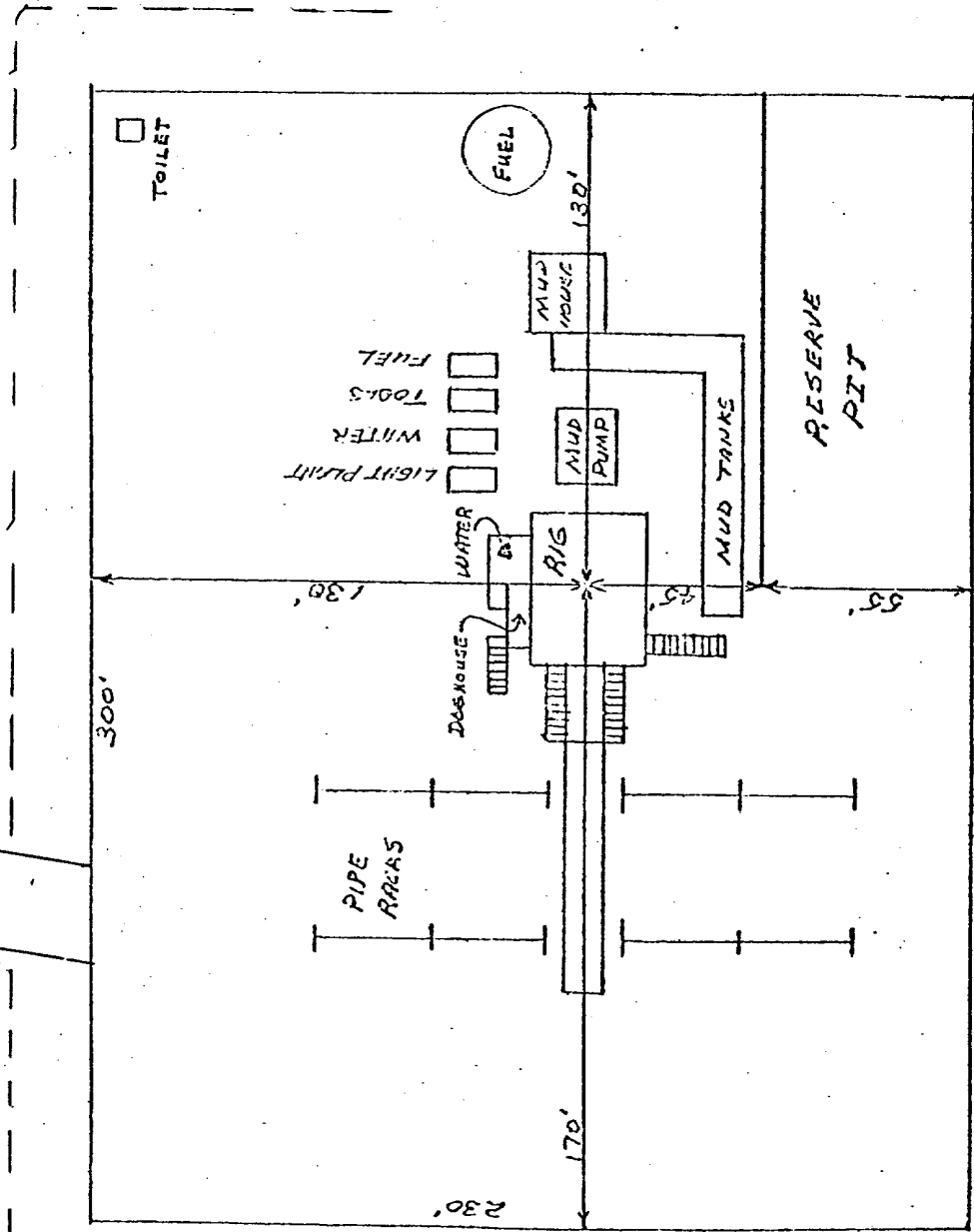
NORTH WEST PIPELINE CORP.
Jan 29-5
#11-A

Access Road

5. Cut

DATE: 11-14-77

SCALE: 1cm = 20'



NORTHWEST PIPELINE CORPORATION
MULTI - POINT SURFACE USE PLAN
for the San Juan 29-5 Unit
Well Number 11A

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.

