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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

| | |
|------------------------------------------------------|-----------------------------------------------------------------------------|
| Operator Northwest Pipeline Corporation | |
| Address P.O. Box 90, Farmington, New Mexico 87401 | |
| Reason(s) for filing (check proper box) | |
| New Well <input checked="" type="checkbox"/> | Change in Transporter of: |
| Recompletion <input type="checkbox"/> | Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/> |
| Change in Ownership <input type="checkbox"/> | Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/> |

If change of ownership give name
and address of previous owner

II. DESCRIPTION OF WELL AND LEASE

| | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------|------------------------------|-----------|
| Lease Name San Juan 32-7 Unit Com | Well No. 24 | Pool Name, including Formation Blanco Mesa Verde | Kind of Lease XXXXXXX Fee | Lease No. |
| Location Unit Letter L ; 1480 Feet From The South Line and 960 Feet From The West Line of Section 21 Township 32N Range 7W NMPLM San Juan 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 East 30th, Farmington, NM 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 East 30th, Farmington, NM 87401 | |
| If well produces oil or liquids, give location of tanks. | Unit Sec. Twp. Rge. | Is gas actually connected? When No |

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't. | Diff. Res't. |
| | | X | X | | | | | |
| Date Spudded 11-1-76 | Date Compl. Ready to Prod. 11-24-76 | Total Depth 5735' | P.B.T.D. 5690' | | | | | |
| Elevations (DF, RAB, RT, GR, etc., 6332' GR | Name of Producing Formation Mesa Verde | Top Oil/Gas Pay 5338' | Tubing Depth 5640' | | | | | |
| Perforations 5338' to 5666' w/23 shots | Depth Casing Shoe 5730' | | | | | | | |
| TUBING, CASING, AND CEMENTING RECORD | | | | | | | | |
| HOLE SIZE | CASING & TUBING SIZE | DEPTH SET | SACKS CEMENT | | | | | |
| 12 1/4" | 9 5/8" | 219' | 115 | | | | | |
| 8 3/4" | 7" | 3637' | 170 | | | | | |
| 6 1/4" | 4 1/2" Liner | 3479' to 5730' | 220 | | | | | |
| - | 2 3/8" | 5640' | | | | | | |

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 11-24-76 | 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 4433 AOF 5072 | Length of Test 3 Hrs. | Bbls. Condensate/MMCF | Gravity of Condensate |
| Testing Method (pilot, back pr.) Back Pressure | Tubing Pressure (Shut-in) 891 PSIG | Casing Pressure (Shut-in) 1177 PSIG | Choke Size 48/64 |

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.

D.H. Maroncelli
(Signature)
D.H. Maroncelli Production Engineer
(Title)
12-2-76
(Date)

OIL CONSERVATION COMMISSION

APPROVED _____, 19____
BY Original Signed by A. R. Kendrick
TITLE SUPERVISOR, DIST. 30

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.

NEW MEXICO OIL CONSERVATION COMMISSION
INITIAL WELL DELIVERABILITY TEST REPORT FOR 19 77

Form C122-A
 Revised 1-1-66

| | | | |
|----------------------------|------------------------------|--------------------------------|---------------------------|
| POOL NAME Blanco | POOL SLOPE n = .75 | FORMATION Mesa Verde | COUNTY San Juan |
|----------------------------|------------------------------|--------------------------------|---------------------------|

86935

| | | | | | |
|--------------------------------------------------------------|--------------------------------------|------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------|------------------------------------------|
| COMPANY Northwest Pipeline Corporation | | | WELL NAME AND NUMBER San Juan 32-7 Unit #24 | | |
| UNIT LETTER L | SECTION 21 | TOWNSHIP 32 | RANGE 7 | PURCHASING PIPELINE Northwest Pipeline Corp. | |
| CASING O.D. - INCHES 4.500 | CASING I.D. - INCHES 4.052 | SET AT DEPTH - FEET 5730 | TUBING O.D. - INCHES 2.375 | TUBING I.D. - INCHES 1.995 | TOP - TUBING PERF. - FEET 5627 |
| GAS PAY ZONE FROM 5338 TO 5666 | | WELL PRODUCING THRU CASING TUBING XX | | GAS GRAVITY .594 | GRAVITY X LENGTH 3342 |
| DATE OF FLOW TEST FROM March 18 TO March 26 | | | DATE SHUT-IN PRESSURE MEASURED December 24, 1976 | | |

PRESSURE DATA - ALL PRESSURES IN PSIA

| | | | | | | |
|--------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------|
| (a) Flowing Casing Pressure (DWt) 374 | (b) Flowing Tubing Pressure (DWt) 374 | (c) Flowing Meter Pressure (DWt) 1189 | (d) Flow Chart Static Reading 903 | (e) Meter Error (Item c - Item d) 1189 | (f) Friction Loss (a - c) or (b - c) 951 | (g) Average Meter Pressure (Integr.) 374 |
| (h) Corrected Meter Pressure (g + e) 374 | (i) Avg. Wellhead Press. $P_t = (h + f)$ 374 | (j) Shut-in Casing Pressure (DWt) 1189 | (k) Shut-in Tubing Pressure (DWt) 903 | (l) P_c = higher value of (j) or (k) 1189 | (m) Del. Pressure $P_d = \frac{80}{951} \% P_c$ 951 | (n) Separator or Dehydrator Pr. (DWt) for critical flow only |

FLOW RATE CORRECTION (METER ERROR)

| | | | |
|---------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------|
| Integrated Volume - MCF/D 194 | Quotient of $\frac{\text{Item c}}{\text{Item d}}$ 1.0000 | $\sqrt{\frac{\text{Item c}}{\text{Item d}}}$ 1.0000 | Corrected Volume Q = 194 MCF/D |
|---------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------|

WORKING PRESSURE CALCULATION

| | | | | | |
|-----------------------------------|-----------------------------------------|-----------------------------------------------------------|------------------------------|--------------------------------------------|----------------------------------------|
| $(1 - e^{-s})$.216 | $(F_c Q_m)^2 (1000)$ 3327 | $R^2 = (1 - e^{-s}) (F_c Q_m)^2 (1000)$ 719 | P_t^2 139876 | $P_w^2 = P_t^2 + R^2$ 140595 | $P_w = \sqrt{P_w^2}$ 375 |
|-----------------------------------|-----------------------------------------|-----------------------------------------------------------|------------------------------|--------------------------------------------|----------------------------------------|

DELIVERABILITY CALCULATION

| | | | |
|------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------|
| $D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n =$ 194 | $\left[\frac{509320}{1273126} \right]^n =$.4001 | $\left[\frac{509320}{1273126} \right]^n =$.5031 | 98 ✓ MCF/D |
|------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------|

REMARKS:

Initial test.
 1st delivered 2/24/77. ✓



SUMMARY

Item h 374 Psia
 P_c 1189 Psia
 Q 194 MCF/D
 P_w 375 Psia
 P_d 951 Psia
 D 98 MCF/D

Company Northwest Pipeline Corporation

By Bobby J. Broughton

Title Well Test Forman

Witnessed By _____

Company _____

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