NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool BALLARD Formation PICTURED CLIFFS County RIO ARRIBA

Initial x Annual _____ Special _____ Date of Test 1-5-60

Company Arizona Explorations, Inc. Lease Jicarilla Well No. C-8

Unit M Sec. 3 Twp. 23N Rge. 5W Purchaser Southern Union Gas Company

Casing 5½" Wt. 14# I.D. _____ Set at 2302 Perf. 2204 To 2235

Tubing 1½" Wt. 2.4# I.D. _____ Set at 2221 Perf. 2211 To 2221

Gas Pay: From 2204 To 2235 L 2220 xG 0.690 -GL 1532 Bar.Press. 12.0

Producing Thru: Casing x Tubing _____ Type Well Single Gas

Date of Completion: 12-14-59 Packer _____ Single-Bradenhead-G. G. or G.O. Dual 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 | | | | | | 696 | | 696 | | |
| 1. | | 3/4" | 166 | | 58 | 221 | | 266 | 58 | 3 hours |
| 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 | | 178 | 1.0019 | 0.9325 | 1.021 | 2099 |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas _____
Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____
$F_c$ _____ $(1-e^{-s})$ _____ $P_c$ 708 $P_c^2$ 501,264

AOF = $\left(\frac{708^2}{708^2 - 178^2}\right)^{.85}$ (2099) = 2219

| 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. | | | | | | | | | |
| 2. | | | | | | | | | |
| 3. | | | | | | | | | |
| 4. | | | | | | | | | |
| 5. | | | | | | | | | |

Absolute Potential: 2219 MCFPD; n 0.85
COMPANY Arizona Explorations, Inc.
ADDRESS 417 Meadows Building, Dallas 6, Texas
AGENT and TITLE Virgil L. Stoabs, Engineer
WITNESSED George Credicott
COMPANY Arizona Explorations, Inc.

REMARKS

RECEIVED
JAN 14 1960
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 $P_t$.