

Case No.

941

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Application, Transcript,  
Small Exhibits, Etc.

CASE 941: OCC application to revise & amend  
orders with regard to deliverability &  
— initial potential tests performed on gas  
wells in San Juan Basin.

LEGAL DEPARTMENT

WILLIS L. LEA, JR.  
GENERAL ATTORNEY

SOUTHERN UNION GAS COMPANY  
BURT BUILDING  
DALLAS 1, TEXAS

August 22, 1955

A. S. GRENIER  
MILLARD F. CARR  
EDWARD G. TAYLOR  
JACK HERTZ

Mr. W. B. Macey, Secretary  
New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Re: Case No. 941

Dear Mr. Macey:

You will recall that last Wednesday, when the above case was being heard by the Commission, some question arose as to what would happen in case an operator failed to file an initial deliverability and shut-in pressure test within the 45-day period contemplated by Section B I(A)1 of proposed Order No. R-333-C. In the latter stages of the hearing the writer suggested, after the matter was clarified by the witness, Mr. Utz, that clarifying language also be incorporated into the Commission's rules. Our Company's suggestion in this regard is set forth below.

No change is suggested in proposed Order No. R-333-C. We would recommend, however, that the first three paragraphs of Rule 14 of the Special Rules and Regulations for the Fulcher Kutz-Pictured Cliffs, Aztec-Pictured Cliffs and South Blanco-Pictured Cliffs Gas Pools, as promulgated in Order No. R-565, and the first three paragraphs of Rule 9 of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool, promulgated in Order No. R-128-C, be stricken and the following paragraph substituted therefor in each instance:

*Rule 9* Allowables to newly completed gas wells shall commence (a) on the date of connection to a gas transportation facility, such date to be determined from an affidavit furnished to the Commission (Box 697, Aztec, New Mexico) by the purchaser, (b) the filing date of Form C-104, C-110 and the above described plat, or (c) a date 45 days prior to the date upon which the well's initial deliverability and shut-in pressure test is reported to the Commission on Form C-122 in conformance with the provisions of R-333-C, whichever date is the later.

No doubt there are many other ways in which the desired result could be obtained, but the foregoing recommendation seems to us the simplest of those which have occurred to us so far.

Several additional copies of this letter are enclosed for your convenience in case you wish to distribute them to members of the Commission's staff for comment.

Very truly yours,

ASG:FG  
Encl.  
cc: Mr. A. M. Wiederkehr

*A. S. Grenier*

CASE NO. 941

PROPOSED REVISION OF

ORDER NO. R-333-L

GAS WELL TESTING RULES AND PROCEDURES

FOR SAN JUAN BASIN AREA

AUGUST 17, 1955 HEARING

GAS WELL TESTING RULES AND PROCEDURES FOR  
SAN JUAN BASIN AREA

SECTION A. TYPE OF GAS WELL TESTS REQUIRED:

I. THE INITIAL DELIVERABILITY AND SHUT-IN PRESSURE TESTS FOR  
NEWLY COMPLETED GAS WELLS.

- (A) Immediately upon completion of each gas well in San Juan Basin,  
a shut-in pressure test of at least 7-days duration shall be made.
- (B) Within 45 days after a well is connected to a gas transportation  
facility the well shall be tested in accordance with Section B, sub-  
section I, paragraph (A) of this order.
- (C) Any tests accomplished for information purposes prior to pipeline  
connection shall not be recognized as an official test for the establish-  
ment of allowables.

II. ANNUAL DELIVERABILITY AND SHUT-IN PRESSURE TESTS:

Annual deliverability and shut-in pressure tests of all producing gas wells are required to be made during the period from April 1 through October 31 of each year.

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.

III. SCHEDULE OF TESTS.

(A) ANNUAL DELIVERABILITY TESTS.

On or before February 15 of each year, the pipeline companies receiving gas from wells to be tested shall, in cooperation with 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 filed promptly 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 pipeline companies, with a copy of such schedule as approved by the Commission, or a part thereof pertinent to such operator's wells, on or before March 15, of each year.

Such schedules shall be filed with the Commission for each Gas Pool as designated by the New Mexico Oil Conservation Commission listing under the heading of each pool the operator, lease, well number and location of each well. Should the pipeline company elect to file schedules by areas then the above listed information shall be listed under the heading of each area in the order listed above.

All wells connected to a pipeline system during the period of February 1 to October 31, both inclusive, of any year shall be scheduled for testing during the testing period for that particular year. Then and in that event the pipeline in cooperation with the operator shall notify the Commission in writing at least (10) ten 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 (10) ten days before tests are scheduled to commence.

(B) DELIVERABILITY RETESTS.

An operator may retest the deliverability of a well at any time for substantial reason by the notification to the Commission (10) ten days before the retest is scheduled to commence. Such retest shall be subject to the approval of the Commission, and conducted in conformance with Section B, Subsection I paragraph (B) of this Order. The Commission may require the retesting of any well at its discretion by the notification of the operator to schedule such retest.

It shall be required that for all wells which are reworked or recompleted, a deliverability retest must be made within forty-five (45) days following the completion of the workover.

IV. WHO MAY WITNESS TESTS:

Any Initial 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 pipeline company taking gas from an offset operator, or a representative of a pipeline company taking gas from the well under test.

Deliverability tests required hereinabove in Subsection I and II 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:

The several known gas producing formations of the San Juan Basin represent a variety of testing situations, and each is treated separately.

I. MESAVERDE FORMATION:

(A) INITIAL DELIVERABILITY AND SHUT-IN PRESSURE TEST.

1. Within (45) forty-five days after a newly completed well is connected to a gas transportation facility the operator shall accomplish a deliverability and shut-in pressure test in conformance with Section B, subsection I, paragraph (B) of this order.
2. In the event that testing a newly completed well in accordance with paragraph 1 above, is impractical, the operator may accomplish a deliverability and shut-in pressure test in the following manner:
  - a. A seven or eight day production chart may be used as a basis for determining the wells deliverability providing the chart so used is

Proposed Order No. R-333-C

preceded by at least (14) fourteen days continuous production. The well shall produce unrestricted through either the casing or tubing, but not both, into a pipeline during these periods.

- b. A shut-in pressure of at least seven days duration shall be taken.
- c. The average daily static meter pressure shall be determined in accordance with Section B, subsection I, Paragraph (B). This pressure shall be used as  $P_t$  in calculating  $P_w$  for the Deliverability Calculation.
- d. The daily average rate of flow shall be determined in accordance with Section B, Subsection I, Paragraph (B), of this order.
- e. The static wellhead working pressure ( $P_w$ ) shall be determined in accordance with Section B, subsection I, paragraph (B), of this order.
- f. The deliverability of the well shall be determined by using the data determined in paragraphs a through f, above, in the deliverability formula in accordance with Section B, subsection I, paragraph (B), of this order.
- g. The data and calculations for the above paragraphs a through f shall be reported to the Commission upon Form C-122-A and filed in triplicate with the



Commission within the forty-five day period  
after connection of the well. Form C-122-A  
shall be signed by the operator or an agent  
designated by the operator. The production chart  
or a photocopy thereof shall be filed attached to  
the C-122-A.

(B) THE ANNUAL DELIVERABILITY AND SHUT-IN PRESSURE TESTS:

These tests shall be taken by unrestrictedly producing the well into the pipeline 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 static wellhead working 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 deliverability shut-in pressure of such well shall be used.

In the event that existing line pressure does not permit a drawdown as  
specified above, with the well producing unrestrictedly into the pipeline, the operator  
shall request an exception to this requirement on the Form C-122-A. The request shall  
state the reasons for the necessity for the exception.

The static wellhead working pressure ( $P_w$ ) of any well under test shall be determined to be the calculated seven (7) day average tubing pressure if the well is flowing through the casing; or the calculated seven (7) day average casing pressure if the well is flowing through the tubing. The static wellhead working pressure ( $P_w$ ) shall be calculated by applying the tables and procedure as set out in New Mexico Oil

Conservation Commission manual entitled "Method of Calculating Pressure Loss Due to Friction in Gas Well Flow Strings". This manual is more specifically known as release 4-G-9-FLT-NW, a copy of which is attached hereto and made a part hereof.

To obtain the shut-in pressure of a well under test the well shall be shut-in immediately after the seven (7) day deliverability test for the full period of seven (7) consecutive days. Such shut-in pressure shall be measured within the next succeeding twenty-four (24) hours following the seven (7) day shut-in period aforesaid. The seven (7) day shut-in pressure shall be measured on the string through which the well flowed during the conditioning and seven (7) day flow period.

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. The dead-weight readings taken shall be recorded on the flow chart in psia. The time and point on chart flowing pressure curve at which these readings are taken shall be indicated with an arrow.

Orifice meter charts shall be changed, and so arranged as to reflect upon a single chart the flow data for the gas from each well for the full seven day deliverability test period. Corrections shall be made for pressure base, measured flowing temperature, specific gravity and supercompressibility (superexpansibility), provided however, that if the specific gravity of gas from any well under test is not available, then and in that event an estimated specific gravity may be assumed therefor, based upon that of gas from nearby wells, the specific gravity of which has been actually determined by measurement.

The seven (7) day average flowing meter pressure shall be calculated by taking the average of all consecutive 2-hour flowing meter pressure readings as recorded on the seven (7) day flow period chart (test chart #3). The pressure so calculated shall be used in calculating the wellhead working pressure, determining supercompressibility factors and calculating flow volumes.

Proposed Order No. R-333-C

The seven (7) day flow period volume shall be calculated from the integrated reading as determined from the flow period orifice meter chart. (Chart #3). The volume so calculated shall be divided by the number of testing days on the chart to determine the average daily flow period rate of flow. The flow chart shall have legibly recorded a minimum of seven (7) days and a maximum of eight (8) flowing days to be acceptable for test purposes. The volume used in this calculation shall be corrected to New Mexico Oil Conservation Commission standard conditions.

The average flowing meter pressure for the seven (7) or eight (8) flow period and the corrected integrated volume shall be determined by the purchasing company that integrates the flow charts and furnished to the operator or testing agency when such operator or testing agency requests such information.

The daily average integrated flow period rate of flow shall be corrected for meter error by the multiplication of a correction factor determined by dividing the square root of the chart flowing meter pressure psia into the square root of the dead-weight flowing meter pressure psia.

The daily volume of flow as determined from the flow period chart (Test Chart #3) integrator readings shall be calculated by applying the Basic Orifice meter formula.

$$Q = C' \sqrt{h_w p_f}$$

where:

$Q$  = Metered volume of flow MCFD @ 15.025, 60°F. and .60 specific gravity.

$C'$  = The 24 hour basic orifice meter flow factor as taken from New Mexico Oil Conservation Commission release "4G-12-BPT State" and corrected for flowing temperature, gravity and supercompressibility.

$h_w$  = Daily average differential meter pressure from flow period chart.

$p_f$  = Daily average flowing meter pressure from flow period chart.

The basic orifice meter flow factors, flowing temperature factor and specific gravity factor shall be determined from New Mexico Oil Conservation

Commission release No. "4 G-12-BPT-State". The four tables in said release are based on "gas measure committee report No. 2" (Revised 1948) of the American Gas Association, New York 17, New York. A copy of said New Mexico Oil Conservation Commission release is attached hereto and made a part hereof.

The daily flow period average corrected flowing meter pressure, psig, shall be used to determine the supercompressibility factor. Correction shall be made for supercompressibility (deviation from Boyle's law) for flowing meter pressures in excess of 100 psig by the use of Simplified Supercompressibility Tables, compiled from C. N. G. A. Bulletins TS-402 and TS-461, published by John P. Squier Company, Dallas, Texas. These tables have been reproduced by specific permission from John P. Squier Company a copy of which is attached hereto and made a part hereof.

When supercompressibility (superexpansibility) correction is made for a gas containing either nitrogen or carbon dioxide in excess of 2 per cent, the supercompressibility factors of such gas shall be determined by the use of <sup>table 5</sup> the above mentioned TS-402 ~~and Table 5~~ for pressure 100-500 psig <sup>for table 2</sup> and TS-461 ~~and Table 2~~ for pressures in excess of 500 psig.

The use of tables for calculating rates of flow from integrator readings, which do not specifically conform to New Mexico Oil Conservation Commission release "4-G-12-BPT-State", may be approved for determining the daily flow period rates of flow upon a showing that such tables are appropriate and necessary.

Deliverability pressure, as used herein for Mesaverde production, is a defined pressure applied to each well and used in the process of comparing the abilities of wells in this formation to produce at wellhead working pressures equal to fifty (50) per cent, of the seven (7) day shut-in pressure of the respective individual wells.

The deliverability of gas at the "deliverability pressure" of any well under test shall be calculated from the test data derived from the tests hereinabove required by use of the following deliverability formula:

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

WHERE:

- D = Deliverability at the deliverability pressure, ( $P_d$ ) MCF/da. (at Standard Condition of 15.025 psia<sup>d</sup> and 60°F).
- Q = Daily flow rate in MCF/da. at wellhead pressure ( $P_w$ )
- $P_c$  = 7-day shut-in casing (or tubing) wellhead pressure, psia.
- $P_d$  = Deliverability pressure; half of the individual well 7-day shut-in pressure,  $P_c$ , psia.
- $P_w$  = Average static wellhead working pressure, as determined from 7-day flow period, psia and calculated from New Mexico Oil Conservation Commission Pressure Loss Due to Friction Tables. (Casing pressure if flowing through the tubing, or tubing pressure if flowing through the casing).
- n = Average pool slope of back pressure curve (0.75) for Mesaverde wells).

Any test hereinabove provided for will be considered unacceptable if the average flow rate for the final 7 day deliverability test is 25 per cent in excess of any consecutive 7-day average of the preceding two weeks. A "deliverability test" not meeting this requirement shall be retested.

The annual deliverability and shut-in pressure tests as required hereinabove shall be reported upon commission Form C-122-A and filed in triplicate, with the Commission within the month next after completion of such tests. Form C-122-A shall be signed by the operator or agent designated as the operator.

All charts relative to annual deliverability tests shall be identified by the words "Test Chart No. 1" (2, 3, 4, etc.), and any or all charts or photostats thereof shall be made available to the Commission upon its request.

