

3-NMOCC 1-Shryack 1-EPNG (Texas) 1-File  
1-Lively 1-EPNG (Ulrich) 1-EPNG (Mabe)

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

Form C-122  
Revised 9-1-65

RECEIVED  
MAY 30 1973  
OIL CON. COM.  
DIST. 3

|                                                                                                                           |              |                              |                 |                                      |                      |  |
|---------------------------------------------------------------------------------------------------------------------------|--------------|------------------------------|-----------------|--------------------------------------|----------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |              |                              |                 |                                      | Test Date<br>5-26-73 |  |
| Company<br>Lively Exploration Co.                                                                                         |              |                              |                 | Connection                           |                      |  |
| Pool<br>Basin - Dakota                                                                                                    |              |                              |                 | Formation<br>Dakota                  |                      |  |
| Completion Date<br>5-9-73                                                                                                 |              | Total Depth<br>7444'         |                 | Plug Back TD<br>7441'                |                      |  |
| Elevation<br>6105' RKB                                                                                                    |              | Farm or Lease Name<br>Lively |                 |                                      |                      |  |
| Log. Size<br>4 1/2"                                                                                                       | Wt.<br>11.2# | d<br>10.5"                   | Set At<br>7444' | Perforations:<br>From 7249' To 7438' |                      |  |
| Log. Size<br>1 1/4"                                                                                                       | Wt.<br>2.4#  | d<br>1.038"                  | Set At<br>7416' | Perforations:<br>From Open End To    |                      |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single - Gas                                                   |              |                              |                 | Packer Set At                        |                      |  |
| Producing Thru                                                                                                            |              | Reservoir Temp. °F<br>8      |                 | Baro. Press. - P <sub>a</sub>        |                      |  |
| L                                                                                                                         |              | H                            |                 | State<br>New Mexico                  |                      |  |
| G <sub>g</sub><br>.65 est                                                                                                 |              | % 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         |        |
| 1         |                            |   |              |                 |                      |             | 2407            |             | 2410            |                  | 7 days |
| 2         | 5/16" H <sub>2</sub> choke |   |              | 200             |                      | 52°         |                 |             | 1266            |                  | 3 hrs  |
| 3         |                            |   |              |                 |                      |             |                 |             |                 |                  |        |
| 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                         | 7.5417                |                  | 212                     | 1.0078               | .9608             | 1.023                       | 1817                 |
| 3                         |                       |                  |                         |                      |                   |                             |                      |
| 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 _____ XXXXXXXXXX  |
| 3   |                |          |                |   | Specific Gravity Flowing Fluid _____ XXXXX       |
| 4   |                |          |                |   | Critical Pressure _____ P.S.I.A. _____ P.S.I.A.  |
| 5   |                |          |                |   | Critical Temperature _____ R _____ R             |

| P <sub>c</sub> 2422 P <sub>c</sub> <sup>2</sup> 5866.084 |                             |                |                             |                                                           |
|----------------------------------------------------------|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|
| NO.                                                      | P <sub>t</sub> <sup>2</sup> | P <sub>w</sub> | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> |
| 1                                                        |                             |                |                             |                                                           |
| 2                                                        |                             | 1215           | 1433.25                     | 4232.83                                                   |
| 3                                                        |                             |                |                             |                                                           |
| 4                                                        |                             |                |                             |                                                           |
| 5                                                        |                             |                |                             |                                                           |

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = 1.3859$       (2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2773$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2321$

|                                              |  |                               |                     |
|----------------------------------------------|--|-------------------------------|---------------------|
| Absolute Open Flow <u>2321</u> Mcfd @ 15.025 |  | Angle of Slope $\theta$ _____ | Slope, n <u>.75</u> |
|----------------------------------------------|--|-------------------------------|---------------------|

Remarks: Dry through hole test

|                         |                            |                              |             |
|-------------------------|----------------------------|------------------------------|-------------|
| Approved by Commission: | Conducted By: <u>Dugan</u> | Calculated By: <u>Jacobs</u> | Checked By: |
|-------------------------|----------------------------|------------------------------|-------------|