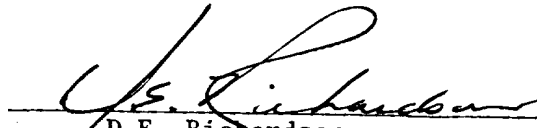
When drilling with gas, the line used to discharge and burn off the gas will be located so as not to damage vegetation in the area, and if necessary an earthen screen will be constructed to protect the vegetation. All liquids from the line will be contained at the site unless otherwise specified by the 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.

11-14-77
Date


D.E. Richardson
Drilling Engineer

DER/ch



Vicinity Map for
NORTHWEST PIPELINE CORP. #11A San Juan 29-5 Unit
1050'FNL 815'FWL Sec 19-T29N-R5W
Rio Arriba County, New Mexico

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
PO Box 90, Farmington, New Mexico 87401
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1050' FNL & 815' FWL
AT TOP PROD. INTERVAL: same
AT TOTAL DEPTH: 6019', 5981' PBTD same
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

- | REQUEST FOR APPROVAL TO: | | SUBSEQUENT REPORT OF: | |
|--------------------------|--------------------------|-----------------------|-------------------------------------|
| TEST WATER SHUT-OFF | <input type="checkbox"/> | | <input type="checkbox"/> |
| FRACTURE TREAT | <input type="checkbox"/> | | <input checked="" type="checkbox"/> |
| SHOOT OR ACIDIZE | <input type="checkbox"/> | | <input checked="" type="checkbox"/> |
| REPAIR WELL | <input type="checkbox"/> | | <input type="checkbox"/> |
| PULL OR ALTER CASING | <input type="checkbox"/> | | <input type="checkbox"/> |
| MULTIPLE COMPLETE | <input type="checkbox"/> | | <input type="checkbox"/> |
| CHANGE ZONES | <input type="checkbox"/> | | <input type="checkbox"/> |
| ABANDON* | <input type="checkbox"/> | | <input type="checkbox"/> |
| (other) "summary" | <input type="checkbox"/> | | <input type="checkbox"/> |

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.)*
- 2-4-78 Spudded 12 1/4" surface hole 1300 hrs. Ran 5 jts (207') 9 5/8" csg set @ 219'. Cmted w/ 125 sks C1"B". Circ 5 bbls, plug down 2045 hrs.
- 2-8-78 Ran 94 jts (3922') of 7" 20# csg set @ 3934'. Cmted w/ 150 sks. Good circ. Plug down 1930 hrs.
- 2-9-78 Tested csg to 600 psi, held OK.
- 2-11-78 Ran 68 jts (2253') of 4 1/2" liner set from 6017' to 3764'. Cmted w/ 210 sks. Plug down 0530 hrs. WOC. Tested csg to 3500 psi. Spot 500 gal 7 1/2% HCl.
- 2-12-78 Ran GR-Neutron & CCL. Perfed 30 holes 5510' to 5968'. Pumped 1000 gal 7 1/2% HCl & Dropped 50 ball sealers, good ball action. Pumped 10,000 gal pad @ 40 BPM @ 1700 psi. Fraced w/ 100,000# 20/40 sand @ 1 1/4#/gal. ISIP 0, AIR 54 BPM, MIR 57 BPM, ATP 1200 psi, MTP 1900 psi. Frac job complete 1000 hrs 2-12-78.
- 2-13-78 Blew well & ran tbg, 190 jts (5940') landed @ 5952'. 5 P.M. gauge 1236 MCFD, 10 P.M. gauge 2039 MCFD. Released rig 0400 hrs 2-14-78. SI for test.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

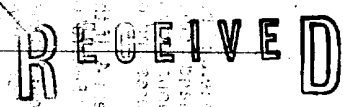
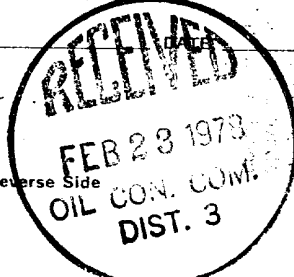
SIGNED B. C. Key TITLE Production Clerk DATE February 16, 1978

