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NEW MEXICO OIL CONSERVATION COMMISSION

30-039-21788
Form C-101
Revised 1-1-65

5A. Indicate Type of Lease
STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work		7. Unit Agreement Name	
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		San Juan 29-5 Unit	
DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		8. Farm or Lease Name	
SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		San Juan 29-5 Unit	
2. Name of Operator		9. Well No.	
Northwest Pipeline Corporation		#88	
3. Address of Operator		10. Field and Pool, or Wildcat	
P.O. Box 90, Farmington, New Mexico 87401		Basin Dakota	
4. Location of Well		12. County	
UNIT LETTER G LOCATED 2450 FEET FROM THE North LINE		Rio Arriba	
AND 1850 FEET FROM THE East LINE OF SEC. 34 TWP. 29N RGE. 5W NMPV			
19. Proposed Depth		19A. Formation	
8075'		Dakota	
20. Rotary or C.T.		Rotary	
21. Elevations (Show whether DF, RT, etc.)		22. Approx. Date Work will start	
6695' GR		June 1, 1978	
21A. Kind & Status Plug. Bond		21B. Drilling Contractor	
		NA	

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12-1/4"	9-5/8"	32.3#	300'	165	Surface
8-3/4"	7"	20#	3660'	165	2500'
6-1/4"	4-1/2"	10.5# & 11.6#	T.D.	345	3660'

Selectively perforate and stimulate the Dakota formation.

A BOP will be installed after the surface casing has been run and cemented.
All subsequent work will be conducted through the BOP.

The W/2 of Section 34 is dedicated to this well. Gas is dedicated.

EXPIRES 8-14-78

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. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed D. H. Maroncelli Title Sr. Drilling Engineer Date 5/6/78

(This space for State Use)

APPROVED BY Frank S. Dancy TITLE DEPUTY OIL & GAS INSPECTOR, DIST #3 DATE MAY 16 1978

CONDITIONS OF APPROVAL, IF ANY:

**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.

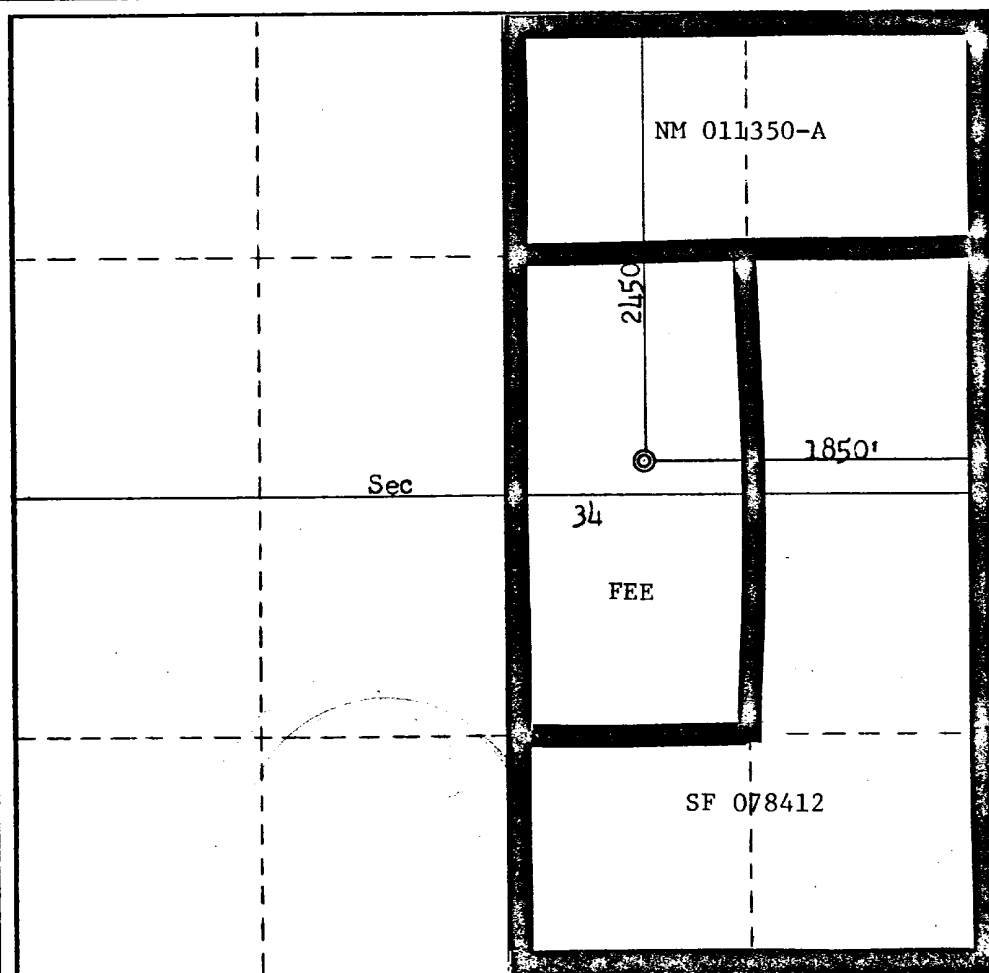
Operator NORTHWEST PIPELINE CORPORATION			Lease SAN JUAN 29-5 UNIT		Well No. 88
Unit Letter G	Section 34	Township 29N	Range 5W	County Rio Arriba	
Actual Footage Location of Well: 2450 feet from the North line and 1850 feet from the East line					
Ground Level Elev. 6695	Producing Formation Dakota		Pool 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

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.H. Maroncelli
Name

D.H. Maroncelli

Position
Sr. Drilling Engineer

Company
Northwest Pipeline Corp.

Date
May 4, 1978

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.

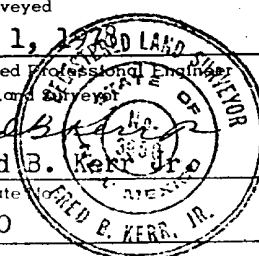
Date Surveyed

May 1, 1978

Registered Professional Engineer and/or Land Surveyor

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

Certificate No. 3950



0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease	
State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	

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 "APPLICATION FOR PERMIT -" (FCPM C-101) FOR SUCH PROPOSALS.)

1. <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER		7. Unit Agreement Name San Juan 29-5 Unit
2. Name of Operator Northwest Pipeline Corporation		8. Farm or Lease Name San Juan 29-5 Unit
3. Address of Operator P.O. Box 90, Farmington, New Mexico 87401		9. Well No. 88.
4. Location of Well UNIT LETTER <u>G</u> <u>2450</u> FEET FROM THE <u>North</u> LINE AND <u>1850</u> FEET FROM THE <u>East</u> LINE, SECTION <u>34</u> TOWNSHIP <u>29N</u> RANGE <u>5W</u> N.M.P.M.		10. Field and Pool, or Wildcat Basin Dakota
15. Elevation (Show whether DF, RT, GR, etc.) 6695' GR		12. County Rio Arriba

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐

PLUG AND ABANDON ☐
CHANGE PLANS ☐

Drill ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐
COMMENCE DRILLING CPNS. ☐
CASING TEST AND CEMENT JOB ☐
OTHER ☐
ALTERING CASING ☐
PLUG AND ABANDONMENT ☐

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

It is our intent to drill this well in the near future;
therefore, we request an extension of the Permit to Drill.

