

MARK UP

RULE D-16 - BACK PRESSURE TESTS FOR NATURAL GAS WELLS FOR PRODUCTION ALLOWABLE DETERMINATION

a) Definitions

(1) AOF shall mean absolute open flow.

~~4-b)~~ All new wells, regardless of the amount of daily production, are subject to an initial one (1) point test, which shall be run within ten (10) days after a new well has commenced production. The Permit Holder of the gas well shall provide the Commission not less than seventy-two (72) hour notice in advance of such test, which may be witnessed by a representative of the Commission. Except as provided for in General Rule B-43(l) or other Commission general rules regulating production allowables, the production allowable for such well shall be calculated based upon the AOF. The AOF shall be deliverability calculated determined from based upon the deliverability such established by an initial one (1) point test. and from a State one (1) point test which shall be conducted by flowing the well at maximum deliverability for a period of twenty-four (24) hours through the production facilities into the pipeline. A minimum pressure draw down of thirty percent (30%) will be required. If such draw down is not achieved over twenty-four (24) hours, then the test may continue for up to 72 hours to measure deliverability or deliverability may be calculated if the required drawdown is not achieved. wellhead flowing pressure will be assumed at such percentage rate. The assigned allowable shall never exceed the maximum deliverability of the well. All new wells producing in excess of the assigned allowable, based on an annual balancing of production for that well, on the date the initial one point test was run the subsequent year, must be shut-in until all overproduction is eliminated. A retest may be conducted at any time when requested by the Permit Holder if the Commission results are questioned by the Permit Holder or when the Permit Holder is directed by the Commission to conduct a retest.

c) All existing gas wells, which include zone recompletions or workovers, producing in excess of 1 MMCF per day and all existing gas wells new, recompleted in a new source of supply and workover gas wells shall be tested for deliverability to determination the AOF. The Permit Holder of the gas well shall provide the Commission not less than seventy-two (72) hour notice in advance of such test, which shall may be witnessed by a representative of the Commission. Except as provided for in General Rule B-43(l) or other Commission general rules regulating production allowables, the production allowable for such well shall be calculated based upon the AOF utilizing the methodology as specified in subparagraph (b) above. providd that the Commission is given not less than seventy two (72) hour notice in advance of such test. The test shall be conducted within ten (10) days after the well has commenced production. approved to turn to pipeline with the results of all initial tests being filed with the Commission within ten (10) days after the test is run. The results of the test shall be used to determine the production allowable, which shall commence on the date of the test. If the test is witnessed by the Commission, the test results shall be forwarded to the Permit Holder for review. A retest may be conducted at any time when requested by the Operator Permit Holder if the Commission results are questioned by the Permit Holder or when the Permit Holder is directed by the Commission to conduct a

retest. If the test is not witnessed, the test results shall be submitted to the Commission within 10 days after the test is run. ~~which shall retain continuing jurisdiction. A penalty of one (1) day reduction in the allowable for such well shall be assessed for each calendar day that the filing of such test data is late.~~ All gas wells, subject to be tested under the provisions of this paragraph, shall continue to be subject to an annual test, and a production allowable determination, in accordance with sub-paragraph (e) below. Until such time that the well has a daily production rate of less than 1 MMCF per day, as evidenced by an annual test, the well shall continue to be tested. Wells which are assessed an exceptional location penalty, shall remain subject to an annual test and allowable determination until the annual well production is 75 MCF per day or less. All wells subject to be tested, under the provisions of this subparagraph, producing in excess of the assigned annual production allowable, must be shut-in on the annual balancing date of based on the last test run the subsequent year, until all overproduction is eliminated.

d) ~~The annual State one (1) point test for a~~ All new or existing wells, including zone recompletions or workovers, except wells subject to an exceptional location penalty, ~~gas wells producing less than 482.5 1 MMCF per day year shall not be subject to an allowable determination as calculated in paragraph (e) below, but shall not be required to be required to report, on a form prescribed by the Director, a 24 hour shut-in pressure and absolute open flow rate. The collection of the shut-in pressure and absolute open flow rate information is not required to be witnessed by a representative of the Commission. The 24 hour shut-in pressure and absolute open flow rate information results of all tests shall be filed with the Commission within thirty (30) ten (10) days after the test is run. A penalty of a one (1) day reduction in the allowable for such well shall be assessed for each calendar day that the filing of such test data is late.~~ The Commission shall have the right to require ~~an~~ wells covered by this sub-paragraph, to have the 24 hour shut-in pressure and absolute open flow rate information resubmitted ~~unwitnessed test to be rerun if for any reason the previously submitted information it appears to be inaccurate. In that event, the Commission may require the collection of another shut-in pressure such retest to which may be witnessed by a Commission representative, or for the Operator to furnish a written explanation of the procedure utilized for the testing of said well and the results reported therefrom. All unwitnessed tests shall be filed with the Commission on or before July 1st of each calendar year. Failure to provide the shut-in pressure and AOF rate information will result in the failing in which the Certificate of Authority to Produce and Transport for that well shall to be subject to suspension or cancellation until such time as the required information is submitted. An accurate flow test shall be run during completion or recompletion and the results thereof shall be promptly filed with the Commission on Form AOGC 3 failing in which the allowable for said well shall be subject to suspension or cancellation. No representative of the Commission shall be required to witness a completion or recompletion flow test.~~

