NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

NOV 13 AM 9:26

Pool Eumont Formation Seven Rivers County Lea

Initial X Annual Special Date of Test 9-29-56 10-2-56

Company The Texas Company Lease J. K. Baxter Well No. 2

Unit P Sec. 30 Twp. 21-S Rge. 36-E Purchaser El Paso Natural Gas Company

Casing 7" Wt. 24# I.D. 6.456 Set at 3673 Perf. 3500 To 3676

Tubing 2 1/2 Wt. 6.50 I.D. 2.44 Set at 3673 Perf. To

Gas Pay: From 3500 To 3673 L 3673 xG .680 -GL 2498 Bar.Press. 13.2

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

Date of Completion: 5-18-51 Packer Reservoir Temp.

OBSERVED DATA

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

| No. | Flow Data (Prover) ~~(Line)~~ ~~Size~~ | Flow Data (~~Choke~~) (Orifice) 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 | | | | | | 625 | | | | 72 |
| 1. | 2 | .1250 | 536 | | 74 | 536 | | | | 3 |
| 2. | 2 | .1875 | 501 | | 78 | 501 | | | | 3 |
| 3. | 2 | .2187 | 482 | | 76 | 482 | | | | 3 |
| 4. | 2 | .250 | 455 | | 71 | 455 | | | | 3 |
| 5. | 2 | .250 | 465 | | 78 | 465 | | | | 24 |

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. | .3418 | | 549.2 | .9868 | .9393 | 1.061 | 185 |
| 2. | .7851 | | 514.2 | .9831 | .9393 | 1.053 | 393 |
| 3. | 1.0834 | | 495.2 | .9850 | .9393 | 1.053 | 523 |
| 4. | 1.4030 | | 468.2 | .9896 | .9393 | 1.050 | 641 |
| 5. | 1.4030 | | 478.2 | .9831 | .9393 | 1.050 | 651 |

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
$F_c$ 5.866 $(1-e^{-s})$ 0.158

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
$P_c$ 638.2 $P_c^2$ 407.3

| 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. | 549.2 | 301.6 | 1.09 | 1.19 | .188 | 301.6 | 105.5 | 549.4 | .86 |
| 2. | 514.2 | 264.4 | 2.31 | 5.34 | .844 | 264.2 | 142.1 | 515.8 | .81 |
| 3. | 495.2 | 245.2 | 3.07 | 9.42 | 1.49 | 246.7 | 160.6 | 496.7 | .78 |
| 4. | 468.2 | 219.2 | 3.76 | 14.13 | 2.23 | 221.4 | 185.9 | 470.5 | .73 |
| 5. | 478.2 | 228.7 | 3.82 | 14.59 | 2.31 | 231.0 | 176.3 | 480.6 | .75 |

Absolute Potential: 1,500 MCFPD; n 1.0

COMPANY THE TEXAS COMPANY
ADDRESS BOX 1270, MIDLAND, TEXAS
AGENT and TITLE L. I. BAKER, DISTRICT GAS MAN L. I. Baker
WITNESSED EARL SMITH
COMPANY EL PASO NATURAL GAS COMPANY

REMARKS

This is a retest. Due to the back pressure curve being flat, a 45° slope was drawn through the highest point of test as required by the Multi-Point Back Pressure Test Manual.

A. UTZ ENGINEER

ELVIS A. GAS ENGIN

## 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 $P_t$.