EXPIRES
UNLESS
RENEWED,

EXPIRES 11-12-78

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Barbara C. Rex TITLE Production Clerk DATE July 28, 1978

APPROVED BY [Signature] TITLE SUPERVISOR DATE Aug 1 1978
CONDITIONS OF APPROVAL IF ANY:

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease	
State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	

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 "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER-		7. Unit Agreement Name San Juan 29-5 Unit
2. Name of Operator Northwest Pipeline Corporation		8. Farm or Lease Name San Juan 29-5 Unit
3. Address of Operator P.O. Box 90, Farmington, New Mexico 87401		9. Well No. 88
4. Location of Well UNIT LETTER <u>G</u> <u>2450</u> FEET FROM THE <u>North</u> LINE AND <u>1850</u> FEET FROM THE <u>East</u> LINE, SECTION <u>34</u> TOWNSHIP <u>29N</u> RANGE <u>5W</u> NMPM.		10. Field and Pool, or Wildcat Basin Dakota
15. Elevation (Show whether DF, RT, GR, etc.) 6695'GR		12. County Rio Arriba

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input checked="" type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <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) SEE RULE 1103.

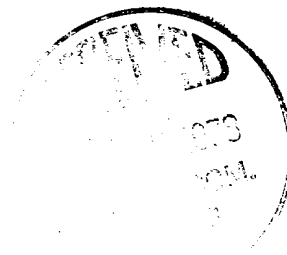
8-26-78 Spud @ 1230 hrs 8-26-78. Drilled to 353'. Ran 8 jts (328') 9-5/8", 36#, K-55 csg set @ 343'. Cmted w/ 175 sks. Plug down @ 2015 hrs. Circ 5 bbls cmt to surface. WOC.
8-27-78 Tested csg to 600 psi, held OK.

Drilling ahead.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED A. R. Kendrick TITLE Production Clerk DATE August 31, 1978

Original Signed by A. R. Kendrick
APPROVED BY _____ TITLE SUPERVISOR DIST. #3 DATE SEP 5 1978
CONDITIONS OF APPROVAL, IF ANY:



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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease	
State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	

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 "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER-	7. Unit Agreement Name San Juan 29-5 Unit
2. Name of Operator Northwest Pipeline Corporation	8. Farm or Lease Name San Juan 29-5 Unit
3. Address of Operator P.O. Box 90, Farmington, New Mexico 87401	9. Well No. 88
4. Location of Well UNIT LETTER <u>G</u> , <u>2450</u> FEET FROM THE <u>North</u> LINE AND <u>1850</u> FEET FROM THE <u>East</u> LINE, SECTION <u>34</u> TOWNSHIP <u>29N</u> RANGE <u>5W</u> NMPM.	10. Field and Pool, or Wildcat Basin Dakota
15. Elevation (Show whether DF, RT, GR, etc.) 6695' GR	12. County Rio Arriba

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data	
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>
OTHER <input type="checkbox"/>	OTHER <u>"Drilling & Completion"</u> <input checked="" type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABANDONMENT <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) SEE RULE 1103.

- 8-30-78 Depth 3895'. Ran 96 jts 7", 20#, K-55, ST&C csg set @ 380'. Cmted w/ 175 sks. Plug down @ 1100 hrs. Top of cmt by temp survey @ 1800'. Pressure tested csg to 1200 psi, held OK.
- 9-2-78 Drilled to TD 8022'. Ran GR-Induction & Density logs.
- 9-3-78 Ran 201 jts of 4-1/2", 10.5# & 11.6#, K-55, ST&C csg set @ 8022'. Cmted w/ 345 sks. Plug down @ 1830 hrs. WOC. Top of cmt by temp survey @ 3250'. Cleaned out to PBTD 8009'. Tested csg to 3800 psi, held OK.
- 9-4-78 Spotted 500 gal 7-1/2% HCl. Ran GR-CCL & perfed from 7982' to 7994' w/ 24 shots. Fraced w/ 50,000# 40/60 sand & 71,840 gal slick wtr. Job complete @ 2400 hrs.
- 9-6-78 Landed 2-3/8" tbg @ 7986'. Released rig @ 0600 hrs.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Barbara C. Rex TITLE Production Clerk DATE Sept. 18, 1978

Original Signed by A. R. Kendrick

APPROVED BY _____ TITLE SUPERVISOR DIST. #3 DATE SEP 20 1978

CONDITIONS OF APPROVAL, IF ANY:

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

Form O-122
Revised 9-1-65

Type Test: <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special						Test Date: 9/13/78			
Company: Northwest Pipeline Corp.				Connection: New Completion					
Pool: Basin				Formation: Dakota				Unit: 29-5	
Completion Date: Sept. 6, 1978		Total Depth: 8022		Plug Back TD: 8009		Elevation: 6695		Farm or Lease Name: San Juan	
Csg. Size 7 4.5	Wt. 20# 10.5#	d 4.052	Set At 3806 8022	Perforations: From 7982 To 7994		Well No. #88			
Tng. Size 2.375	Wt. 4.9	d 1.995	Set At 7986	Perforations: From To		Unit Sec. Twp. Rye. G 34 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	Gg .590	% CO ₂	% N ₂	% H ₂ S	Prover 3/4" Choke		Meter Run	Taps

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
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.	
SI							2372		2493	
1.	2"	X	.750	205		60°	205		909	
2.										
3.										
4.										
5.										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	9.604		217	1.000	1.302	1.017	2760
2.							
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _t	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 2505	P _c ² 6275025	
NO.	P _t ²	P _w
1		921
2		848241
3		5426784
4		
5		

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.1563$

ACF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3087$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1151$

Absolute Open Flow	3078	Mcf @ 15.025	Angle of Slope @	Slope, n .75
--------------------	------	--------------	------------------	--------------

Remarks: Blew med. mist of H₂O throughout test.

Approved By Commission:	Conducted By: Fred Hamrick	Calculated By: Fred Hamrick	Checked By:
-------------------------	-------------------------------	--------------------------------	-------------

DEVIATION REPORT

NAME OF COMPANY Northwest Pipeline Corp ADDRESS PO Box 90, Farmington, New Mexico 87401

LEASE San Juan 29-5 Unit WELL 88 UNIT G SEC 34 T. 29N R. 5W

POOL Basin Dakota COUNTY Rio Arriba

<u>DEPTH</u>	<u>(°)</u> <u>DEVIATION</u>
<u>353</u>	<u>1</u>
<u>933</u>	<u>3/4</u>
<u>1433</u>	<u>1</u>
<u>2009</u>	<u>1-3/4</u>
<u>2496</u>	<u>1-1/2</u>
<u>2941</u>	<u>1-1/2</u>
<u>2995</u>	<u>1</u>
<u>3533</u>	<u>1</u>
<u>3800</u>	<u>3/4</u>
<u>4292</u>	<u>1/4</u>
<u>4788</u>	<u>3/4</u>
<u>5274</u>	<u>3/4</u>
<u>5762</u>	<u>1/4</u>
<u>6253</u>	<u>1/2</u>
<u>6750</u>	<u>1/2</u>
<u>6906</u>	<u>3/4</u>
<u>7314</u>	<u>1/4</u>
<u>7786</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 25th day of September, 1978

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

My Commission Expires 12-18-79

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Form C-105
Revised 11-1-78

NEW MEXICO OIL CONSERVATION COMMISSION WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease	
State <input type="checkbox"/>	Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.	