ed) The initial and annual tests, run on wells as required in paragraphs (b) and (c) above, shall be conducted as follows:

(1) Before a test is started, the wellbore should be cleared of any accumulated fluids. The well shall be shut-in for a minimum of twenty-four (24) hours for a one (1) point test. The pressure shall be measured with a dead-weight pressure gauge or a calibrated test gauge approved by the Commission. All flow rate measurements shall be obtained by the use of an orifice meter or other authorized metering device in good operating condition previously approved by a representative of the Commission. The

Commission shall be furnished a written explanation setting forth in detail the reasons why such data cannot be obtained in accordance with this procedure.

~~Form AOGC 13 shall be revised as submitted and all absolute open flow calculations shall be converted from bottom hole to surface determined by a forty five degree (45°) slope (n = 1) from the initial or annual one point test.~~

- (2) ~~Purchaser nominations will be discontinued. The method of allocating production allowable for all gas wells within the State of Arkansas under the jurisdiction of the Commission which are currently subject to the Method VI allowable calculation shall be as follows:~~

Methods for allowable calculations for new wells as specified in paragraph (b), or existing wells producing greater than or equal to 1 MMCF per day as specified in paragraph (c) above, shall be as follows:

- A) Wells at a legal location and in a standard 640 acre unit:

$$\text{Allowable} = \text{AOF} \times 0.75$$

- B) Wells at a legal location and not in a standard 640 acre unit:

$$\text{Allowable} = \text{AOF} \times 0.75 \times \text{unit acreage}/640(\text{standard unit acreage})$$

- C) Wells that are assigned an exceptional location penalty and in a standard 640 acre unit:

$$\text{Allowable} = \text{AOF} \times \text{penalty factor (encroachment footage/legal footage)}$$

- D) Wells that are assigned an exceptional location penalty and not in a standard 640 acre unit:

$$\text{Allowable} = \text{AOF} \times \text{penalty factor (encroachment footage/legal footage)} \times \text{unit acreage}/640(\text{standard unit acreage})$$

METHOD VIII: SEVENTY-FIVE PERCENT (75%) ABSOLUTE OPEN FLOW

$$\text{Allowable} = 0.75 \times \frac{\text{Wellhead Absolute Open Flow}}{\text{Unit Acreage}} \times \frac{\text{Exceptional}}{\text{Standard Acreage}} \times \text{Allowable Percentage}$$

~~With the minimum allowable to be assigned by the Commission as:~~

$$\text{Minimum Allowable} = 182.5 \text{ MMCF/YR} \times \frac{\text{Exceptional Location}}{\text{Unit Acreage}} \times \frac{\text{Standard Acreage}}{\text{Allowable Percentage}}$$

- (3) ~~The minimum allowable assigned for wells located in fields which have standard units that are less than 640 acres shall be reduced to less than the 182.5 MMCF/year by a fraction, the numerator of which shall be the acreage within said unit and the~~

denominator of which shall be the unit acreage for the field. Wells producing less than 1 MMCF per day, and do not have an exceptional location penalty, may produce at AOF.

- (4) Wells that have an AOF of less than 75 MCF, and are assigned a exceptional location penalty, may produce at AOF.

~~g) Every well in North Arkansas subject to the allocation formula shall be entitled to produce an amount of gas equal to its total allowable accrued from the date of completion or the six (6) month period immediately preceding the date of first sales, whichever is the lesser, in addition to the regular allowable which is otherwise allocated to such well. Such initial accrued underproduction may be produced in addition to the regular well allowable during the succeeding twelve (12) month period. On July 1st of each subsequent year, any accrued underproduction shall be eliminated. Any well having an accumulated overproduction as of such balancing date shall be shut in until all overproduction is eliminated; provided, however, that any well which produces less than 182.5 MMCF during the year preceding such date shall be exempt from being shut in unless the rate of production is the result of a penalty upon the well allowable in which case, the minimum allowable will be reduced by the penalty being placed upon the well allowable. All wells producing in excess of the assigned annual allowable must be shut in on July 1st of the subsequent year until all overproduction is eliminated.~~