

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

Form C-122  
 Revised 9-1-65

|                                                                                                                           |             |                                    |                           |                                               |                         |                                                                 |                    |
|---------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------|---------------------------|-----------------------------------------------|-------------------------|-----------------------------------------------------------------|--------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |             |                                    |                           |                                               |                         | Test Date<br>7/13/88                                            |                    |
| Company<br>BTA Oil Producers                                                                                              |             |                                    |                           | Connection<br>Llano, Inc.                     |                         |                                                                 |                    |
| Pool<br>Ojo Chiso                                                                                                         |             |                                    |                           | Formation<br>Morrow                           |                         | Unit                                                            |                    |
| Completion Date<br>6/16/88                                                                                                |             | Total Depth<br>13,310              |                           | Plug Back TD<br>13,237                        |                         | Elevation<br>3497 KB                                            |                    |
| Farm or Lease Name<br>Chiso -B- Com, 8711 <span style="float:right">JV-P Com</span>                                       |             |                                    |                           |                                               |                         |                                                                 |                    |
| Csg. Size<br>5"                                                                                                           | Wt.<br>23.2 | d<br>4.044                         | Set At<br>13,310          | Perforations:<br>From                      To |                         | Well No.<br>1                                                   |                    |
| Thq. Size<br>2-7/8                                                                                                        | Wt.<br>6.5  | d<br>2.441                         | Set At<br>12,558          | Perforations:<br>From 12,633      To 12,787   |                         | Unit      Sec.      Twp.      Rge.<br>K      14      22      34 |                    |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                         |             |                                    |                           | Packer Set At<br>10,670                       |                         | County<br>Lea                                                   |                    |
| Producing Thru<br>Tubing                                                                                                  |             | Reservoir Temp. °F<br>181 @ 12,600 |                           | Mean Annual Temp. °F<br>60°                   |                         | Baro. Press. - P <sub>g</sub><br>13.2                           |                    |
| State<br>New Mexico                                                                                                       |             |                                    |                           |                                               |                         |                                                                 |                    |
| L<br>12,558                                                                                                               | H<br>12,558 | G <sub>g</sub><br>0.649            | % CO <sub>2</sub><br>0.30 | % N <sub>2</sub><br>1.00                      | % H <sub>2</sub> S<br>0 | Prover<br>4.026                                                 | Meter Run<br>4.026 |
| Taps<br>Flange                                                                                                            |             |                                    |                           |                                               |                         |                                                                 |                    |

| FLOW DATA |                  |   |              |                 |                      | TUBING DATA |                 | CASING DATA |                 | Duration of Flow |            |
|-----------|------------------|---|--------------|-----------------|----------------------|-------------|-----------------|-------------|-----------------|------------------|------------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. h <sub>w</sub> | Temp. °F    | Press. p.s.i.g. | Temp. °F    | Press. p.s.i.g. |                  | Temp. °F   |
| SI        | 4.026" x 2.000"  |   |              |                 |                      |             |                 | 82          | Pkr             | 82               | SI 624 hrs |
| 1.        | 4.026" x 2.000"  |   |              | 580             | 11                   | 87          | 6275            | 82          | Pkr             |                  | 60 min     |
| 2.        | 4.026" x 2.000"  |   |              | 590             | 25                   | 72          | 6073            | 83          | Pkr             |                  | 60 min     |
| 3.        | 4.026" x 2.000"  |   |              | 605             | 40                   | 75          | 5956            | 85          | Pkr             |                  | 60 min     |
| 4.        | 4.026" x 2.000"  |   |              | 643             | 80                   | 65          | 5675            | 85          | Pkr             |                  | 60 min     |
| 5.        |                  |   |              |                 |                      |             |                 |             |                 |                  |            |

