

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

IN THE MATTER OF:

Case No. 1209

TRANSCRIPT OF PROCEEDINGS

DEARNLEY - MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
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February 20, 1957

NEW MEXICO OIL CONSERVATION COMMISSION
 MABRY HALL - STATE CAPITOL
 SANTA FE, NEW MEXICO

REGISTER

HEARING DATE February 20, 1957 TIME: 10:00 a.m.

NAME:	REPRESENTING:	LOCATION
<i>A. H. Hines</i>	El Paso Nat Gas	El Paso
<i>Ant. Dwyer</i>	El Paso Nat Gas	El Paso
<i>Jason W. Kelleher</i>	W.P. Carr	Santa Fe
<i>W. J. Quinonez</i>	W.P. Carr	Durango photo
<i>R. S. Christie</i>	Amerada	near Okla
<i>H. D. Bushnell</i>	Amerada Prop.	Tulsa, Okla.
<i>R. I. Lakson</i>	Amerada Pet Corp	Tulsa Okla
<i>Nancy Loyd</i>	N.M. Statehouse Reporting Service	S.F.
<i>Wm. J. Pooley</i>	acc	SF
<i>Warren Martin</i>	"	"
<i>John P. M. Navas</i>	"	"
<i>John P. M. Navas</i>	Nig. Petroleum, Inc.	Fl. Wood, Tex.

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
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IN THE MATTER OF: :

Application of Amerada Petroleum Corporation :
for an order establishing a 320-acre non- :
standard gas proration unit in the Jalmat Gas :
Pool in exception to Rule 5 (a) of the New :
Mexico Oil Conservation Commission Special :
Rules and Regulations for said pool as set :
forth in Order R-520. Applicant, in the :
above-styled cause, seeks an Order establish- :
ing a 320-acre non-standard gas proration :
unit in the Jalmat Gas Pool comprising the :
N/2 of Section 3, Township 26 South, Range :
37 East, Lea County, New Mexico; said acre- :
age to be dedicated to applicant's C. C. :
Cagle "C" No. 1 Well located 990 feet from :
the North line and 990 feet from the West :
line of said Section 3. The NE/4 of said :
Section 3 is not presently within the :
horizontal limits of the Jalmat Gas Pool. :

:Case No.
: 1209

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BEFORE:

Mr. Daniel S. Nutter, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: The hearing will come to order please. Let
the record show that this hearing convened in the office of the
secretary of the Oil Conservation Commission at 10:00 a.m., was
recessed, and reconvened in Mabry Hall.

The first case on the docket this morning will be case No.
1209.

MR. COOLEY: Case No. 1209. Application of Amerada Petroleum Corporation for an order establishing a 320-acre non-standard gas proration unit in the Jalmat Gas Pool in exception to Rule 5 (a) of the New Mexico Oil Conservation Commission Special Rules and Regulations for said pool as set forth in Order R-520.

MR. BUSHNELL: H. D. Bushnell, attorney for Amerada appearing on behalf of that corporation. I have two witnesses who are going to testify, and I would like them to be sworn at this time.

(Witnesses sworn.)

R. L. LAKSON

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

DIRECT EXAMINATION

BY: MR. BUSHNELL:

Q Would you state your name and place of residence?

A R. L. Lakson, Tulsa, Oklahoma.

Q And for what company are you employed?

A I am emplyed by Amerada Petroleum Corporation.

Q In what capacity.

A As a geologist.

Q Have you ever testified on prior occasions before this Commission? A No.

Q When did you -- you have a degree in geology, is that

correct?

A Yes, sir.

Q When did you receive it and from what school?

A I received a bachelor of science in geology from the South Dakota School of Mine Technology.

Q And in what year did you receive that degree?

A In 1949.

Q And how long have you been working as a geologist, since graduation?

A Since I graduated I have been working for Amerada Petroleum Corporation.

Q As a geologist, is that correct?

A As a geologist.

Q How long have you been working in the West Texas-New Mexico area?

A All of that time.

MR. BUSHNELL: Are his qualifications acceptable?

MR. NUTTER: They are.

Q (BY Mr. Bushnell): Mr. Lakson, I hand you what has been marked Exhibit No. 1. Would you state what that is?

