

RECESSED HEARING

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE  
OF NEW MEXICO

Held at the House of Representatives,  
State Capitol, Santa Fe, New Mexico,  
at 9:00 o'clock A. M., December 9, 1939.

PRESENT:

Hon. John E. Miles, Governor, Chairman of Commission  
Hon. Frank Worden, Commissioner of Public Lands, Secretary  
Hon. A. Andreas, State Geologist, Member of Commission  
Hon. Carl E. Livingston, Attorney for Commission.

Pursuant to the order made on December 6, 1939, separating the hearing on the Hobbs Proration Order and the Monument Proration Order, hearing on the Monument Proration Order was convened at nine o'clock, A. M., of December 9, 1939, the appearances being the same as on December 6, 1939, in this case, No. 14, whereupon the following proceedings were had, to-wit:

BY MR. SETH: I understand Mr. Kraus has a report from the Engineering Committee appointed last summer, and I suggest that Mr. Kraus be sworn.

EDGER KRAUS,

being first duly sworn to tell the truth, the whole truth and nothing but the truth, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q State your name.

A Edgar Kraus.

Q What is your profession?

A Petroleum geologist and engineer.

Q By whom are you employed?

A Atlantic Refining Company.

Q Was a committee appointed last May or June, of engineers, to submit a report on Monument and Hobbs?

A There was.

Q Have they agreed on a report on Monument?

A They have.

Q Were you chairman of that committee?

A I was.

Q Will you please state the names of the members of the committee and read the report?

A The members were G. E. Card, of the Stanolind Oil & Gas Co.; Jack Rankin, of the Repollo Oil Co.; Lloyd Gray, of the Gulf Oil Corporation; M. Albertson, of the Shell Oil Corporation; R. S. Dewey, of the Humble Oil & Refining Company; and R. S. Christie, of the Amerada Petroleum Company; A. E. Gibson, of the Cities Service Oil Company, and myself as chairman.

In investigating conditions at Monument, we found one condition that the committee unanimously believed should be corrected. It appears that in some cases when packers are set in wells in the Monument field, bottom hole pressures are reduced. In view of the fact that the proration formula at Monument includes the bottom hole pressure factor, this reduction in pressure actually penalized some operators who set packers, in their daily allowable. Although the committee did not feel that operators setting packers should be rewarded for such work, since it was a conservation measure, they did feel that such operators should not be penalized. For that reason the following recommendation was made concerning the assignment of pressures to Monument packer wells: (Reading)

✓ "METHOD OF ASSIGNING PRESSURES TO MONUMENT PACKER WELLS

The committee recommends the following procedure in determining the bottom hole pressure of wells in which packers have been set:

Pressures shall be taken in packer wells as in nonpacker wells, and the pressures used in determining the average bottom hole pressure of the field and the percentage rates of increase or decrease in the field's average bottom hole pressure.

If the operator elects, the bottom hole pressure of a packer well may be used to determine its allowable according to the formula in use.

If he elects not to use the measured pressure, and it has been determined to the satisfaction of the proration umpire that the packer has in fact been successful in conserving reservoir energy, then a bottom hole pressure may be assigned to the packer

well, which bottom hole pressure is to be used in determining the allowable of the well according to the formula. The assigned pressure shall be calculated by applying to the bottom hole pressure of the packer well the average percentage increase or decrease of bottom hole pressure in all of the non-packer wells on the eight units adjoining or cornering on the unit on which the packer well is situated. This average percentage increase or decrease shall be applied to the bottom hole pressure of the packer well found by actual test in the regular pressure survey run prior to the date the packer was effectively set. If none of the wells on the eight units described above are without a Packer, then in that event the percentage increase or decrease of the field's average bottom hole pressure may be used in determining the bottom hole pressure of the packer well in the same manner as described above.

When packers have been set before the effective date of the acceptance of these recommendations, and the packers are effective in conserving reservoir energy, then at the option of the operator the pressure of the packer well may be determined as described above and used in the future in determining allowable. In no event shall any change in such bottom hole pressure be used retroactively.

It is recommended that bottom hole pressure be taken in all wells in the field unless mechanically impossible so that averages of the two types mentioned above used in assigning pressures may be as representative as possible.

The committee urges that each operator do the necessary remedial work to reduce gas-oil ratios."

That ends the recommendation.

BY GOVERNOR MILES: Was it the unanimous decision by the committee that the packers be set?