II. PICTURED CLIFFS FORMATION:

(A) INITIAL DELIVERABILITY AND SHUT-IN PRESSURE TEST:

Same as prescribed for Mesaverde formation; see Section B, subsection I, Paragraph (A).

(B) 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, paragraph (B) of the Mesaverde formation procedures, except that in the back pressure formula, the exponent "n" shall have the value of point eighty-five (.85).

III. FRUITLAND FORMATION:

(A) All initial and 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 in Section B, Subsection II, paragraphs (A) and (B).

IV. THE DAKOTA FORMATION:

All tests of Dakota wells shall be in conformity with requirements and procedures provided hereinabove for the Mesaverde formation, except as follows:

(A) BARKER DOME - DAKOTA: (Storage Area)

1. INITIAL OPEN FLOW POTENTIAL TEST:

An average "pool slope", based upon bottom-hole conditions, shall be established by the Commission after consideration of data to be provided by the operators; these data shall be based upon tests taken in conformity with the conventional back pressure method, indicated in Commission Rule 401. This "slope" shall be applied to each well in the Barker-Dome Dakota Area, as if such slope were the actual performance back pressure slope of each such well, in the following manner:

This back pressure slope so established shall be plotted through a point predetermined by one stabilized flow rate at a static wellhead working pressure not in excess of seventy-five (75) per cent of the seven (7) day shut-in pressure of such well.

The flowing rates (Q) shall be corrected for pressure base, measured flowing temperature, specific gravity and supercompressibility, by the use of methods

of calculation and tables hereinabove referred to and approved in Section B, Sub-section I, paragraph (B), of the Mesaverde procedures.

A seven (7) day shut-in pressure test shall be made for each well in the Barker Dome-Dakota Area, provided however, that where the shut-in period exceeds seven days such fact shall be reported to the Commission.

The values of the seven (7) day shut-in pressure ( $P_c$ ) and the working wellhead pressure ( $P_w$ ) shall be corrected to bottom hole conditions.

A schedule of tests shall be prepared by the transporter and approved by the Commission, and reports of such tests shall be signed by the operator or his designated agent and duly filed with the Commission, on Form C-122, the regular state-wide form.

## 2. ANNUAL OPEN FLOW POTENTIAL TEST:

This test shall be made of all wells producing from the Barker Dome-Dakota Storage Area by obtaining seven (7) day shut-in pressures of all Dakota wells, converting the same to bottom hole pressures ( $P_f$ ) computing the squares of such bottom hole pressures, ( $P_f^2$ ) and applying the same to the original average "pool slope" to obtain an adjusted open flow. If so desired as an alternate method an adjusted open flow may be computed from the following equation:

$$O_{f_2} = O_{f_1} \left[ \frac{(P_{f_2})^2}{(P_{f_1})^2} \right]^n$$

WHERE:

- $O_{f_2}$  = Adjusted absolute open flow.
- $O_{f_1}$  = Original absolute open flow.
- $P_{f_2}$  = New bottom hole shut-in (psia.)
- $P_{f_1}$  = Old bottom hole shut-in (psia.)
- $n$  = Slope of back pressure curve.

Tests of all wells in the Barker Dome-Dakota storage area shall be made during the period of April 1 through October 31 of each year and reports made to the Commission within the next succeeding month after test is made.

V. PENNSYLVANIAN FORMATION:

All tests of wells producing from the Pennsylvanian formation of the San Juan Basin Area shall be as follows:

(A) INITIAL OPEN FLOW POTENTIAL TEST:

Immediately after completion of each new well an absolute open flow shall be determined by the conventional back-pressure method indicated by Rule 401 of the Commission's Rules and Regulations.

Seven day shut-in pressures will be used in all cases, and, if for any reason the shut-in period exceeds seven days, then, the actual shut-in time shall be reported.

(B) ANNUAL OPEN FLOW POTENTIAL TEST:

This test shall be made of all wells producing from the Pennsylvanian formation of the San Juan Basin area, and such tests shall conform in all respects with the procedure set out next above under initial open flow potential test or in the alternative, by obtaining a seven day shut-in pressure of each well and converting the same to bottom hole pressure ( $P_f$ ). The square of the bottom hole pressure ( $P_f^2$ ) will be computed and applied to the original back pressure curve and an adjusted absolute open flow will be obtained.

If shut-in pressure time is in excess of seven (7) days, then the actual shut-in time shall be reported.

There is no objection to the use of an adjusted absolute open flow calculated from the equation as set out hereinabove under Dakota formation, Section B, Subsection IV, paragraph (A) - subparagraph 2.

All tests hereunder shall be made during the period from April 1 through October 31 of each year, and reported to the Commission upon regular Form C-122 during the month succeeding the month in which the tests are made.



## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122  
8-8-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool \_\_\_\_\_ Formation \_\_\_\_\_ County \_\_\_\_\_

Initial \_\_\_\_\_ Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test \_\_\_\_\_

Company \_\_\_\_\_ Lease \_\_\_\_\_ Well No. \_\_\_\_\_

Unit \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ Rge. \_\_\_\_\_ Purchaser \_\_\_\_\_

Casing \_\_\_\_\_ Wt. \_\_\_\_\_ I.D. \_\_\_\_\_ Set at \_\_\_\_\_ Perf. \_\_\_\_\_ To \_\_\_\_\_

Tubing \_\_\_\_\_ Wt. \_\_\_\_\_ I.D. \_\_\_\_\_ Set at \_\_\_\_\_ Perf. \_\_\_\_\_ To \_\_\_\_\_

Gas Pay: From \_\_\_\_\_ To \_\_\_\_\_ L \_\_\_\_\_ xG \_\_\_\_\_ -GL \_\_\_\_\_ Bar.Press. \_\_\_\_\_

Producing Thru: Casing \_\_\_\_\_ Tubing \_\_\_\_\_ Type Well \_\_\_\_\_

Date of Completion: \_\_\_\_\_ Packer \_\_\_\_\_ Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps \_\_\_\_\_

Flow Data						Tubing Data	Casing Data		Duration of Flow Hr.	
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. $h_w$	Temp. °F.	Press. psig	Temp. °F.	Press. psig		Temp. °F.
SI										
1.										
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.							
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ Mcf/bbl.

Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.

$F_c$  \_\_\_\_\_  $(1-e^{-s})$

Specific Gravity Separator Gas \_\_\_\_\_

Specific Gravity Flowing Fluid \_\_\_\_\_

$P_c$  \_\_\_\_\_  $P_c^2$

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. $P_w$	$\frac{P_w}{P_c}$
1.									
2.									
3.									
4.									
5.									

Absolute Potential: \_\_\_\_\_ MCFPD; n \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

AGENT and TITLE \_\_\_\_\_

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  $P_t$ .

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

729 )  
859 )  
CASES: 860 ) Consolidated  
941 )  
ORDER NO. R-565-C

THE APPLICATION OF THE OIL  
CONSERVATION COMMISSION UPON  
ITS OWN MOTION FOR AN ORDER  
REVISING ORDER R-565 AFFECTING  
AND CONCERNING THE FULCHER KUTZ-  
PICTURED CLIFFS, THE AZTEC-PICTURED  
CLIFFS, AND THE SOUTH BLANCO-PICTURED  
CLIFFS GAS POOLS IN SAN JUAN AND RIO  
ARRIBA COUNTIES, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 'clock a. m. on June 16, 1954, and was thereupon continued to October 14, 1954, March 16, 1955 and August 17, 1955, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 13<sup>th</sup> day of October, 1955, the Commission, a quorum being present, having considered the records and testimony adduced, and being fully advised in the premises,

FINDS:

(1) That due notice of the time and place of hearing and the purpose thereof having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.

(2) That there is need for the revision of Orders R-565, R-565-A, R-565-B, R-614, R-620 and their consolidation into this order, due to the revision of Order R-333-B.

IT IS THEREFORE ORDERED:

That special pool rules applicable to the Fulcher Kutz-Pictured Cliffs Gas Pool, the Aztec-Pictured Cliffs Gas Pool and the South Blanco-Pictured Cliffs Gas Pool, be and the same hereby are promulgated, as follows:

SPECIAL RULES AND REGULATIONS  
FOR THE FULCHER KUTZ-PICTURED CLIFFS  
GAS POOL

---

Well Spacing and Acreage Requirements for Drilling Tracts:

**RULE 1:** Any well drilled a distance of one mile or more from the outer boundary of the Fulcher Kutz-Pictured Cliffs Gas Pool shall be classified as a wildcat well. Any well drilled less than one mile from the outer boundary of said pool shall be spaced, drilled, operated and prorated in accordance with the regulations in effect in the Fulcher Kutz-Pictured Cliffs Gas Pool.

**RULE 2:** Each well drilled or recompleted within the Fulcher Kutz-Pictured Cliffs Gas Pool shall be located on a tract consisting of not less than a quarter section of approximately 160 surface contiguous acres substantially in the form of a square which shall be a legal subdivision (quarter section) of the U. S. Public Land Surveys.

**RULE 3:** Any well drilled within the defined limits of the Fulcher Kutz-Pictured Cliffs Gas Pool shall be located on a designated drilling tract consisting of not less than a quarter section which is a legal subdivision of the U. S. Public Lands Survey, such quarter section to contain approximately 160 contiguous acres and to be substantially in the form of a square. Such well shall be located at least 990 feet from the outer boundary of said quarter section, provided, however, that a tolerance of 200 feet is permissible.

**RULE 4:** The Secretary-Director of the Commission shall have authority to grant exception to the requirements of Rules 2 and 3 where application has been filed in due form and such exception is required because of conditions resulting from previously drilled wells in the area or, in the case of Rule 3, the necessity for exception is based upon topographic conditions.

Applicants shall furnish all operators of leases offsetting the lease containing subject well a copy of the application to the Commission, and applicant shall include with his application a list of names and addresses of all such operators, together with a written statement that all such operators have been properly notified by registered mail. The Secretary-Director of the Commission shall wait at least 20 days before approving any such exception, and shall approve such exception only in the absence of objection of any offset operators. In the event an operator objects to the exception, the Commission shall consider the matter only after proper notice and hearing.

**RULE 5:** The provision of Statewide Rule 104, Paragraph (k), shall not apply to the Fulcher Kutz-Pictured Cliffs Gas Pool.

Gas Proration and Allocation:

**RULE 6:** (A) The acreage allocated to a gas well for proration purposes shall be known as the gas proration unit for that well. For the purpose of gas allocation in the Fulcher Kutz-Pictured Cliffs Gas Pool, a standard proration unit shall consist of approximately 160 surface contiguous acres substantially in the form of a square which shall be a legal subdivision (quarter-section) of the U. S. Public Land Survey; provided, however, that a non-standard proration unit may be formed after notice and hearing by the Commission or under the provisions of Paragraph (B) of this rule.

The allowable production from any non-standard gas proration unit as compared with the allowable production therefrom if such tract were a standard unit shall be in the ratio which the area of the non-standard proration unit bears to a standard proration unit of 160 acres, subject to the provisions of Rule 9 of this order. Any gas proration unit containing between 158 and 162 acres shall be considered to contain 160 acres for the purpose of computing allowables.

(B) The Secretary of the Commission shall have authority to grant an exception to Rule 6 (A) without Notice and Hearing where application has been filed in due form and where the following facts exist and the following provisions are complied with;

1. The proposed non-standard proration unit consists of less than 160 acres or where the unorthodox size or shape of the tract is due to a variation in legal subdivision of the U. S. Public Land Surveys.
2. The non-standard gas proration unit consists of contiguous quarter-quarter sections and/or lots.
3. The non-standard gas proration unit lies wholly within a single governmental section.
4. The entire non-standard gas proration unit may reasonably be presumed to be productive of gas.
5. The applicant presents written consent in the form of waivers from:

(a) All operators owning interests in the section in which any part of the non-standard gas proration unit is situated and which acreage is not included in said non-standard gas proration unit.

(b) all operators owning interests in acreage offsetting the non-standard unit.

6. In lieu of paragraph 5 of this rule, the applicant may furnish proof of the fact that said offset operators were notified by registered mail of his intent to form such non-standard gas proration unit. The Secretary of the Commission may approve the application if, after a period of 30 days following the mailing of said notice, no operator has made objection to formation of such non-standard gas proration unit.

**RULE 7:** At least 30 days prior to the beginning of each gas proration period, the Commission shall hold a hearing after due notice has been given. The Commission shall cause to be submitted by each gas purchaser "Preliminary Nominations" of that quantity of gas which each purchaser in good faith actually desires to purchase within the ensuing proration period, by months, from the Fulcher Kutz-Pictured Cliffs Gas Pool. The Commission shall consider the "Preliminary Nominations" of purchasers, actual production, and such other factors as may be deemed applicable in determining the amount of gas that may be produced without waste from said pool within the ensuing proration period. "Preliminary Nominations" shall be submitted on Form C-121-A as prescribed by the Commission.

**RULE 8:** In the event a gas purchaser's market shall have increased or decreased, purchaser may file with the Commission prior to the 10th day of the month a "Supplemental Nomination" showing the amount of gas the purchaser actually in good faith desires to purchase during the ensuing proration month from the Fulcher Kutz-Pictured Cliffs Gas Pool. The Commission shall hold a public hearing between the 13th and 20th days of each month to determine the reasonable market demand for gas from said pool for the ensuing proration month, and shall issue a proration schedule setting out the amount of gas which each well may produce during the ensuing proration month. "Supplemental Nominations" shall be submitted on Form C-121-A as prescribed by the Commission.

Included in the monthly proration schedule shall be (a) a summary of the total pool allocation for that month showing nominations, and adjustments made for underage or overage applied from a previous month, (b) a tabulation of the net allowable and production for the second preceding month together with a cumulative overage or underage computation, (c) a tabulation of the current and net allowables for the preceding month, (d) a tabulation of current monthly allowable for the ensuing proration month, and (e) a tabulation of the acreage and deliverabilities assigned each well, and the factors assigned each well for use in calculating individual well allowables. The Commission shall include in the proration schedule the gas wells in the Fulcher Kutz-Pictured Cliffs Pool delivering to a gas transportation facility, or lease gathering system, and shall include in the proration schedule of said pool any well which

the Commission finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well. The total allowable to be allocated to said pool each month shall be equal to the sum of the preliminary or supplemental nominations, whichever is applicable, together with any adjustment which the Commission deems advisable.