A This is a plat showing the wells in the immediate area of Section 3, Township 26 South, Range 37 East, and it also shows the structural relationship of the Yates and Seven Rivers in that area.

Q Now, what were the points used as a basis of drawing these

contour lines?

A We used what Amerada terms as a Zone One point to contour this map on.

Q And what is Zone One?

A Zone One is a point about twenty feet into the Yates.

Q Twenty feet below the top of the Yates, is that correct?

A That's right.

Q Why did you use that point?

A We used the Zone One marker because we find that it is easier to pick up from samples than is the Yates top.

Q Now, what does this Exhibit show with reference to the structure in the N/2 of Section 3, which is Township 26 South, Range 37 East?

A It shows that the structural relationship of the N/2 of Section 3 does not go below a plus 275.

Q And how does that compare with the structure under other wells in this area?

A We note that there are five wells in this area that are producing gas below a plus 275.

Q Would you, for the record, identify those five wells by their quarter locations, quarter-section locations?

A The first one is the N/2 of the S/W of Section 10.

Q Section what?

A Section 10.

Q All right.

A Do you want the names on these --

Q No, if you will just identify them, those being the only gas wells.

A And then there are two in Section 9. There is one in Section 4.

MR. NUTTER: Which well is that, sir?

A That is the S/E of the S/W.

Q And there is one in Section 5 in the center of the S/E also, isn't there, in the S/W of Section 5?

A Yes.

Q That would make a total of six wells then, wouldn't it?

A I will have to make a correction on that. That first well that I listed is higher than our plus 275.

Q And to identify that well, that would not be included in there, that would be included where? A Section 10.

Q For the record -- A Section 10.

Q For the record, they are five wells.

(Amerada's Exhibit No. 2 marked for identification.)

Q I hand you now what is marked Exhibit No. 2. Would you state what this is?

A This is a west-east cross section using the top of the Yates Formation as a reference plane, and drawn from the following

gamma ray neutron logs: Olson No. 1 Farnsworth in Section 4, the Olson No. 2 Farnsworth in Section 4, the Amerada No. 1 Cagle "C" in Section 3, and the Olson No. 1 Gregory-Federal in Section 35.

Q Now, what does the yellow portion of this exhibit represent?

A The yellow coloring represents the actual productive and probable productive sands in the Yates and Seven Rivers Formation.

Q Now, you have furnished the Commission all the information that is available in this area, is that correct?

A Yes.

Q And from this information, evidence, as shown on these exhibits, in your opinion, do the productive sands in the Jalmat underlie all of the N/2 of Section 3?

A Yes, they do.

MR. BUSHNELL: That's all the questions I have of this witness.

MR. NUTTER: Does anyone have any questions of the witness?

MR. MANKIN: I have some questions.

MR. NUTTER: Mr. Mankin.

CROSS EXAMINATION

BY: MR. MANKIN:

Q I am Warren Mankin of the Oil Conservation Commission. You indicated on the right of the cross-section here, this Olson No. 1 Federal. Is that a producing well at the present time in the Jalmat

Pool?

A The only thing I can say is that it was completed as an oil well.

Q Completed as an oil well possibly from the Queen?

A Yes.

Q Was there any test of the Yates or the Seven Rivers in that well as to gas productivity? A To my knowledge, no.

Q Just what the electric log shows?

A That's right.

Q Now, Mr. Lakson, you indicated that the yellow is the actual productive and probable producing zones of the Yates and Seven Rivers. Is that based on samples or is that based on the interpretation of the logs?

A It is based on both, from the sample descriptions and the electrical log interpretation.

Q Three of the wells to the left of the cross-section are all productive, or have been tested to be productive of the gas--

A That is right.

Q --in these formations, and you have no knowledge of the wells to the far right? A That is right.

MR. MANKIN: That is all.

MR. NUTTER: Does anyone else have any questions of the witness?

MR. BUSHNELL: I would like to ask one more question. This information is correlated on this exhibit Mr. Nutter is referring to, and it is also based on test information, is that correct, as being productive, based on testing of those wells that were completed in the Jalmat? A Yes, that is right.

MR. NUTTER: If there are no other questions of the witness--

MR. UTZ: I have a question.

MR. NUTTER: Mr. Utz.

