## STATE OF NEW MEXICO ENERGY and MINERALS DEPARTMENT

## OIL CONSERVATION DIVISION

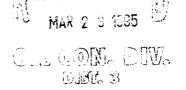
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This form is not to be used for reporting packer leakage tests in Southeast New Mexico

## NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

| Operator            | SOUTHLAND ROYALTY CO  |                         | •                | CDONTICO D                                       |                |                         | Well                    |          |        |  |
|---------------------|-----------------------|-------------------------|------------------|--|----------------|-------------------------|-------------------------|----------|--------|--|
| Location            | SOUTHLAND RUTALITY CO | ·                       |                  | Lease  | FRONTIER B     |                         |                         | No.      | 2      |  |
|                     | Unit D Sec            | . 0 —                   | 278              |  | 1 114          | _                       |                         |          |        |  |
| of Well:            | T                     | <del></del>             | 27N              | Rge.   | 11W            | County                  |                         | SAN JUAN |        |  |
|                     | NAME OF F             | ESERVOIR OR POOL        |                  |  | PE OF PROD.    |                         | OD OF PROD.             |          | MEDIUM |  |
| 11                  |                       |                         |                  | <del>                                     </del> | (Oil or Gas)   | (Flo                    | w or Art. Lift)         | (Tbg. 01 | Csg.)  |  |
| Upper               | GALLUP                | GAS                     |                  | ELOW   |                | CSG                     |                         |          |        |  |
| Completion<br>Lower | UALLUI                | UAS                     |                  | FLOW   |                | L:                      | Sti                     |          |        |  |
| Completion          | DAKOTA                | GAS                     |                  | FLOW   |                | TDC                     |                         |          |        |  |
| Completion          | L DAKUTA              | DDE                     | IN PRESSURE DATA |  |                |                         | TBG                     |          |        |  |
| Upper               | Hour, date shut-in    | Length of time shut-in  | TEOW SHOT-       | SI press   |                |                         | Stabilized? (Vec        | or No    |        |  |
| Completion          | 3-3-95                | 7 DAY                   | rs.              | or press   | . psig<br>560  | Stabilized? (Yes or No) |                         |          |        |  |
| Lower               |                       | , , ,                   | -                | <b>†</b>   | 300            |                         |                         |          |        |  |
| Completion          | 3-3-95                | 5 DAY                   | rs               |  | 547            |                         |                         |          |        |  |
| pivaou              | FLOW TEST NO. 1       |                         |                  |  |                |                         |                         |          |        |  |
| Commenced a         | t (hour,date)* 3-8-   | 95                      |                  | ··   | Zone producing | (Upper o                | r Lower)                | LOWER    |        |  |
| TIME                | LAPSED TIME           | PRESSURE                |                  |  | PROD. ZONE     | (                       |                         |          |        |  |
| (hour,date)         | SINCE*                | Upper Completion        | Lower Comple     | tion   | TEMP           |                         | REMARI                  | cs       |        |  |
|                     |                       | † ···                   |                  |  |                |                         |                         |          |        |  |
| 6-Mar               |                       | 559                     | 538              | ŀ  |                |                         |                         |          |        |  |
|                     |                       |                         |                  |  |                |                         |                         |          |        |  |
| 7-Mar               |                       | 560                     | 546              |  |                |                         |                         |          |        |  |
|                     |                       |                         |                  |  |                |                         |                         |          |        |  |
| 8-Mar               |                       | 560                     | 547              |  |                |                         |                         |          |        |  |
|                     |                       |                         |                  |  |                |                         |                         |          |        |  |
| 9-Mar               |                       | 563                     | 224              |  |                |                         |                         |          |        |  |
|                     |                       |                         |                  |  |                |                         |                         |          |        |  |
| 10-Mar              |                       | 561                     | 198              |  |                |                         |                         | ·····    |        |  |
|                     |                       |                         |                  |  |                |                         |                         |          |        |  |
|                     |                       | <u></u>                 | <u> </u>         |  |                |                         |                         |          |        |  |
| Production r        | ate during test       |                         |                  |  |                |                         |                         |          |        |  |
|                     |                       |                         |                  |  |                |                         |                         |          |        |  |
| Oil:                | BOPD based on         | Bbls.                   | in               | Hours.   |                | Grav.                   |                         | GOR      | _      |  |
| <b>C</b>            |                       | MOEDD. T                | (O : 5           |  |                |                         |                         |          |        |  |
| Gas:                |                       | MCFPD; Tested the       | u (Ontice or N   | neter):  |                |                         |                         | •        |        |  |
|                     |                       | MID                     | трет епіт і      | N DDEC   | CIDE DATA      |                         |                         |          |        |  |
| Upper               | Hour, date shut-in    | Length of time shut-in  | TEST SHUT-I      | T  | <del></del>    |                         | Stabilizada (V          | or No    |        |  |
| Completion          | itour, date sude-m    | Langua or unite shut-in |                  | or pres.   | pres. psig     |                         | Stabilized? (Yes or No) |          |        |  |
| Lower               | Hour, date shut-in    | Length of time shut-in  | <del> </del>     | SI press   | ngia           |                         | Stabilized? (Yes        | or No)   |        |  |
| Completion          |                       |                         |                  | p. p.cas   | . hp           |                         | Canonizou: (168         | 01 110)  |        |  |
|                     | 1                     | <u> </u>                |                  | ·  |                |                         |                         |          |        |  |

(Continue on reverse side)