If, during a proration month, the acreage assigned a well is increased, the operator shall notify the Secretary-Director in writing of such increase. The increased allowable assigned the gas proration unit for the well shall become effective on the first day of the month following receipt of the notification by the Director. All communications shall be mailed to the Director, at Box 871, Santa Fe, New Mexico.

**RULE 9:** The monthly gas allocation to the Fulcher Kutz-Pictured Cliffs Gas Pool shall be divided and allocated among the wells connected to a gas transportation facility in the following manner:

The product obtained by multiplying each well's acreage factor by the calculated deliverability (expressed as MCF per day) for that well shall be known as the "AD" factor for that well. The acreage factor shall be determined to the nearest hundredth of a unit by dividing the acreage within the proration unit by 160. The "AD" factor shall be computed to the nearest whole unit.

A tentative allocation shall be made by dividing seventy-five percent (75%) of the pool allocation among the wells in the proportion that each well's "AD" factor bears to the sum of the "AD" factors of all wells in the pool.

The remaining twenty-five percent (25%) of the pool allocation shall be divided among wells in the proportion that each well's acreage factor bears to the sum of the acreage factors of all wells in the pool.

When the tentative allowable received by a well is in excess of its known producing ability, the well shall be classed as a marginal well and its allowable limited to its known producing ability. The sum of the difference between the tentative allowables and the limited allowables of all marginal wells on the proration schedule shall be reallocated to the non-marginal wells by application of the same formula. If such reallocation shall result in placing any other well within the marginal classification, the difference between the tentative allowable and the limited allowable of such marginal well shall be redistributed by application of the same formula until no well has received an allowable in excess of its known producing ability.

Any well having a calculated allowable less than that of the largest allowable assigned a marginal well shall be assigned an allowable equal to the largest marginal allowable; provided that the allowable so assigned shall not be greater than the well's ability to produce. If the allowable so assigned is greater than the well's ability to produce, the well shall be limited to its ability to produce. All wells with allowables so assigned shall be classified as marginal wells.

**RULE 10:** The calculated deliverability at the "deliverability pressure" shall be determined in accordance with the provisions of Order R-333-C.

Balancing of Production:

**RULE 11: Underproduction:** The hours of 7 o'clock a. m., M.S.T. February 1, and 7 o'clock a. m., M.S.T., August 1, shall be known as balancing dates and the periods of time bound by these dates shall be known as gas proration periods. In order to effectively administer the prorationing of gas in the Fulcher Kutz-Pictured Cliffs Pool, it is advisable to have a portion of each proration period include both summer and winter months. Therefore, the first proration period shall commence on March 1, 1955, and shall continue for a period of eleven months until February 1, 1956. Future proration periods shall commence on the dates set out above. The amount of current gas allowable remaining unproduced at the end of each proration period shall be carried forward to and may be produced during the next succeeding proration period in addition to the normal gas allowable for such succeeding period; provided, however, that whatever amount thereof is not made up within the first succeeding proration period shall be cancelled.

If it appears that such continued underproduction has resulted from inability of the well to produce its allowable, it may be classified as a marginal well and its allowable reduced to the level of the well's ability to produce.

If, at the end of a proration period a marginal well has produced more than the total allowable assigned a non-marginal unit of corresponding size and deliverability, such marginal well shall be reclassified as a non-marginal well and its allowable prorated accordingly.

If, during a proration period a marginal well is reworked or re-completed in such a manner that its productive capacity is increased to an extent that said well should be reclassified as a non-marginal well, the reclassification shall be effective on the first day of the proration month following the date of recompletion.

The Secretary-Director may reclassify a well at any time if production data or deliverability tests reflect the need for such reclassification.

**RULE 12: Overproduction:** A well which has produced a greater amount of gas than was allowed during a given proration period shall have its allowable for the first succeeding proration period reduced by the amount of such overproduction and such overproduction shall be made up within the first succeeding proration period. If, at any time, a well is overproduced an amount equivalent to six times its current monthly allowable, said well shall be shut-in during the current month.

The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut-in if, upon public hearing after due notice, it is shown that complete shut-in of the well would result in material damage to said well.



Granting of Allowables:

**RULE 13:** No gas well shall be given an allowable until Form C-104 and Form C-110 have been filed, together with a plat showing acreage attributed to said well and the locations of all wells on the lease.

**RULE 14:** Allowables to newly completed gas wells shall commence

- (a) on the date of connection to a gas transportation facility, such date to be determined from an affidavit furnished to the Commission (Box 697, Aztec, New Mexico) by the purchaser,
- (b) The latest filing date of Form C-104, C-110 or the above described plat, or
- (c) a date 45 days prior to the date upon which the well's initial deliverability and shut-in pressure test is reported to the Commission on Form C-122 in conformance with the provisions of R-333-C,

whichever date is the later.

No well shall be assigned an allowable unless a deliverability test, or a potential test taken in conformance with the provisions of Order R-333-C has been submitted.

Deliverability tests shall be taken and calculated in conformance with Order R-333-C, the provisions of Rule 10 of this order and the testing schedule provision of Order R-333-C.

A change in a well's deliverability due to retest or test after re-completion or workover shall become effective the first of the month following receipt and approval of Form C-122-A for such test. Such tests shall be taken in accordance with Order R-333-C.

Deliverability tests taken during 1954 shall be used in calculating allowables for the proration period commencing March 1, 1955. Subsequent annual tests shall be used in calculating allowables for proration periods commencing during the next ensuing year.

Reporting of Production:

**RULE 15:** The monthly gas production from each well shall be metered separately and the production therefrom shall be reported to the Commission on Form C-115, and such report shall be postmarked on or before the 24th day of the month immediately following the month in which the gas reported was produced. The operator shall show on such report the disposition of the gas produced.

Each purchaser or taker of gas in the Fulcher Kutz-Pictured Cliffs Gas Pool shall submit a report to the Commission, and such report shall be postmarked on or before the 15th day of the month immediately following the month in which the gas was purchased or taken. Such report shall be filed on either Form C-111 or Form C-114, whichever is applicable, and the wells shall be listed in approximately the same order as they are found listed on the proration schedule.

Forms C-111 and C-114 as referred to herein shall be submitted in triplicate, the original being sent to the Commission at Box 871, Santa Fe, New Mexico, remaining copies will be sent to Box 697, Aztec, New Mexico and Box 2045, Hobbs, New Mexico, respectively.

Forms C-115 shall be submitted in accordance with Rule 1114 of the Commission's Rules and Regulations.

The full production of gas from each well shall be charged against the well's allowable regardless of the disposition of the gas; provided, however, that gas used in maintaining the producing ability of the well shall not be charged against the allowable.

**RULE 16:** The term "gas purchaser" as used in these rules, shall mean any "taker" of gas either at the wellhead or at any point on the lease where connection is made to facilitate the transportation or utilization of gas. It shall be the responsibility of said "taker" to submit a nomination in accordance with Rules 7 and 8 of this order.

**RULE 17:** No gas, either dry gas or casinghead gas, produced from the Fulcher Kutz-Pictured Cliffs Gas Pool, except that gas used for "drilling-in" purposes, shall be flared or vented unless specifically authorized by order of the Commission after notice and hearing.

**SPECIAL RULES AND REGULATIONS  
FOR THE AZTEC-PICTURED CLIFFS  
GAS POOL**

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**Well Spacing and Acreage Requirements for Drilling Tracts:**

**RULE 1:** Any well drilled a distance of one mile or more from the outer boundary of the Aztec-Pictured Cliffs Gas Pool shall be classified as a wildcat well. Any well drilled less than one mile from the outer boundary of said pool shall be spaced, drilled, operated and prorated in accordance with the regulations in effect in the Aztec-Pictured Cliffs Gas Pool.

**RULE 2:** Each well drilled or recompleted within the Aztec-Pictured Cliffs Gas Pool shall be located on a tract consisting of not less than a quarter section approximately 160 surface contiguous acres substantially in the form of a square which shall be a legal subdivision (quarter section) of the U. S. Public Land Surveys.

**RULE 3:** Any well drilled within the defined limits of the Aztec-Pictured Cliffs Gas Pool shall be located on a designated drilling tract consisting of not less than a quarter section which is a legal subdivision of the U. S. Public Lands Survey, such quarter section to contain approximately 160 surface contiguous acres and to be substantially in the form of a square. Such well shall be located at least 990 feet from the outer boundary of said quarter section, provided, however, that a tolerance of 200 feet is permissible.

**RULE 4:** The Secretary-Director of the Commission shall have authority to grant exception to the requirements of Rules 2 and 3 where application has been filed in due form and such exception is required because of conditions resulting from previously drilled wells in the area or, in the case of Rule 3, the necessity for exception is based upon topographic conditions.

Applicants shall furnish all operators of leases offsetting the lease containing subject well a copy of the application to the Commission, and applicant shall include with his application a list of names and addresses of all such operators, together with a written statement that all such operators have been properly notified by registered mail. The Secretary-Director of the Commission shall wait at least 20 days before approving any such exception, and shall approve such exception only in the absence of objection of any offset operators. In the event an operator objects to the exception, the Commission shall consider the matter only after proper notice and hearing.

**RULE 5:** The provision of Statewide Rule 104, Paragraph (k), shall not apply to the Aztec-Pictured Cliffs Gas Pool.

Gas Proration and Allocation:

**RULE 6:** (A) The acreage allocated to a gas well for proration purposes shall be known as the gas proration unit for that well. For the purpose of gas allocation in the Aztec-Pictured Cliffs gas pool, a standard proration unit shall consist of approximately 160 surface contiguous acres substantially in the form of a square which shall be a legal subdivision (quarter-section) of the U. S. Public Land Survey; provided, however, that a non-standard unit may be formed after notice and hearing by the Commission or under the provisions of Paragraph (B) of this Rule.

The allowable production from any non-standard gas proration unit as compared with the allowable production therefrom if such tract were a standard unit shall be in the ratio which the area of the non-standard proration unit bears to a standard proration unit of 160 acres, subject to the provisions of Rule 9 of this order. Any gas proration unit containing between 158 and 162 acres shall be considered to contain 160 acres for the purpose of computing allowables.

(B) The Secretary of the Commission shall have authority to grant an exception to Rule 6 (A) without Notice and Hearing where application has been filed in due form and where the following facts exist and the following provisions are complied with:

1. The proposed non-standard proration unit consists of less than 160 acres or where the unorthodox size or shape of the tract is due to a variation in legal subdivision of the U. S. Public Land Surveys.
2. The non-standard gas proration unit consists of contiguous quarter-quarter sections and/or lots.
3. The non-standard gas proration unit lies wholly within a single governmental section.
4. The entire non-standard gas proration unit may reasonably be presumed to be productive of gas.
5. The applicant presents written consent in the form of waivers from:
  - (a) all operators owning interests in the section in which any part of the non-standard gas proration unit is situated and which acreage is not included in said non-standard gas proration unit.
  - (b) all operators owning interests in acreage offsetting the non-standard unit.
6. In lieu of paragraph 5 of this rule, the applicant may furnish proof of the fact that said offset operators were notified by registered mail of his intent to form such non-standard gas proration unit. The Secretary of the Commission may approve the application if, after a period of 30 days following the mailing of said notice, no operator has made objection to formation of such non-standard gas proration unit.

**RULE 7:** At least 30 days prior to the beginning of each gas proration period, the Commission shall hold a hearing after due notice has been given. The Commission shall cause to be submitted by each gas purchaser "Preliminary Nominations" of that quantity of gas which each purchaser in good faith actually desires to purchase within the ensuing proration period, by months, from the Aztec-Pictured Cliffs Gas Pool. The Commission shall consider the "Preliminary Nominations" of purchasers, actual production, and such other factors as may be deemed applicable in determining the amount of gas that may be produced without waste from said pool within the ensuing proration period. "Preliminary Nominations" shall be submitted on Form C-121-A as prescribed by the Commission.

**RULE 8:** In the event a gas purchaser's market shall have increased or decreased, purchaser may file with the Commission prior to the 10th day of the month a "Supplemental Nomination" showing the amount of gas the purchaser actually in good faith desires to purchase during the ensuing proration month from the Aztec-Pictured Cliffs Gas Pool. The Commission shall

hold a public hearing between the 13th and 20th days of each month to determine the reasonable market demand for gas from said pool for the ensuing proration month, and shall issue a proration schedule setting out the amount of gas which each well may produce during the ensuing proration month. "Supplemental Nominations" shall be submitted on Form C-121-A as prescribed by the Commission.

Included in the monthly proration schedule shall be (a) a summary of the total pool allocation for that month showing nominations, and adjustments made for underage or overage applied from a previous month, (b) a tabulation of the net allowable and production for the second preceding month together with a cumulative overage or underage computation, (c) a tabulation of the current and net allowables for the preceding month, (d) a tabulation of current monthly allowable for the ensuing proration month, and (e) a tabulation of the acreage and deliverabilities assigned each well, and the factors assigned each well for use in calculating individual well allowables. The Commission shall include in the proration schedule the gas wells in the Aztec-Pictured Cliffs Pool delivering to a gas transportation facility, or lease gathering system, and shall include in the proration schedule of said pool any well which the Commission finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well. The total allowable to be allocated to said pool each month shall be equal to the sum of the preliminary or supplemental nominations, whichever is applicable, together with any adjustment which the Commission deems advisable.

If, during a proration month, the acreage assigned a well is increased, the operator shall notify the Secretary-Director in writing of such increase. The increased allowable assigned the gas proration unit for the well shall become effective on the first day of the month following receipt of the notification by the Director. All communications shall be mailed to the Director, at Box 871, Santa Fe, New Mexico.

**RULE 9:** The monthly gas allocation to the Aztec-Pictured Cliffs Gas Pool shall be divided and allocated among the wells connected to a gas transportation facility in the following manner:

The product obtained by multiplying each well's acreage factor by the calculated deliverability (expressed as MCF per day) for that well shall be known as the "AD" factor for that well. The acreage factor shall be determined to the nearest hundredth of a unit by dividing the acreage within the proration unit by 160. The "AD" factor shall be computed to the nearest whole unit.

