

DEC 27 1984

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File C-5/F

|                                                                                                                                                                      |                             |                                  |                                                           |                                        |                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------|-----------------------------------------------------------|----------------------------------------|--------------------------------------|
| Type Test<br>4 POINT <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Special                                                                    |                             | O. C. D.<br>ARTESIA, OFFICE      |                                                           | Test Date<br>12-13-84                  |                                      |
| Company<br>MCKAY OIL COMPANY                                                                                                                                         |                             | Connection<br>TO AIR             |                                                           |                                        |                                      |
| Pool<br>S. PECOS SLOPE <i>abo</i>                                                                                                                                    |                             | Formation<br>ABO                 |                                                           | Unit<br><del>NE</del>                  |                                      |
| Completion Date<br>11-27-84 <i>12-13-84</i>                                                                                                                          |                             | Total Depth<br>4338 <i>4310</i>  |                                                           | Elevation<br>3559.                     |                                      |
| Casing Size<br>4.500                                                                                                                                                 |                             | Casing ID<br>4.052               |                                                           | Perforations:<br>From 3580. To 3589.   |                                      |
| Tubing Size<br>2.375                                                                                                                                                 |                             | Tubing ID<br>1.995               |                                                           | Perforations:<br>From 0. To 0.         |                                      |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>SINGLE                                                                                                    |                             | Packoff Gel At<br>0.             |                                                           | County<br>CHAVES                       |                                      |
| Producing thru<br>TUBING                                                                                                                                             |                             | Reservoir Temp. °F<br>100. 3585. |                                                           | Mean Annual Temp. °F<br>60.0           |                                      |
| L<br>3585.                                                                                                                                                           |                             | H<br>3585.                       |                                                           | G <sub>g</sub><br>0.648                |                                      |
| % CO <sub>2</sub><br>0.00                                                                                                                                            |                             | % N <sub>2</sub><br>6.88         |                                                           | % H <sub>2</sub> S<br>0.               |                                      |
| Prover<br>2.0                                                                                                                                                        |                             | Motor Run                        |                                                           | Taps<br>FLANGE                         |                                      |
| FLOW DATA                                                                                                                                                            |                             |                                  |                                                           |                                        |                                      |
| NO.                                                                                                                                                                  | Prover Line Size            | X                                | Orifice Size                                              | Press. p.s.i.g.                        | Diff. h <sub>w</sub>                 |
| 1                                                                                                                                                                    | 2.00 X 0.063                |                                  |                                                           | 773.                                   | 0.                                   |
| 2                                                                                                                                                                    | 2.00 X 0.094                |                                  |                                                           | 724.                                   | 0.                                   |
| 3                                                                                                                                                                    | 2.00 X 0.125                |                                  |                                                           | 650.                                   | 0.                                   |
| 4                                                                                                                                                                    | 2.00 X 0.188                |                                  |                                                           | 400.                                   | 0.                                   |
| TUBING DATA                                                                                                                                                          |                             |                                  |                                                           |                                        |                                      |
|                                                                                                                                                                      | Press. p.s.i.g.             | Temp. °F                         | Press. p.s.i.g.                                           | Temp. °F                               |                                      |
|                                                                                                                                                                      | 820.                        |                                  | 903.                                                      |                                        |                                      |
| 1                                                                                                                                                                    | 773.                        | 56.                              | 853.                                                      | 8/64                                   | 1.0                                  |
| 2                                                                                                                                                                    | 727.                        | 56.                              | 799.                                                      | 8/64                                   | 1.0                                  |
| 3                                                                                                                                                                    | 650.                        | 58.                              | 715.                                                      | 8/64                                   | 1.0                                  |
| 4                                                                                                                                                                    | 425.                        | 58.                              | 537.                                                      | 12/64                                  | 1.0                                  |
| B.H.P. DATA                                                                                                                                                          |                             |                                  |                                                           |                                        |                                      |
|                                                                                                                                                                      | Press. p.s.i.g.             | CHOKE                            |                                                           |                                        |                                      |
|                                                                                                                                                                      |                             |                                  |                                                           |                                        |                                      |
| RATE OF FLOW CALCULATIONS                                                                                                                                            |                             |                                  |                                                           |                                        |                                      |
| NO.                                                                                                                                                                  | Coefficient (24 Hour)       | $\sqrt{h_w P_m}$                 | Pressure P <sub>m</sub>                                   | Flow Temp. Factor Ft.                  | Gravity Factor F <sub>g</sub>        |
