

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

Form C-122
 Revised 9-1-65

APR 24 1975

| | | | | | | | | | | |
|---|-----------------------------|------------------------------------|--|---|--|---|---|--------------------------------------|--------------------------------------|-----------------|
| Type Test <input type="checkbox"/> Initial <input checked="" type="checkbox"/> Annual <input type="checkbox"/> Special | | | | Test Date 4-18-75 | | G. G. G. ARTESIA, OFFICE | | | | |
| Company Atlantic Richfield Co. | | | | Connection Southern Union | | | | | | |
| Pool Avalon <i>Morrow</i> | | | | Formation Morrow | | Unit - | | | | |
| Completion Date 5-10-75 | | Total Depth 11050' | | Plug Back TD 10995' | | Elevation 3224' DF | | Farm or Lease Name Conley Federal | | |
| Csq. Size 5 1/2" | Wt. 20 | d 4.778 | Set At 11090' | Perforations: From 10672' To 10897' | | Well No. 1 | | | | |
| Tng. Size 2" | Wt. 4.7 | d 1.995 | Set At 10544' | Perforations: From - To - | | Unit D | Soc. 33 | Twp. 20S | Rge. 27E | |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single | | | | | Packer Set At 10535' | | County Eddy | | | |
| Producing Thru Tubing | | Reservoir Temp. *F 176 @ 10500' | | Mean Annual Temp. *F 60 | | Baro. Press. - P _a 13.2 | | State New Mexico | | |
| L 10785' | H - | G _g 0.605 | % CO ₂ 0.650 | % N ₂ 1.037 | % H ₂ S 0.00 | Prover | Meter Run X | Taps F | | |
| FLOW DATA | | | | | TUBING DATA | | CASING DATA | | Duration of Flow | |
| NO. | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. h _w | Temp. *F | Press. p.s.i.g. | Temp. *F | | Press. p.s.i.g. |
| SI | | | | | | | 3522 | | Packer | 17 Days |
| 1. | 1 13/16 | 2 | 2 | 627 | 14 | 65 | 2764 | 65 | | 1.0 |
| 2. | 1 11/16 | 2 | 2 | 627 | 12 | 79 | 2865 | 66 | | 1.0 |
| 3. | 1 9/16 | 2 | 2 | 627 | 7 | 63 | 3056 | 65 | | 1.0 |
| 4. | 1 7/16 | 2 | 2 | 627 | 5 | 74 | 3305 | 66 | | 1.0 |
| 5. | | | | | | | | | | |
| RATE OF FLOW CALCULATIONS | | | | | | | | | | |
| NO. | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P _m | Flow Temp. Factor Ft. | Gravity Factor F _g | Super Compress. Factor, F _{pv} | Rate of Flow Q, Mcia | | | |
| 1 | 19.81 | 94.68 | 640.2 | 0.9952 | 1.286 | 1.051 | 2522.9 | | | |
| 2 | 19.81 | 87.65 | 640.2 | 0.9822 | 1.286 | 1.046 | 2294.1 | | | |
| 3 | 19.81 | 66.95 | 640.2 | 0.9971 | 1.286 | 1.052 | 1789.1 | | | |
| 4 | 19.81 | 56.58 | 640.2 | 0.9868 | 1.286 | 1.048 | 1490.7 | | | |
| 5 | | | | | | | | | | |
| NO. | P _r | Temp. *R | T _r | Z | Gas Liquid Hydrocarbon Ratio <u>Dry Gas</u> Mcf/bbl. | | | | | |
| 1 | 0.95 | 525 | 1.50 | 0.906 | A.P.I. Gravity of Liquid Hydrocarbons <u>-</u> Deg. | | | | | |
| 2 | 0.95 | 539 | 1.54 | 0.914 | Specific Gravity Separator Gas <u>0.6048</u> X X X X X X X X | | | | | |
| 3 | 0.95 | 523 | 1.49 | 0.904 | Specific Gravity Flowing Fluid <u>X X X X X</u> | | | | | |
| 4 | 0.95 | 534 | 1.52 | 0.910 | Critical Pressure <u>672</u> P.S.I.A. - P.S.I.A. | | | | | |
| 5 | | | | | Critical Temperature <u>351</u> R - R | | | | | |
| $P_c = 1509.2$ $P_c^2 = 20332.9$ | | | | | | | | | | |
| NO. | P _r ² | P _w * | R _w ² | P _c ² - P _w ² | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.874$ | | (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.586$ | | | |
| 1 | - | 3641.2 | 13258.3 | 7074.6 | 6 | | | | | |
| 2 | - | 3741.2 | 13996.6 | 6336.3 | 3 | | | | | |
| 3 | - | 3936.2 | 15493.7 | 4839.2 | 2 | | | | | |
| 4 | - | 4045.2 | 16363.6 | 3969.3 | 2 | | Q _{OP} = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6524$ | | | |
| 5 | | | | | | | | | | |
| Absolute Open Flow <u>6524</u> Mcfd @ 15.025 | | | | | Angle of Slope θ <u>47° 55'</u> | | | Slope, n <u>0.903</u> | | |
| Remarks: * BHP @ (-7561) 10785 used for pressure calculations | | | | | | | | | | |
| Approved By Commission: | | | Conducted By: Coleman Petr. Engr. Co. | | | Calculated By: Joe A. Coleman | | | Checked By: <i>Joe A. Coleman</i> | |