1a. TYPE OF WELL

OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER _____

b. TYPE OF COMPLETION

NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER _____

7. Unit Agreement Name
San Juan 29-5 Unit
8. Farm or Lease Name
San Juan 29-5 Unit

2. Name of Operator
Northwest Pipeline Corporation

9. Well No.
88

3. Address of Operator
PO Box 90, Farmington, New Mexico 87401

10. Field and Pool, or Wildcat
Basin Dakota

4. Location of Well

UNIT LETTER G LOCATED 2450 FEET FROM THE North LINE AND 1850 FEET FROM

12. County	
Rio Arriba	

THE East LINE OF SEC. 34 TWP. 29N RGE. 5W NMPM

15. Date Spudded 8-26-78	16. Date T.D. Reached 9-3-78	17. Date Compl. (Ready to Prod.) 9-13-78	18. Elevations (DF, RKB, RT, GR, etc.) 6695' GR	19. Elev. Casinghead
-----------------------------	---------------------------------	---	--	----------------------

20. Total Depth 8022'	21. Plug Back T.D. 8009'	22. If Multiple Compl., How Many	23. Intervals Drilled By Rotary Tools A11	Cable Tools
--------------------------	-----------------------------	----------------------------------	---	-------------

24. Producing Interval(s), of this completion — Top, Bottom, Name
Dakota; 7982' to 7994'

25. Was Directional Survey Made
No

26. Type Electric and Other Logs Run
GR-Induction & Comp Density

27. Was Well Cored
No

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	36	343'	12-1/4"	175 sks	5 bbls
7"	20	3806'	8-3/4"	175 sks	-

29. LINER RECORD				30. TUBING RECORD			
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
4-1/2"	surface	8022'	345		2-3/8"	7986'	none

31. Perforation Record (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
7982' to 7984' (24 holes @ 2 shots/ft.)		DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
		7982' to 7994'	500 gal 7-1/2% HCl.
			10,000 gal pad
			50,000# 40/60 sand in slick wtr
			Total fluid = 71,840 gal

33. PRODUCTION							
Date First Production		Production Method (Flowing, gas lift, pumping — Size and type pump)				Well Status (Prod. or Shut-in)	
N/A		Flowing				Shut-in	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas — Oil Ratio
9-13-78	3	2"X0.750"	→	0	CV 2760	0	
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)	
205 psig	909 psig	→	0	AOF 3087	0	-	

34. Disposition of Gas (Sold, used for fuel, vented, etc.)
Waiting on pipeline connection

Test Witnessed By

35. List of Attachments

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED Barbara C. Rex TITLE Production Clerk DATE Sept. 25, 1978

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 33 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

T. Anhy _____	T. Canyon _____
T. Salt _____	T. Strawn _____
B. Salt _____	T. Atoka _____
T. Yates _____	T. Miss _____
T. 7 Rivers _____	T. Devonian _____
T. Queen _____	T. Silurian _____
T. Grayburg _____	T. Montoya _____
T. San Andres _____	T. Simpson _____
T. Glorieta _____	T. McKee _____
T. Paddock _____	T. Ellenburger _____
T. Blinebry _____	T. Gr. Wash _____
T. Tubb _____	T. Granite _____
T. Drinkard _____	T. Delaware Sand _____
T. Abo _____	T. Bone Springs _____
T. Wolfcamp _____	T. _____
T. Penn. _____	T. _____
T. Cisco (Bough C) _____	T. _____

Northwestern New Mexico

T. Ojo Alamo _____	T. Penn. "B" _____
T. Kirtland-Fruitland _____	T. Penn. "C" _____
T. Pictured Cliffs _____	T. Penn. "D" _____
T. Cliff House _____	T. Leadville _____
T. Menefee _____	T. Madison _____
T. Point Lookout _____	T. Elbert _____
T. Mancos _____	T. McCracken _____
T. Gallup _____	T. Ignacio Qtzite _____
Base Greenhorn _____	T. Granite _____
T. Dakota _____	T. _____
T. Morrison _____	T. _____
T. Todilto _____	T. _____
T. Entrada _____	T. _____
T. Wingate _____	T. _____
T. Chinle _____	T. _____
T. Permian _____	T. _____
T. Penn. "A" _____	T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from _____ to _____

No. 2, from _____ to _____

No. 3, from _____ to _____

No. 4, from _____ to _____

No. 5, from _____ to _____

No. 6, from _____ to _____

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....

No. 2, from.....to.....feet.....

No. 3, from.....to.....feet.....

No. 4, from.....to.....feet.....

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
5505'			Mesa Verde				
7802'			Greenhorn				
7853'			Graneros				
7971'			Dakota				

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TRANSPORTER	OIL	1
	GAS	1
OPERATOR		2
PRODUCTION OFFICE		

NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-65

I. Operator
Northwest Pipeline Corporation
Address
PO Box 90, Farmington, New Mexico 87401
Reason(s) for filing (Check proper box)
New well ☒ Change in Transporter of:
Recompletion ☐ Oil ☐ Dry Gas ☐
Change in Ownership ☐ Casinghead Gas ☐ Condensate ☐
Other (Please explain)

If change of ownership give name and address of previous owner

II. DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease	Lease No.
San Juan 29-5 Unit	88	Basin Dakota	XXXX XXXXXX Fee	
Location Unit Letter G ; 2450 Feet From The North Line and 1850 Feet From The East Line of Section 34 Township 29N Range 5W , NMPM, Rio Arriba County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)					
Northwest Pipeline Corporation	3539 E 30th St., Farmington, New Mexico 87401					
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)					
Northwest Pipeline Corporation	3539 E 30th St., Farmington, New Mexico 87401					
If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When

If this production is commingled with that from any other lease or pool, give commingling order number:

IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
		X	X					
Date Spudded 8-26-78	Date Compl. Ready to Prod. 9-13-78	Total Depth 8022'	P.B.T.D. 8009'					
Elevations (DF, RKB, RT, GR, etc.) 6695' GR	Name of Producing Formation Dakota	Top Oil/Gas Pay 7982'	Tubing Depth 7986'					
Perforations 7982' to 7994'; 24 holes			Depth Casing Shoe 8022'					
TUBING, CASING, AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT					
12-1/4"	9-5/8"	343'	175					
8-3/4"	7"	3806'	175					
6-1/4"	4-1/2" liner	surface to 8022'	345					
-	2-3/8" tbg	7986'	-					

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
	9-13-78	Flow	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D CV 2760 AOF 3087	Length of Test 3 hrs	Bbls. Condensate/MMCF 0	Gravity of Condensate
Testing Method (pilot, back pr.) Back Pressure	Tubing Pressure (Shut-in) 2372 psig	Casing Pressure (Shut-in) 2493 psig	Choke Size 2" X 0.750"

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Richard L. Rex
(Signature)

Production Clerk
(Title)

September 25, 1978
(Date)

OIL CONSERVATION COMMISSION

APPROVED SEP 25 1978, 19
BY Original Signature
TITLE DEPUTY OIL & GAS INSPECTION DIV. #3

This form is to be filed in compliance with RULE 1104.
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.
All sections of this form must be filled out completely for allowable on new and recompleted wells.
Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.
Separate Forms C-104 must be filed for each pool in multiply completed wells.

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NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-65

I. Operator
Northwest Pipeline Corporation
Address
PO Box 90, Farmington, New Mexico 87401
Reason(s) for filing (Check proper box) **Correction** Other (Please explain)
New Well ☒ ~~XXXXXX~~ Transporter of:
Recompletion ☐ Oil ☐ Dry Gas ☒
Change in Ownership ☐ Casinghead Gas ☐ Condensate ☐
If change of ownership give name and address of previous owner _____

II. DESCRIPTION OF WELL AND LEASE

Lease Name San Juan 29-5 Unit	Well No. 88	Pool Name, Including Formation Basin Dakota	Kind of Lease XXXXXXXXXX Fee	Lease No.
Location Unit Letter G ; 2450 Feet From The North Line and 1850 Feet From The East Line of Section 34 Township 29N Range 5W , NMPM, Rio Arriba County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/> Northwest Pipeline Corporation	Address (Give address to which approved copy of this form is to be sent) 3539 E 30th St., Farmington, New Mexico 87401					
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/> El Paso Natural Gas Company	Address (Give address to which approved copy of this form is to be sent) PO Box 990, Farmington, New Mexico 87401					
If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When

If this production is commingled with that from any other lease or pool, give commingling order number: _____

IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Rest'v.	Diff. Rest'v.
		X	X					
Date Spudded 8-26-78	Date Compl. Ready to Prod. 9-13-78	Total Depth 8022'	P.B.T.D. 8009'					
Elevations (DF, RKB, RT, GR, etc.) 6695' GR	Name of Producing Formation Dakota	Top Oil/Gas Pay 7982'	Tubing Depth 7986'					
Perforations 7982' to 7994'; 24 holes			Depth Casing Shoe 8022'					
TUBING, CASING, AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE		DEPTH SET		SACKS CEMENT			
12-1/4"	9-5/8"		343'		175			
8-3/4"	7"		3806'		175			
6-1/4"	4-1/2"		surface to 8022'		345			
-	2-3/8" tbq		7986'		-			

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test 9-13-78	Producing Method (Flow, pump, gas lift, etc.) Flow	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL			
Actual Prod. Test-MCF/D CV 2760 AOF 3087	Length of Test 3 hrs	Bbls. Condensate/MMCF 0	Gravity of Condensate -
Testing Method (pilot, back pr.) Back Pressure	Tubing Pressure (Shut-in) 2372 psig	Casing Pressure (Shut-in) 2493 psig	Choke Size 2" X 0.750"

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Barbara C. Rex
(Signature)
Production Clerk

(Title)
November 22, 1978

(Date)

OIL CONSERVATION COMMISSION
APPROVED **NOV 27 1978**, 19_____
BY Original Signed by A. R. Kendrick
TITLE SUPERVISOR DIST. #3

This form is to be filed in compliance with RULE 1104.
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.
All sections of this form must be filled out completely for allowable on new and recompleted wells.
Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.
Separate Forms C-104 must be filed for each pool in multiply completed wells.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

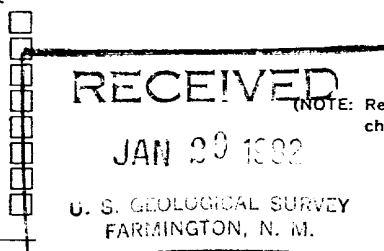
SUNDRY NOTICES AND REPORTS ON WELLS

(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.)

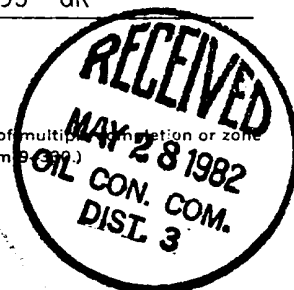
1. oil ☐ gas ☒ other ☐
well well well
2. NAME OF OPERATOR
Northwest Pipeline Corporation
3. ADDRESS OF OPERATOR
P.O. Box 90, Farmington, N.M. 87401
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 2540 FNL & 1850 FEL
AT TOP PROD. INTERVAL: 2540 FNL & 1850 FEL
AT TOTAL DEPTH: 2540 FNL & 1850 FEL
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) Water Disposal ☒

SUBSEQUENT REPORT OF:



5. LEASE *Fee*
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.
#88
10. FIELD OR WILDCAT NAME
Basin Dakota
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 34, T29N, R5W
12. COUNTY OR PARISH
Rio Arriba
13. STATE
N.M.
14. API NO.
15. ELEVATIONS (SHOW DF, KDB, AND WD)
6695' GR



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.)*

It is proposed to dispose of approximately 500 bbls of produced water from this well and the San Juan 29-5 Unit #89, 90, & 91 on a lease road located in the SW/4 of Sec 34, T29N, R5W. The water will be spread on the indicated dirt road by a water truck and a blade will follow working it into the ground. The contractor will be DAWN TRUCKING. A water analysis of the produced water and a topographic map of the area are attached.

Approval granted for disposal from unit well for beneficial use, not to exceed three times for each well, to control dust.

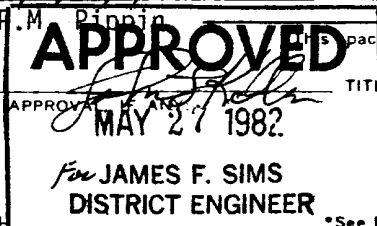
Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED *J.F. Sims* TITLE *Prod Engineer* DATE *1-22-82*

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL _____



SGK/djt

*See Instructions on Reverse Side

NMOCC

DIVISION LABORATORY

FARMINGTON, NEW MEXICO

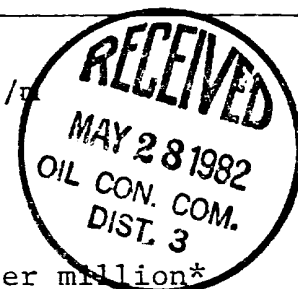
LABORATORY WATER ANALYSIS

Report No: 1 of 6To: Northwest Pipeline Corp.Date: 1-11-82P. O. Box 90Farmington, NM 87401Attn: Mr. Sterg Katirgis

This report is the property of National Cementers Corp. and neither it nor any part thereof is to be published or disclosed without first securing the express approval of laboratory management; it may, however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from National Cementers Corporation.

Submitted By: Sterg KatirgisDate Received: 12-30-81Well No: SJ 29-5 #88 DKDepth: unknownFormation: DakotaLocation: Unknown*No Oil in Water*

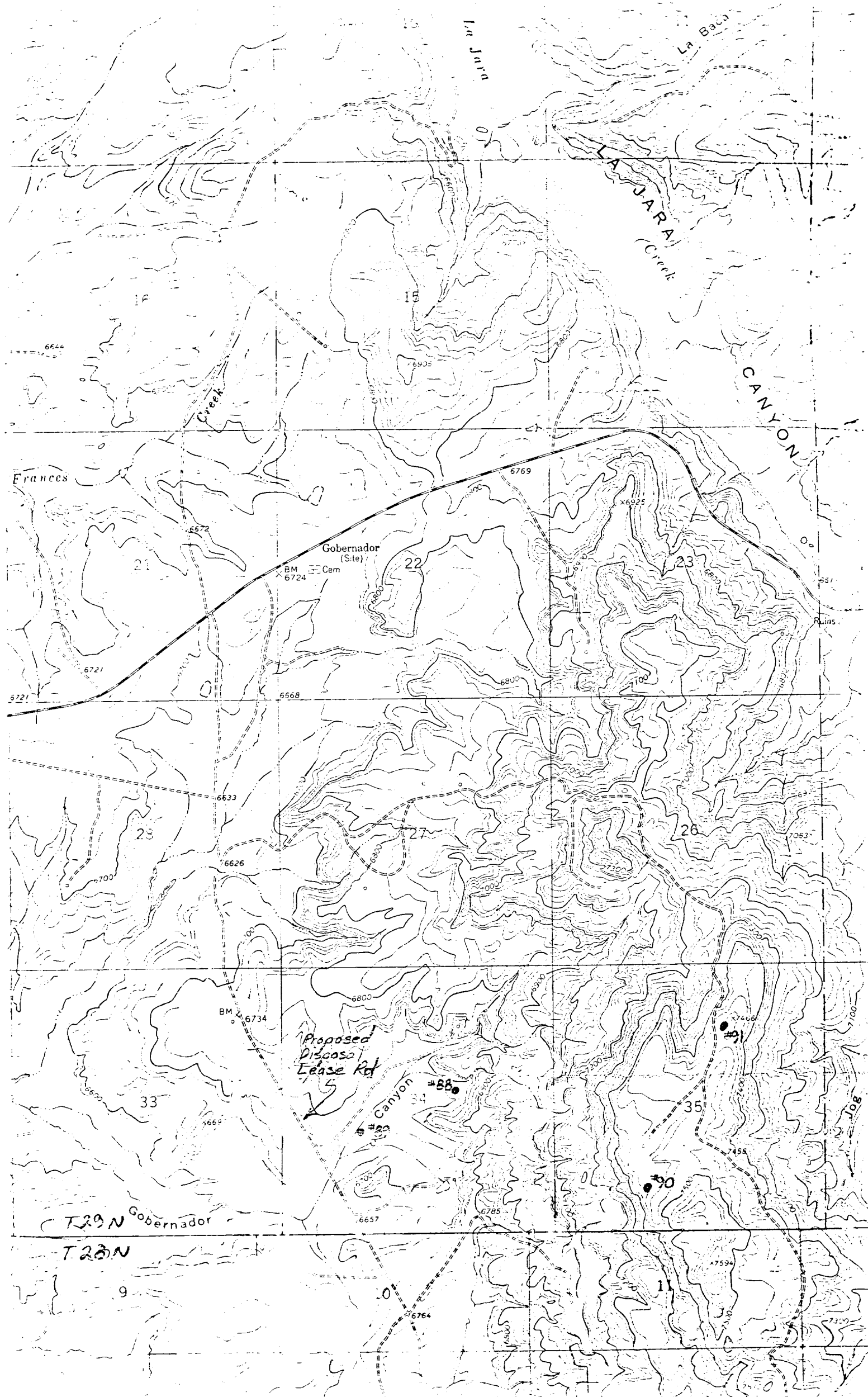
Resistivity	<u>0.54</u>	ohms/m ² /in
Temperature	<u>73°F</u>	
Specific Gravity(Sp.Gr.)	<u>1.011</u>	
pH	<u>8.08</u>	
Total Dissolved Solids	<u>14,501</u>	parts per million*
Calcium (Ca ⁺⁺)	<u>143</u>	parts per million
Magnesium (Mg ⁺⁺)	<u>11</u>	parts per million
Chlorides (Cl ⁻)	<u>3,615</u>	parts per million
Carbonates (CO ₃ ⁻⁻)	<u>0</u>	parts per million
Bicarbonates (HCO ₃ ⁻)	<u>1,076</u>	parts per million
Sulfates (SO ₄ ⁻⁻)	<u>4,796</u>	parts per million
Iron (Fe ⁺⁺⁺)	<u>Present</u>	parts per million
Potassium (K ⁺)	<u>nil</u>	parts per million
Sodium (Na ⁺)(Difference)	<u>4,860</u>	parts per million
Stability Index (SI)	<u>not required</u>	

