

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

February 3, 1954

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
OCC EXHIBIT No. 1  
CASE 529

NOTICE OF PROPOSED ORDER

TO: Operators - San Juan Basin, New Mexico portion.

FROM: R. R. Spurrier, Secretary-Director

RE: New Mexico Oil Conservation Commission Order No. R-333.

After one years' experience in testing as directed by New Mexico Oil Conservation Commission Order R-333 it has become desirable to clarify, revise or delete, as the case may be, parts of Order R-333.

The following listed changes in Order R-333 will be considered at the March 17, hearing, after due notice, and will then be incorporated in a new order, probably R-333-A, unless testimony contrary to Commission testimony proves it advisable to act otherwise. Effected operators and pipeline companies are expected to comply with these proposed revisions until an order is issued.

Section A. TYPE OF GAS WELL TESTS REQUIRED:

Part (2) ORIGINAL DELIVERABILITY AND SHUT-IN PRESSURE TESTS:  
(Delete entirely)

Part (3) ANNUAL DELIVERABILITY AND SHUT-IN PRESSURE TESTS:

Annual deliverability and shut-in pressure tests are required to be made during the period from April 1 through October 31 of each year of all producing gas wells. The results of these annual tests are required to be filed with the Commission on Form C-122-A within the month next after completion of such tests.

All wells connected to a pipeline system between November 1 and December 31 of any calendar year shall be tested during the following annual Testing Period. All wells connected to a pipeline system between January 1 and April 1 of any calendar year shall be tested during the testing period of that calendar year.

Part (4) SCHEDULE OF TESTS:

Within thirty (30) days after the effective date of this order and, on or before February 15th of each succeeding year thereafter, the pipeline companies receiving gas from wells to be tested shall, in cooperation with their respective operators, submit a testing schedule for the annual deliverability and shut-in pressure tests for all wells connected to their respective pipeline systems as of February 1 of the year for which the schedule is applicable; such test schedules shall be promptly filed

with the Commission for approval, and if approved, the Commission shall furnish each operator, as identified by lists of names and addresses furnished by the respective pipe line companies, with a copy of such schedule as approved by the Commission, or a part thereof pertinent to such operator's wells, immediately, in the first instance and thereafter, on or before March 15th, of each succeeding year.

All wells connected to a pipe line system during the period of February 1 to October 31 of any year shall be scheduled for testing during the testing period for that particular year. Then and in that event the pipe line in cooperation with the operator shall notify the Commission in writing at least five (5) days before the commencement of the conditioning period for any tests.

In event changes for substantial reasons are necessary in the annual test schedule, the Commission shall be notified fifteen (15) days before tests are scheduled to commence.

Part (5) WHO MAY WITNESS TESTS: Any Initial Potential Test or Annual Deliverability and shut-in pressure test may be witnessed by any or all of the following: an agent of the Commission, an offset operator, a representative of the pipe line company taking gas from an offset operator, or a representative of a pipe line company taking gas from the well under test.

Deliverability tests required hereinabove in Paragraph (3) of this section shall determine the calculated deliverability of each gas well, which shall be reported to the Commission by converting actual deliverability against existing line pressures to the calculated deliverability at a pressure equal to fifty (50) percent of the shut-in pressure of each well in the manner hereinafter specified below. Such calculated deliverability so determined, and hereinafter so referred to, shall not be considered as the actual deliverability of any well into a gas transportation facility, but shall be used by the Commission as an index to determine the well's ability to produce at assumed wellhead working pressures, as compared to other wells in the pool under like conditions.

## Section B. PROCEDURES FOR TESTS:

### Subsection I. MESAVERDE FORMATION

Part (1) INITIAL POTENTIAL TEST: The initial potential test in the Mesaverde Formation shall be made after a minimum shut-in time of seven (7) days. The shut-in pressure will be measured by the use of a dead-weight gauge. The open flow shall be determined by a pitot tube measurement after unrestricted flowing of the gas to the air for a period of three (3) hours; the flow nipple shall be at least eight (8) diameters long. The pitot tube shall be constructed of one-eight (1/8) inch pipe (nominal diameter). Standard tables (Reid's) will be provided by the Commission, on request.