BY: MR. UTZ:

Q This projection on the basis of the electric log is projected from Amerada's Cagle "C" over to the Olson Gregory-Federal approximately two miles without any control, is that right?

A That is right, yes, sir.

Q And referring to Exhibit 1, I believe it was, the contour map, those contours are based on your so-called 1, which is twenty feet below the top of the Yates, is that correct?

A Yes.

Q What control did you have when you contoured the two hundred, the plus 250 and the plus 300 intervals in Section 34 and Section 3?

A I had no control to put those in there other than an established rate of dip coming down from the top of the structure.

Q And your electric log projection on Exhibit 2 doesn't

indicate the dip across the area?

A No, sir. That is, Exhibit No. 2 is drawn using the top of the Yates as a reference plane, and it would not show structure interpretation.

Q And you base your opinion that the NE/4 of Section 3 is productive from the Devonian Gas Pool on the basis of these two, entirely?

A Yes, sir.

MR. NUTTER: Correction, Jalmat.

A Yes, Jalmat.

MR. UTZ: Jalmat Gas Pool, excuse me. That's all I have.

MR. BUSHNELL: I would like to state Mr. Mankin reminded me that I didn't ask the witness who prepared the exhibits, and I would like the privilege of doing so.

MR. NUTTER: Go ahead.

MR. BUSHNELL: Were these Exhibits prepared by you or under your supervision, both exhibits, No. 1 and No. 2?

A Yes.

MR. NUTTER: Are there any other questions of the witness? If not, the witness may be excused.

MR. BUSHNELL: Mr. Christie.

R. S. CHRISTIE

having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY: MR. BUSHNELL:

Q Would you state your name and residence, and the company for which you are employed?

A R. S. Christie, Amerada Petroleum Corporation, Tulsa, Oklahoma.

Q And have you testified previously before this Commission?

A Yes, sir, I have.

(Amerada's Exhibit No. 3 marked for identification.)

Q I hand you what is marked -- Are his qualifications acceptable?

MR. NUTTER: Yes, sir.

Q I hand you what has been marked Exhibit No. 3. Will you state what it is and the purpose for which it is submitted?

A Exhibit No. 3 is a plat showing the proposed 320-acre non-standard unit which is outlined in green and shows the location of the subject well to be designated for the non-standard unit, and several surrounding wells, and also by red circle, the offset leases within fifteen hundred feet off the Cagle "C" No. 1.

Q It shows the specific 320-acre that is being asked for in this application, does it not? A Yes, it does.

Q For the record, would you state the purpose for which it is being submitted?

A It is to support our exhibit copies attached to its

application.

Q Now, Mr. Christie, when was the Cagle "C" No. 1, shown on that plat, originally drilled?

A It was originally drilled in April of 1949.

Q And how was it completed?

A The intended depth at that time, or pay, was the Langlie-Mattix, and it was proven non-commercial in the Langlie-Mattix, and was temporarily abandoned at that time.

Q And since then, it has been re-completed?

A Yes.

Q Will you state when the re-completion was and in what formation?

A Well, the well was re-completed approximately in June of 1956, and was completed in the Jalmat pay zone.

(Amerada's Exhibit No. 4 marked for identification.)

Q Now, I hand you what has been marked Exhibit No. 4. Would you state what that is?

A Exhibit No. 4 is a gamma ray neutron log, Amerada's Cagle "C" No. 1.

Q And what does it show with reference to the yellow area?

A The sands that are colored in yellow, or the yellow color represents the sands that are considered to be productive in the Yates and Seven Rivers Formations.

Q And what do the red hash marks represent on this exhibit?

A The red hash marks indicate where the well has been perforated for production.

Q It also shows the location of the top of the Yates, isn't that correct?

A Yes, sir, it does. The top of the Yates shown on the log is at 2638 feet, which is a plus 366 feet. It also shows the top of zone one which Mr. Lakson testified to be 2662 feet, or plus 342.

Q Now, it also shows the top of the Queens, is that correct?

A Yes, sir. The top of the Queens is depicted at 3331 or minus 309. This, of course, is also the base of the Seven Rivers.

Q What, Mr. Christie, is the -- was the initial potential test shown on this well?

A Initial potential, those tests present on the perforation were tested by Amerada and El Paso Natural Gas Company. The perforation **opposite** the Yates Zone tested six million cubic feet per day, and the perforation **opposite** the Seven Rivers tested three million cubic feet per day.