REMARKS: Residue Solids=~~12.2 mil solids/liter~~, or 9.1 mil solids/Liter(as mush)

* indicates parts per million by weight; uncorrected for Specific Gravity

LABORATORY ANALYST:

Respectfully submitted,
National Cementers CorporationClarion CochranBy: Clarion A. Cochran



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NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-65

I. Operator
Northwest Pipeline Corporation
Address
P.O. Box 90, Farmington, New Mexico 87499
Reason(s) for filing (Check proper box)
New Well ☐ Change in Transporter of:
Recompletion ☐ Oil ☐ Dry Gas ☐
Change in Ownership ☐ Gashead Gas ☐ Condensate ☒ Other (Please explain)

If change of ownership give name
and address of previous owner

II. DESCRIPTION OF WELL AND LEASE

Lease Name San Juan 29-5 Unit	Well Name, Name, (including formation) 88 Basin Dakota	Kind of Section XXX-XXXX	Lease No.
Location Unit Letter G : 2450 Feet From The North Line and 1850 Feet From The East Line of Section 34 Township 29N Range 5W Section 10000 Rio Arriba County			

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil Petro Source Inc.	Name of Authorized Transporter of Gashead Gas or Dry Gas El Paso Natural Gas Company	Address (Give address to which approved copy of this form is to be sent) 1979 So 700 West, Salt Lake City, Utah 84104 Address (Give address to which approved copy of this form is to be sent) P.O. Box 90, Farmington, New Mexico 87499
If well produces oil or liquid, give location of tanks.	Unit Sec. Twp. Rge. G 34 29N 5W	Is gas actually connected? When

If this production is commingled with that from any other lease or pool, give commingling order number:

IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Some Reservoir	Dist. Reservoir
Date Spudded	Date Compl. Ready to Prod.		Total Depth		P.B.T.D.			
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation		Top Oil/Gas Pay		Tubing Depth			
Perforations						Depth Casing Shoe		
TUBING, CASING, AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE		DEPTH SET		SACKS CEMENT			

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Testing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pitot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Donna J. Brace
Production Clerk

December 9, 1982
(Date)

OIL CONSERVATION COMMISSION

APPROVED

DEC 27 1982

Original signed by CHARLES OHLSON

BY

TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #7

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Form C-104 must be filed for each pool in multiply



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

TONEY ANAYA
GOVERNOR

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

May 1, 1984

Mr. Mike J. Turnbaugh
Northwest Pipeline Corp.
P.O. Box 90
Farmington, NM 87499

Re: Application for Hardship Classification
San Juan 29-5 Unit #88 G-34-29N-5W
San Juan 29-5 Unit #89 K-34-29N-5W
San Juan 29-5 Unit #90 B-34-29N-5W

Dear Mike:

The referenced applications are returned unapproved for the following reasons:

#88

- 1) The production history you supplied indicated that the well has logged off only twice in five years. After swabbing in the first time, the well returned to production at a higher rate. After swabbing in the second time, the well returned to production at a lower rate but showed increasing monthly production. This indicates that a short shut-in period may not cause permanent loss. Also, why was the well shut-in?
- 2) There is no explanation of why small bore tubing has not been installed.
- 3) There are no cost figures which indicate that without relief this well will be prematurely abandoned.
- 4) There is no documentation of water production.
- 5) Plat does not show offset ownership.
- 6) There is no signed certification.

Mr. Mike J. Turnbaugh
May 1, 1984
Page 2

#89

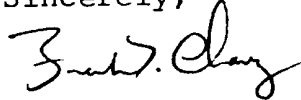
- 2) There is no explanation of why small bore tubing has not been installed.
- 3) There are no cost figures which indicate that without relief this well will be prematurely abandoned.
- 4) There is no documentation of water production.
- 5) Plat does not show offset ownership.
- 6) There is no signed certification.

#90

- 1) This well has been logged off only once in five years for an unusually long period of time. Why was it shut-in for this length of time? Would a shorter shut-in period of a month or several weeks cause the well to log off?
- 2) There is no explanation of why small bore tubing has not been installed.
- 3) There are no cost figures which indicate that without relief this well will be prematurely abandoned.
- 4) There is no documentation of water production.
- 5) Plat does not show offset ownership.
- 6) There is no signed certification.

If you have any questions, please contact this office.

Sincerely,



Frank T. Chavez
District Supervisor

FTC/dj

xc: Joe Ramey
Well File ✓

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

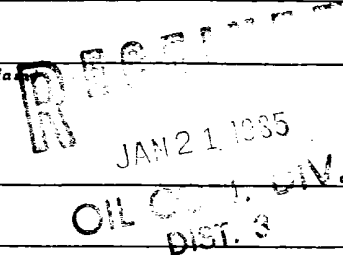
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TRANSPORTER	OIL	
	GAS	
OPERATOR		
PRODUCTION OFFICE		

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-01-78
Format 06-01-83
Page 1

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I.

Operator Northwest Pipeline Corporation		
Address P.O. Box 90, Farmington, New Mexico 87499		
Reason(s) for filing (Check proper box)		Other (Please explain)
<input type="checkbox"/> New Well	Change in Transporter of:	
<input type="checkbox"/> Recompletion	<input type="checkbox"/> Oil	
<input type="checkbox"/> Change in Ownership	<input type="checkbox"/> Casinghead Gas <input checked="" type="checkbox"/> Dry Gas <input checked="" type="checkbox"/> Condensate	

If change of ownership give name
and address of previous owner _____

II. DESCRIPTION OF WELL AND LEASE

Lease Name San Juan 29-5 Unit	Well No. 88	Pool Name, including Formation Basin Dakota	Kind of Lease Share <input checked="" type="checkbox"/> Fee	Lease No.
Location				
Unit Letter <u>G</u> : <u>2450</u> Feet From The <u>North</u> Line and <u>1850</u> Feet From The <u>East</u>				
Line of Section <u>34</u> Township <u>29N</u> Range <u>5W</u> , NMPM, <u>Rio Arriba</u> County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
UPG, Inc.	P.O. Box 66, Liberal, Kansas 67901
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
El Paso Natural Gas Company	P.O. Box 990, Farmington, New Mexico 87499
If well produces oil or liquids, give location of tanks.	Is gas actually connected? When
Unit <u>G</u> Sec. <u>34</u> Twp. <u>29N</u> Rge. <u>5W</u>	

If this production is commingled with that from any other lease or pool, give commingling order number: _____

NOTE: Complete Parts IV and V on reverse side if necessary.

