NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin-Dakota Formation Dakota County San Juan

Initial X Annual ____ Special ____ Date of Test 3-13-64

Company PAN AMERICAN PETROLEUM CORP. Lease L. C. Kelly Well No. 2

Unit B Sec. 3 Twp. 30N Rge. 12W Purchaser ____

Casing 4-1/2 Wt. 10.5 I.D. 4.052 Set at 6632 Perf. 6584-90/6637 To 6650/ 6686-6706 / 6740-6744

Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6630 Perf. Open To Ended

Gas Pay: From 6584 To 6744 L 6660 xG .709 -GL 4634 Bar.Press. 12

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

Date of Completion: 3-3-64 Packer None Reservoir Temp. ____

OBSERVED DATA

Tested Through (~~Prover~~) (Choke) (~~Meter~~) Type Taps Flange

| No. | Flow Data (~~Prover~~) (Line) Size | (Choke) (~~Orifice~~) Size | Press. psig | Diff. $h_w$ | Temp. °F. | Tubing Data Press. psig | Tubing Data Temp. °F. | Casing Data Press. psig | Casing Data Temp. °F. | Duration of Flow Hr. |
|---|---|---|---|---|---|---|---|---|---|---|
| SI | 8 days | | | | | 1963 | | 2006 | | |
| 1. | 2 inch | .750 | 158 | | | 133 | 60° est. | 441 | 60° est. | 3 Hr. |
| 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. | 12.3650 | | 164 | 1.000 | .9258 | 1.019 | 1914 |
| 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 ____
$P_c$ 2016 $P_c^2$ 4,064,256

| No. | $P_w$ $P_t$ (psia) | $P_t^2$ | $F_cQ$ | $(F_cQ)^2$ | $\frac{(F_cQ)^2}{(1-e^{-s})}$ | $P_w^2$ | $P_c^2-P_w^2$ | Cal. $P_w$ | $\frac{P_w}{P_c}$ |
|---|---|---|---|---|---|---|---|---|---|
| 1. | | | | | | 385,209 | 3,679,047 | | |
| 2. | | | | | | | | | |
| 3. | | | | | | | | | |
| 4. | | | | | | | | | |
| 5. | | | | | | | | | |

Absolute Potential: 1990 MCFPD; n .75

COMPANY PAN AMERICAN PETROLEUM CORPORATION
ADDRESS Box 468, Farmington, New Mexico
AGENT and TITLE F. L. Kuhere, District Engineer
WITNESSED By: F. L. Kuhere
COMPANY ____

REMARKS

RECEIVED
MAY 19 1964
OIL CON. COM.
DIST. 3

## 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 $P_t$.