

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Angels Peak Dakota Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test 9-2-59
Company Pan American Petroleum Corp. Lease Fred Feasel "J" Well No. 1
Unit G Sec. 34 Twp. 28N Rge. 10W Purchaser Southern Union Gas Company
Casing 4-1/2 Wt. 11.6 I.D. 4.000 Set at 6541 Perf. 6374 To 6420
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6342 Perf. Open ended; no perforations To _____
Gas Pay: From 6374 To 6420 L 6342 xG 0.70 (est.) GL 4439 Bar.Press. 12
Producing Thru: Casing _____ Tubing X Type Well Single Gas
Date of Completion: 8-22-59 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 140°F.

OBSERVED DATA

Tested Through (none) (Choke) (none) Type Taps _____

| No. | Flow Data | | | Tubing Data | | Casing Data | | Duration of Flow Hr. |
|-----|-------------|--------------|-------------|----------------------|-----------|-------------|-----------|----------------------|
| | (Line) Size | (Choke) Size | Press. psig | Diff. h _w | Temp. °F. | Press. psig | Temp. °F. | |
| SI | Shut in | 11 days. | | | | | | |
| 1. | 2" | 3/4" | 330 | | 60°(est.) | 1991 | 962 | 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. | 12.363 | | 342 | 1.000 | 0.9258 | 1.042 | 4079 |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |

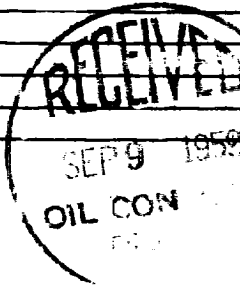
PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c _____ (1-e^{-s})
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 2003 P_c 4,012,009

| No. | P _w P _t (psia) | P _t ² | F _c Q | (F _c Q) ² | (F _c Q) ² (1-e ^{-s}) | P _w ² | P _c ² -P _w ² | Cal. P _w | P _w /P _c |
|-----|--------------------------------------|-----------------------------|------------------|---------------------------------|--|-----------------------------|--|---------------------|--------------------------------|
| 1. | | | | | | 948,876 | 3,063,333 | | |
| 2. | | | | | | | | | |
| 3. | | | | | | | | | |
| 4. | | | | | | | | | |
| 5. | | | | | | | | | |

Absolute Potential: 4993 MCFPD; n 0.75
COMPANY Pan American Petroleum Corporation
ADDRESS Box 487, Farmington, New Mexico
AGENT and TITLE R. H. Bauer, Jr., Area Engineer
WITNESSED _____
COMPANY _____

REMARKS



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 .