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

Linda S. Marques

Linda S. Marques (Signature)
Production and Drilling Clerk

(Title)

January 11, 1985

(Date)

OIL CONSERVATION DIVISION

APPROVED JAN 31 1985
BY Frank J. Dwyer
TITLE SUPERVISOR DISTRICT # 3

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepens well, this form must be accompanied by a tabulation of the deviated tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiple completed wells.

Memo

From
FRANK T. CHAVEZ
District Supervisor

To Dick,

*I Recommend deny or docket for
hearing.*

① *Small tubing has not been
run.*

② *Fast decline in S.I. pressure
may indicate casing failure.*

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

Operator Northwest Pipeline Corporation Contact Party Mark McCallister
Address P.O. Box 90 - Farmington, NM 87499 Phone No. 505/327-5351
Lease San Juan 29-5 Unit Well No. 88 UT G Sec. 34 TWP 29N RGE 5W
Pool Name Basin Dakota Minimum Rate Requested 120 MCF/D
Transporter Name El Paso Natural Gas Company Purchaser (if different) _____

Are you seeking emergency "hardship" classification for this well? X yes _____ no

Applicant must provide the following information to support his contention that the subject well qualifies as a hardship gas well.

- 1) Provide a statement of the problem that leads the applicant to believe that "underground waste" will occur if the subject well is shut-in or is curtailed below its ability to produce. (The definition of underground waste is shown on the reverse side of this form)
- 2) Document that you as applicant have done all you reasonably and economically can do to eliminate or prevent the problem(s) leading to this application.
 - a) Well history. Explain fully all attempts made to rectify the problem. If no attempts have been made, explain reasons for failure to do so.
 - b) Mechanical condition of the well (provide wellbore sketch). Explain fully mechanical attempts to rectify the problem, including but not limited to:
 - i) the use of "smallbore" tubing; ii) other de-watering devices, such as plunger lift, rod pumping units, etc.
- 3) Present historical data which demonstrates conditions that can lead to waste. Such data should include:
 - a) Permanent loss of productivity after shut-in periods (i.e., formation damage).
 - b) Frequency of swabbing required after the well is shut-in or curtailed.
 - c) Length of time swabbing is required to return well to production after being shut-in.
 - d) Actual cost figures showing inability to continue operations without special relief
- 4) If failure to obtain a hardship gas well classification would result in premature abandonment, calculate the quantity of gas reserves which would be lost
- 5) Show the minimum sustainable producing rate of the subject well. This rate can be determined by:
 - a) Minimum flow or "log off" test; and/or
 - b) Documentation of well production history (producing rates and pressures, as well as gas/water ratio, both before and after shut-in periods due to the well dying, and other appropriate production data).
- 6) Attach a plat and/or map showing the proration unit dedicated to the well and the ownership of all offsetting acreage.
- 7) Submit any other appropriate data which will support the need for a hardship classification.
- 8) If the well is in a prorated pool, please show its current under- or over-produced status.
- 9) Attach a signed statement certifying that all information submitted with this application is true and correct to the best of your knowledge; that one copy of the application has been submitted to the appropriate Division district office (attach name) and that notice of the application has been given to the transporter/purchaser and all offset operators.

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MAR 12 1985

OIL CON. DIV
DIST. ?

GENERAL INFORMATION APPLICABLE TO HARDSHIP GAS WELL CLASSIFICATION

1) Definition of Underground Waste.

"Underground Waste as those words are generally understood in the oil and gas business, and in any event to embrace the inefficient, excessive, or improper use or dissipation of the reservoir energy, including gas energy and water drive, of any pool, and the locating, spacing, drilling, equipping, operating, or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recovered from any pool, and the use of inefficient underground storage of natural gas."

- 2) The only acceptable basis for obtaining a "hardship" classification is prevention of waste with the burden of proof solely on the applicant. The applicant must not only prove waste will occur without the "hardship" classification, but also that he has acted in a responsible and prudent manner to minimize or eliminate the problem prior to requesting this special consideration. If the subject well is classified as a "hardship" well, it will be permitted to produce at a specified minimum sustainable rate without being subject to shut-in by the purchaser due to low demand. The Division can rescind approval at any time without notice and require the operator to show cause why the classification should not be permanently rescinded if abuse of this special classification becomes apparent.
- 3) The minimum rate will be the minimum sustainable rate at which the well will flow. If data from historical production is insufficient to support this rate (in the opinion of the Director), or if an offset operator or purchaser objects to the requested rate, a minimum flow ("log off") test may be required. The operator may, if he desires, conduct the minimum flow test, and submit this information with his application.
- 4) If a minimum flow test is to be run, either at the operator's option or at the request of the Division, the offset operators, any protesting party, the purchaser and OCD will be notified of the date of the test and given the opportunity to witness, if they so desire.
- 5) Any interested party may review the data submitted at either the Santa Fe office or the appropriate OCD District Office.
- 6) The Director can approve uncontested applications administratively if, in his opinion, sufficient justification is furnished. Notice shall be given of intent to approve by attaching such notice to the regular examiner's hearing docket. Within 20 days following the date of such hearing, the affected parties will be permitted to file an objection. If no objection has been filed, the application may be approved.
- 7) Should a protest be filed in writing, the applicant will be permitted to either withdraw the application, or request it to be set for hearing.
- 8) An emergency approval, on a temporary basis for a period not to exceed 90 days, may be granted by the District Supervisor, pending filing of formal application and final action of the OCD Director. This temporary approval may be granted only if the District Supervisor is convinced waste will occur without immediate relief. If granted, the District Supervisor will notify the purchaser.
- 9) After a well receives a "hardship" classification, it will be retained for a period of one year unless rescinded sooner by the Division. The applicant will be required to certify annually that conditions have not changed substantially in order to continue to retain this classification.
- 10) Nothing here withstanding, the Division may, on its own motion, require any and all operators to show cause why approval(s) should not be rescinded if abuse is suspected or market conditions substantially change in the State of New Mexico.
- 11) A well classified as a "hardship well" will continue to accumulate over and under production (prorated pools). Should allowables exceed the hardship allowable assigned, the well will be permitted to produce at the higher rate, if capable of doing so, and would be treated as any other non-hardship well. Any cumulative overproduction accrued either before or after being classified "hardship" must, however, be balanced before the well can be allowed to produce at the higher rate.

NORTHWEST PIPELINE CORPORATION

PRODUCTION & DRILLING
P O BOX 90
FARMINGTON NEW MEXICO 87499

February 25, 1985

Frank Chavez
New Mexico Oil Conservation Div.
1000 Rio Brazos Rd.
Aztec, NM 87410

Re: San Juan 29-5 Unit #88

Dear Frank:

The San Juan 29-5 Unit #88 was completed in the Dakota formation in September of 1978. This well will log off with fluid any time it is shut in for more than five days. A stopcock was installed in April of 1981 to maintain bottom hole pressure and ensure enough gas volume is available to lift fluid. The well has to be blown to atmosphere periodically even with a stopcock.

Each time the well is shut in for no demand or mechanical problems, it has to be swabbed in. The average number of days to swab the well in is two. At a cost of \$1200 per day, it costs NWP \$2400 to return the well to production. At the well's current production of 100 mcf/d, one swabbing operation will take 7 days to payout. To date approximately \$7200 has been spent on swabbing operations.

