BEFORE THE

Oil Conservation Commission

SANTA FE, NEW MEXICO

March 16, 1955

IN THE MATTER OF:

CASE NO. 860 — Regular Hearing

TRANSCRIPT OF PROCEEDINGS

ADA DEARNLEY AND ASSOCIATES

COURT REPORTERS

ROOMS 105, 106, 107 EL CORTEZ BUILDING
TELEPHONE 7-9546
ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 16, 1955

IN THE MATTER OF:

    The application of the Oil Conservation
Commission upon its own motion for an
order amending provisions of Paragraph 2
of Rule 6(A) of the Fulcher Kutz-Pictured
Cliffs Gas Pool Rules; Paragraph 2 of
Rule 6(A) of the Aztec-Pictured Cliffs
Gas Pool Rules; and Paragraph 2 of Rule
6(A) of the South Blanco-Pictured Cliffs
Gas Pool Rules; all as contained in Order
R-565.

    Applicant, in the above-styled cause,
will consider proposals to amend Paragraph
2 of Rule 6(A) of the Fulcher-Kutz-
Pictured Cliffs Gas Pool Rules; Paragraph
2 of Rule 6(A) of the Aztec-Pictured
Cliffs Gas Pool Rules; and Paragraph 2 of
Rule 6(A) of the South Blanco-Pictured
Cliffs Gas Pool Rules, as set forth in
Order R-565, to provide for a procedure
in assigning allowables to wells located
on tracts containing less than a standard
spacing unit to prevent the premature
abandonment of wells caused by assignment
of low allowables.

Case No. 860

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 860.

E L V I S   A.   U T Z

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

DIRECT EXAMINATION

By MR. KITTS:

Q   Will you state your name and position, please?

A   Elvis A. Utz, Engineer with the Oil Conservation Commission.

Q   Mr. Utz, you are familiar, I believe, with Case Number 860, which pertains to a proposed amendment of the provision of Paragraph 2 of Rule 6(A) of the separate various pool rules contained in R-565, is that correct?

A   That is correct.

Q   Mr. Utz, in your study of this matter, as a result of this study, you have certain recommendations to place before the Commission as to these revisions?

A   Yes, I do.

Q   Will you state what they are?

A   In order to explain what we mean by the breaking point, I would like to take the liberty to read a little explanation of how we arrive at the breaking point.

In calculating allowables as required by Order R-565, it is necessary to find what is commonly called the "Breaking Point". This is brought about by the fact that the pool allowable is determined by the demand of gas from the pool. There are almost always some low deliverability wells which cannot produce their calculated allowable. These wells then must be assigned an allowable equal to their ability to produce or 100% deliverability. Order R-565 states that wells in Fulcher Kutz, Aztec and South Blanco shall be prorated according to a formula. This formula is 25% acreage plus 75% acreage times deliverability. Since there are certain wells in a pool which cannot produce the volume

calculated by the formula and are allowed 100% deliverability

instead if the calculated allowable, it is necessary to determine

the deliverability value at which 100% deliverability ends and the

25% acreage plus 75% acreage times deliverability formula takes

over. This is the "Breaking Point".

Thisppoint is determined by applying a "cut and try" formula

which is:
$$\frac{F_1}{1-F_2} = BP$$

where:

$$F_1 = \frac{\text{Estimated daily non-marginal acreage allocation}}{\text{Estimated daily non-marginal acreage factors in pool.}}$$

$$F_2 = \frac{\text{Estimated daily non-marginal Ac x Del. allocation}}{\text{Estimated daily non-marginal Ac x Del. factors in pool.}}$$

When the estimated BP equals the calculated breaking point

then of course the problem is solved.

However when applying the formula to wells with low acreage

factors (less than 160) their calculated allowable is less than the

allowable of the well at the breaking point. The allowables of

these wells calculate as low as 14 Mcf/da. There are 29 wells so

affected in the Fulcher Kutz Pool and two wells in the Aztec

Pictured Cliffs Pool. In all probability pending non-standard

unit applications, when approved, will eliminate all but 19 wells

in Fulcher Kutz from this category.

To give you a little explanation of how that will effect the

pool allowables, or how it has effected the pool allowables, I

would like to explain by means of this chart.

Q   That is marked Exhibit No. 1, Mr. Utz?

A   I will mark it as Exhibit No. 1.

(Marked Commission's Exhibit No. 1
for identification.)

Q That was prepared by you?

