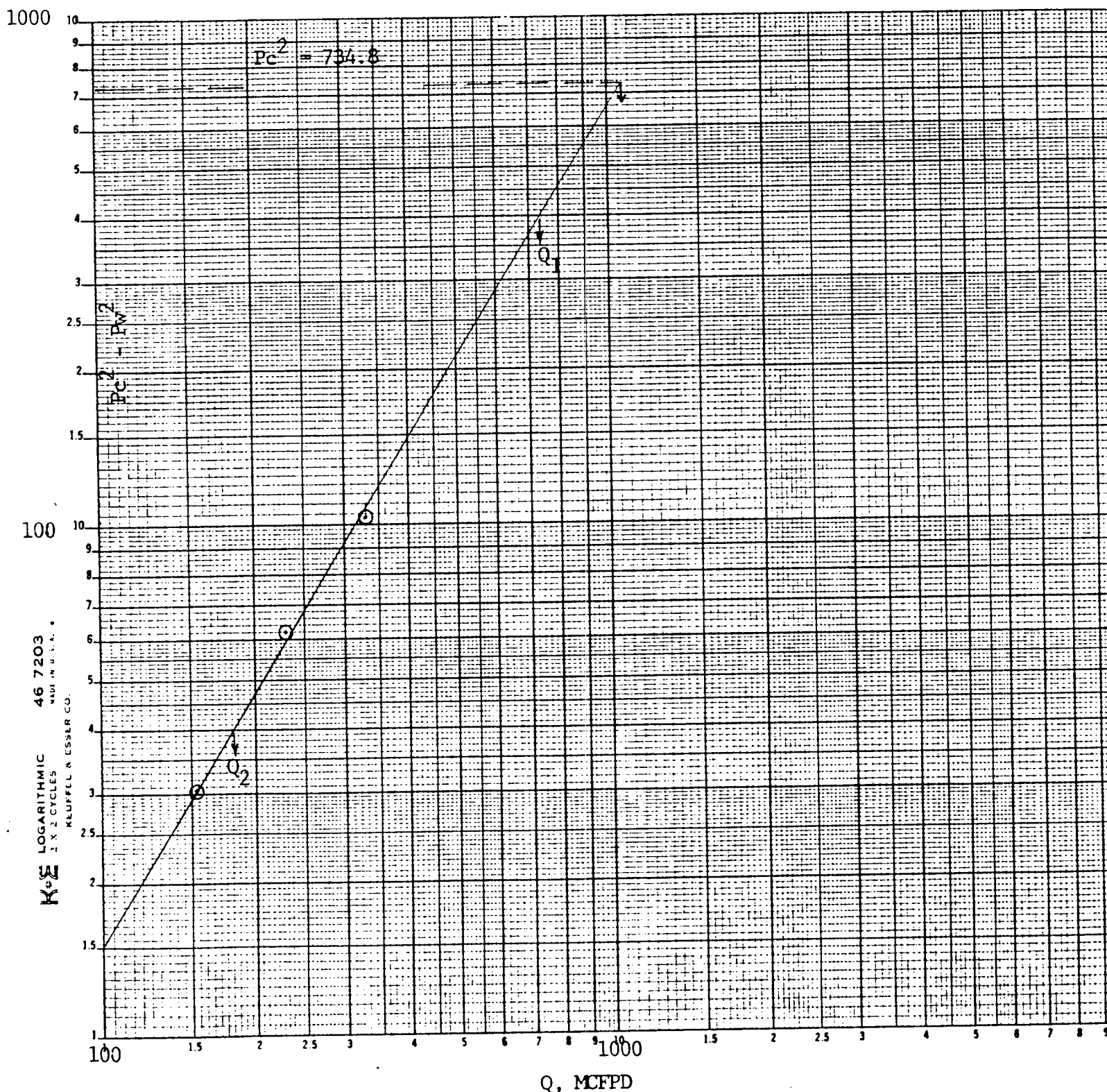


## MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

|                                                                                                                           |                             |                                       |                             |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------|-----------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                             | Test Date<br>6-13-87                  |                             |
| Company<br>MCKAY OIL CORPORATION                                                                                          |                             | Connection<br>AIR                     |                             |
| Pool<br>West Pecos Slope - Abo                                                                                            |                             | Formation<br>Abo                      |                             |
| Completion Date<br>06-13-87                                                                                               |                             | Total Depth<br>3400                   |                             |
| Csg. Size<br>4-1/2                                                                                                        |                             | Well No.<br>#7                        |                             |
| Wt.<br>10.5                                                                                                               |                             | Set At<br>3075                        |                             |
| Perforations:<br>From 2724 To 2861                                                                                        |                             | Unit<br>I                             |                             |
| Thq. Size<br>2-3/8                                                                                                        |                             | Wt.<br>4.7                            |                             |
| Set At<br>2699                                                                                                            |                             | Perforations:<br>From -- To --        |                             |
| Type Well - Single - Drivenhead - G.C. or G.O. Multiple<br>Single                                                         |                             | Packer Set At<br>--                   |                             |
| Producing Thru<br>Tubing                                                                                                  |                             | Reservoir Temp. °F<br>92              |                             |
| Mean Annual Temp. °F<br>60                                                                                                |                             | Barc. Press. - P <sub>g</sub><br>13.2 |                             |
| State<br>New Mexico                                                                                                       |                             | County<br>Chaves                      |                             |
| L<br>2792.5                                                                                                               |                             | H<br>2792.5                           |                             |
| G <sub>g</sub><br>0.632                                                                                                   |                             | % CO <sub>2</sub><br>0.163            |                             |
| % N <sub>2</sub><br>5.973                                                                                                 |                             | % H <sub>2</sub> S<br>0               |                             |
| Prover<br>2.00                                                                                                            |                             | Meter Run<br>--                       |                             |
| Taps<br>--                                                                                                                |                             | Duration of Flow<br>SI 72 Hrs.        |                             |
| FLOW DATA                                                                                                                 |                             |                                       |                             |
| NO.                                                                                                                       | Prover Line Size            | X                                     | Orifice Size                |
| 1.                                                                                                                        | 2.000                       | .250                                  | 36                          |
| 2.                                                                                                                        | 2.000                       | .250                                  | 102                         |
| 3.                                                                                                                        | 2.000                       | .250                                  | 156                         |
| 4.                                                                                                                        | 2.000                       | .250                                  | 225                         |
| 5.                                                                                                                        |                             |                                       |                             |
| TUBING DATA                                                                                                               |                             |                                       |                             |
| NO.                                                                                                                       | Press. p.s.i.g.             | Temp. °F                              | Press. p.s.i.g.             |
| 1.                                                                                                                        | 840                         | 100                                   | 835                         |
| 2.                                                                                                                        | 841                         | 97                                    | 822                         |
| 3.                                                                                                                        | 826                         | 90                                    | 802                         |
| 4.                                                                                                                        | 807                         | 84                                    | 779                         |
| 5.                                                                                                                        |                             |                                       |                             |
| CASING DATA                                                                                                               |                             |                                       |                             |
| NO.                                                                                                                       | Press. p.s.i.g.             | Temp. °F                              | Rate of Flow O. Mc/d        |
| 1.                                                                                                                        | 844                         | --                                    | 65                          |
| 2.                                                                                                                        | 841                         | --                                    | 153                         |