A That is right.

BY MR. SETH:

Q You have had many years experience in Lea County wells, in all fields?

A Yes, sir.

BY MR. SETH: I think the Commission knows Mr. Kraus's qualifications without bringing that out.

Q Do you recommend the adoption of this report by the Commission?

A I do.

Q You believe it is a conservation measure?

A It is primarily for that purpose.

Q And will give an increase in the ultimate recovery of petroleum?

A Yes, sir.

Q And it will do no harm to wells or their equity?

A I believe it will do equity to all.

Q And in your judgment, should that be put into effect at the earliest possible date?

A Yes, sir, since it is designed for conservation purposes, I think it should be put in effect immediately.

BY MR. KOENIG (Of the Ohio Oil Co.):

We are in accord with everything brought out, except we have asked for an adjustment on allowables on three packer wells already completed. The thing we have in mind in asking for a re-adjustment in allowables has been delayed in some other matters. We hoped there would be some adjustments retroactively; on wells that have been completed for eight or ten months, and we have suffered considerable loss.

BY MR. ANDREAS: Was the Ohio represented on this committee?

A No, sir. The way it has been worked out and recommendations made, it is very satisfactory except for the retroactive factor. We have lost considerable oil, but we have been able to reduce our ratios; one well was 20 to 1, another 30 to 1. We have reduced the ratios in all wells running packers. The highest is 12 to 1, the lowest 4 to 1. We have been successful in running packers, and in all three of the wells in which we ran packers there was a reduction in pressure. We would like to set an example that packers can be run to help the field and help the gas-oil ratios. We have gone ahead very much in line with Mr. Andreas's suggestion. That is, it was in line with the suggestion of the Commission -- at least Mr. Andreas' suggestion was made approximately a year ago, and was that he would recommend packers being run in the high gas-oil ratio wells in Monument.

BY MR. HEDRICK: If the Commission, in its wisdom, has seen fit to change the formula and give more weight to bottom hole pressure, would your recommendation be the same?

A I think this has nothing to do with the allocation formula.

BY MR. SETH: That is all.

Witness dismissed.

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BY MR. CHRISTIE: (Of Amarada Petroleum Co.): If this is the proper place, I would like to submit a change in the method of taking bottom hole pressure in the Monument Pool.

BY MR. WORDEN: Are you offering that?

A I am submitting it.

BY GOVERNOR MILES: Will you submit it to the committee?

A This was taken up by the operators.

BY MR. SETH: If he is going to be cross examined, I think he should be sworn.

R. S. CHRISTIE,

being first duly sworn to tell the truth, the whole truth and nothing but the truth, was examined by Mr. Seth, and testified as follows:

DIRECT EXAMINATION

Q State your name?

A R. S. Christie, of the Amerada Petroleum Corporation.

Q Are you a petroleum engineer?

A Yes, sir.

Q With many years experience in New Mexico?

A Yes, sir.

Q You desire to submit a recommendation as to the method of taking bottom hole pressures at Monument?

A Yes, sir. (Reading):

"Method of Taking Bottom Hole Pressures  
in the Monument Field.

The bottom hole pressure shall be taken at a sub-sea depth of -250 ft. In event this depth cannot be reached, the gradient shall be determined between this sub-sea depth and the actual measured depth and the bottom hole pressure of the well corrected

according to the weight of the fluid or gas as determined by the gradient. If for any reason a gradient cannot be determined the well will be given the unit allowance."

BY MR. SETH: Any questions?

BY MR. RANKIN:

Q Mr. Christie, in case a packer is set with a chain in it, and that chain falls above the -250 mark, would your recommendation still hold true? What I am trying to get at, the operators has made an effort to do corrective work.

A Of course, we do not know there is fluid in the hole.

Q The effectiveness of the packer setting could shortly be determined before setting the packer?

A I believe in a case like that, the weight of the fluid in the bottom of the hole could be determined fairly accurately.

Q If ratios were taken before and after the packer setting, and conservation measures have resulted from setting the packer, and ratios are lowered, do you think the well should be penalized from the point the packer is set by measuring the gradient in that case to a -250 point?

A If you have established a low ratio well by reason of setting a packer, you will have fluid in the tube and can establish the gradient in the well. This is not intended to penalize anybody for conservation. It is just made inasmuch as, if pressure is used as a factor, I think that should be corrected.

BY MR. SETH:

Q Why do you make this recommendation?