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         | 19.81                 | 80.78            | 593.2                   | 0.9795                           | 1.241                         | 1.051                                   | 2044                 |
| 2                         | 19.81                 | 122.80           | 603.2                   | 0.9786                           | 1.241                         | 1.058                                   | 3126                 |
| 3                         | 19.81                 | 157.25           | 618.2                   | 0.9768                           | 1.241                         | 1.057                                   | 3991                 |
| 4                         | 19.81                 | 229.12           | 656.2                   | 0.9768                           | 1.241                         | 1.066                                   | 5865                 |
| 5                         |                       |                  |                         |                                  |                               |                                         |                      |

|     |                |          |                |       |                                       |            |          |
|-----|----------------|----------|----------------|-------|---------------------------------------|------------|----------|
| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z     | Gas Liquid Hydrocarbon Ratio          | 31.42      | Mcf/bbl. |
| 1.  | 0.89           | 547      | 1.47           | 0.905 | A.P.I. Gravity of Liquid Hydrocarbons | 50.6 @ 60° | Deg.     |
| 2.  | 0.90           | 532      | 1.43           | 0.894 | Specific Gravity Separator Gas        | 0.649      | XXXXXXX  |
| 3.  | 0.92           | 535      | 1.44           | 0.895 | Specific Gravity Flowing Fluid        | XXXXXX     |          |
| 4.  | 0.98           | 525      | 1.41           | 0.880 | Critical Pressure                     | 669        | P.S.I.A. |
| 5.  |                |          |                |       | Critical Temperature                  | 372        | R        |

|                                               |                             |                             |                                                           |
|-----------------------------------------------|-----------------------------|-----------------------------|-----------------------------------------------------------|
| P <sub>r</sub> 8476.2    P <sub>w</sub> 71846 |                             |                             |                                                           |
| NO.                                           | P <sub>r</sub> <sup>2</sup> | P <sub>w</sub> <sup>2</sup> | P <sub>r</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> |
| 1                                             |                             | 8232.2                      | 67769                                                     |
| 2                                             |                             | 8037.2                      | 64597                                                     |
| 3                                             |                             | 7962.2                      | 63397                                                     |
| 4                                             |                             | 7650.2                      | 58526                                                     |
| 5                                             |                             |                             | 13320                                                     |

$$(1) \frac{P_r^2}{P_r^2 - P_w^2} = 5.39$$

$$(2) \left[ \frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 4.593$$

$$ACF = Q \left[ \frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 26938$$

|                    |        |                |                  |       |          |      |
|--------------------|--------|----------------|------------------|-------|----------|------|
| Absolute Open Flow | 26,938 | Mcf/d @ 15.025 | Angle of Slope @ | 47.85 | Slope, n | .905 |
|--------------------|--------|----------------|------------------|-------|----------|------|

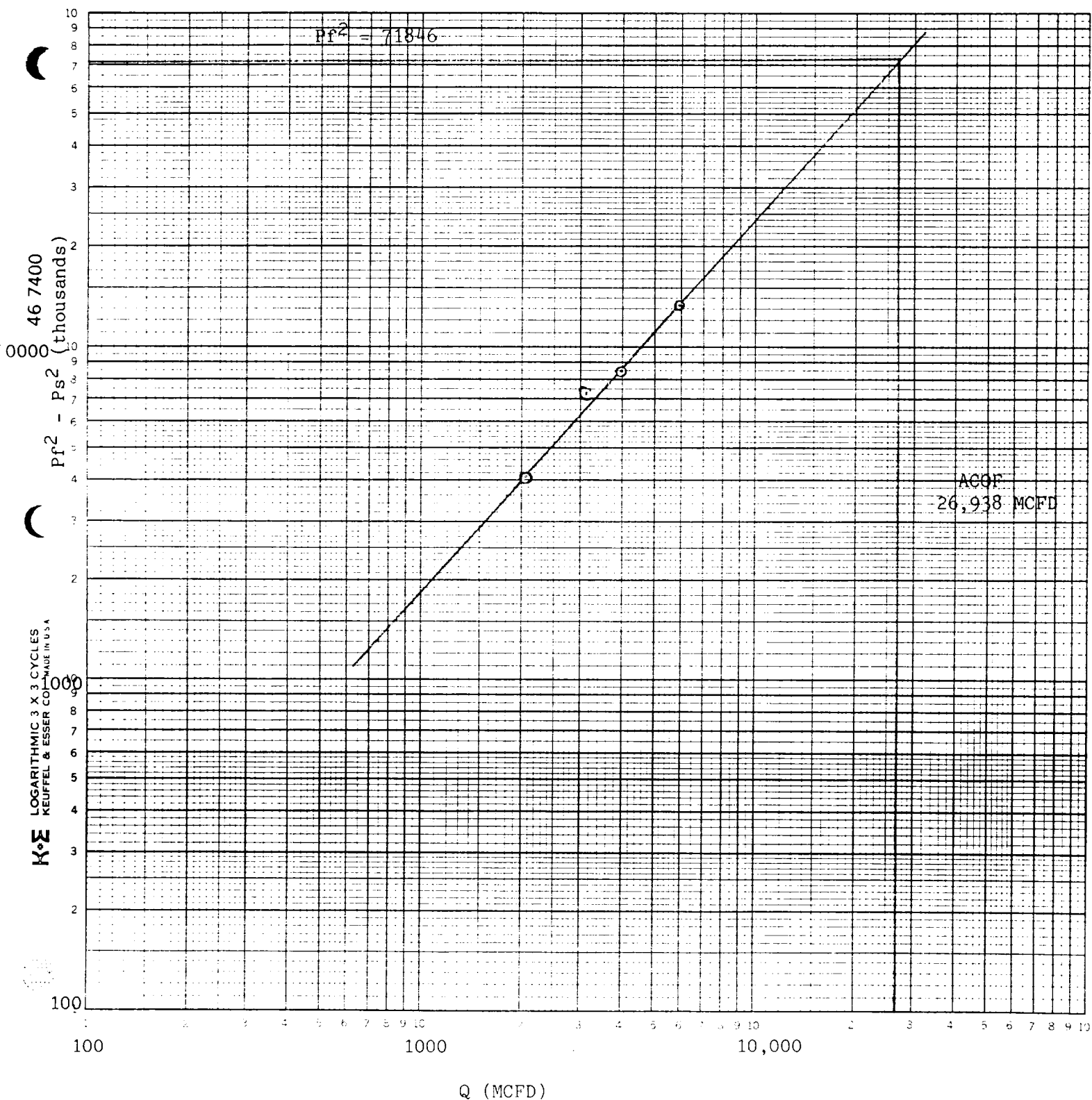
  

Remarks: Bottom hole pressure measured by Jarrel Services, Inc.

|                         |                   |                |             |
|-------------------------|-------------------|----------------|-------------|
| Approved By Commission: | Conducted By:     | Calculated By: | Checked By: |
|                         | BTA Oil Producers | T. J. Williams |             |

8711 JV-P Chiso "B" #1  
7/13/88



AOF = 26,938 MCFD  
n = 0.905  
 $\theta = 47.85$

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

|                        |     |
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| PRODUCTION OFFICE      |     |

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

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

REQUEST FOR ALLOWABLE  
AND  
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I. Operator  
BTA OIL PRODUCERS

Address  
104 South Pecos Midland, Texas 79701

Reason(s) for filing (Check proper box)

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

Other (Please explain)

If change of ownership give name  
and address of previous owner

II. DESCRIPTION OF WELL AND LEASE

|                                                                                                                                                                                                                   |               |                                                     |                                              |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------|----------------------------------------------|----------------------|
| Lease Name <del>Chiso</del><br>Chiso -B-, 8711 JV-P Com                                                                                                                                                           | Well No.<br>1 | Pool Name, including Formation<br>Ojo Chiso, Morrow | Kind of Lease<br>State, Federal or Fee State | Lease No.<br>LG-6555 |
| Location<br>Unit Letter <u>-K-</u> : <u>1980</u> Feet From The <u>South</u> Line and <u>2310</u> Feet From The <u>West</u><br>Line of Section <u>14</u> Township <u>22-S</u> Range <u>34-E</u> , NMPM, Lea 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"/><br>Sun Refining & Marketing Co. | Address (Give address to which approved copy of this form is to be sent)<br>P. O. Box 2039, Tulsa, OK 74102 |
| Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input checked="" type="checkbox"/><br>Llano, Inc.          | Address (Give address to which approved copy of this form is to be sent)<br>Box 1320, Hobbs, N.M. 88240     |
| If well produces oil or liquids,<br>give location of tanks.                                                                                      | Unit Sec. Twp. Rge. Is gas actually connected? When<br>K 14 22-S 34-E <u>NO</u> <u>yes</u> <u>7-14-88</u>   |

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

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

VI. CERTIFICATE OF COMPLIANCE

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

Dorothy Houghton  
(Signature) DOROTHY HOUGHTON  
Regulatory Supervisor  
(Title)  
6/21/88  
(Date)

OIL CONSERVATION DIVISION

APPROVED 7-14-88, 19  
BY ORIGINAL SIGNATURE OF JERRY SEXTON  
DISTRICT SUPERVISOR  
TITLE

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

#### IV. COMPLETION DATA

|                                             |                             |                      |                 |                   |          |                   |           |             |            |
|---------------------------------------------|-----------------------------|----------------------|-----------------|-------------------|----------|-------------------|-----------|-------------|------------|
| Designate Type of Completion - (X)          |                             | Oil Well             | Gas Well        | New Well          | Workover | Deepen            | Plug Back | Same Res'v. | Diff. Res. |
|                                             |                             |                      | X               | X                 |          |                   |           |             |            |
| Date Spudded                                | Date Compl. Ready to Prod.  |                      | Total Depth     |                   |          | P.B.T.D.          |           |             |            |
| 4-11-88                                     | 6-16-88                     |                      | 13,310'         |                   |          | 13,237'           |           |             |            |
| Elevations (DF, RKB, RT, CR, etc.)          | Name of Producing Formation |                      | Top Oil/Gas Pay |                   |          | Tubing Depth      |           |             |            |
| 3,477' GR 3,497' K.B.                       | Morrow                      |                      | 12,633'         |                   |          | 12,558'           |           |             |            |
| Perforations                                |                             |                      |                 |                   |          | Depth Casing Shoe |           |             |            |
| 12,633' - 12,787'                           |                             |                      |                 |                   |          | 13,310'           |           |             |            |
| <b>TUBING, CASING, AND CEMENTING RECORD</b> |                             |                      |                 |                   |          |                   |           |             |            |
| HOLE SIZE                                   |                             | CASING & TUBING SIZE |                 | DEPTH SET         |          | SACKS CEMENT      |           |             |            |
| 20"                                         |                             | 16"                  |                 | 1230'             |          | 1400 - Circ.      |           |             |            |
| 14-3/4"                                     |                             | 10-3/4"              |                 | 5000'             |          | 3000 - Circ.      |           |             |            |
| 9-1/2"                                      |                             | 7-5/8"               |                 | 11,218' DV @6015' |          | 2200 - Circ.      |           |             |            |
| 6-1/2"                                      |                             | 5" Liner             |                 | 10,816' - 13,310' |          | 390               |           |             |            |

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

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

#### GAS WELL

|                                  |                           |                           |                       |
|----------------------------------|---------------------------|---------------------------|-----------------------|
| Actual Prod. Test - MCF/D        | Length of Test            | Bble. Condensate/MMCF     | Gravity of Condensate |
| 2892                             | 24 hrs.                   | 24,100                    | 50°                   |
| Testing Method (pilot, back pr.) | Tubing Pressure (Shut-in) | Casing Pressure (Shut-in) | Choke Size            |
| Orifice Meter                    | 6500                      | Pkr.                      | Adj.                  |