A tentative allocation shall be made by dividing seventy-five percent (75%) of the pool allocation among the wells in the proportion that each well's "AD" factor bears to the sum of the "AD" factors of all wells in the pool.

The remaining twenty-five percent (25%) of the pool allocation shall be divided among wells in the proportion that each well's acreage factor bears to the sum of the acreage factors of all wells in the pool.

When the tentative allowable received by a well is in excess of its known producing ability, the well shall be classed as a marginal well and its allowable limited to its known producing ability. The sum of the difference between the tentative allowables and the limited allowables of all marginal wells on the proration schedule shall be reallocated to the non-marginal wells by application of the same formula. If such reallocation shall result in placing any other well within the marginal classification, the difference between the tentative allowable and the limited allowable of such marginal well shall be redistributed by application of the same formula until no well has received an allowable in excess of its known producing ability.

Any well having a calculated allowable less than that of the largest allowable assigned a marginal well shall be assigned an allowable equal to the largest marginal allowable; provided that the allowable so assigned shall not be greater than the well's ability to produce. If the allowable so assigned is greater than the well's ability to produce, the well shall be limited to its ability to produce. All wells with allowables so assigned shall be classified as marginal wells.

**RULE 10:** The calculated deliverability at the "deliverability pressure" shall be determined in accordance with the provisions of Order R-333-C.

Balancing of Production:

**RULE 11:** Underproduction: The hours of 7 o'clock a.m., M.S.T. February 1, and 7 o'clock a.m., M.S.T., August 1, shall be known as balancing dates and the periods of time bound by these dates shall be known as gas proration periods. In order to effectively administer the prorationing of gas in the Aztec-Pictured Cliffs Pool, it is advisable to have a portion of each proration period include both summer and winter months. Therefore, the first proration period shall commence on March 1, 1955, and shall continue for a period of eleven months until February 1, 1956. Future proration periods shall commence on the dates set out above. The amount of current gas allowable remaining unproduced at the end of each proration period shall be carried forward to and may be produced during the next succeeding proration period in addition to the normal gas allowable for such succeeding period; provided, however, that whatever amount thereof is not made up within the first succeeding proration period shall be cancelled.

If it appears that such continued underproduction has resulted from inability of the well to produce its allowable, it may be classified as a marginal well and its allowable reduced to the level of the well's ability to produce.

If, at the end of a proration period a marginal well has produced more than the total allowable assigned a non-marginal unit of corresponding size and deliverability, such marginal well shall be reclassified as a non-marginal well and its allowable prorated accordingly.

If, during a proration period a marginal well is reworked or recompleted in such a manner that its productive capacity is increased to an extent that said

well should be reclassified as a non-marginal well, the reclassification shall be effective on the first day of the proration month following the date of recompletion.

The Secretary-Director may reclassify a well at any time if production data or deliverability tests reflect the need for such reclassification.

**RULE 12:** Overproduction: A well which has produced a greater amount of gas than was allowed during a given proration period shall have its allowable for the first succeeding proration period reduced by the amount of such overproduction and such overproduction shall be made up within the first succeeding proration period. If, at any time, a well is overproduced an amount equivalent to six times its current monthly allowable, said well shall be shut-in during the current month.

The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut-in if, upon public hearing after due notice, it is shown that complete shut-in of the well would result in material damage to said well.

**Granting of Allowables:**

**RULE 13:** No gas well shall be given an allowable until Form C-104 and Form C-110 have been filed, together with a plat showing acreage attributed to said well and the locations of all wells on the lease.

**RULE 14:** Allowables to newly completed gas wells shall commence

(a) on the date of connection to a gas transportation facility, such date to be determined from an affidavit furnished to the Commission (Box 697, Aztec, New Mexico) by the purchaser,

(b) the latest filing date of Form C-104, C-110 or the above described plat, or

(c) a date 45 days prior to the date upon which the well's initial deliverability and shut-in pressure test is reported to the Commission on Form C-122-A in conformance with the provisions of R-333-C,

whichever date is the later.

No well shall be assigned an allowable unless a deliverability test, taken in conformance with the provisions of Order R-333-C has been submitted.

Deliverability tests shall be taken and calculated in conformance with Order R-333-C, the provisions of Rule 10 of this order and the testing schedule provisions of Order R-333-C.

A change in a well's deliverability due to retest or test after recompletion or workover shall become effective the first of the month following receipt and approval of Form C-122-A for such test. Such tests shall be taken in accordance with Order R-333-C.

Deliverability tests taken during 1954 shall be used in calculating allowables for the proration period commencing March 1, 1955. Subsequent annual tests shall be used in calculating allowables for proration periods commencing during the next ensuing year.

Reporting of Production:

**RULE 15:** The monthly gas production from each well shall be metered separately and the production therefrom shall be reported to the Commission on Form C-115, and such report shall be postmarked on or before the 24th day of the month immediately following the month in which the gas reported was produced. The operator shall show on such report the disposition of the gas produced.

Each purchaser or taker of gas in the Aztec-Pictured Cliffs Gas Pool shall submit a report to the Commission, and such report shall be postmarked on or before the 15th day of the month immediately following the month in which the gas was purchased or taken. Such report shall be filed on Form C-111 or Form C-114, whichever is applicable, and the wells shall be listed in approximately the same order as they are found listed on the proration schedule.

Forms C-111 and C-114 as referred to herein shall be submitted in triplicate, the original being sent to the Commission at Box 871, Santa Fe, New Mexico, remaining copies will be sent to Box 697, Aztec, New Mexico and Box 2045, Hobbs, New Mexico, respectively.

Forms C-115 shall be submitted in accordance with Rule 1114 of the Commission's Rules and Regulations.

The full production of gas from each well shall be charged against the well's allowable regardless of the disposition of the gas; provided, however, that gas used in maintaining the producing ability of the well shall not be charged against the allowable.

**RULE 16:** The term "gas purchaser" as used in these rules, shall mean any "taker" of gas either at the wellhead or at any point on the lease where connection is made to facilitate the transportation or utilization of gas. It shall be the responsibility of said "taker" to submit a nomination in accordance with Rules 7 and 8 of this order.

**RULE 17:** No gas, either dry gas or casinghead gas, produced from the Aztec-Pictured Cliffs Gas Pool, except that gas used for "drilling-in" purposes, shall be flared or vented unless specifically authorized by order of the Commission after notice and hearing.

SPECIAL RULES AND REGULATIONS  
FOR THE SOUTH BLANCO-PICTURED CLIFFS  
GAS POOL

Well Spacing and Acreage Requirements for Drilling Tracts:

**RULE 1:** Any well drilled a distance of one mile or more from the outer boundary of the South Blanco-Pictured Cliffs Gas Pool shall be classified



as a wildcat well. Any well drilled less than one mile from the outer boundary of said pool shall be spaced, drilled, operated and prorated in accordance with the regulations in effect in the South Blanco-Pictured Cliffs Gas Pool.

**RULE 2:** Each well drilled or recompleted within the South Blanco-Pictured Cliffs Gas Pool shall be located on a tract consisting of not less than a quarter section of approximately 160 surface contiguous acres substantially in the form of a square which shall be a legal subdivision (quarter section) of the U. S. Public Land Surveys.

**RULE 3:** Any well drilled within the defined limits of the South Blanco-Pictured Cliffs Gas Pool shall be located on a designated drilling tract consisting of not less than a quarter section which is a legal subdivision of the U. S. Public Lands Survey, such quarter section to contain approximately 160 surface contiguous acres and to be substantially in the form of a square. Such well shall be located at least 990 feet from the outer boundary of said quarter section, provided, however, that a tolerance of 200 feet is permissible."

**RULE 4:** The Secretary-Director of the Commission shall have authority to grant exception to the requirements of Rules 2 and 3 where application has been filed in due form and such exception is required because of conditions resulting from previously drilled wells in the area or, in the case of Rule 3, the necessity for exception is based upon topographic conditions.

Applicants shall furnish all operators of leases offsetting the lease containing subject well a copy of the application to the Commission, and applicant shall include with his application a list of names and addresses of all such operators, together with a written statement that all such operators have been properly notified by registered mail. The Secretary-Director of the Commission shall wait at least 20 days before approving any such exception, and shall approve such exception only in the absence of objection of any offset operators. In the event an operator objects to the exception, the Commission shall consider the matter only after proper notice and hearing.

**RULE 5:** The provision of Statewide Rule 104, Paragraph (k), shall not apply to the South Blanco-Pictured Cliffs Gas Pool.

Gas Proration and Allocation:

**RULE 6:** (A) The acreage allocated to a gas well for proration purposes shall be known as the gas proration unit for that well. For the purpose of gas allocation in the South Blanco-Pictured Cliffs Gas Pool, a standard proration unit shall consist of approximately 160 surface contiguous acres substantially in the form of a square which shall be a legal subdivision (quarter-section) of the U. S. Public Land Survey; provided, however, that a non-standard proration unit may be formed after notice and hearing by the Commission or under the provisions of Paragraph (B) of this Rule.

The allowable production from any non-standard gas proration unit as compared with the allowable production therefrom if such tract were a standard unit shall be in the ratio which the area of the non-standard proration unit bears to a standard proration unit of 160 acres, subject to the provisions of Rule 9 of this order. Any gas proration unit containing between 158 and 162 acres shall be considered to contain 160 acres for the purpose of computing allowables.

(B) The Secretary of the Commission shall have authority to grant an exception to Rule 6 (a) without Notice and Hearing where application has been filed in due form and where the following facts exist and the following provisions are complied with:

1. The proposed non-standard proration unit consists of less than 160 acres or where the unorthodox size or shape of the tract is due to a variation in legal subdivision of the U. S. Public Land Surveys.

2. The non-standard gas proration unit consists of contiguous quarter-quarter sections and/or lots.

3. The non-standard gas proration unit lies wholly within a single governmental section.

4. The entire non-standard gas proration unit may reasonably be presumed to be productive of gas.

5. The applicant presents written consent in the form of waivers from:

- (a) all operators owning interests in the section in which any part of the non-standard gas proration unit is situated and which acreage is not included in said non-standard gas proration unit.

- (b) all operators owning interests in acreage offsetting the non-standard unit.

6. In lieu of paragraph 5 of this rule, the applicant may furnish proof of the fact that said offset operators were notified by registered mail of his intent to form such non-standard gas proration unit. The Secretary of the Commission may approve the application if, after a period of 30 days following the mailing of said notice, no operator has made objection to formation of such non-standard gas proration unit.

**RULE 7:** At lease 30 days prior to the beginning of each gas proration period, the Commission shall hold a hearing after due notice has been given. The Commission shall cause to be submitted by each gas purchaser "Preliminary Nominations" of that quantity of gas which each purchaser in good faith actually desires to purchase within the ensuing proration period, by months, from the South Blanco-Pictured Cliffs Gas Pool. The Commission shall consider the "Preliminary Nominations" of purchasers, actual production, and such other factors as may be deemed applicable in determining the amount of gas that may be produced without waste from said pool within the ensuing proration period. "Preliminary Nominations" shall be submitted on Form C-121-A as prescribed by the Commission.

**RULE 8:** In the event a gas purchaser's market shall have increased or decreased, purchaser may file with the Commission prior to the 10th day of the month a "Supplemental Nomination" showing the amount of gas the purchaser actually in good faith desires to purchase during the ensuing proration month from the South Blanco-Pictured Cliffs Gas Pool. The Commission shall hold a public hearing between the 13th and 20th days of each month to determine the reasonable market demand for gas from said pool for the ensuing proration month, and shall issue a proration schedule setting out the amount of gas which each well may produce during the ensuing proration month. "Supplemental Nominations" shall be submitted on Form C-121-A as prescribed by the Commission.

Included in the monthly proration schedule shall be (a) a summary of the total pool allocation for that month showing nominations, and adjustments made for underage or overage applied from a previous month, (b) a tabulation of the net allowable and production for the second preceding month together with a cumulative overage or underage computation, (c) a tabulation of the current and net allowables for the preceding month, (d) a tabulation of current monthly allowable for the ensuing proration month, and (e) a tabulation of the acreage and deliverabilities assigned each well, and the factors assigned each well for use in calculating individual well allowables. The Commission shall include in the proration schedule the gas wells in the South Blanco-Pictured Cliffs Pool delivering to a gas transportation facility, or lease gathering system, and shall include in the proration schedule of said pool any well which the Commission finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well. The total allowable to be allocated to said pool each month shall be equal to the sum of the preliminary or supplemental nominations, whichever is applicable together with any adjustment which the Commission deems advisable.

If, during a proration month, the acreage assigned a well is increased, the operator shall notify the Secretary-Director in writing of such increase. The increased allowable assigned the gas proration unit for the well shall become effective on the first day of the month following receipt of the notification by the Director. All communications shall be mailed to the Director, at Box 871, Santa Fe, New Mexico.

**RULE 9:** The monthly gas allocation to the South Blanco-Pictured Cliffs Gas Pool shall be divided and allocated among the wells connected to a gas transportation facility in the following manner:

The product obtained by multiplying each well's acreage factor by the calculated deliverability (expressed as MCF per day) for that well shall be known as the "AD" factor for that well. The acreage factor shall be determined to the nearest hundredth of a unit by dividing the acreage within the proration unit by 160. The "AD" factor shall be computed to the nearest whole unit.

A tentative allocation shall be made by dividing seventy-five percent (75%) of the pool allocation among the wells in the proportion that each well's "AD" factor bears to the sum of the "AD" factors of all wells in the pool.

The remaining twenty-five percent (25%) of the pool allocation shall be divided among wells in the proportion that each well's acreage factor bears to the sum of the acreage factors of all wells in the pool.

When the tentative allowable received by a well is in excess of its known producing ability, the well shall be classed as a marginal well and its allowable limited to its known producing ability. The sum of the difference between the tentative allowables and the limited allowables of all marginal wells on the proration schedule shall be reallocated to the non-marginal wells by application of the same formula. If such reallocation shall result in placing any other well within the marginal classification, the difference between the tentative allowable and the limited allowable of such marginal well shall be redistributed by application of the same formula until no well has received an allowable in excess of its known producing ability.

