3-[illegible]
1-McKay
1-Empire States
1-NWP
1-Reese
1-File

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Ated Ext Formation Pictured Cliffs County San Juan

Initial X Annual ____ Special ____ Date of Test 6-29-58

Company McKay, Payne & Zachry Lease Uptegrove Well No. 1

Unit P Sec. 2 Twp. 30N Rge. 12W Purchaser ____

Casing 5½ Wt. 14# I.D. 5.012 Set at 2200 Perf. 2072 To 2084

Tubing 1" Wt. 1.70 I.D. 1.049 Set at 2079 Perf. 2079 To 2074

Gas Pay: From 2072 To 2084 L ____ xG ____ -GL ____ Bar.Press. ____

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

Date of Completion: ____ 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 | | | | | | 656 | | 659 | | |
| 1. | | | | | | | | | | |
| 2. | | 3/4" | 67 | | 62 | 199 | | | | 3 hrs |
| 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. | | | | | | | |
| 2. | 12.3650 | | 79 | .9981 | 1.000 | 1.000 | 975 |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
$P_c$ ____ $(1-e^{-s})$ ____ $P_c$ 671 $P_c^2$ 450

| 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. | | | | | | | | | |
| 2. | | | | | | 44.5 | 405.5 | | 1.110 |
| 3. | 211 | | | | | | | | |
| 4. | | | | | | | | | |
| 5. | | | | | | | | | |

Absolute Potential: 1068 MCFPD; n .85 1.0925

COMPANY Val R. Reese & Assoc., Inc.
ADDRESS 120 S. Commercial
AGENT and TITLE T. A. Dugan, Engineer
WITNESSED Bob Jackson
COMPANY Empire States Drlg. Corp.

REMARKS

RECEIVED
JUL 3 1958
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 $P_t$.