NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool [illegible]-Pictured Cliffs Formation Pictured Cliffs County San Juan

Initial X Annual _____ Special _____ Date of Test 12-14-57

Company Pan American Petroleum Corp. Lease Kenny Gas Unit Well No. 1

Unit M Sec. 20 Twp. 29N Rge. 10W Purchaser El Paso Natural Gas Company

Casing 5½ Wt. 14 I.D. 5.012 Set at 1819 Perf. 1745 To 1760

Tubing 1.66 Wt. 2.3 I.D. 1-1/4 Set at 1759 Perf. 1749 To 1759

Gas Pay: From 1745 To 1760 L 1752 xG .69 est. -GL 1214 Bar.Press. 13

Producing Thru: Casing X Tubing _____ Type Well Gas - Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 11-25-57 Packer None Reservoir Temp. 89° F.

OBSERVED DATA

Tested Through [illegible] (Choke) [illegible] Type Taps _____

| No. | Flow Data (Prover) (Line) Size | Flow Data (Choke) ([illegible]) Size | Flow Data Press. psig | Flow Data Diff. $h_w$ | Flow Data Temp. °F. | Tubing Data Press. psig | Tubing Data Temp. °F. | Casing Data Press. psig | Casing Data Temp. °F. | Duration of Flow Hr. |
|---|---|---|---|---|---|---|---|---|---|---|
| SI | Shut in 10 days | | | | | 641 | | 641 | | |
| 1. | | 3/4" | 177 | | 60° F | 203 | 60° F est. | 181 | 60° est. | 3 hrs. |
| 2. | | | | | | | | | | |
| 3. | | | | | | | | | | |
| 4. | | | | | | | | | | |
| 5. | | | | | | | | | | |

FLOW CALCULATIONS

| No. | Coefficient (24-Hour) | $\sqrt{h_w p_f}$ | Pressure psia | Flow Temp. Factor $F_t$ | Gravity Factor $F_g$ | Compress. Factor $F_{pv}$ | Rate of Flow Q-MCFPD @ 15.025 psia |
|---|---|---|---|---|---|---|---|
| 1. | 12.365 | | 189 | 1.000 | 0.9325 | 1.023 | 2289 |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
$F_c$ _____ $(1-e^{-s})$ _____

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid 0.69 est
$P_c$ 653 $P_c^2$ 426,409

| No. | $P_w$ $P_t$ (psia) | $P_t^2$ | $F_cQ$ | $(F_cQ)^2$ | $(F_cQ)^2$ $(1-e^{-s})$ | $P_w^2$ | $P_c^2-P_w^2$ | Cal. $P_w$ | $\frac{P_w}{P_c}$ |
|---|---|---|---|---|---|---|---|---|---|
| 1. | | | | | | 45,796 | 380,613 | | |
| 2. | | | | | | | | | |
| 3. | | | | | | | | | |
| 4. | | | | | | | | | |
| 5. | | | | | | | | | |

Absolute Potential: 2463 MCFPD; n 0.85
COMPANY PAN AMERICAN PETROLEUM CORPORATION
ADDRESS Box 487, Farmington, New Mexico
AGENT and TITLE Field Engineer R. M. Brown Jr.
WITNESSED _____
COMPANY _____

REMARKS

RECEIVED
JAN 30 1958
OIL CON. COM.

## 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.

$F_{pv}$ = Supercompressability 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 $P_t$.