Form C-122

# MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

| Poo]                                                                                        | W13                                                                                          | deat        |                    | I                          | Formation                       | Picta            | red CLIE                                          | Ís                   | County                         | Rio /                  | irriba                                           |                                  |  |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------|--------------------|----------------------------|---------------------------------|------------------|---------------------------------------------------|----------------------|--------------------------------|------------------------|--------------------------------------------------|----------------------------------|--|
|                                                                                             |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      | Date of Test February 15, 1987 |                        |                                                  |                                  |  |
| Company Horthwest Production Com                                                            |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| Unit E Sec. 12 Twp. 200 Rge. W Purchaser Pacific Morthwest Pipeline Corp.                   |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
|                                                                                             | ng 👫 V                                                                                       |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
|                                                                                             |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| Tubing 11 Wt. 2.3 I.D. Set at Perf. To  Gas Pay: From 3666 To 3688 L xG 680 -GL Bar. Press. |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| Prod                                                                                        | Producing Thru: Casing X Tubing Type Well Single - Gas  Single-Bradenhead-G. G. or G.O. Dual |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| Date                                                                                        | of Complet                                                                                   | cion:_      | 2-4                | -67                        | Packe                           | r M              | Sin                                               | gle-Brade<br>Reservo | enhead-G.<br>oir Temp          | G. or (                | 3.0. D                                           | ual<br>                          |  |
|                                                                                             |                                                                                              |             |                    |                            |                                 |                  | ED DATA                                           |                      |                                |                        |                                                  |                                  |  |
| Tested Through (Research (Street) (1998)                                                    |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      | Type Taps                      |                        |                                                  |                                  |  |
|                                                                                             |                                                                                              | I           | rlow Da            | ata                        |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| No.                                                                                         | (Prover)<br>(Line)                                                                           | (Cho        | oke)<br>fice)      | Press                      | Diff.                           | Temp.            |                                                   | Temp.                |                                |                        |                                                  | Duration of Flow                 |  |
| l                                                                                           | Sittle                                                                                       |             | ize                |                            | h <sub>w</sub>                  | o <sub>F</sub> . | <del> </del>                                      | °F.                  | psig                           | <sup>⊃</sup> F•        |                                                  | Hr.                              |  |
| SI<br>l.                                                                                    |                                                                                              | <u></u>     | <del></del>        |                            |                                 |                  | 200                                               |                      | 990                            |                        |                                                  | II                               |  |
| 2 <b>.</b> 3 <b>.</b>                                                                       | ZH                                                                                           | 3/4         | 4                  |                            |                                 | 63               | 303                                               | 43                   | 254                            |                        | <del>                                     </del> | 3 hrs                            |  |
| 4.<br>5.                                                                                    |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
|                                                                                             | <del></del>                                                                                  | <del></del> |                    | <u> </u>                   | _ <b></b>                       | ELON CAL         | CUT ATTON                                         | ·c                   |                                | l                      | <u> </u>                                         |                                  |  |
| <u>"</u>                                                                                    | Coeffici                                                                                     | .ent        |                    | P                          | ressure                         | Flow CAL         | CULATION<br>Temp.                                 | Gravity              | Compre                         | ss.                    | Rate                                             | of Flow                          |  |
| No.                                                                                         | Coefficient<br>(24-Hour) √h                                                                  |             | √ h <sub>w</sub> r | o <sub>f</sub>             | psia                            | Fac<br>F         | Factor<br>F <sub>t</sub>                          |                      | Facto F <sub>DV</sub>          | Factor F <sub>DV</sub> |                                                  | Q-MCFPD<br>@ 15.025 psia         |  |
| 1.                                                                                          |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| 1. 2. 3. 4. 5.                                                                              | 12,1793                                                                                      |             |                    |                            | 348                             |                  | 71                                                | .9498                | 1.00                           |                        | 3,                                               |                                  |  |
| 5.                                                                                          |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
|                                                                                             |                                                                                              |             |                    |                            | PR                              | ESSURE C         | ALCULATI                                          | ons                  |                                |                        |                                                  |                                  |  |
| Gas L                                                                                       | iquid Hydro                                                                                  | carbor      | Ratio              | )                          |                                 | cf/bbl.          |                                                   | Speci                | fic Gravi                      | ty Sepa                | arator                                           | Gas                              |  |
|                                                                                             | ty of Liqui                                                                                  | •           |                    | ons<br>L-e <sup>-s</sup> ) |                                 | deg.             |                                                   | Speci                | fic Gravi                      | ty Flow                |                                                  |                                  |  |
| ·                                                                                           |                                                                                              |             | \                  |                            | :                               |                  |                                                   | - c                  |                                | _+ C                   |                                                  |                                  |  |
| No.                                                                                         | P <sub>w</sub>                                                                               |             |                    | _                          | (n.o.)2                         | (1)              | 0)2                                               | D 2                  | $P_c^2 - P_w^2$                |                        | ,                                                |                                  |  |
| No.                                                                                         | Pt (psia)                                                                                    | ₽ŧ          | F                  | , Q                        | (F <sub>c</sub> Q) <sup>2</sup> | (1               | c <sup>Q)<sup>2</sup></sup><br>-e <sup>-s</sup> ) | P <sub>w</sub> 2     | P <sub>c</sub> -P <sub>w</sub> |                        | al.                                              | P <sub>w</sub><br>P <sub>c</sub> |  |
| 1.<br>2.                                                                                    |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| 3.<br>4.                                                                                    | 294                                                                                          |             |                    |                            |                                 |                  |                                                   |                      | 936                            | <b></b>                |                                                  | 1.0018                           |  |
| 5.                                                                                          |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                | 1                      | 二二                                               |                                  |  |
|                                                                                             | lute Potent<br>ANY                                                                           |             |                    |                            | malina E                        | MCFPD;           | n                                                 | / 1.0776             |                                |                        |                                                  |                                  |  |
| ADDRESS And Buck Brooker, Fastington, New Mexico                                            |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| WITNESSED                                                                                   |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| COMPANYREMARKS                                                                              |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
| FEB 18 1957                                                                                 |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      |                                |                        |                                                  |                                  |  |
|                                                                                             |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      | 1                              | OIL C                  | ON. C                                            | ъ /                              |  |
|                                                                                             |                                                                                              |             |                    |                            |                                 |                  |                                                   |                      | `                              | V DI                   | ST. 3                                            |                                  |  |

## INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

#### NOMENCLATURE

- Q I Actual rate of flow at end of flow period at W. H. working pressure  $(P_w)$ . MCF/da. @ 15.025 psia and 60° F.
- PcI 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia
- PwT Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- $P_t$  Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia
- Pf Meter pressure, psia.
- hw- Differential meter pressure, inches water.
- Fg Gravity correction factor.
- $F_{t}$  Flowing temperature correction factor.
- F<sub>DV</sub> Supercompressability factor.
- n I Slope of back pressure curve.
- Note: If  $P_{\mathbf{W}}$  cannot be taken because of manner of completion or condition of well, then  $P_{\mathbf{W}}$  must be calculated by adding the pressure drop due to friction within the flow string to  $P_{\mathbf{t}}$ .

# PACIFIC NORTHWEST PIPELINE CORPORATION

## DRILLING DEPARTMENT

|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | COMPA       | NYNorti              | west Pro       | Production Corp. |       |  |
|-----------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|----------------|------------------|-------|--|
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | LEASE       | Hgn                  |                | WELL NO.         | 12-12 |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DATE        | of test_             | February       | 15, 1957         | ·     |  |
| SHUT IN PRESSURI      | E (PSIG): TUBI  | ngcasin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | IG 999      | S.I. PE              | RIOD           | 7                | DAYS  |  |
| SIZE BLOW NIPPL       | 2" prover       | w/3/4" plate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                      |                |                  |       |  |
| FLOW THROUGH          | Casing          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             | WORKING              | PRESSURE       | S FROM_          | bing  |  |
| TIME<br>HOURS MINUTES | PRESSURE        | Q (MCFD)<br>15.025 PSIA 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | : 60°F      | WELLHEAL<br>PRESSURE | WORKING (PSIG) |                  | TEMP  |  |
| 3 0                   | 254             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <del></del> | 111                  | 282            |                  | 63    |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                      |                |                  |       |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                      |                |                  |       |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <del></del> |                      |                |                  |       |  |
|                       | -               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                      |                |                  |       |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                      |                |                  |       |  |
| START TEST AT         | 11:05 a.m.      | <del>, , , , , , , , , , , , , , , , , , , </del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | END TE      | ST AT                | 2:05 p.m.      |                  |       |  |
|                       | ightly wet w/M2 | thru out.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                      |                |                  |       |  |
|                       | O STEANS        | Mary the second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                      |                |                  |       |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | +           |                      |                |                  |       |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                      |                | 1                |       |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                      |                |                  |       |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                      |                |                  |       |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                      |                |                  |       |  |
|                       |                 | The state of the s |             |                      |                |                  |       |  |
|                       |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TESTE       | D BY C.              | R. Wagne       | r                |       |  |

OIL CONSERVATION COMMISSION

AZTEC DISTRICT OFFICE

No. Copies Received

DISTRIBUTION

No.
PROMOGRAPHICAL

Operator

Santa Fe
Proration Office
State Land Office

U. S. G. S.

Transporter

File

/