| 1                                                                                                                                                                    | 0.06                        | 0.                               | 786.2                                                     | 1.0039                                 | 1.2423                               |
| 2                                                                                                                                                                    | 0.14                        | 0.                               | 737.2                                                     | 1.0039                                 | 1.2423                               |
| 3                                                                                                                                                                    | 0.26                        | 0.                               | 663.2                                                     | 1.0019                                 | 1.2423                               |
| 4                                                                                                                                                                    | 0.61                        | 0.                               | 413.2                                                     | 1.0019                                 | 1.2423                               |
| Super Compress. Factor, F <sub>spv</sub>                                                                                                                             |                             |                                  |                                                           |                                        |                                      |
|                                                                                                                                                                      |                             |                                  |                                                           |                                        |                                      |
| Rate of Flow Q, Mscf                                                                                                                                                 |                             |                                  |                                                           |                                        |                                      |
|                                                                                                                                                                      |                             |                                  |                                                           |                                        |                                      |
| 1                                                                                                                                                                    |                             |                                  |                                                           |                                        | 67.                                  |
| 2                                                                                                                                                                    |                             |                                  |                                                           |                                        | 138.                                 |
| 3                                                                                                                                                                    |                             |                                  |                                                           |                                        | 231.                                 |
| 4                                                                                                                                                                    |                             |                                  |                                                           |                                        | 324.                                 |
| Gas Liquid Hydrocarbon Ratio 0. Mscf/bbl.                                                                                                                            |                             |                                  |                                                           |                                        |                                      |
| A.P.I. Gravity of Liquid Hydrocarbons 0. Deg.                                                                                                                        |                             |                                  |                                                           |                                        |                                      |
| 1                                                                                                                                                                    | 1.19                        | 516.                             | 1.45                                                      | 0.872                                  | Specific Gravity Separator Gas 0.648 |
| 2                                                                                                                                                                    | 1.12                        | 516.                             | 1.45                                                      | 0.879                                  | Specific Gravity Flowing Fluid XXXXX |
| 3                                                                                                                                                                    | 1.01                        | 518.                             | 1.46                                                      | 0.891                                  | Critical Pressure 658. P.S.I.A.      |
| 4                                                                                                                                                                    | 0.63                        | 518.                             | 1.46                                                      | 0.930                                  | Critical Temperature 355. °F         |
| $(1) \frac{P_c^2}{P_w^2 - P_c^2} = 2.7412$ $(2) \left[ \frac{P_c^2}{P_w^2 - P_c^2} \right]^n = 2.7412$ $AOR = Q \left[ \frac{P_c^2}{P_w^2 - P_c^2} \right]^n = 633.$ |                             |                                  |                                                           |                                        |                                      |
| NO.                                                                                                                                                                  | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup>      | P <sub>w</sub> <sup>2</sup> - P <sub>c</sub> <sup>2</sup> |                                        |                                      |
| 1                                                                                                                                                                    | 750.                        | 625.                             | 125.                                                      |                                        |                                      |
| 2                                                                                                                                                                    | 660.                        | 551.                             | 109.                                                      |                                        |                                      |
| 3                                                                                                                                                                    | 530.                        | 443.                             | 87.                                                       |                                        |                                      |
| 4                                                                                                                                                                    | 303.                        | 254.                             | 48.                                                       |                                        |                                      |
| <p>Post ID-2<br/>1-4-85<br/>Comp V BK</p>                                                                                                                            |                             |                                  |                                                           |                                        |                                      |
| Absolute Open Flow 633. Mscf @ 15.025                                                                                                                                |                             |                                  |                                                           |                                        |                                      |
| Angle of Slope 45.0                                                                                                                                                  |                             |                                  |                                                           |                                        |                                      |
| Slope, n 1.000                                                                                                                                                       |                             |                                  |                                                           |                                        |                                      |
| Remarks: BOTTOM HOLE PRESSURES MEASURED WITH AMERADA PRESSURE ELEMENTS.                                                                                              |                             |                                  |                                                           |                                        |                                      |
| Approved By Commission                                                                                                                                               |                             | Conducted By<br>RICKY HATCHETT   |                                                           | Calculated By<br>BENNETT & CATHEY INC. |                                      |
|                                                                                                                                                                      |                             |                                  |                                                           | Checked By                             |                                      |