A The formula for allocation of production at Monument has one factor of bottom hole pressure, and if you are going to use that, then it should be as correct as can be obtained.

Q What change would that make?

A At the present time, if you cannot reach -250 feet depth, the measured pressure is taken and corrected from that depth of -250, using the gradient of oil, which, in some cases, might give an additional pressure of 50 or 60 pounds. If your well is a completely gas well, you will have an additional 50 or 60 pounds you should not be entitled to.

Witness dismissed.

BY MR. FLEETWOOD: (Barnsdall Oil Co.) We are here to attend the hearing on any modification or alteration of the proration plan for Monument. We favor a change; however, we did not petition the Commission to set a hearing. If Mr. Livingston will allow a reference to the Hobbs hearing, we feel as we did in that case, that whoever did ask for the hearing, whether by petition or oral request, should at this time proceed on the request or application for change. If that is not the modus operandi, before we proceed we would like to request that information so that we may be advised of the identity of the person or persons who made the request. We do favor a change, but we would like to be advised of the method of procedure.

BY MR. RANKIN: Insofar as I have been able to determine, no operator asked for the hearing on the Monument field. It seems to me, as well as I can determine, the Commission asked for the hearing.

Insofar as the Repollo Oil Company is concerned, they are very well satisfied with conditions as they are.

BY MR. FLEETWOOD: If there is no one present that did request the hearing, we are quite willing to proceed.

BY MR. WORDEN: Proceed.

BY MR. FLEETWOOD: Perhaps I should outline our position so that there will be no misunderstanding.

The Barnsdall, ever since we obtained production at Monument, has been consistently endeavoring to secure the promulgation of a proration plan, or a set of rules which would permit every operator, insofar as is practical or possible, to produce ratably his oil in place. The Commission which formerly promulgated rules did not, we feel, and did feel at that time, ever write an order which would do equity between the operators and permit everyone to have his fair chance to produce his oil in place. We feel today we have evidence to prove that such rules should be, can be, and will be written. Our case today will be very brief. We came out here with the hope, which has been justified, that the Stanolind and Gulf would prove our case at Monument, and we feel they have adequately done that.

We are going to attempt to show that our oil in place is

being drained from under our land, and the oil of other operators is being drained, and that does not comply with the laws of the State of New Mexico.

Our second contention is that that condition can be remedied just as Dr. Knappen testified in the Hobbs case, by more greatly accenting the weight given to bottom hole pressure. If the Commission is willing, I will proceed.

BY GOVERNOR MILES: Proceed.

GEORGE H. CARD,

being first duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined by Mr. Fleetwood, and testified as follows:

DIRECT EXAMINATION

Q You are George Card, engineer for the Stanolind Oil and Gas Company, aren't you?

A Yes, sir.

Q You are the same Mr. Card who testified the other day before this Commission that the fields of Eunice, Hobbs and Monument were so nearly similar that there was no reason to have any different proration plans applicable to each of them?

A I didn't say they were similar, except that I said I couldn't see any essential difference in the three fields that would justify Eunice being on straight acreage and Hobbs should not be on straight acreage, and also that there was a higher straight acreage factor at Monument than Hobbs.

BY GOVERNOR MILES: You didn't say they were similar?

A I said I didn't see why Hobbs should not be on straight acreage if Eunice is.

BY MR. FLEETWOOD:

Q You did testify that the similarity between the fields was such that any proration plan applicable to one should be applicable to the three?

A I think straight acreage would be applicable to all.

Q Did you testify to that, that the three fields were so similar there was no reason for a different proration plan?

A The point I made was that straight acreage would be applicable.

BY MR. FLEETWOOD: We feel sure he did testify to that, and we would like to get the stenographic notes from the young lady who made the record. I think that will show he did so testify.

BY MR. RANKIN: It seems to me this case is getting very involved. We were talking about Monument and Hobbs, and now we have gone down to Eunice. Insofar as the Repollo Oil Company is concerned, Eunice was not on this notice of hearing, and we are wholly unprepared. We would like to make a study of Eunice before that field is taken up.

BY MR. FLEETWOOD: Of course, Mr. Rankin realizes that this hearing is on Monument only. My only purpose in asking Mr. Card this question is to refresh the Commissioners' and the operators' memory to the effect that Mr. Card did testify to that effect, and I certainly think it is quite essential to a consideration of our program to determine that similarity.

BY MR. RANKIN: I suggest the witness testify to what he thinks he testified to.

