

OGB - 10A
INSTRUCTIONS

Read Carefully and Comply Fully

This report shall be submitted to the State Oil and Gas Board within fifteen (15) days after the tests have been completed.

Attach to this report a copy of all field data, calculations, and a plot of the back-pressure curve.

State Oil and Gas Board personnel will not make additions to or change any part of a notarized form.

STATE OIL AND GAS BOARD OF ALABAMA

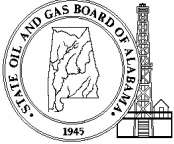
Form OGB - 10A

420 Hackberry Lane
P.O. Box 869999

Tuscaloosa, Alabama 35486-6999
(205) 349-2852 Fax (205)349-2861
www.ogb.state.al.us

Permit number _____

5 / 00



One-Point Back-Pressure Test Report for Gas Wells

(file in triplicate)

| | | | | | | | | | | |
|----------------------------|-----------------------|---|---|--------------------------------|---|---|--|-----------------------------|---|-------------|
| Type test | | <input type="checkbox"/> Annual | <input type="checkbox"/> Special | Test date | | Field | | Pool | | |
| Name of operator | | | | | Address | | | | | |
| Well name and number | | | | | | | | | | |
| Completion date | | | Total depth | | Elevation | | County | | | |
| Csg. size | Wt. | d | Set at | | Perforations: From | | To | | | |
| Tbg. size | Wt. | d | Set at | | Perforations: From | | To | | | |
| Type completion (describe) | | | | Packer set at | | L | | H | | |
| Reservoir temp | | ° F@ | | Mean annual temp. | | ° F | | Baro. Press. P _a | | |
| G _g | %CO ₂ | %N ₂ | %H ₂ S | Prover | | Meter run | | Taps | | |
| Flow data | | | | | Tubing data | | Casing data | | Duration of flow hr. | |
| No. | Prover line size | X | Choke Orifice size | Press. psig | Diff. h _w | Temp. ° F | Press. psig | Temp. ° F | | Press. psig |
| S1 | | | | | | | | | | |
| 1. | | | | | | | | | | |
| No. | Coefficient (24-hour) | (h _w P _m) ^{1/2} | | Pressure P _m | Flow temp. factor, F _t | Gravity factor, F _g | Super compress. factor F _{pv} | Rate of flow Q, Mcfd | | |
| 1. | | | | | | | | | | |
| No. | P _r | Temp. °R | T _r | z | Gas liquid hydrocarbon ratio _____ Mcf/bbl | | | | | |
| 1. | | | | | API gravity of liquid hydrocarbons _____ deg. | | | | | |
| | | | | Specific gravity separator gas | | XXXXXXXXXXXXXXXXXX | | | | |
| | | | | Specific gravity flowing fluid | | XXXXXXXXXXXXXXXXXX | | | | |
| | | | | Critical pressure | | _____ psia | | _____ psia | | |
| | | | | Critical temperature | | _____ °R | | _____ °R | | |
| P _c _____ | | P _c ² _____ | | P _t _____ | | P _t ² _____ | | | | |
| No. | P _t | P _t ² | P _c ² - P _t ² | P _w | P _w ² | P _c ² - P _w ² | P _s | P _s ² | P _t ² - P _s ² | |
| 1. | | | | | | | | | | |

$$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right] = \left[\frac{P_c^2}{P_c^2 - P_t^2} \right] = \frac{P_c^2}{P_c^2 - P_w^2} \quad \log \left[\frac{P_c^2}{P_c^2 - P_w^2} \right] = \frac{P_c^2}{P_c^2 - P_w^2}$$

$$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{P_c^2}{P_c^2 - P_w^2} \quad n \log \left[\frac{P_c^2}{P_c^2 - P_w^2} \right] = \frac{P_c^2}{P_c^2 - P_w^2}$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n$$

If subsurface pressure data are used, substitute P_t for P_c and P_s for P_w in above formulas.

AOF _____ Mcfd
n _____
θ _____ (Source of n)

Has the allowable for this well been established by the State Oil and Gas Board? _____

If so, state order number _____ and allowable _____

TABLE OF NOMENCLATURE

- P_a - Field barometric pressure, psia.
- P_c - Shut-in pressure, psia (length of shut-in minimum of 24 hours).
- P_w - Static column wellhead pressure corresponding to the flowing wellhead pressure, psia (to be recorded at end of each flow rate).
- P_t - Flowing wellhead pressure, psia.
- P_m - Static pressure at point of gas measurement, psia.
- P_s - Flowing pressure at vertical depth H. psia.
- P_f - Shut-in pressure at vertical depth H. psia.
- G_g - Specific gravity of separator gas (air = 1.0).
- L - Length of the flow string from the middle of the producing formation to the pressure point at wellhead, feet.
- H - Vertical depth corresponding to L, feet.
- h_w - Meter differential pressure, inches at water.
- Q - 24 hour rate of flow, Mcfd.
- d - Inside diameter, inches.
- $^{\circ}R$ - Degrees, Rankine (degrees Fahrenheit absolute).
- P_r - Reduced pressure, dimensionless.
- T_r - Reduced temperature, dimensionless.
- z - Compressibility factor, dimensionless.
- n - Exponent of back-pressure equation, dimensionless.
- θ - Angle of slope of back-pressure curve.

Remarks: _____

Executed this the _____ day of _____, 20 _____

Signature _____

Before me, the undersigned authority, on this day personally appeared _____ known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he/she is duly authorized to make the above report and that he/she has knowledge of the facts stated therein, and that said report is true and correct.

Subscribed and sworn to before me this _____ day of _____, 20 _____

SEAL

My commission expires _____

Notary Public in and for _____
County, _____