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____
CONDITIONS OF APPROVAL, IF ANY:

5. LEASE SF 078282	
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. 11A	
10. FIELD OR WILDCAT NAME Blanco Mesa Verde	
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 19 T29N R5W	
12. COUNTY OR PARISH Rio Arriba	13. STATE New Mexico
14. API NO.	
15. ELEVATIONS (SHOW DF, KDB, AND WD) 6712' GR	

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



U. S. GEOLOGICAL SURVEY
DURANGO, COLO.

*See Instructions on Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special						Test Date 2/24/78				
Company Northwest Pipeline Corp.				Connection New Well						
Pool Blanco				Formation Mesa Verde				Unit San Juan 29-5		
Completion Date Feb. 14, 1978		Total Depth 6019		Plug Back TD 5981		Elevation 6712 GR		Farm or Lease Name San Juan 29-5 Unit		
Csg. Size 7.000 4.500	Wt. 20.0 10.5	d 6.457 4.025	Set At 3934 3764-6017	Perforations: From 5510 To 5968		Well No. #11A				
Tbg. Size 2.375	Wt. 4.7	d 1.995	Set At 5952	Perforations: From To		Unit Sec. Twp. Rge. D 19 29 5				
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Gas - Single						Packer Set At None		County Rio Arriba		
Producing Thru Tubing		Reservoir Temp. °F @		Mean Annual Temp. °F		Baro. Press. - P _a 12.0		State New Mexico		
L	H	G _g .650	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Taps		
Pos. Choke										
FLOW DATA						TUBING DATA		CASING DATA		
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F
1.	2	x	.750	267		61°	742		821	
2.							267		680	
3.										
4.										
5.										
RATE OF FLOW CALCULATIONS										
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd			
1	9.604		279	.999	1.240	1.031	3422			
2.										
3.										
4.										
5.										
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.					
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.					
2.					Specific Gravity Separator Gas _____ X X X X X X X X					
3.					Specific Gravity Flowing Fluid _____ X X X X X					
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.					
5.					Critical Temperature _____ R _____ R					
P _c 833 P _c ² 693889					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.2270$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.4077$					
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 8239$					
1		692	478864	215025						
2										
3										
4										
5										
Absolute Open Flow 8239 Mcfd @ 15.025					Angle of Slope Θ _____			Slope, n .75		
Remarks: Blew light mist of water through out test. Trace of condensate.										
Approved By Commission:			Conducted By: Fred S. Hamrick			Calculated By: B.J. Broughton			Checked By:	

BJB/aa

DEVIATION REPORT

NAME OF COMPANY Northwest Pipeline Corp. ADDRESS PO Box 90, Farmington, New Mexico 87401
LEASE San Juan 29-5 Unit WELL 11A UNIT D SEC 19 T. 29N R. 5W
POOL Blanco Mesa Verde COUNTY Rio Arriba

<u>DEPTH</u>	<u>(0) DEVIATION</u>
<u>222</u>	<u>1</u>
<u>728</u>	<u>3/4</u>
<u>1280</u>	<u>3/4</u>
<u>1897</u>	<u>1</u>
<u>2462</u>	<u>1-1/4</u>
<u>2962</u>	<u>3/4</u>
<u>3084</u>	<u>1/4</u>
<u>3555</u>	<u>1/2</u>
<u>3934</u>	<u>1</u>
<u>4424</u>	<u>3/4</u>
<u>4910</u>	<u>1/4</u>
<u>5455</u>	<u>1/2</u>
<u>5954</u>	<u>1/2</u>



Certificate: I, the undersigned, state that I, Barbara C. Rex
acting in my capacity as Production Clerk of Northwest Pipeline Corporation,
am authorized by said Company to make this report; and that this report was prepared
by me or under my supervision and direction and that the facts stated herein are
true to the best of my knowledge and belief.

Barbara C. Rex

Subscribed and sworn to before me this 2nd day of March, 1978

Virginia B. Copeland
NOTARY PUBLIC IN AND FOR SAN JUAN COUNTY, NEW MEXICO

My Commission Expires

12-18-79