Any well having a calculated allowable less than that of the largest allowable assigned a marginal well shall be assigned an allowable equal to the largest marginal allowable; provided that the allowable so assigned shall not be greater than the well's ability to produce. If the allowable so assigned is greater than the well's ability to produce, the well shall be limited to its ability to produce. All wells with allowables so assigned shall be classified as marginal wells.

**RULE 10:** The calculated deliverability at the "deliverability pressure" shall be determined in accordance with the provisions of Order R-333-C.

Balancing of Production:

**RULE 11:** Underproduction: The hours of 7 o'clock a.m., M.S.T., February 1, and 7 o'clock a.m., M.S.T., August 1, shall be known as balancing dates and the periods of time bound by these dates shall be known as gas proration periods. In order to effectively administer the prorationing of gas in the South Blanco-Pictured Cliffs Pool, it is advisable to have a portion of each proration period include both summer and winter months.

Therefore, the first proration period shall commence on March 1, 1955, and shall continue for a period of eleven months until February 1, 1956. Future proration periods shall commence on the dates set out above. The amount of current gas allowable remaining unproduced at the end of each proration period shall be carried forward to and may be produced during the next succeeding proration period in addition to the normal gas allowable for such succeeding period; provided, however, that whatever amount thereof is not made up within the first succeeding proration period shall be cancelled.

If it appears that such continued underproduction has resulted from inability of the well to produce its allowable, it may be classified as a marginal well and its allowable reduced to the level of the well's ability to produce.

If, at the end of a proration period a marginal well has produced more than the total allowable assigned a non-marginal unit of corresponding size and deliverability, such marginal well shall be reclassified as a non-marginal well and its allowable prorated accordingly.

If, during a proration period a marginal well is reworked or re-completed in such a manner that its productive capacity is increased to an extent that said well should be reclassified as a non-marginal well, the reclassification shall be effective on the first day of the proration month following the date of recompletion.

The Secretary-Director may reclassify a well at any time if production data or deliverability tests reflect the need for such reclassification.

**RULE 12: Overproduction:** A well which has produced a greater amount of gas than was allowed during a given proration period shall have its allowable for the first succeeding proration period reduced by the amount of such overproduction and such overproduction shall be made up within the first succeeding proration period. If, at any time, a well is overproduced an amount equivalent to six times its current monthly allowable, said well shall be shut-in during the current month.

The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut-in if, upon public hearing after due notice, it is shown that complete shut-in of the well would result in material damage to said well.

Granting of Allowables:

**RULE 13:** No gas well shall be given an allowable until Form C-104 and Form C-110 have been filed, together with a plat showing acreage attributed to said well and the locations of all wells on the lease.

**RULE 14:** Allowables to newly completed gas wells shall commence

(a) on the date of connection to a gas transportation facility, such date to be determined from an affidavit furnished to the Commission (Box 597, Aztec, N. M.) by the purchaser,

(b) the latest filing date of Form C-104, C-110 or the above described plat, or

(c) a date 45 days prior to the date upon which the well's initial deliverability and shut-in pressure test is reported to the Commission on Form C-122-A in conformance with the provisions of R-333-C,

whichever date is the later.

No well shall be assigned an allowable unless a deliverability test, or a potential test taken in conformance with the provisions of Order R-333-C has been submitted.

Deliverability tests shall be taken and calculated in conformance with Order R-333-C, the provisions of Rule 10 of this order and the testing schedule provisions of Order R-333-C.

A change in a wells deliverability due to retest or test after re-completion or workover shall become effective the first of the month following receipt and approval of form C-122-A for such test. Such tests shall be taken in accordance with Order R-333-C.

Deliverability tests taken during 1954 shall be used in calculating allowables for the proration period commencing March 1, 1955. Subsequent annual tests shall be used in calculating allowables for proration periods commencing during the next ensuing year.

Reporting of Production:

**RULE 15:** The monthly gas production from each well shall be metered separately and the production therefrom shall be reported to the Commission on Form C-115, and such report shall be postmarked on or before the 24th day of the month immediately following the month in which the gas reported was produced. The operator shall show on such report the disposition of the gas produced.

Each purchaser or taker of gas in the South Blanco-Pictured Cliffs Gas Pool shall submit a report to the Commission and such report shall be postmarked on or before the 15th day of the month immediately following the month in which the gas was purchased or taken. Such report shall be filed on either Form C-111 or Form C-114, whichever is applicable, and the wells shall be listed in approximately the same order as they are found listed on the proration schedule.

Forms C-111 and C-114 as referred to herein shall be submitted in triplicate, the original being sent to the Commission at Box 871, Santa Fe, New Mexico, remaining copies will be sent to Box 697, Aztec, New Mexico and Box 2045, Hobbs, New Mexico, respectively.

Forms C-115 shall be submitted in accordance with Rule 1114 of the Commission's Rules and Regulations.

The full production of gas from each well shall be charged against the well's allowable regardless of the disposition of the gas; provided, however, that gas used in maintaining the producing ability of the well shall not be charged against the allowable.

**RULE 16:** The term "gas purchaser" as used in these rules, shall mean any "taker" of gas either at the wellhead or at any point on the lease where connection is made to facilitate the transportation or utilization of gas. It shall be the responsibility of said "taker" to submit a nomination in accordance with Rules 7 and 8 of this order.

**RULE 17:** No gas, either dry gas or casinghead gas, produced from the South Blanco-Pictured Cliffs Gas Pool, except that gas used for "drilling-in" purposes, shall be flared or vented unless specifically authorized by order of the Commission after notice and hearing.

The following provisions shall apply to the Aztec Pictured Cliffs Gas Pool, the Fulcher Kutz-Pictured Cliffs Gas Pool and the South Blanco-Pictured Cliffs Gas Pool.

**PROVIDED FURTHER,** That in filing Form C-101, "Notice of Intention to Drill or Recomplete", or USGS Form 9-331-a, (whichever is applicable), all operators shall strictly comply with the applicable provisions of Rule 104 (b). Accompanying the above form shall be a plat of the acreage contained in the proration unit, together with a complete list of all working interest owners designating the acreage they hold within the communitized area dedicated to the well.

**PROVIDED FURTHER,** That failure to comply with the provisions of this order or the rules contained herein shall result in the cancellation of allowable assigned to the affected well. No further allowable shall be assigned to the affected well until all rules and regulations are complied with. The Secretary-Director shall notify the operator of the well and the purchaser, in writing, of the date of allowable cancellation and the reason therefor.

**PROVIDED FURTHER,** That all transporters of gas or users of gas shall furnish connection notices to the Commission in accordance with the provisions of Rule 14, as soon as possible after the date of connection.

DONE at Santa Fe, New Mexico on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*John F. Simms*  
JOHN F. SIMMS, Chairman

*E. S. Walker*  
E. S. WALKER, Member

*W. B. Macey*  
W. B. MACEY, Member and Secretary



BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

941 )  
CASES: 696 ) consolidated  
Order No. R-566-D

THE APPLICATION OF THE OIL  
CONSERVATION COMMISSION UPON  
ITS OWN MOTION FOR AN ORDER  
REVISING ORDER R-566-C AFFECT-  
ING AND CONCERNING THE WEST KUTZ-  
PICTURED CLIFFS GAS POOL, SAN  
JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing on May 19, 1954, June 24, 1954, July 14, 1954, and August 17, 1955, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 18<sup>th</sup> day of October, 1955, the Commission, a quorum being present, having considered the records and the testimony adduced and being fully advised in the premises,

FINDS:

(1) That due notice of the time and place of hearing and the purpose thereof having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.

(2) That there is need for the revision of Orders R-566, R-566-A, R-566-B, and R-566-C and their consolidation into this order, due to the revision of Order R-333-B.

IT IS THEREFORE ORDERED:

That the following shall be the:

SPECIAL RULES AND REGULATIONS  
FOR THE WEST KUTZ-PICTURED CLIFFS  
GAS POOL

Well Spacing and Acreage Requirements for Drilling Tracts:

RULE 1: Any well drilled a distance of one mile or more from the outer boundary of the West Kutz-Pictured Cliffs Gas Pool shall be classified as a wildcat well. Any well drilled less than one mile from the outer boundary of said pool shall be spaced, drilled, operated and prorated in accordance with the regulations in effect in the West Kutz-Pictured Cliffs Gas Pool.



**RULE 2:** Each well drilled or recompleted within the West Kutz-Pictured Cliffs Gas Pool shall be located on a tract consisting of not less than a quarter section of approximately 160 surface contiguous acres substantially in the form of a square which shall be a legal subdivision (quarter section) of the U. S. Public Land Surveys.

**RULE 3:** Any well drilled within the defined limits of the West Kutz-Pictured Cliffs Gas Pool shall be located on a designated drilling tract consisting of not less than a quarter section which is a legal subdivision of the U. S. Public Lands Survey, such quarter section to contain approximately 160 contiguous acres and to be substantially in the form of a square. Such well shall be located at least 990 feet from the outer boundary of said quarter section, provided, however, that a tolerance of 200 feet is permissible.

**RULE 4:** The Secretary-Director of the Commission shall have authority to grant exception to the requirements of Rules 2 and 3 where application has been filed in due form and such exception is required because of conditions resulting from previously drilled wells in the area or, in the case of Rule 3, the necessity for exception is based upon topographic conditions.

Applicants shall furnish all operators of leases offsetting the lease containing subject well a copy of the application to the Commission, and applicant shall include with his application a list of names and addresses of all such operators, together with a written statement that all such operators have been properly notified by registered mail. The Secretary-Director of the Commission shall wait at least 20 days before approving any such exception, and shall approve such exception only in the absence of objection of any offset operators. In the event an operator objects to the exception, the Commission shall consider the matter only after proper notice and hearing.

**RULE 5:** The provision of Statewide Rule 104, Paragraph (k), shall not apply to the West Kutz-Pictured Cliffs Gas Pool.

**Gas Proration and Allocation:**

**RULE 6: (A)** The acreage allocated to a gas well for proration purposes shall be known as the gas proration unit for that well. For the purpose of gas allocation in the West Kutz-Pictured Cliffs Gas Pool, a standard proration unit shall consist of approximately 160 surface contiguous acres substantially in the form of a square which shall be a legal subdivision (quarter-section) of the U. S. Public Land Survey; provided, however, that a non-standard gas proration unit may be formed after notice and hearing by the Commission or under the provisions of Paragraph (B) of this Rule.

The allowable production from any non-standard gas proration unit as compared with the allowable production therefrom if such tract were a standard unit shall be in the ratio which the area of the non-standard proration unit bears to a standard proration unit of 160 acres. Any gas proration unit containing between 158 and 162 acres shall be considered to contain 160 acres for the purpose of computing allowables.

**(B)** The Secretary-Director of the Commission shall have authority to grant an exception to Rule 6 (A) without notice and hearing where application has been filed in due form and where the following facts exist and the following provisions are complied with:

1. The proposed non-standard proration unit consists of less than 158 acres.
2. The unorthodox size or shape of the tract is due to a variation in legal subdivision of the U. S. Public Land Surveys.
3. The acreage assigned the non-standard unit lies wholly within a legal section.
4. The acreage assigned the non-standard unit is contiguous with the acreage containing said well.
5. The entire non-standard gas proration unit may reasonably be presumed to be productive of gas.
6. The length or width of the non-standard gas proration unit does not exceed 2640 feet.
7. The operator making application for such exception to Rule 6 (A) includes with such application:

(a) Waivers from (1) all operators owning interests in the quarter sections in which any part of the non-standard gas proration unit is situated and which acreage is not included in said non-standard gas proration units; and (2) all operators owning interests in acreage offsetting the non-standard proration unit; or

(b) A list of names and mailing addresses of all operators outlined in paragraph (a) above, together with proof of the fact that said operators were notified by registered mail of the intent of the applicant to form such non-standard gas proration unit. The Secretary-Director of the Commission may approve such application if, after a period of 20 days following the mailing of said notice, no operator as outlined in paragraph (a) (1) above has entered an objection to the formation of such non-standard gas proration unit.

**RULE 7:** At least 30 days prior to the beginning of each gas proration period, the Commission shall hold a hearing after due notice has been given. The Commission shall cause to be submitted by each gas purchaser "Preliminary Nominations" of that quantity of gas which each purchaser in good faith actually desires to purchase within the ensuing proration period, by months, from the West Kutz-Pictured Cliffs Gas Pool. The Commission shall consider the "Preliminary Nominations" of purchasers, actual production and such other factors as may be deemed applicable in determining the amount of gas that may be produced without waste from said pool within the ensuing proration period. "Preliminary Nominations" shall be submitted on Form C-121-A as prescribed by the Commission.

**RULE 8:** In the event a gas purchaser's market shall have increased or decreased, purchaser may file with the Commission prior to the 10th day of the month a "Supplemental Nomination" showing the amount of gas the purchaser actually in good faith desires to purchase during the ensuing proration month from the West Kutz-Pictured Cliffs Gas Pool. The Commission shall hold a public hearing between the 13th and 20th days of each month to determine the reasonable market demand for gas from said pool for the ensuing proration month, and shall issue a proration schedule setting out the amount of gas which each well may produce during the ensuing proration month.

"Supplemental Nominations" shall be submitted on Form C-121-A as prescribed by the Commission.

Included in the monthly proration schedule shall be (a) a summary of the total pool allocation for that month showing nominations, and adjustments made for underage or overage applied from a previous month, (b) a tabulation of the net allowable and production for the second preceding month together with a cumulative overage or underage computation, (c) a tabulation of the current and net allowables for the preceding month, (d) a tabulation of current monthly allowable for the ensuing proration month, and (e) a tabulation of the acreage and deliverabilities assigned each well, and the factors assigned each well for use in calculating individual well allowables. The Commission shall include in the proration schedule the gas wells in the West Kutz-Pictured Cliffs Pool delivering to a gas transportation facility, or lease gathering system, and shall include in the proration schedule of said pool any well which the Commission finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well. The total allowable to be allocated to said pool each month shall be equal to the sum of the preliminary or supplemental nominations, whichever is applicable, together with any adjustment which the Commission deems advisable.