As the well's production declines, it will log off with greater frequency. If the well starts logging off once every 3 months, the well will be prematurely abandoned when the well is capable of producing 16 mcf/d. This will leave 8 mmcf of recoverable reserves in the ground. This amounts to approximately \$27,040 in lost revenue.

If the well were allowed to produce with a hardship classification, small bore tubing will be installed and the well can continually lift fluid in the wellbore. With the well producing continually the well will not log and the costs of swabbing will not have to be paid out. At current producing and swabbing rates, 6% of the well's gross revenues go to swabbing.

The use of small bore tubing will reduce the volume of gas needed to lift fluid from the wellbore. If the well is shut in, the size of the tubing will not make a difference because the bottom hole pressure cannot overcome the hydrostatic pressure of the fluid column. Small bore tubing may even promote logging in that less water can exert the same hydrostatic pressure on the formation.

An initial liquid production test run in November of 1980 indicates the well produces 9.5 BWPD when producing constantly. Through the use of a stopcock set for 4 hrs. off and 4 hrs. on, the water production can be cut to approximately 4 BWPD.

The attached production curve indicates that underground waste is already occurring. The rate of which the well was returned to production following the last swabbing operation is approximately 37% of the previous rate. Also, the SICP is declining at an abnormal rate indicating the relative permeability to gas is being reduced.

The minimum producing rate required to lift fluid from the wellbore is 700 mcf/d in 2 3/8" tubing and 475 mcf/d in 1 1/2" tubing. This well cannot maintain a producing rate of 475 mcf/d without the use of a stopcock. The well's producing history indicates a stopcock time setting of 6 hours off and 2 hours on will maintain enough gas volume to lift fluid from the wellbore. Based on a minimum flow rate of 475 mcf/d, this well will require an average minimum flow rate of 120 mcf/d to lift fluid from the wellbore.

Sincerely,



Mark McCallister
Production & Drilling Engineer

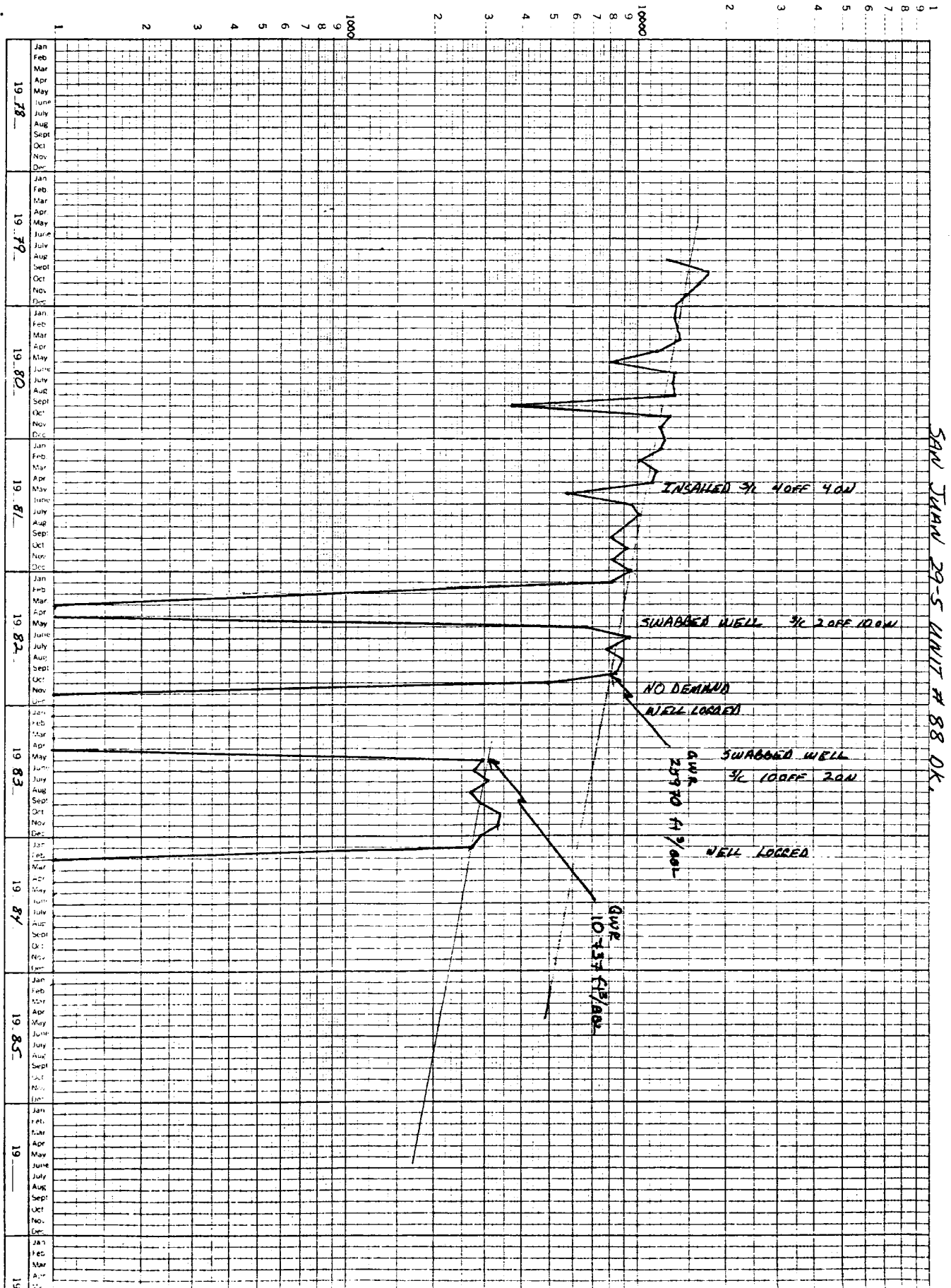
MAM/cnh
cc: File

PRODUCTION HISTORY

SAN JUAN 29-5 UNIT #88

The San Juan 29-5 Unit #88 Dakota was first delivered on June 29, 1979. An initial water production rate of 5.7 BWPD was measured. Due to problems with the production unit, the well was shut in for repairs on January 23, 1980. The well logged while shut in and was swabbed in on February 26, 1980. The well produced an average of 388 mcf/d for the remainder of 1980. A stopcock was installed on April 30, 1981 set for 4 hours off and 4 hours on. The well produced an average of 314 mcf/d in 1981. Due to more problems with the production unit the well logged off in January of 1982. The SICP at this time was 1740# (2493# at IP test). The well was swabbed in on April 28, 1982. The well was shut in for no demand on October 20, 1982. The well was off for 40 days. The well was on for 2 days when the fire in the production unit went out and the well logged. The well was swabbed in on April 29, 1983. The stopcock time was changed to 10 hours off and 2 hours on. On May 9, 1983 the stopcock time was changed to 11 hours off and 1 hour on. The well averaged over 1000 mcf/d while on. The orifice plate was changed from 1.250 to 1.750 on July 1, 1983. The well seemed to be producing good at the above settings. On January 30, 1984 the well was found logged off while producing.