BY MR. FLEETWOOD: I want that answer to be in the record.

BY GOVERNOR MILES: You can testify now.

A I just stated in the last answer.

BY GOVERNOR MILES: Was his answer satisfactory?

BY MR. FLEETWOOD: I would like to re-state the question and ask Mr. Card, did you, or did you not say that, and if he is not willing to do that, then ask the young lady to bring her notes. With the Commission's approval, I will ask that question.

Q Did you, or did you not testify that Eunice, Hobbs and Monument fields were so similar there was no reason why there should be any difference in the proration plans applicable to all three fields?

A The point I was making, as I told you --

BY MR. FLEETWOOD: He can answer that yes or no.

BY GOVERNOR MILES: We will ask that the record be brought up.

BY MR. FLEETWOOD: I withdraw Mr. Card from the witness stand.

If the Commission please, I would like to replace Mr. Card with Mrs. Irene Kerchner and have her sworn.

MRS., IRENE KIRCHNER,

being first duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined by Mr. Fleetwood, and testified as follows:

DIRECT EXAMINATION

Q Will you state your name.

A Mrs. Irene Kerchner.

Q Are you the reporter who made the stenographic shorthand notes during the first part of the Hobbs hearing?

A I was.

Q Is this transcript made from your shorthand notes?

A Yes, sir.

Q I will ask you if the transcript of the following question and answer is correct: "Question: In your opinion, is there such difference between the three pools as justifies any difference in the allocation of the allowable to the wells in each one?" Answer by Mr. Card: "No difference";

I will ask you if that is a correct quotation of that question and answer?

A That is a correct quotation.

Witness dismissed.

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BY MR. FLEETWOOD: That is all I had to inquire of both Mrs. Kerchner and Mr. Card.

R. D. CURTIS,

being called as a witness and being first duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined by Mr. Fleetwood, and testified as follows:

DIRECT EXAMINATION

Q Will you state your name?

A R. D. Curtis.

Q Are you an employee of the Barnsdall Oil Company?

A I am.

Q How long have you been employed by the Barnsdall Oil Company?

A Since February, 1936.

Q What position do you hold with that company?

A Proration engineer.

Q Will you briefly outline for the Commission your qualifications and experience?

A I graduated as a petroleum engineer from the Colorado School of Mines in 1926. I worked approximately six and a half years for the Typsy Oil Company, which is now the Gulf Oil Corporation, and I went with the Barnsdall Oil Company in February, 1936, for whom I am at present employed.

Q What are your duties with Barnsdall?

A My main duties are to take care of proration matters for the company, the engineering part of proration matters.

Q Have you ever, for these various people, Gypsy, Gulf, Barnsdall, worked in the field as field engineer?

A Not as field engineer, but I have been in the field.

Q What kind of work did you do?

A Roust-about.

Q In your job as proration engineer for Barnsdall, do the Lea County fields, and in particular, the Monument field, come under your observation?

A They do.

Q How much time, how many years have you spent, while working for the Barnsdall, accumulating data and making observations and drawing engineering conclusions relative to the Monument field?

A Close to four years now. I started work on that section when I went to work for them in February, 1936.

Q Have you, to the best of your ability, attempted to familiarize yourself with the facts and factors of engineering involved?

A I have tried my best.

Q In connection with your work is it necessary to ~~know~~ be familiar with the proration plan in effect at Monument?

A It is.

Q Do you know, at the present time, what the proration plan at Monument is?

A I do.

Q Would you briefly outline the present proration plan at Monument?

A The present proration plan --

BY GOVERNOR MILES: It will be necessary to recess this meeting until the gas-oil ratio meeting is finished.

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Pursuant to recess taken, this hearing was reconvened at eleven o'clock, December 9th.

BY GOVERNOR MILES: The decision of the Commission, in this Monument case, is that it will be continued until the first Monday in February, 1940. If there is no other statements to be made, the Commission will adjourn.

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C E R T I F I C A T E

I hereby certify that the foregoing and attached eleven pages of typewritten matter are a true, correct and complete transcript of the shorthand notes made by me on the 9th day of December, 1939, in the hearing before the Oil Conservation Commission in Case No. 14, in the Monument division of such hearing.

Witness my hand this 4th day of January, 1940.

R.S. (L. 1939) 10-6-2 m  
in special hearing.  
Municipal Hearing  
Date 9, 1939 - Council