If, during a proration month, the acreage assigned a well is increased, the operator shall notify the Secretary-Director in writing of such increase. The increased allowable assigned the gas proration unit for the well shall become effective on the first day of the month following receipt of the notification by the Director. All communications shall be mailed to the Director, at Box 871, Santa Fe, New Mexico.

RULE 9: The monthly gas allocation to the West Kutz-Pictured Cliffs Pool shall be divided and allocated among the wells connected to a gas transportation facility in the following manner:

The product obtained by multiplying each well's acreage factor by the calculated deliverability (expressed as MCF per day) for that well shall be known as the "AD" factor for that well. The acreage factor shall be determined to the nearest hundredth of a unit by dividing the acreage within the proration unit by 160. The "AD" factor shall be computed to the nearest whole unit.

A tentative allocation shall be made by dividing seventy-five percent (75%) of the pool allocation among the wells in the proportion that each well's "AD" factor bears to the sum of the "AD" factors of all wells in the pool.

The remaining twenty-five percent (25%) of the pool allocation shall be divided among wells in the proportion that each well's acreage factor bears to the sum of the acreage factors of all wells in the pool.

When the tentative allowable received by a well is in excess of its known producing ability, the well shall be classed as a marginal well and its allowable limited to its known producing ability. The sum of the difference between the tentative allowables and the limited allowables of all marginal wells on the proration schedule shall be reallocated to the non-marginal wells by application of the same formula. If such reallocation shall result in placing any other well within the marginal classification, the difference between the tentative allowable and the limited allowable of such marginal well shall be redistributed by application of the same formula until no well has received an allowable in excess of its known producing ability.

RULE 10: The calculated deliverability at the "deliverability pressure" shall be determined in accordance with the provisions of Order R-333-C.

Balancing of Production:

RULE 11: Underproduction: The hours of 7 o'clock a.m., M.S.T., February 1, and 7 o'clock a.m., M.S.T., August 1, shall be known as balancing dates and the periods of time bound by these dates shall be known as gas proration periods. In order to effectively administer the prorationing of gas in the West Kutz-Pictured Cliffs Pool, it is advisable to have a portion of each proration period include both summer and winter months. Therefore, the first proration period shall commence on March 1, 1955, and shall continue for a period of eleven months until February 1, 1956. Future proration periods shall commence on the dates set out above. The amount of current gas allowable remaining unproduced at the end of each proration period shall be carried forward to and may be produced during the next succeeding proration period in addition to the normal gas allowable for such succeeding period; provided, however, that whatever amount thereof is not made up within the first succeeding proration period shall be cancelled.

If it appears that such continued underproduction has resulted from inability of the well to produce its allowable, it may be classified as a marginal well and its allowable reduced to the level of the well's ability to produce.

If, at the end of a proration period a marginal well has produced more than the total allowable assigned a non-marginal unit of corresponding size and deliverability, such marginal well shall be reclassified as a non-marginal well and its allowable prorated accordingly.

If, during a proration period a marginal well is reworked or recompleted in such a manner that its productive capacity is increased to an extent that said well should be reclassified as a non-marginal well, the reclassification shall be effective on the first day of the proration month following the date of recompletion.

The Secretary-Director may reclassify a well at any time if production data or deliverability tests reflect the need for such reclassification.

RULE 12: Overproduction: A well which has produced a greater amount of gas than was allowed during a given proration period shall have its allowable for the first succeeding proration period reduced by the amount of such overproduction and such overproduction shall be made up within the first succeeding proration period. If, at any time, a well is overproduced an amount equivalent to six times its current monthly allowable, said well shall be shut-in during the current month.

The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut-in if, upon public hearing after due notice, it is shown that complete shut-in of the well would result in material damage to said well.

Granting of Allowables:

RULE 13: No gas well shall be given an allowable until Form

C-104 and Form C-110 have been filed, together with a plat showing acreage attributed to said well and the locations of all wells on the lease.

**RULE 14:** Allowables to newly completed gas wells shall commence (a) on the date of connection to a gas transportation facility, such date to be determined from an affidavit furnished to the Commission (Box 697, Aztec, New Mexico) by the purchaser, (b) the latest filing date of Form C-104, Form C-110 or the above described plat, or (c) a date 45 days prior to the date upon which the well's initial deliverability and shut-in pressure test is reported to the Commission on Form C-122-A in conformance with the provisions of R-333-C, whichever date is the later.

No well shall be assigned an allowable unless a deliverability test, or a potential test taken in conformance with the provisions of Order R-333-C has been submitted.

Deliverability tests shall be taken and calculated in conformance with Order R-333-C, the provisions of Rule 10 of this order and the testing schedule provisions of Order R-333-C.

A change in a wells deliverability due to retest or test after recompletion or workover shall become effective the first of the month following receipt and approval of Form C-122-A for such test. Such tests shall be taken in accordance with Order R-333-C.

Deliverability tests taken during 1954 shall be used in calculating allowables for the proration period commencing March 1, 1955. Subsequent annual tests shall be used in calculating allowables for proration periods commencing during the next ensuing year.

Reporting of Production:

**RULE 15:** The monthly gas production from each well shall be metered separately and the production therefrom shall be reported to the Commission on Form C-115, such form shall be postmarked on or before the 24th day of the month immediately following the month in which the gas reported was produced. The operator shall show on such report the disposition of the gas produced.

Each purchaser or taker of gas in the West Kutz-Pictured Cliffs Gas Pool shall submit a report to the Commission, and such report shall be postmarked on or before the 15th day of the month immediately following the month in which the gas was purchased or taken. Such report shall be filed on either Form C-111 or Form C-114, whichever is applicable, and the wells shall be listed in approximately the same order as they are found listed on the proration schedule.

Forms C-111 and C-114 as referred to herein shall be submitted in triplicate, the original being sent to the Commission at Box 871, Santa Fe, New Mexico, remaining copies will be sent to Box 697, Aztec, New Mexico, and Box 2045, Hobbs, New Mexico, respectively.

Forms C-115 shall be submitted in accordance with Rule 1114 of the Commission's Rules and Regulations.

The full production of gas from each well shall be charged against the well's allowable regardless of the disposition of the gas; provided, however, that gas used in maintaining the producing ability of the well shall not be charged against the allowable.

RULE 16: The term "gas purchaser" as used in these rules, shall mean any "taker" of gas either at the wellhead or at any point on the lease where connection is made to facilitate the transportation or utilization of gas. It shall be the responsibility of said "taker" to submit a nomination in accordance with Rules 7 and 8 of this order.

RULE 17: No gas, either dry gas or casinghead gas, produced from the West Kutz-Pictured Cliffs Gas Pool, except that gas used for "drilling-in" purposes, shall be flared or vented unless specifically authorized by order of the Commission after notice and hearing.

PROVIDED FURTHER, That in filing Form C-101, "Notice of Intention to Drill", or USGS Form 9-331-a, (whichever is applicable), all operators shall strictly comply with the applicable provisions of Rule 104 (b). Accompanying the above form shall be a plat of the acreage contained in the proration unit, together with a complete list of all working interest owners designating the acreage they hold within the communitized area dedicated to the well.

PROVIDED FURTHER, That failure to comply with the provisions of this order or the rules contained herein shall result in the cancellation of allowable assigned to the affected well. No further allowable shall be assigned to the affected well until all rules and regulations are complied with. The Secretary-Director shall notify the operator of the well and the purchaser, in writing, of the date of allowable cancellation and the reason therefor.

PROVIDED FURTHER, That all transporters of gas or users of gas shall file with the Commission connection notices in accordance with the provisions of Rule 14, as soon as possible after the date of connection.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*John F. Simms*  
JOHN F. SIMMS, Chairman

*E. S. Walker*  
E. S. WALKER, Member

*W. B. Macey*  
W. B. MACEY, Member and Secretary



BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF THE STATE OF NEW  
MEXICO FOR THE PURPOSE OF  
CONSIDERING:

330 )  
330-A) Consolidated  
CASES: 941 )  
Order No. R-128-D

THE APPLICATION OF THE OIL  
CONSERVATION COMMISSION  
UPON ITS OWN MOTION FOR AN  
ORDER REVISING ORDER R-110 AND  
ORDER R-128-C AFFECTING AND CON-  
CERNING THE BLANCO-MESAVERDE  
GAS POOL, SAN JUAN AND RIO ARriba  
COUNTIES, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

These causes came on for hearing at 9 o'clock a.m. on  
April 15, 1954 and June 21, 1954 and August 17, 1955, before the Oil  
Conservation Commission of New Mexico, hereinafter referred to as the  
"Commission".

NOW, on this 13<sup>th</sup> day of October, 1955, the Commission,  
a quorum being present, having considered the testimony adduced and the  
exhibits received at said hearings, and being fully advised in the premises,

FINDS:

(1) That due notice of the time and place of hearing and the  
purpose thereof having been given as required by law, the Commission has  
jurisdiction of these cases and the subject matter thereof.

(2) That there is need for the revision of Order R-128-C due  
to the revision of Order R-333-B and that this order should contain all of  
the provisions of Order R-128-C with all applicable changes.

IT IS THEREFORE ORDERED:

(1) That Order R-110, dated November 9, 1951 and Order R-128-C  
dated December 16, 1954 is hereby amended as follows:

Section 15: Gas Proration and Allocation

RULE 1. (a) The acreage allocated to a gas well for proration  
purposes shall be known as the Gas Proration Unit for that well. For the  
purpose of Gas Allocation in the Blanco-Mesa Verde Gas Pool, a standard pro-  
ration unit shall consist of between 316 and 324 contiguous surface acres,  
substantially in the form of a rectangle which shall be a legal subdivision (half  
section) of the U. S. Public Land Surveys; provided however, that a non-standard

gas proration unit may be formed after notice and hearing or under the provisions of paragraph (b) of this rule. Any proration unit containing less than 316 acres or more than 324 acres shall be a non-standard proration unit. The allowable production from any non-standard proration unit as compared with the allowable production therefrom if such tract were a standard unit shall be in the ratio of the area of such non-standard proration unit expressed in acres to 320 acres. Any gas proration unit containing between 316 and 324 acres shall be considered to contain 320 acres for the purpose of computing allowables.

(b) The Secretary of the Commission shall have authority to grant an exception to Rule 1 (a) without notice and hearing where application has been filed in due form and where the following facts exist and the following provisions are complied with;

1. The non-standard gas proration unit consists of contiguous quarter-quarter sections and/or lots.
2. The non-standard gas proration unit lies wholly within a single governmental section.
3. The entire non-standard gas proration unit may reasonably be presumed to be productive of gas.
4. The applicant presents written consent in the form of waivers from:
  - (a) All operators owning interests in the section in which any part of the non-standard gas proration unit is situated and which acreage is not included in said non-standard unit, and
  - (b) All operators owning interests in acreage offsetting the non-standard gas proration unit.
5. In lieu of paragraph 4 of this rule, the applicant may furnish proof of the fact that said offset operators were notified by registered mail of his intent to form such non-standard gas proration unit. The Secretary of the Commission may approve the application if, after a period of 30 days following the mailing of said notice, no operator has made objection to formation of such non-standard gas proration unit.

RULE 2. At least 30 days prior to the beginning of each gas proration period the Commission shall hold a hearing after due notice has been given. The Commission shall cause to be submitted by each gas purchaser its "Preliminary Nominations" of the amount of gas which each in good faith actually desires to purchase within the ensuing proration period,



by months from the Blanco-Mesaverde Gas Pool. The Commission shall consider the "Preliminary Nominations" of purchasers, actual production, and such other factors as may be deemed applicable in determining the amount of gas that may be produced without waste from the pool within the ensuing proration period. "Preliminary Nominations" shall be submitted on a Form C-121-A as prescribed by the Commission.

**RULE 3.** In the event a gas purchaser's market shall have increased or decreased, he may file with the Commission prior to the 10th day of the month a "supplemental nomination", showing the amount of gas he actually in good faith desires to purchase during the ensuing proration month from the Blanco-Mesaverde Gas Pool. The Commission shall hold a public hearing between the 13th and 20th days of each month to determine the reasonable market demand for gas for the ensuing proration month, and shall issue a proration schedule setting out the amount of gas which each well may produce during the ensuing proration month. "Supplemental Nominations" shall be submitted on a Form C-121-A as prescribed by the Commission.

Included in the monthly proration schedule shall be (a) a summary of the total pool allocation for that month showing nominations, and adjustments made for underage or overage applied from a previous month, (b) a tabulation of the net allowable and production for the second preceding month together with a cumulative overage or underage computation, (c) a tabulation of the current and net allowables for the preceding month, (d) a tabulation of current monthly allowable for the ensuing proration month, and (e) a tabulation of the acreage and deliverabilities assigned each well, and the factors assigned each well for use in calculating individual well allowables. The Commission shall include in the proration schedule the gas wells in the Blanco-Mesaverde Gas Pool delivering to a gas transportation facility, or lease gathering system, and shall include in the proration schedule for the Blanco-Mesaverde Gas Pool any well which it finds is being unreasonably discriminated against through denial of access to a gas transportation facility, which is reasonably capable of handling the type of gas produced by such well. The total allowable to be allocated to the pool each month shall be equal to the sum of the preliminary or supplemental nominations (whichever is applicable), together with any adjustment which the Commission deems advisable.

If during a proration month the acreage assigned a well is increased the operator shall notify the Director in writing (Box 871, Santa Fe, New Mexico) of such increase. The increased allowable assigned the gas proration unit for the well shall be effective on the first day of the month following receipt of the notification by the Director.

**RULE 4.** The monthly allocation to the Blanco-Mesaverde Gas Pool shall be divided and allocated among the wells connected to a gas transportation facility in the following manner.

The product obtained by multiplying each well's acreage factor by the calculated deliverability (expressed as MCF per day) for that well shall be known as the "AD" factor for that well. The acreage factor shall

be determined to the nearest hundredth of a unit by dividing the acreage within the proration unit by 320. The "AD factor" shall be computed to the nearest whole unit.