A Yes, it was. Horizontally I have plotted the deliverability in MCF per day. On the right side of the graph I have plotted individual well allowables, million cubic feet per month. The blue curve represents the allowable curve for wells of various deliverabilities. The breaking point that I just attempted to explain is this point where the curve breaks. This is brought about because these wells down here can not deliver their calculated deliverability. Therefore, by the "cut and try" method, we have to calculate this point so that we will be able to assign the balance of the wells which are capable of delivering their calculated allowable, and be able to assign them their allowable on the basis of the formula.

The other curves, the black and red and green curves are pool allowables. Again the horizontal deliverability in MCF per day is applicable to those. On the left hand side of the chart, I have plotted pool allowable in million cubic feet per month. The green curve represents the allowable as it would be without the new proposed rule, which gives some advantage to the low acreage factor wells. The red curve indicates how the pool allowable would be distributed after the non-standard applications that I spoke of are allowed, which should happen about May 1st. The black curve indicates how the allowable is distributed as of now with 29 low acreage factor wells. As may be seen, it doesn't make too great a difference except a few wells in the category around 100 to 200 MCF.

Q Mr. Utz, do you have a recommendation to make for a revision of Paragraph 2?

A Yes, I do have.

Q Will you mark that Exhibit 2, if it is not so marked?

                (Marked Commission's Exhibit 2, for identification.)

A I haven't had the opportunity of distributing that. I wonder if I should read it?

Q I believe you should read it. Would you do so, please?

A "Proposed Amendment to Rule 6 -- Order R-565. 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 wells ability to produce. If the allowable so assigned is greater than the wells 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."

Q Do you have any comment on that proposed amendment, Mr. Utz?

A I have a recommendation to make. The addition of this paragraph to Rule 6 of Order R-565 will, in my opinion, help to prevent the premature abandonment of small deliverability wells which were drilled on small tracts. Most of these wells were drilled in good faith before 160-acre spacing was in effect and are therefore due some special consideration. I therefore recommend that Rule 6 of Order R-565 be amended by the substitution of this paragraph.

Q For Paragraph 2?

A That is right.

MR. MACEY: Anyone have any questions of the witness?

(Witness excused.)

MR. KITTS: We would like to offer in evidence, Exhibits 1 and 2.

MR. MACEY: Without objection the Exhibits will be received. Anyone have anything further in this case? If not the case will be taken 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 17th day of March, 1955.

_____
Notary Public, Court Reporter

My Commission Expires:
June 19, 1955

1. In calculating allowables as required by Order R-565 it is necessary to find what is commonly called the "Breaking Point". This is brought about by the fact that the pool allowable is determined by the demand of gas from the pool. There are almost always some low deliverability wells which cannot produce their calculated allowable. These wells then must be assigned an allowable equal to their ability to produce or 100% deliverability. Order R-565 states that wells in Fulcher Kutz, Aztec and South Blanco shall be prorated according to a formula. This formula is 25% acreage plus 75% acreage times deliverability. Since there are certain wells in a pool which cannot produce the volume calculated by the formula and are allowed 100% deliverability instead of the calculated allowable, it is necessary to determine the deliverability value at which 100% deliverability ends and the 25% acreage plus 75% acreage times deliverability formula takes over. This is the "Breaking Point".

This point is determined by applying a "cut and try" formula which is:

$$\frac{F_1}{1-F_2} \cdot BP$$

where:

$$F_1 = \frac{\text{Estimated daily non-marginal acreage allocation}}{\text{Estimated daily non-marginal acreage factors in pool.}}$$

$$F_2 = \frac{\text{Estimated daily non-marginal Ac x Del. allocation}}{\text{Estimated daily non-marginal Ac x Del. factors in pool.}}$$

When the estimated BP equals the calculated breaking point then of course the problem is solved.

However when applying the formula to wells with low acreage factors (less than 160) their calculated allowable is less than the allowable of the well at the

breaking point. The allowables of these wells calculate as low as 14 Mcf/da.
There are 29 wells so affected in the Fulcher Kutz Pool and two wells in the
Aztec Pictured Cliffs Pool. In all probability pending non-standard unit
applications, when approved, will eliminate all but 19 wells in Fulcher Kutz
from this catagory.

The addition of this paragraph to Rule 9 of Order R-565 will in my
opinion help to prevent the premature abandonment of small deliverability
wells which were drill on small tracts. Most of these wells were drilled in
good faith before 160-acre spacing was in effect and are therefore due some
special consideration. I therefore recommend that Rule 9 of Order R-565 be
amended by the addition of this paragraph.