| 3.                                                                                                                        | 826                         | --                                    | 230                         |
| 4.                                                                                                                        | 807                         | --                                    | 329                         |
| 5.                                                                                                                        |                             |                                       |                             |
| RATE OF FLOW CALCULATIONS                                                                                                 |                             |                                       |                             |
| NO.                                                                                                                       | Coefficient (24 Hour)       | $\sqrt{h_w P_m}$                      | Pressure P <sub>m</sub>     |
| 1.                                                                                                                        | 1.087                       | --                                    | 49.2                        |
| 2.                                                                                                                        | 1.087                       | --                                    | 115.2                       |
| 3.                                                                                                                        | 1.087                       | --                                    | 169.2                       |
| 4.                                                                                                                        | 1.087                       | --                                    | 238.2                       |
| 5.                                                                                                                        |                             |                                       |                             |
| NO.                                                                                                                       | R <sub>1</sub>              | Temp. °R                              | T <sub>r</sub>              |
| 1.                                                                                                                        | 0.07                        | 560                                   | 1.60                        |
| 2.                                                                                                                        | 0.17                        | 557                                   | 1.59                        |
| 3.                                                                                                                        | 0.26                        | 550                                   | 1.57                        |
| 4.                                                                                                                        | 0.36                        | 544                                   | 1.55                        |
| 5.                                                                                                                        |                             |                                       |                             |
| Gas Liquid Hydrocarbon Ratio 0 Mcf/bbl.                                                                                   |                             |                                       |                             |
| A.P.I. Gravity of Liquid Hydrocarbons 0 Deg.                                                                              |                             |                                       |                             |
| Specific Gravity Separator Gas 0.632 XXXXXXXXXX                                                                           |                             |                                       |                             |
| Specific Gravity Flowing Fluid XXXXXX                                                                                     |                             |                                       |                             |
| Critical Pressure 659 P.S.I.A. P.S.I.A.                                                                                   |                             |                                       |                             |
| Critical Temperature 351 R R                                                                                              |                             |                                       |                             |
| P <sub>c</sub> 857.2 P <sub>c</sub> <sup>2</sup> 734.8                                                                    |                             |                                       |                             |
| NO.                                                                                                                       | P <sub>1</sub> <sup>2</sup> | P <sub>w</sub>                        | P <sub>w</sub> <sup>2</sup> |
| 1.                                                                                                                        | --                          | 854.2                                 | 729.7                       |
| 2.                                                                                                                        | --                          | 839.2                                 | 704.3                       |
| 3.                                                                                                                        | --                          | 820.2                                 | 672.7                       |
| 4.                                                                                                                        | --                          | 795.2                                 | 632.3                       |
| 5.                                                                                                                        |                             |                                       |                             |
| (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 24.09$                                                                                 |                             |                                       |                             |
| (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6.97$                                                                 |                             |                                       |                             |
| AOF = 0 $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1,066$                                                            |                             |                                       |                             |
| Absolute Open Flow 1,066 Mc/d @ 15.025                                                                                    |                             | Angle of Slope @ 58.60                |                             |
| Slope, n 0.61                                                                                                             |                             |                                       |                             |
| Remarks: No water produced during test.                                                                                   |                             |                                       |                             |
| Approved By Division                                                                                                      |                             | Conducted By: R. Snyder               |                             |
| Calculated By: C. Sanders                                                                                                 |                             | Checked By: P. Stewart                |                             |