Part (1) Second Paragraph

This test shall be reported on Commission Form C-122-B.

Part (2) ORIGINAL DELIVERABILITY AND SHUT-IN PRESSURE TESTS:

Sub-part (a) first paragraph.  
(Delete entirely)

→ Part (3) THE ANNUAL DELIVERABILITY AND SHUT-IN PRESSURE TESTS:

Sub-part (a) First Paragraph.

(a) These tests shall be taken by unrestrictedly producing the well into the pipe line through either the casing or tubing, but not both. The daily flowing rate shall be determined from an average of seven (7) consecutive producing days, following a minimum conditioning period of fourteen (14) consecutive days production. The first seven (7) days of said conditioning period shall have not more than one (1) interruption which interruption shall be no longer than 36 hours continuous duration. The eighth to fourteenth days, inclusive, of said conditioning period shall have no interruptions whatsoever. All such production during the fourteen (14) day conditioning period plus the seven (7) day deliverability test period shall be at working wellhead pressures not in excess of seventy-five (75) per cent of the previous ~~annual~~ seven (7) day shut-in pressure of such well if such previous annual shut-in pressure information is available; otherwise, the seven (7) day initial potential shut-in pressure of such well shall be used.

Part (3) Sub-part (a) fourth paragraph.

All wellhead pressures as well as the flowing meter pressure tests which are to be taken during the seven (7) day deliverability test period, as required hereinabove shall be taken with a dead-weight gauge.

Part (3) Sub-part (b)

In the event it is impossible to measure accurately the pressure of the static column of gas due to packer or bridges in the well bore, then the static working wellhead pressure,  $P_w$ , shall be determined by adding the calculated pressure drop due to friction in the flowing column of gas to the actual flowing wellhead pressure. The method of determining the loss of pressure due to friction shall be the so-called Humble Method which involves the uses of the formula:

$$P_w = \sqrt{P_{wf}^2 + R^2}$$

where:  $P_w$  = Flowing pressure at wellhead plus friction drop (p. s. i. a.)  
(calculated static wellhead pressure)

$P_{wf}$  = flowing pressure at well head (p. s. i. a.)

R = friction drop (p. s. i. a.) and is read from the so called Humble Curve, as illustrated in Report No. 248 of Humble Oil and Refining Company, Natural Gas Division.

Part (3) Sub-part (d)

The annual deliverability and shut-in pressure tests as required hereinabove shall be reported upon Commission Form C-122-A and filed with the Commission as provided hereinabove.

Part (3) Sub-part (e)

All charts relative to annual deliverability tests shall be identified by the words, Test Chart No. 1, 2, 3, etc., and any or all charts or photostats thereof shall be made available to the Commission upon its request.

Section B. PROCEDURES FOR TESTS.

Sub-section II. PICTURED CLIFFS FORMATION.

Part (2) Delete entirely.

Part (3) ANNUAL DELIVERABILITY AND SHUT-IN PRESSURE TESTS:

In all respects the deliverability and shut-in pressure tests of wells in the Pictured Cliffs formation shall be made in conformity with the procedures set out in Section B, Subsection I, part 3, sub-parts (a) (b) (c) (d) (e) of the Mesaverde formation procedures, except that in paragraph (a) thereof, the back pressure formula, the exponent "n" shall have the value of point eighty-five (.85) and the deliverability pressure ( $P_d$ ) shall be one half ( $1/2$ ) of the individual well head shut in pressure -  $P_c$ , psia, but not in excess of 250 psia.

Subsection III. FRUITLAND FORMATION:

Part (1) All initial potential, annual deliverability and shut-in pressure tests of gas wells producing from the Fruitland formation shall be identical in all respects to those requirements and procedures hereinabove set out and required for the Pictured Cliffs formation (Section B Subsection II, parts 1 and 3).