

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Formation Dakota County San Juan
Initial x Annual _____ Special _____ Date of Test 7-21-61
Company PURCO PETROLEUM CORP Lease State Well No. 30
Unit I Sec. 36 Twp. 30 N Rge. 12 W Purchaser El Paso Natural Gas Company
Casing 5 1/2 Wt. 15 1/2 I.D. 4.950 Set at 6645 Perf. 6468 To 6530
Tubing 2 3/8 Wt. 4.7 I.D. 1.992 Set at 6506 Perf. _____ To 6506
Gas Pay: From 6468 To 6530 L _____ xG 0.650 -GL _____ Bar.Press. 12.025
Producing Thru: Casing _____ Tubing x Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 7-8-61 Packer _____ Reservoir Temp. 178

OBSERVED DATA

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

| No. | Flow Data | | | | | Tubing Data | | Casing Data | | Duration of Flow Hr. |
|-----|----------------------|------------------------|-------------|----------------------|-----------|-------------|-----------|-------------|-----------|----------------------|
| | (Prover) (Line) Size | (Choke) (Orifice) Size | Press. psig | Diff. h _w | Temp. °F. | Press. psig | Temp. °F. | Press. psig | Temp. °F. | |
| SI | <u>2"</u> | <u>0.750</u> | | | | <u>1375</u> | <u>80</u> | <u>2002</u> | | |
| 1. | | | | | | <u>870</u> | | <u>735</u> | | <u>1</u> |
| 2. | | | | | | <u>190</u> | | <u>575</u> | | <u>2</u> |
| 3. | | | | | | <u>175</u> | | <u>580</u> | | <u>3</u> |
| 4. | | | | | | | | | | |
| 5. | | | | | | | | | | |

FLOW CALCULATIONS

| No. | Coefficient (24-Hour) | $\sqrt{h_{wpf}}$ | 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. | <u>12.365</u> | | <u>187</u> | <u>0.9813</u> | <u>0.9608</u> | <u>1.025</u> | <u>2235</u> |
| 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 0.65
Specific Gravity Flowing Fluid _____
P_c 1387 P_c² 1,923,769

| 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. | <u>540</u> | | | | | <u>291,600</u> | <u>1,632,169</u> | | |
| 2. | | | | | | | | | |
| 3. | | | | | | | | | |
| 4. | | | | | | | | | |
| 5. | | | | | | | | | |

Absolute Potential: 2530 MCFPD; n 0.75

COMPANY PURCO PETROLEUM CORPORATION
ADDRESS 108 West Chuska, Aztec, New Mexico
AGENT and TITLE Jack Dunning District Engineer
WITNESSED _____
COMPANY Purco Petroleum Corporation

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} = Supercompressibility 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 .