- (1) A tentative allocation shall be made by dividing seventy-five percent (75%) of the pool allocation among the wells in the proportion that each well's "AD factor" bears to the sum of all the "AD factors" in the pool.
- (2) The remaining twenty-five (25%) of the pool allocation shall be divided among the wells in the proportion that each well's acreage factor bears to the sum of all the acreage factors in the pool.

When the tentative allowable received by a well is in excess of its known producing ability the well shall be classed as a marginal well and its allowable limited to its known producing ability. The sum of the difference between the tentative allowables and the limited allowables of all marginal wells on the proration schedule shall be reallocated to the non-marginal wells by application of the same formula. If such reallocation shall result in placing any other well within the marginal classification, the difference between the tentative allowable and the limited allowable of such marginal well shall be redistributed by application of the same formula until no well has received an allowable in excess of its known producing ability.

**RULE 5.** The calculated deliverability at the "deliverability pressure" shall be determined in accordance with the provisions of Order R-333-C.

#### BALANCING OF PRODUCTION

**RULE 6.** Underproduction: The dates 7:00 a.m., February 1, and 7:00 a.m., August 1, shall be known as balancing dates and the periods of time bounded by these dates shall be known as gas proration periods. In order to effectively administer the prorationing of gas in the Blanco-Mesaverde Gas Pool, it is advisable to have a portion of each proration period include both summer and winter months. Therefore the first proration period shall commence March 1, 1955 and shall continue for a period of 11 months and future proration periods shall commence on the dates outlined above. The amount of current gas allowable remaining unproduced at the end of each proration period shall be carried forward to and may be produced during the next succeeding proration period in addition to the normal gas allowable for such succeeding period; but whatever amount thereof is not made up within the first succeeding proration period shall be cancelled.

If it appears that such continued underproduction has resulted from inability of the well to produce its allowable, it may be classified as a marginal well and its allowable reduced to the well's ability to produce.

If at the end of a proration period a marginal well has produced more than the total allowable assigned a non-marginal unit of corresponding size and deliverability, the marginal well shall be reclassified as a non-marginal well and its allowable prorated accordingly.

If during a proration period a marginal well is reworked or re-completed in such a manner that its productive capacity is increased to the extent that it should be reclassified as a non-marginal well, the reclassification shall be effective on the first day of the proration month following the date of recompletion.

The Director may reclassify a well at any time if production data or deliverability tests reflect the need for such a reclassification.

**RULE 7. Overproduction:** A well which has produced a greater amount of gas than was allowed during a given proration period shall have its allowable for the first succeeding proration period reduced by the amount of such overproduction and such overproduction shall be made up within the first succeeding proration period. If, at any time, a well is overproduced an amount equaling six times its current monthly allowable, it shall be shut-in during the current month.

The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut-in upon a showing at public hearing after due notice that complete shut-in of the well would result in material damage to the well.

#### GRANTING OF ALLOWABLES

**RULE 8.** No gas well shall be given an allowable until Form C-104 and Form C-110 have been filed together with a plat showing acreage attributed to said well and the locations of all wells on the lease.

**RULE 9.** Allowables to newly completed gas wells shall commence

- (a) On the date of connection to a gas transportation facility, such date to be determined from an affidavit furnished to the Commission (Box 697, Aztec, New Mexico) by the purchaser;
- (b) the latest filing date of Form C-104, C-110 or the above described plat; or
- (c) a date 45 days prior to the date upon which the well's initial deliverability and shut-in pressure test is reported to the Commission on Form C-122-A in conformance with the provisions of R-333-C;

whichever date is the later.

No well shall be assigned an allowable unless a deliverability test taken in conformance with the provisions of Order R-333-C has been submitted.

Deliverability tests shall be taken and calculated in conformance with Order R-333-C, the provisions of Rule 5 of this order and the testing schedule provisions of Order R-333-C.

A change in a wells deliverability due to retest or test after re-completion or workover shall become effective the first of the month following receipt and approval of Form C-122-A for such test. Such tests shall be taken in accordance with Order R-333-C.

Deliverability tests taken during 1954 shall be used in calculating allowables for the proration period commencing March 1, 1955. Subsequent annual tests shall be used in calculating allowables for proration periods commencing during the next ensuing year.

#### REPORT OF PRODUCTION

**RULE 10.** The monthly gas production from each well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 and be postmarked on or before the 24th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the gas produced.

Each purchaser or taker of gas in the Blanco-Mesaverde Gas Pool shall submit a report to the Commission to be postmarked on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. Such report shall be filed on either Form C-111 or Form C-114 (whichever is applicable) with the wells being listed in approximately the same order as they are listed on the proration schedule. Forms C-111 and C-114 referred to herein shall be submitted in triplicate, the original being sent to the Commission at Box 871, Santa Fe, New Mexico, the other copies being sent to Box 697, Aztec, New Mexico and Box 2045, Hobbs, New Mexico.

Form C-115 shall be submitted in accordance with Rule 1114 of the Commission's Rules and Regulations.

The full production of gas from each well shall be charged against the well's allowable regardless of what disposition has been made of the gas, provided however, that gas used in maintaining the producing ability of the well shall not be charged against the well's allowable.

**RULE 11.** The term "gas purchaser" as used in these rules, shall mean any "taker" of gas either at the wellhead or at any point on the lease where connection is made for gas transportation or utilization. It shall be the responsibility of said "taker" to submit a nomination.

**RULE 12.** No gas, either dry gas or casinghead gas, produced from the Blanco-Mesaverde Gas Pool except that gas used for "drilling-in purposes," shall be flared or vented unless specifically authorized by order of the Commission after notice and hearing.

**PROVIDED FURTHER,** That in filing Form C-101 Notice of Intention to Drill or Recomplete or USGS Form 9-331-a (whichever is applicable), all operators shall comply strictly with the provisions of Order R-110 and the applicable provisions of Order R-397. Accompanying the above form shall be a plat of the acreage contained in the proration unit together

with a complete list of all working interest owners designating the acreage they hold within the communitized area dedicated to the well.

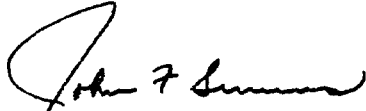
PROVIDED FURTHER, That failure to comply with the provisions of this order or the rules contained herein shall result in the cancellation of allowable assigned to the affected well. No further allowable shall be assigned to the affected well until all rules and regulations are complied with. The Director shall notify the operator of the well and the purchaser in writing of the date of allowable cancellation and the reason therefor.

PROVIDED FURTHER, That the provisions of Statewide Rule 104 (k) shall not apply to the Blanco-Mesaverde Gas Pool.


PROVIDED FURTHER, That all transporters of gas or users of gas shall file with the Commission connection notices in accordance with the above provisions of Rule 9 (a) as soon as possible after the date of connection.

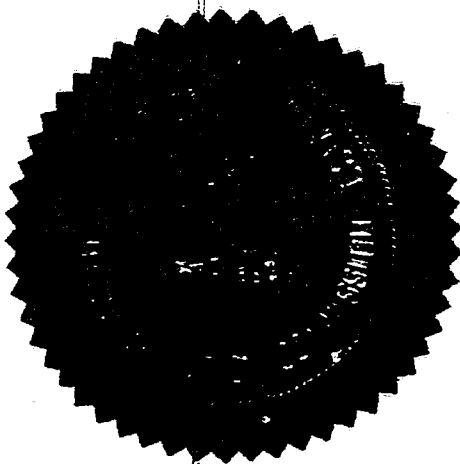
DONE at Santa Fe, New Mexico on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
JOHN F. SIMMS, Chairman

  
E. S. WALKER, Member

  
W. B. MACEY, Member and Secretary



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BEFORE THE  
**Oil Conservation Commission**  
SANTA FE, NEW MEXICO  
August 17, 1955

IN THE MATTER OF:

CASE NO. 941

TRANSCRIPT OF PROCEEDINGS

ADA DEARNLEY AND ASSOCIATES  
COURT REPORTERS  
605 SIMMS BUILDING  
TELEPHONE 3-6691  
ALBUQUERQUE, NEW MEXICO

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
August 17, 1955

IN THE MATTER OF:

Application of the Commission upon its own  
motion for an order revising and mending  
the provisions of Orders R-128-C, R-565,  
R-566, R-333-B with regard to deliverability  
tests and the initial potential test per-  
formed on gas wells in the San Juan Basin.

Case No. 941

BEFORE:

Honorable John F. Simms,  
Mr. E. S. (Johnny) Walker  
Mr. William B. Macey.

TRANSCRIPT OF HEARING

MR. MACEY: The next case on the docket is Case 941.

ELVIS A. UTZ,

called as a witness, having been first duly sworn, testified as  
follows:

DIRECT EXAMINATION

By MR. GURLEY:

Q State your name please.

A Elvis A. Utz.

Q What is your position?

A Engineer with the Oil Conservation Commission.

Q Have you, in your official capacity, Mr. Utz, had opportunity  
to study the proposed revision of Order Number R-333-B?

A Yes, I have.

Q Do you feel that a revision in these rules is necessary at this time?

A Yes, I do.

Q Would you state to the Commission the reasons behind your thinking?

A The old Order R-333-B provided for an initial potential test to be used in estimating a deliverability for prorationing which estimated deliverability should be recalculated, or the allowable on the well should be recalculated. When a deliverability was run, in accordance with R-333-B the recalculation of these estimate deliverability wells has run into a monumental task. After only about five months of prorationing and when the connections increase, as I certainly anticipate that they will up there, the task will become even greater.

I am recommending a change in this order in order to eliminate estimated deliverabilities and to provide a deliverability, or initial deliverability which will be more in accordance with the wells' ability to produce into the pipeline. If this is done, then the need, as far as proration is concerned, of an initial potential test, is no longer necessary.

Not only does it require considerable amount of work on the part of the Commission to recalculate these deliverabilities, we have found that the estimated deliverabilities are invariably high, which, of course, in effect removes a certain amount of allowable from the rest of the pool for a considerable length of time. Therefore, I am proposing that the Order be revised to eliminate from the order the initial potential test, and to provide for as simple a test as possible in order to put the well on the proration schedule



with a more realistic deliverability.

Q Do you have any further recommendation concerning Order R-333-B?

A Yes. I would like to run through the order and briefly point out the changes, and to elaborate somewhat on any of the more important changes.

MR. MACEY: Before you start, Mr. Utz, it is my understanding that the case is going to be continued to September, is that correct?

A To the best of my knowledge it isn't.

MR. MACEY: All right, go ahead.

A Under Section A of the proposed Order which has been circulated here, and which I presume you all have copies of, the Sub-section entitled: Initial Deliverability and Shut-In Pressure Tests For Newly Completed Gas Wells"; this entire sub-section was changed, as noted by the underlining. Briefly, this section provides for a 7-day shut-in pressure immediately after completion; provides for a test within 45 days after connection. It also, in Paragraph C, eliminates any information test as an official test for the establishment of allowables.

On Page 2, under Paragraph B, in parenthesis, the reference to deliverability retest, this is a change which allows an operator, or rather clarifies the proposition of retesting any deliverability test, and provides that the operator may retest for substantial reason, either a deliverability test after recompletion, or an annual deliverability test.

Further, which is not shown here, I would like to recommend that another change be made. In the third line, after "commence," I would like to recommend that the following sentence be put in this para-

graph for clarification. It reads as follows: "Such notification shall consist of scheduling the well as required for the annual deliverability test in Sub-section 3, Paragraph (A), above."

It seems that in regard to retest, some people are somewhat in the dark as to rescheduling a well for retest. This further provides that it shall be mandatory to retest all recompleted wells.

Under Section (B) of Page 3 is really the heart of the change, and has to do with the initial deliverability and shut-in pressure test. Briefly, this test is made as simple as possible in order to evaluate the well's ability to produce into the pipeline. The reason that this test has to be made as simple as possible, and with as little field work as possible, is that some of the areas in San Juan Basin are almost inaccessible in the wintertime; accomplishing a test in accordance with R-333-C, which test, is the same in the recommended order, is almost impossible. In accomplishing this test, the only field work that is necessary is to take the shut-in pressure. This pressure is required immediately after completion, and is the pressure that probably will be used, and should be used in connection with the calculating of the initial deliverability. The deliverabilities run as follows: Within 45 days after connection to the pipeline, a 7 or 8-day production chart may be used as a basis for calculating the deliverability. This chart should be preceded, if at all possible, by 14 days of continuous production. The purpose being, of course, to have as near stabilization as possible.

With the aid of the information on the chart and the 7-day shut-in pressure, and calculating the  $P_w$ , as prescribed later in R-333-C, a deliverability may be arrived at for the well's ability to produce

at the static wellhead working pressure of 50 percent of the 7-day shut-in pressure.

I have on Page 4 a slight change which I would like to put into the record, in Sub-paragraph b. It states as follows: "This shall be the shut-in pressure required in Section A, Sub-section 1, Paragraph (A), which is the shut-in pressure that is required immediately after recompletion of the well."

MR. MACEY: You are going to add that statement? Repeat what you said.

A ~~The~~ Paragraph b, which now reads: "A shut-in pressure of at least seven days duration shall be taken", I would like to add the following sentence. "This shall be the shut-in pressure required in Section A, Sub-section 1, Paragraph (A), which is the shut-in we require in Sub-section 1, Section (A).

Further, on Page 5, the first paragraph which is underlined, the last sentence, I would like to strike. Since the chart will be integrated and the static, average static pressure in the integrated volume will be furnished by the pipeline furnishing the gas, I see no reason for a requirement of the photostatic copy of the chart.

Still on Page 5, the last paragraph, which is underlined, has to do with relinquishing somewhat on 25 percent draw down requirement. There are some wells, particularly, at the present time, in the north end of the Fulcher Kutz Pool, which have line pressures high enough that it is impossible to get 25 percent drawdown. These wells are old wells in a partially depleted area, and I believe it is order to re linquish on this particular requirement.

