

MULTI-POINT TEST FOR GAS WELLS

Pool Langlie Mattix Formation Queen County Lea

Initial \_\_\_\_\_ Annual \_\_\_\_\_ ☒ Date of Test 4-29/30-57

Company Pan American Petroleum Corp. Myers "A" Well No. 6

Unit J Sec. 22 Twp. 24-S R. 37-E Surveyor Permian

Casing 5 1/2" Wt. 17.0# I.D. 4.892" Set 3358' Perfor. 3360' To 3530'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set 3561' Perfor. \_\_\_\_\_ To \_\_\_\_\_

Gas Pay: From 3359' To 3562' L 3360' M 0.670 GL 2251 Bar.Press. 13.2

Producing Thru: Casing ☒ Type Well Single Completion

Date of Completion: 3-17-49 Backed \_\_\_\_\_ Single-Bradenhead-G. G. or G.O. Dual \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

CONFIRMED DATA

Tested Through (Prover) (~~CHOKE~~) (~~TESTER~~) Type Taps \_\_\_\_\_

| No. | Flow Data                  |                              |                |              | Tubing Data    |              | Casing Data    |              | Duration of Flow Hr. |
|-----|----------------------------|------------------------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------------|
|     | (Prover)<br>(Line)<br>Size | (CHOKE)<br>(Orifice)<br>Size | Press.<br>psig | Diff.<br>in. | Press.<br>psig | Temp.<br>°F. | Press.<br>psig | Temp.<br>°F. |                      |
| SI  |                            |                              |                |              |                |              | 415.2          |              | 68-1/2 HR. SIM       |
| 1.  | 2"                         | 1/8"                         | 412.4          |              |                |              | 412.4          |              | 3                    |
| 2.  | 2"                         | 3/16"                        | 407.6          |              |                |              | 407.6          |              | 3                    |
| 3.  | 2"                         | 7/32"                        | 402.3          |              |                |              | 402.3          |              | 3                    |
| 4.  | 2"                         | 1/4"                         | 396.2          |              |                |              | 396.2          |              | 3                    |
| 5.  | 2"                         | 1/4"                         | 382.6          |              |                |              | 382.6          |              | 20                   |

FLOW CALCULATIONS

| No. | Coefficient<br>(24-Hour) | Pressure<br>Prover<br>psia | Flow Temp.<br>°F. | Gravity<br>Factor<br>Fg | Compress.<br>Factor<br>Fpv | Rate of Flow<br>Q-MCFPD<br>@ 15.025 psia |
|-----|--------------------------|----------------------------|-------------------|-------------------------|----------------------------|------------------------------------------|
| 1.  | 0.3418                   | 425.6                      | 0.9924            | 0.9463                  | 1.044                      | 143                                      |
| 2.  | 0.7891                   | 420.8                      | 0.9924            | 0.9463                  | 1.043                      | 324                                      |
| 3.  | 1.0834                   | 415.5                      | 0.9924            | 0.9463                  | 1.043                      | 441                                      |
| 4.  | 1.4030                   | 409.4                      | 0.9924            | 0.9463                  | 1.041                      | 562                                      |
| 5.  | 1.4030                   | 395.8                      | 0.9887            | 0.9463                  | 1.039                      | 540                                      |

PERFORMING CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ Specific Gravity Separator Gas \_\_\_\_\_

Gravity of Liquid Hydrocarbons \_\_\_\_\_ Specific Gravity Flowing Fluid \_\_\_\_\_

F<sub>c</sub> 1.812 (1 - F<sub>c</sub>) 0.143 F<sub>c</sub> 428.4 P<sub>c</sub><sup>2</sup> 183.5

| No. | P <sub>w</sub><br>Pt (psia) | P <sub>c</sub> <sup>2</sup> | F <sub>g</sub> Q | (F <sub>g</sub> Q) <sup>2</sup> | F <sub>g</sub> Q <sup>2</sup> | P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup> | Cal.<br>P <sub>w</sub> | P <sub>w</sub><br>F <sub>c</sub> |
|-----|-----------------------------|-----------------------------|------------------|---------------------------------|-------------------------------|----------------------------------------------------------|------------------------|----------------------------------|
| 1.  | 425.6                       | 181.1                       | 0.2391           | 0.0671                          | 0.0096                        | 181.1                                                    | 425.6                  | .98                              |
| 2.  | 420.8                       | 177.1                       | 0.5871           | 0.3447                          | 0.0493                        | 177.1                                                    | 420.8                  | .98                              |
| 3.  | 415.5                       | 172.6                       | 0.7991           | 0.6386                          | 0.0913                        | 172.7                                                    | 415.6                  | .97                              |
| 4.  | 409.4                       | 167.6                       | 1.018            | 1.036                           | 0.1481                        | 167.7                                                    | 409.5                  | .96                              |
| 5.  | 395.8                       | 156.7                       | 0.9785           | 0.9575                          | 0.1369                        | 156.8                                                    | 396.0                  | .92                              |

Absolute Potential: 2500 MOWLE 0.61

COMPANY Pan American Petroleum Corporation

ADDRESS Post Office Box 68 Hobbs, New Mexico

AGENT and TITLE M. C. McPhail Field Engineer

WITNESSED \_\_\_\_\_

COMPANY \_\_\_\_\_

ELVIS A. L.  
GAS ENGINEER

## INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

## NOMENCLATURE

$Q$  = Actual rate of flow at end of flow period at W. H. working pressure ( $P_w$ ).  
MCF/da. @ 15.025 psia and 60° F.

$P_c$  = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.  
psia

$P_w$  = Static wellhead working pressure as determined at the end of flow period.  
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia

$P_t$  = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

$P_f$  = Meter pressure, psia.

$h_w$  = Differential meter pressure, inches water.

$F_g$  = Gravity correction factor.

$F_t$  = Flowing temperature correction factor.

$F_{pv}$  = Supercompressibility factor.

$n$  = Slope of back pressure curve.

Note: If  $P_w$  cannot be taken because of manner of completion or condition of well, then  $P_w$  must be calculated by adding the pressure drop due to friction within the flow string to  $P_t$ .