

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

|                                                                                                                           |                      |                                     |                                                                 |
|---------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------|-----------------------------------------------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                      | Test Date<br>12-21-82               |                                                                 |
| Company<br>Dugan Production Corp.                                                                                         |                      | Connection                          |                                                                 |
| Pool<br>WAW Fruitland P.C.                                                                                                |                      | Formation<br>Pictured Cliffs        |                                                                 |
| Completion Date<br>12-14-82                                                                                               | Total Depth<br>1480' | Plug Back TD<br>1431'               | Elevation<br>6082' GL                                           |
| Form or Lease Name<br>Lucky Billy Charlie                                                                                 |                      | Well No.<br>1                       |                                                                 |
| Csg. Size<br>2-7/8"                                                                                                       | Wt.<br>6.5#          | d<br>2.441                          | Set At<br>1474' GL                                              |
| Perforations<br>From 1220' To 1334'                                                                                       |                      | Well No.<br>1                       |                                                                 |
| Tiq. Size<br>None                                                                                                         | Wt.                  | d                                   | Set At                                                          |
| Perforations<br>From To                                                                                                   |                      | Unit Sec. Twp. Rge.<br>M 22 27N 13W |                                                                 |
| Type Well - Single - Bradenhead - G.C. or G.O. Multiple<br>single - gas                                                   |                      | Packer Set At                       |                                                                 |
| Producing Thru<br>Casing                                                                                                  |                      | County<br>San Juan                  |                                                                 |
| Reservoir Temp. °F<br>p                                                                                                   |                      | State<br>NM                         |                                                                 |
| Mean Annual Temp. °F                                                                                                      |                      | Baro. Press. - P <sub>a</sub>       |                                                                 |
| L                                                                                                                         | H                    | G <sub>g</sub><br>0.62              | % CO <sub>2</sub> % N <sub>2</sub> % H <sub>2</sub> S    Prover |
| Meter Run                                                                                                                 |                      | Taps                                |                                                                 |

  

| 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        |                  |   |              |                 |                      |             |                 |             | 228             |                  | 7 days   |
| 1.        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |
| 2.        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |
| 3.        | 7/16" pos. choke |   | 18           |                 |                      |             |                 | 60°         |                 |                  | 3 hrs.   |
| 4.        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |
| 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, Fpv | Rate of Flow Q, Mcfd |
| 1                         |                       |                  |                         |                       |                   |                             |                      |
| 2                         |                       |                  |                         |                       |                   |                             |                      |
| 3                         | 4.123                 |                  | 30                      | 1.0                   | 0.9837            | 1.000                       | 122                  |
| 4                         |                       |                  |                         |                       |                   |                             |                      |
| 5                         |                       |                  |                         |                       |                   |                             |                      |

  

| NO. | P <sub>t</sub> | Temp. °R | T <sub>r</sub> | Z | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.          |
|-----|----------------|----------|----------------|---|------------------------------------------------------|
| 1   |                |          |                |   | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.     |
| 2   |                |          |                |   | Specific Gravity Separator Gas _____ X X X X X X X X |
| 3   |                |          |                |   | Specific Gravity Flowing Fluid _____ X X X X X       |
| 4   |                |          |                |   | Critical Pressure _____ P.S.I.A. _____ P.S.I.A.      |
| 5   |                |          |                |   | Critical Temperature _____ R _____ R                 |

  

| NO. | P <sub>1</sub> | P <sub>2</sub> | P <sub>3</sub> | P <sub>4</sub> | P <sub>5</sub> | P <sub>6</sub> | P <sub>7</sub> | P <sub>8</sub> | P <sub>9</sub> | P <sub>10</sub> |
|-----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| 1   |                |                |                |                |                |                |                |                |                |                 |
| 2   |                |                |                |                |                |                |                |                |                |                 |
| 3   |                |                |                |                |                |                |                |                |                |                 |
| 4   |                |                |                |                |                |                |                |                |                |                 |
| 5   |                |                |                |                |                |                |                |                |                |                 |

  

(1)  $\frac{P_c^2}{P_e^2 - P_w^2} =$  \_\_\_\_\_

(2)  $\left[ \frac{P_c^2}{P_e^2 - P_w^2} \right]^n =$  \_\_\_\_\_

AOF = Q  $\left[ \frac{P_e^2}{P_e^2 - P_w^2} \right]^n =$  \_\_\_\_\_

Friction negligible; tested thru casing.

  

|                                        |                      |                |
|----------------------------------------|----------------------|----------------|
| Absolute Open Flow _____ Mcfd @ 15.025 | Angle of Slope _____ | Slope, n _____ |
| Remarks _____                          |                      |                |

  

|                            |                         |                          |                   |
|----------------------------|-------------------------|--------------------------|-------------------|
| Approved By Division _____ | Conducted By: Fagrelius | Calculated By: Fagrelius | Checked By: _____ |
|----------------------------|-------------------------|--------------------------|-------------------|