Also, this is a situation which is going to become more and more apparent as the field grows older. At the same time, it is my feel-

ing that all drawdowns possible should be accomplished with the test in order to get a more accurate deliverability. It may not be worth calling attention to, but for the matter of the record, on Page 8, the third paragraph down, which begins, "When supercompressibility (superexpansibility) correction is made for a gas containing either nitrogen or carbon dioxide in excess of 2 per cent, the supercompressibility factors of such gas shall be determined by the use of Table 5", which is an insert after the words "of the above mentioned TS-402". Strike out "and Table 5". It is merely a clarification. It would read: "-- TS-402 for pressure 100-500 psig", and strike out and insert "Table 2" for "and TS-461", and after "461" strike out "and Table 2". To finish the paragraph it would read: "-- for pressures in excess of 500 psig.

Briefly, I believe that covers the important changes to be made in Order R-333-B.

Q Mr. Utz, have you, in your official capacity, had an opportunity to study the proposed changes in Order R-128-C?

A Yes, I have.

Q Would you state to the Commission your reason behind your findings there?

A The changes that I am about to recommend in R-128-C, which is the Mesaverde Proration Order for the San Juan Basin are to allow that order to conform with the recommended changes in R-333-B, and to incorporate in the order another order, namely, R-614, which is now written, and which actually is a part of the order.

On Order R-128-C, under Rule 1, Paragraph b, I recommend that the Commission incorporate the Order R-614 as now written in this order.

Further, under Rule 5, on Page 4, after the words, "R-333-A", I recommend that the wording, "provided, however, that the deliverability pressure shall be determined as follows:--" and refers to 50 percent of the seven-day shut-in pressure. This is taken care of in Order R-333-B as recommended. Also --

MR. MACEY: You mean 333-C.

A 333-C, that is right.

MR. MACEY: Okay.

A Also, under Rule 9, I recommend that the paragraph which has reference to using the initial potential test, 20 percent of the initial potential test be stricken from the order. That concludes the changes on 128-C.

Q In your official capacity, Mr. Utz, have you had an opportunity to study Order R-565?

A Yes, I have.

Q Do you have any recommendations as to possible revisions of that?

A Yes, I have.

Q Would you state those recommendations and reasons behind them?

A Yes, sir. Order R-565 is a proration order for the Aztec-Fulcher Kutz and South Blanco Pools, Pictured Cliffs Pools. The changes that I recommend in this order are as follows: I recommend the revision of Order R-620, and its inclusion in Rule 6, the second paragraph, and Rule 9, which is an additional paragraph of Rule 9. This briefly has to do with the requirements for non-standard units -- Correction, it does not. Order R-620 has to do with the revision of allowables on low acreage factor wells to prevent premature

abandonment.

I further recommend the inclusion of R-565-A, which is a nunc-pro-tunc to be included in R-565, replacing Rule 3 in the Fulcher Kutz and Aztec special rules of this order. I further recommend the inclusion of R-565-B, also a nunc-pro-tunc to be included in Order R-565, replacing Rule 3 of the South Blanco-Pictured Cliffs Special Rules section. This has to do with spacing.

I further recommend inclusion of R-614 in Order R-565 to replace Paragraph b of Rule 6 in the Fulcher Kutz, Aztec and South Blanco Special Rules section. This is the order that has to do with the changes in non-standard proration units.

Further, as recommended in the other Order R-128-C, Rule 10, after the reference to R-333, I recommend that the wording, "provided, however, that the deliverability pressure shall be determined as follows:", and refers to the 50 percent of the seven day shut-in, be stricken.

Further, in Rule 14, the third paragraph, I recommend that it be stricken entirely, which has reference to 15 percent of the initial potential test. That is all I have on R-565.

Q The majority of the statements that you have made deal with the deliverability tests and the initial potential tests performed on gas wells in the San Juan Basin, that is, the proposed changes?

A No. sir, the changes, most of the changes that I am proposing in these orders are just the inclusion of orders already written and nunc-pro-tunc. In other words, to clean up the order.

Q The actual changes are dealing with that that was advertised in the initial notice?

A That is right.

Q In your official capacity, Mr. Utz, have you had an opportunity to study the proposed revisions of Order R-566?

A Yes, I have.

Q Is it your opinion that such order should be revised at this time?

A Yes, it is.

Q Would you state to the Commission the reasoning behind your proposal and your recommendations thereof?

A Yes, I will. In Order R-566, I recommend the inclusion of R-566-A, which is another nunc-pro-tunc to replace Rule 3 in R-566. Other than that, the only recommendations I have is that the reference to the 50 percent shut-in pressure in Rule 10 be stricken, as well as Rule 14, being revised as follows: -- The third paragraph. I recommend it be stricken. This also has reference to the use of 15 percent of initial potential as estimated deliverable.

In all three of the orders, proration orders, I recommend that any reference to R-333-B be changed to R-333-C.

MR. GURLEY: That is all.

MR. MACEY: Any questions of the witness? Mr. Rieder?

MR. RIEDER: If it please the Commission, and without objection from the operators, I would like to propose that all orders mentioned in Case 941 be rewritten in their entirety, so that the orders that will result from these changes will be clear to all parties. I would like to have the inclusion of all these nunc-pro-tunc and additional orders, and each order to be written separately as a result of this hearing.

MR. MACEY: Anyone else? Mr. Utz, I have one question, and maybe the rules take care of it. I didn't want to dig through there

and find it. When an operator completes a well, after it is connected, as I understand it, he has 45 days in which to either take a deliverability test upon which the Commission will base the well's allowable, effective the date of the connection, or he has the right to take a so-called production test in the third week, is that correct, in at least the third week, is that correct?

A That is correct, it can be from the third week to the last week in the 45 days.

MR. MACEY: What provision do you have in the event an operator doesn't get the test taken and submitted to the Commission? Say he submits a test on the 55th day, when do you give him his allowable?

A According to the way the order is written, actually if you don't get the test in by the 45th day, you should be taken off the schedule.

MR. MACEY: He is not on it to start, because you can't give him an allowable --

A You can recalculate the allowable when you do get the test, for the first 45 days, which is valid production under the order.

MR. MACEY: I am not sure I understand. You mean that the test taken the third week, is that mandatory that he has to take the production test on the third week, is that correct?

A It is mandatory that he has to take that production test and report it during the 45-day period after connection to the pipeline.

MR. MACEY: Then you give him an allowable based on that figure, is that right?

A That is right, a revised allowable.



MR. MACEY: What is his original allowable, if that is the revised?

A That would be the original allowable then.

MR. MACEY: Then he takes a deliverability test, is that correct, within 45 days?

A No, sir. The test within 45 days would be one of two tests, either in accordance with R-333-C, the section which sets out the regular deliverability test, or this production test, as you call it. Either one, he runs would be the basis for giving him his allowable for any production prior to the receiving of that test.

MR. MACEY: Now, my question is this. If he submits the deliverability test on the 55th day, what allowable do you give him and when do you give it to him? You know you are going to have that happen.

A Yes, I certainly do. If you want to live to the letter of the order, then you would give him an allowable for 45 days, when you receive the test, and he would not have any allowable from the 45 days to the time that you receive the test. He may have been producing but it would be charged against his allowable, not calculated from the interim period for the 45 days, and the time that you received the test.

MR. MACEY: For every day that he is late beyond the 45-day limit, he is penalized with the lack of an allowable for each day that he is late, is that correct?

A That is correct.

MR. MACEY: Okay, I wanted you to make sure.

MR. ABBOTT: W. D. Abbott, Amerada.

CROSS EXAMINATION

By MR. ABBOTT:

Q Elvis, if I understand this correctly, if we go out and drill a wildcat, complete a gas well, the only thing we submit to the Commission is a shut-in pressure, is that right?

A Unless we write an initial potential order, that is right.

Q Don't you think that maybe under "C" here, this -- one of these tests for information purposes should be turned into the Commission?

A There is an apparent need for an initial potential test of some kind. As far as proration is concerned, we have no need for it if this order is accepted. My recommendation would be this, that if the need is sufficient, and apparently it is for initial potential test, that an order be written setting out that initial potential test which may be run for the benefit of the operators, for information purposes or any other use it is to be used for, such as unit agreements.

While I am on the subject, I also would like to recommend that if the Commission sees fit to write an initial potential order, that the initial potential be the same as in the old R-333-B, with this exception, that all wells with two inch tubing shall be tested through the tubing, and all wells tubed with one-inch tubing shall be tested through the casing. There is a reason for that. It is in the interest of consistency, you get a different figure on the same well by testing through the tubing, or the casing. Usually you get a larger figure testing through the casing. Further, since sand fracing is quite common, testing through the casing is cutting

out a lot of wellheads. Testing through one-inch gives you an initial potential that is considerably too high, since the well does not stabilize.

MR. MACEY: Mr. Grenier?

By MR. GRENIER:

Q Mr. Utz, referring again to Mr. Macey's question regarding the penalty for late filing of this test data with the Commission, I wasn't quite clear in this. Identical case we were discussing, of an operator who got in a report on the 55th day, whether he would lose production from days 1 through 10, or whether he would lose production from days 46 through 55. Maybe I am just getting unduly complicated and all you are going to say is that he will have 45 days production, and this is what he did produce in the 55, and whatever the excess is going to have to be made up by under-production later. Is the latter the way you would vision it as working?

A I would vision it being that from the 46th to the 55th day would be the production that he should lose.

Q Suppose he waits a year --

A (Interrupting) If he waited a year he would long since have a shut-in order from us, I am sure.

Q Fine. What is the basis for that? In other words, I am suggesting that this is a matter of sufficient importance that unless the well is spelled out already in some section of the orders, that I am not familiar with, don't you think it would be well to give a little explanation of those mechanics in the orders so that everybody would know what they were faced with? When you are applying a penalty the person ought to be told what the penalty is, just as an

ordinary principle of law-writing, or regulation writing?

A Well, are you suggesting that we write in the order what the penalty would be?

Q I think it entirely appropriate where you have even an indirect penalty application of this kind, that it be definite as to what the penalty is.

A I would be agreeable to doing that. I do feel that since the 45-day period is set out in the order that it is very apparent that is the only production that would be --

Q (Interrupting) I am thinking that maybe one sentence somewhere, in any event you won't get more than 45 days retroactive production allowed, in advance of the date you report.

A I would be willing to incorporate that in the order and recommend it.

MR. GRENIER: Thank you.

MR. MACEY: In other words, you are recommending that the man be given a 45-day grace period of allowable so to speak, and that if any days he is in violation, why the order so state that he would be in violation that many number of days from the date of his original connection?

MR. GRENIER: That is right, and that he is just going to have his balance period, he is going to be cut down proportionately by that number of days, as if he weren't on the line. I am sure he would be producing it, but would be going against the allowable on a shorter period. Whenever you have a penal provision, or one penal operation, though not expressly stated so, it seems to me you need to spell it out, for no other reason than the Commission's own protection stove of argument there is to quote them chapter and

verse and tell them to go home.

A You recommend that be put in the proration order or testing order?

MR. MACEY: Either one.

MR. GRENIER: I haven't got into that much detail. It is something that ought to be in the pattern is all I am saying to you. If you would like me to make a specific recommendation and language just where to put it -- Obviously the Commission is going to have to do some work on this, particularly if Mr. Rieder's suggestions are adopted to rewrite and revise these rules, in which I would like to concur. It is confusing to have three sets of field rules in one order. It is hard to refer to them and keep track of what you are doing. I think you can find a place to put it. If you would like me to make a recommendation --

A We would be glad to have it.

MR. GRENIER: When I get back I will write you a letter as to where it might be

MR. MACEY: Anyone else have a question of the witness?

MR. TRUBY: L. G. Truby, with Pacific Northwest.

By MR. TRUBY:

Q Even generally the rules look satisfactory to me. I have one question to the effect that our operations may be a little bit peculiar, in that we may possibly be in a position to putting one to three wells on a pipeline in over one to two months. We don't know how we would develop. I didn't notice any provision in the rule for an exception to this 45 days. It could be extremely difficult for us to get that completed number of well tests in with the available personnel in that time. Has that point been considered, or

would there be some provision for exception, if that situation should arise?

A There is no provision that I know of in the order. However, any Commission order is subject to an exception. However, there is no provision even for administrative exceptions that I know of in the order as presently written.

Q Well, it would appear to me in a case of this type, there should probably be some provision for administrative exceptions for unusual cases of that type that might arise in the rule itself.

A Would you object to bringing those to hearing?

Q No.

MR. MACEY: Each individual one?

A If he had a group of them.

Q Yes, I should think that each individual case would be time consuming and in our case would all occur in a short period of time. I wouldn't think it would be a matter for the Commission to hear each individual case, but it could be handled by administrative exception, if there was provision in the rule for administrative exception.

A I see no reason why a provision couldn't be put in the rule for an exception.

MR. MACEY: Anyone else have a question of the witness? If not the witness may be excused.

(Witness excused.)

MR. MACEY: Does anyone have anything further in Case 941?

MR. WOODRUFF: I haven't reviewed these orders, and I think they are reasonable and workable. I do concur in the suggestion that the other revisions, other than for testing, as Mr. Rieder

suggested, be put out in final form so they can be seen. I think that the request of Mr. Truby, that some exception be permitted in extenuating circumstances is reasonable. I do believe that it will be necessary to have an initial potential order, not that the test requires it necessarily, but an order which would provide for a consistent manner of testing, if and when the tests are taken. I would strongly recommend that such an order be prepared which would provide a test to be used when found necessary by the Commission, or by the operator. It may be well for Commission purposes, for the Commission to require that to be filed with you.

MR. MACEY: Anyone else? If nothing further we will take the case under advisement.

STATE OF NEW MEXICO )  
: SS.  
COUNTY OF BERNALILLO )

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 22nd day of August, 1955.

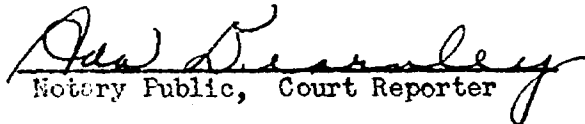
  
Notary Public, Court Reporter

My Commission Expires:  
June 19, 1959.

STATE OF NEW MEXICO )  
: ss.  
COUNTY OF BERNALILLO )

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knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial  
seal this 19th day of August, 1955.

  
Notary Public, Court Reporter

My Commission Expires:

June 19, 1959