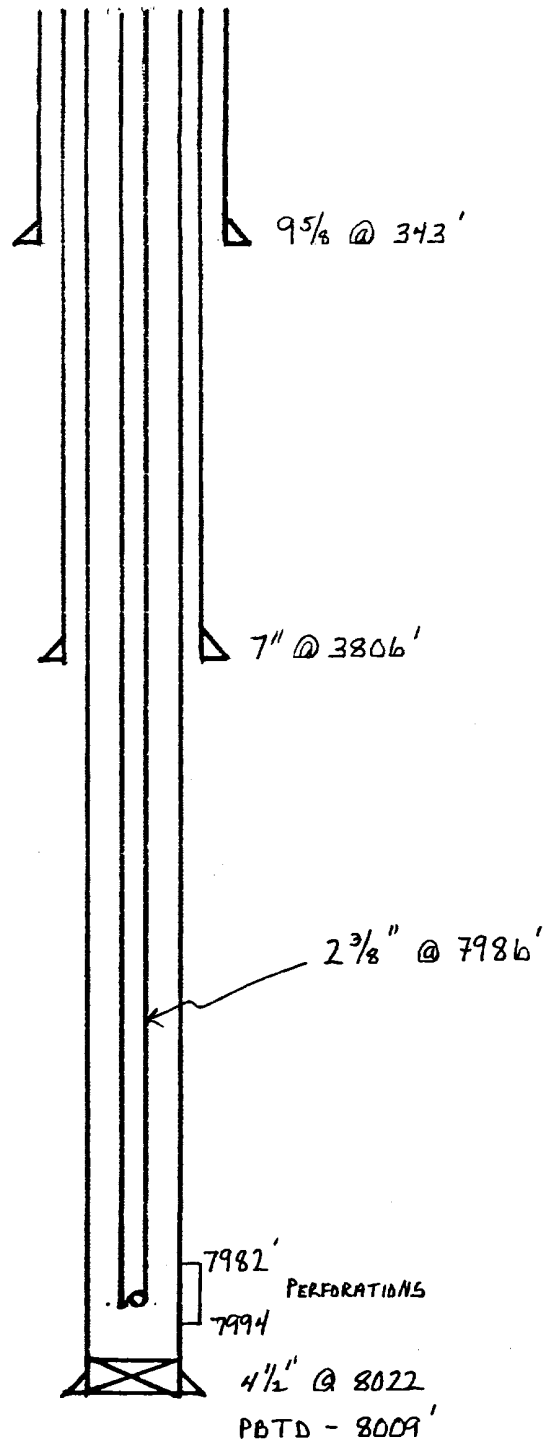
MLF PER MONTH



SAN JUAN 29-5 UNIT # 88 OK.

13th Expansion 9-1-78

SAN JUAN 29-5 UNIT # 88



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OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-01-78
Form 10-01-83

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JAN 20 1986

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS DIST. 3

I.

Operator
Northwest Pipeline Corporation

Address
P.O. Box 90 - Farmington, New Mexico 87499

Reason(s) for filing (Check proper box)

<input type="checkbox"/> New Well	Change in Transporter of:	<input type="checkbox"/> Oil	<input type="checkbox"/> Dry Gas
<input type="checkbox"/> Recompletion	<input type="checkbox"/> Casinghead Gas	<input checked="" type="checkbox"/> Condensate	
<input type="checkbox"/> Change in Ownership			

Other (Please explain):

If change of ownership give name
and address of previous owner:

II. DESCRIPTION OF WELL AND LEASE

Lease Name San Juan 29-5 Unit	Well No. 88	Pool Name, including Formation Basin Dakota	Kind of Lease State Federal Fee	Lease No. Fee
Location				
Unit Letter G	: 2450	Feet From The North	Line and 1850	Feet From The East
Line of Section 34	Township 29N	Range 5W	, NMPM, Rio Arriba County	

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Mancos Corporation	P.O. Drawer 1320 - Farmington, NM 87499
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
El Paso Natural Gas Company	P.O. Box 990 - Farmington, New Mexico 87499
If well produces oil or liquids, give location of tanks.	Is gas actually connected? When
Unit : G Sec. : 34 Twp. : 29N Rge. : 5W	

If this production is commingled with that from any other lease or pool, give commingling order number:

NOTE: Complete Parts IV and V on reverse side if necessary.

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

Carrie Harmon B
Carrie Harmon (Signature)
Production & Drilling Clerk (Title)
January 7, 1986 (Date)

OIL CONSERVATION DIVISION JAN 20 1986

APPROVED _____
BY Frank J. Davis 19
SUPERVISOR DISTRICT 3

TITLE _____

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviate tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiphase completed wells.

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ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-01-78
Format 06-01-83
Page 1

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I. Operator
Northwest Pipeline Corporation

Address
P.O. Box 90 - Farmington, New Mexico 87499

Reason(s) for filing (Check proper box)

<input type="checkbox"/> New Well	Change in Transporter of:	
<input type="checkbox"/> Recompletion	<input type="checkbox"/> Oil	<input type="checkbox"/> Dry Gas
<input type="checkbox"/> Change in Ownership	<input type="checkbox"/> Casinghead Gas	<input checked="" type="checkbox"/> Condensate

Other (Please explain):

If change of ownership give name
and address of previous owner:

II. DESCRIPTION OF WELL AND LEASE

Lease Name San Juan 29-5 Unit	Well No. 88	Pool Name, Including Formation Basin Dakota	Kind of Lease X Lease X X X X X Fee	Lease No. Fee
Location Unit Letter <u>G</u> : <u>2450</u> Feet From The <u>North</u> Line and <u>1850</u> Feet From The <u>East</u> Line of Section <u>34</u> Township <u>29N</u> Range <u>5W</u> , NMPM, <u>Rio Arriba</u> County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Four-Four Inc.	P.O. Box 821 - Farmington, NM 87499
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
El Paso Natural Gas Company	P.O. Box 990 - Farmington, NM 87499
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When
G 34 29N 5W	

If this production is commingled with that from any other lease or pool, give commingling order number:

NOTE: Complete Parts IV and V on reverse side if necessary.

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

Carrie Hamm
(Signature)
Production & Drilling Clerk
(Title)
May 29, 1986
(Date)

OIL CONSERVATION DIVISION

APPROVED Frank J. [Signature] JUN 10 1986
BY [Signature]
TITLE SUPERVISOR DISTRICT # 2

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepen well, this form must be accompanied by a tabulation of the deviate tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for all wells on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiple completed wells.

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ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-01-78
Format 08-01-83
Page 1

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

RECEIVED

JUN 01 1988

I.

Operator Northwest Pipeline Corporation		OIL CON. DIV. DIST. 7
Address 3539 East 30th - Farmington, NM 87401		
Reason(s) for filing (Check proper box)		
<input type="checkbox"/> New Well	<input type="checkbox"/> Change in Transporter of:	Other (Please explain)
<input type="checkbox"/> Recompletion	<input type="checkbox"/> Oil	
<input type="checkbox"/> Change in Ownership	<input type="checkbox"/> Casinghead Gas <input checked="" type="checkbox"/> Dry Gas <input checked="" type="checkbox"/> Condensate	

If change of ownership give name and address of previous owner _____

II. DESCRIPTION OF WELL AND LEASE

Lease Name San Juan 29-5 Unit	Well No. 88	Pool Name, including Formation Basin Dakota	Kind of Lease XXXXXXXXXX Fee	Lease No. Fee
Location				
Unit Letter <u>G</u> : <u>2450</u> Feet From The <u>North</u> Line and <u>1850</u> Feet From The <u>East</u>				
Line of Section <u>34</u> Township <u>29N</u> Range <u>5W</u> , NMPM, <u>Rio Arriba</u> County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Gary Energy Corporation	P.O. Box 159 - Bloomfield, NM 87413
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
El Paso Natural Gas Company	P.O. Box 990 - Farmington, NM 87499
If well produces oil or liquids, give location of tanks.	Is gas actually connected? When
Unit <u>G</u> Sec. <u>34</u> Twp. <u>29N</u> Rge. <u>5W</u>	

If this production is commingled with that from any other lease or pool, give commingling order number: _____

NOTE: Complete Parts IV and V on reverse side if necessary.

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

Carrie Harmon
(Signature)
Production & Drilling Clerk
(Title)
May 31, 1988
(Date)

OIL CONSERVATION DIVISION

JUN 01 1988

APPROVED _____
BY Burt J. Shump
TITLE SUPERVISION DISTRICT # 3

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

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