MCKAY OIL CORPORATION  
 South Four Mile Draw Fed. #7  
 Sec. 21, T6S, R22E  
 06-13-87



$Q_1 = 738$ ;  $\log = 2.86806$   
 $Q_2 = 181$ ;  $\log = 2.25768$   
 $n = \frac{0.61038}{0.61}$   
 (Point #1 off scale)  $n = 0.61$   
 AOF = 1066

your Interest in Measurement be our Concern.



PRECISION SERVICE INC.  
Flow Measurement Engineers  
Analysis Results Summary  
Casper, WY 82601

Run No. 618-2  
Date Run 06/18/87  
Date Sampled 06/13/87

Analysis For: MCKAY OIL CORPORATION

Lease: SOUTH 4 MILE DRAW FED #7

Location: CHINA DRAW

Purpose: WELL TEST

Sampling Temp. 90 °F

Volume/day

Pressure on Bomb 140

Producer: MCKAY OIL CORP.

County: CHAVES State: NEW MEXICO

Sampled By: K.ESLINGER

Atmos Temp. °F

Formation

PSIG, Line Pressure 153.2 PSIA PSIG

Gas Component

Analysis

Press. Base: 14.73

|                                   | Mol. %  | Liq. % | GPM<br>Per MCF |
|-----------------------------------|---------|--------|----------------|
| Carbon Dioxide CO <sub>2</sub>    | .163    |        |                |
| Oxygen O <sub>2</sub>             | 5.973   |        |                |
| Nitrogen N <sub>2</sub>           |         |        |                |
| Hydrogen Sulfide H <sub>2</sub> S |         |        |                |
| Methane C <sub>1</sub>            | 88.284  |        | 14.964         |
| Ethane C <sub>2</sub>             | 2.922   |        | .781           |
| Propane C <sub>3</sub>            | 1.361   |        | .375           |
| Iso-Butane IC <sub>4</sub>        | .214    |        | .070           |
| Nor-Butane NC <sub>4</sub>        | .576    |        | .182           |
| Iso-Pentane IC <sub>5</sub>       | .119    |        | .043           |
| Nor-Pentane NC <sub>5</sub>       | .198    |        | .072           |
| Hexanes plus                      | .191    |        | .088           |
| Hexanes C <sub>6</sub>            |         |        |                |
| Heptanes                          |         |        |                |
| Heptanes Plus C <sub>7</sub> +    |         |        |                |
| Total                             | 100.000 |        | 16.575         |
| Pentane + G.P.M.                  |         |        | .203           |
| Propane + GPM                     |         |        | .830           |
| 26-lb Gasoline                    |         |        | .309           |

BTU Dry 1031

BTU Wet 1013

Calc. Specific Gravity .632

@ Std. Press. 14.696

BTU Dry 1029

BTU Wet 1011

Calc. Vap. Press. # Sq.In.

Reid Vap. Press. # Sq.In.

Z Factor .9978

N Value 1.3041

Ave Mol Wt 18.2657

Ave Cu Ft/Gal

Run by JEFFREY A. PROPP

Calculated By JEFFREY A. PROPP

Ethane + GPM 1.611

Remarks:

Distribution: