

C/SF  
C-122

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL RECEIVED

|                                                                                                                              |              |                                           |                            |                                      |                         |                                      |                    |
|------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------|----------------------------|--------------------------------------|-------------------------|--------------------------------------|--------------------|
| Type of Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |              |                                           |                            | Test Date<br>3/24/82                 |                         | APR 28 1982                          |                    |
| Company<br>The Desana Corporation /                                                                                          |              |                                           |                            | Connection<br>None                   |                         |                                      |                    |
| Well<br><i>Wildcat Bone Spring</i><br>Undesignated                                                                           |              |                                           |                            | Formation<br>Bone Springs            |                         | Unit<br>O.C.D.<br>ARTESIA OFFICE     |                    |
| Completion Date<br>3/11/82                                                                                                   |              | Total Length<br>20 5616' <i>OTD 13307</i> |                            | Plug Hole TD<br>5575'                |                         | Elevation<br>3246' GL-10'            |                    |
| Casing Size<br>4 1/2"                                                                                                        | Wt.<br>10.50 | d<br>4.052                                | Set At<br>5610'            | Perforations:<br>From 5496' To 5516' |                         | Well No.<br>1                        |                    |
| Trip Size<br>2 3/8"                                                                                                          | Wt.<br>4.7   | d<br>1.995                                | Set At<br>5410'            | Perforations:<br>From Open To Ended  |                         | Unit Sec. Twp. Rge.<br>K 32. 23s 27e |                    |
| Type Well - Single - Broadhead - G.C. or G.O. Multiple<br>Single                                                             |              |                                           |                            | Packer Set At<br>5410'               |                         | County<br>Eddy                       |                    |
| Producing Thru<br>Tubing                                                                                                     |              | Reservoir Temp. °F<br>110° 5411'          |                            | Mean Annual Temp. °F<br>60°          |                         | State<br>New Mexico                  |                    |
| L<br>5506                                                                                                                    | H<br>-       | Gg<br>0.685                               | % CO <sub>2</sub><br>2.610 | % N <sub>2</sub><br>2.112            | % H <sub>2</sub> S<br>- | Prover<br>-                          | Meter Run<br>2.900 |
|                                                                                                                              |              |                                           |                            |                                      |                         | Flg.<br>-                            |                    |

  

| FLOW DATA |                  |       |              |                 |          |          | TUBING DATA         |          | CASING DATA     |          | Location of Flow |
|-----------|------------------|-------|--------------|-----------------|----------|----------|---------------------|----------|-----------------|----------|------------------|
| NO        | Prover Line Size | X     | Orifice Size | Press. p.s.i.g. | Diff. hw | Temp. °F | Press. p.s.i.g. BWT | Temp. °F | Press. p.s.i.g. | Temp. °F |                  |
| 51        |                  |       |              |                 |          |          | 1862                | 60       | PACKER          |          | 1 week           |
| 1         | 2.90             | 7/64  | 1.00         | 500             | 5        | 87       | 1789                |          |                 |          | 1.0 hr           |
| 2         | 2.90             | 8/64  | 1.00         | 510             | 10       | 80       | 1850                |          |                 |          | 1.0 hr           |
| 3         | 2.90             | 10/64 | 1.00         | 520             | 31       | 79       | 1845                |          |                 |          | 1.0 hr           |
| 4         | 2.90             | 11/64 | 1.00         | 520             | 59       | 79       | 1745                |          |                 |          | 1.0 hr           |
| 5         |                  |       |              |                 |          |          |                     |          |                 |          |                  |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                       |                   |                                         |                        |
|---------------------------|-----------------------|------------------|-------------------------|-----------------------|-------------------|-----------------------------------------|------------------------|
| NO                        | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor Ft. | Gravity Factor Fg | Super Compress. Factor, F <sub>sp</sub> | Rate of Flow Q, Mscf/d |
| 1                         | 4.801                 | 50.66            | 513.2                   | 0.9750                | 1.208             | 1.043                                   | 298.78                 |
| 2                         | 4.801                 | 72.33            | 523.2                   | 0.9813                | 1.208             | 1.045                                   | 430.17                 |
| 3                         | 4.801                 | 128.57           | 533.2                   | 0.9822                | 1.208             | 1.048                                   | 767.54                 |
| 4                         | 4.801                 | 177.37           | 533.2                   | 0.9822                | 1.208             | 1.048                                   | 1058.86                |
| 5                         |                       |                  |                         |                       |                   |                                         |                        |

  

|    |                |          |                |       |                                       |        |          |
|----|----------------|----------|----------------|-------|---------------------------------------|--------|----------|
| NO | R <sub>1</sub> | Temp. °R | T <sub>1</sub> | Z     | Gas Liquid Hydrocarbon Ratio          | 26.618 | Mcf/tol. |
| 1  | 0.76           | 547      | 1.47           | 0.919 | A.P.I. Gravity of Liquid Hydrocarbons | 64.7   | Deg.     |
| 2  | 0.77           | 540      | 1.46           | 0.916 | Specific Gravity Separator Gas        | 0.685  | XXXXXX   |
| 3  | 0.79           | 539      | 1.45           | 0.911 | Specific Gravity Flowing Fluid        | XXXXX  | XXXXXX   |
| 4  | 0.79           | 539      | 1.45           | 0.911 | Critical Pressure                     | 676    | P.S.I.A  |
| 5  |                |          |                |       | Critical Temperature                  | 371    | R        |

  

|    |                |                  |                             |                                                           |                                                               |                                                             |
|----|----------------|------------------|-----------------------------|-----------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------|
| NO | P <sub>1</sub> | P <sub>w</sub> * | P <sub>w</sub> <sup>2</sup> | P <sub>1</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> | (1) $\frac{P_c^2}{P_1^2 - P_w^2} = 20.595$                    | (2) $\left[ \frac{P_c^2}{P_1^2 - P_w^2} \right]^n = 16.270$ |
| 1  |                | 2468.2           | 6092.0                      | 269.5                                                     | AOF = Q $\left[ \frac{P_c^2}{P_1^2 - P_w^2} \right]^n = 6999$ | <i>Posted ID-2<br/>5-7-82<br/>Comp-SE</i>                   |
| 2  |                | 2460.2           | 6052.6                      | 308.9                                                     |                                                               |                                                             |
| 3  |                | 2404.2           | 5780.2                      | 581.3                                                     |                                                               |                                                             |
| 4  |                | 2355.2           | 5547.0                      | 314.5                                                     |                                                               |                                                             |
| 5  |                |                  |                             |                                                           |                                                               |                                                             |

  

|                         |  |                |                          |                |
|-------------------------|--|----------------|--------------------------|----------------|
| Absolute Open Flow 6999 |  | Mcf/d @ 15.025 | Angle of Slope @ 47° 19' | Slope, n 0.922 |
|-------------------------|--|----------------|--------------------------|----------------|

  

Remarks: \* BOTTOM HOLE PRESSURE @ (-2260) 5506' USED FOR PRESSURE CALCULATIONS  
WELL PRODUCED 4.0 BD IN 4.0 HOURS = 24.0 BD/DAY

  

|                      |                                           |                                  |                                         |
|----------------------|-------------------------------------------|----------------------------------|-----------------------------------------|
| Approved By Division | Conducted By:<br>JARREL WELL TESTING, INC | Calculated By:<br>Joe A. Coleman | Checked By: PE, #2208<br>Joe A. Coleman |
|----------------------|-------------------------------------------|----------------------------------|-----------------------------------------|