FLOW TEST NO. 2

| <u></u>      |                            |                                       | FLOW 1E3   | 1 NO. 2                          |                       |   |  |  |  |
|--------------|----------------------------|---------------------------------------|--|----------------------------------|-----------------------|---|--|--|--|
|              | at (hour,date)**           |                                       |  | Zone producing (Upper or Lower): |                       |   |  |  |  |
| TIME         | LAPSED TIME                | PRESSURE                              |  | PROD. ZONE                       |                       |   |  |  |  |
| (hour,date)  | SINCE**                    | Upper Completion                      | Lower Completion                                 | TEMP.                            | REMARKS               |   |  |  |  |
|              |                            |                                       |  |                                  |                       |   |  |  |  |
|              |                            |                                       |  |                                  |                       |   |  |  |  |
|              |                            |                                       |  |                                  |                       |   |  |  |  |
|              | ļ                          | <del></del>                           |  |                                  |                       |   |  |  |  |
|              |                            |                                       |  | Š.                               |                       |   |  |  |  |
|              | <del> </del>               |                                       | <del> </del>                                     |                                  |                       |   |  |  |  |
|              |                            |                                       |  |                                  |                       |   |  |  |  |
|              | <del> </del>               | <del> </del>                          | <del></del>                                      |                                  |                       |   |  |  |  |
|              |                            |                                       |  |                                  |                       |   |  |  |  |
|              | <del></del>                | -                                     | <del>                                     </del> | <del></del>                      |                       |   |  |  |  |
|              |                            |                                       | }  |                                  |                       |   |  |  |  |
| Production 1 | rate during test           |                                       | <u> </u>   | <u> </u>                         |                       |   |  |  |  |
|              | J                          |                                       |  |                                  |                       |   |  |  |  |
| Oil:         | BOPD based on Bbls. in     |                                       | Bbls. in   | Hours.                           | Grav. GOR             |   |  |  |  |
| Gas:         |                            | MCFPD; Te                             | sted thru (Orifice or                            | Meter):                          | GOR                   |   |  |  |  |
| Remarks:     |                            |                                       |  | , <del></del>                    |                       | · |  |  |  |
|              |                            |                                       |  |                                  |                       |   |  |  |  |
| I hereby cer | tify that the informa      | tion herein contained                 | is true and complet                              | e to the best of my ki           | nowledge.             |   |  |  |  |
|              |                            |                                       |  |                                  | -                     | • |  |  |  |
| Approved     | Johnn                      | y Robinson                            | <u> </u>   | _ Operator                       | Southland Royalty Co. |   |  |  |  |
|              | 3 1                        |                                       | 1  |                                  |                       |   |  |  |  |
| New Mex      | ico Oil Conservation<br>MA | Division 1005                         |  | Ву                               | Tanya Atcitty         |   |  |  |  |
|              |                            | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |  |                                  |                       |   |  |  |  |
| Ву           |                            |                                       |  | Title                            | Operations Assistant  |   |  |  |  |
|              | IDEPUTY 0                  | IL & GAS INSPECT                      | TORI   |                                  | <del></del>           |   |  |  |  |

## NORTHWEST NEW MEXICO PACKER LEAKAGE TEST INSTRUCTIONS

Date

1. A packer leakinge test shall be commenced on each multiply completed well within seven days after actual completion of the well, and annually thereafter as prescribed by the order authorizing the multiple completion. Such tests shall also be connected on all multiple completions within seven days following recompletion and/or chemical or fracture treatment, and whenever remedial work has been done on a well during which the packer or the tubing have been disturbed. Tests shall also be taken at any time that communication is suspected or when requested by the Division.

Title

- At least 72 hours prior to the commencement of any packer leakage test, the operator shall notify the Division in writing of the exact time the test is to be commenced. Offset operators shall also be so notified.
- 3. The packer leakage test shall commence when both zones of the dual completion are shut-in for pressure stabilization. both zones shall remain shut-in until the well-head pressure in each has stabilized, provided however, that they need not remain shut-in more than seven days.
- 4. For flow Test No. 1, one zone of the dual completion shall be produced at the normal rate of production while the other zone remains shut-in. Such test shall be continued for seven days if the case of a gas well and for 24 hours in the case of an oil well. Note: if, on an initial packer leakage test, a gas well is being flowed to the atmosphere due to the lack of a pipeline connection the flow period shall be three hours.
- Following completion of flow Test No. 1, the well shall again be shut-in, in accordance with Paragraph 3 above.
- Flow Test No. 2 shall be conducted even though no leak was indicated during flow Test No. 1.
  Procedure for Flow Test No. 2 is to be the same as for Flow Test No. 1

except that the previously produced zone shall remain shut-in while the zone which was previously shut-in is produced.

3/17/95

7. Pressures for gas-zone tests must be measured on each zone with a deadweight pressure gauge at time intervals as follows: 3 hours tests: immediately prior to the beginning of each flow-period, at fifteen minute intervals during the first hour thereof, and at hourly intervals thereafter, including one pressure measurement immediately prior to the flow period, at least one time during each flow period (at approximately the midway point) and immediately prior to the conclusion of each flow period. Other pressures may be taken as desired, or may be requested on wells which have previously shown questionable test data.

24-hour oil zone tests: all pressures, throughout the entire test, shall be continuously measured and recorded with recording pressure gauges the accuracy of which must be checked at least twice, once at the beginning and once at the end of each test, with a deadweight pressure gauge. If a well is a gas-oil or an oil-gas dual completion, the recording gauge shall be required on the oil zone only, with deadweight pressures as required above being taken on the gaz zone.

8. The results of the above described tests shall be filed in triplicate within 15 days after completion of the test. Tests shall be filed with the Aztec District Office of the New Mexico Oli Conservation Division of Northwest New Mexico Packer Leakage Test form Revised 10/01/78 with all deadweight pressures indicated thereon as well as the flowing temperatures (gas zones only) and gravity and GOR (oil zones only).