Q And what evidence do you have with reference to the pressure tests shown on this well?

A We took a pressure test on the well in both zones following completion and showed the pressure in the Yates Zone to be 3

763 pounds per square inch, and the pressure in the lower zone, 715 pounds per square inch.

Q How does this compare with the original pressure of the well shown in this area?

A Information that we have indicates the original pressure in this area was approximately 1200 pounds, so that would indicate we have reduction in pressure in this area of approximately 450 pounds.

Q From this information and the other evidence presented here, Mr. Christie, in your opinion, are the sands in the N/2 of Section 3 permeable so that the Cagle Well in the NW/4 of Section 3 can drain all of the North 320-acres?

A I think, based on the potentials, the magnitude of potentials, and also the fact that the area surrounding our Cagle "C" 1 has been reduced in pressure by approximately 450 pounds, indicates that one well will drain a larger area in this particular formation, and I think, in my opinion, that this well will drain that North 320-acres.

Q And, is it your opinion, that the owners in the N/2 of Section 3 would recover as much gas, based on present allowable rules, from one well as they would from two wells from this 320-acre tract?

A In my opinion, I think they would.

MR. BUSHNELL: That's all the questions I have of Mr. Christie at this time.

MR. NUTTER: Does anyone have a question of the witness? Mr. Utz?

MR. UTZ: Yes, I would like to ask a question.

CROSS EXAMINATION

BY: MR. UTZ:

Q Mr. Christie, referring to the Olson Gregory-Federal No. 1, in Section 35, S/E S/E, do you have any knowledge that that well was tested in the Yates and Seven Rivers?

A I have no knowledge, Mr. Utz, it was ever tested, but based on our Exhibit No. 2, I would expect that those sands that carry all the way through there, contain gas. It may require a fraction job, or something like that, to make them produce, but I am confident there is gas in those sands in that particular well.

Q Is there any production in the Yates and Seven Rivers to the North of Section 3, or to the South?

A Yes, all the wells that are shown on Exhibit 1 as being completed in that interval are gas productive.

Q Two wells in the W/2 of Section 34, that is correct, isn't it?

A The two wells, owned by Southern California Petroleum

Corporation. Those two wells have produced from the Jalmat interval one million seven hundred and some cubic feet of gas. Based on the commission records, approximately a million and a half has been produced from the No. 1 well.

Q It seems to me that the real question here is as to whether or not the NE/2 of Section 3 is productive from the Jalmat Gas Pool. You have determined that the 250, and 300 foot contours were drawn in without any control or electric log cross-sections; showed that there is no control over the area. Personally, I am just wanting information as to why you think that this is actually productive in the Jalmat Gas Pool, and that's all I am interested in.

A I think that the plat, or Exhibit No. 1 is actually a reproduction of a smaller area taken from a larger map that shows contouring in the Yates Formation that extended clear over to the Langlie-Mattix Field, and you will note that in the northeast corner, there is indications of a syncline coming in there, and it is inconceivable to me that those sands will not be productive over to that syncline, and probably start becoming more anhydrotic after you cross that syncline, and I still think that probably the gas production would at least, at least the gas in place would continue on to that Olson Gregory-Federal.

MR. NUTTER: Now, Mr. Christie, Mr. Utz' question was

based on the premise that you consider the Northeastern Quarter of Section 34 to be productive of gas. I don't believe you made that statement. Is that your expert opinion?

A Yes, it is. You will note our records will show that there are a hundred and ninety-two feet of the Yates Formation and about four hundred and eighty-two, three feet of the Seven Rivers in our Cagle "C" No. 1. It is inconceivable to me that those sands will not at least carry to the east edge of Section 3, being of that thickness.

Q (By Mr. Utz) You would not be desirous of dedicating any acreage to the Cagle "C"?

A No, sir.

MR. UTZ: That's all I have.

MR. NUTTER: Does anyone else have any questions?

BY: MR. MANKIN:

Q Mr. Christie, Exhibit No. 1 showed that this well was a dual completion. Would you like to correct the record to show that that originally was a dual completion, and would you explain what has happened since that time?

A The well was originally completed as a dual completion with the hopes of obtaining some oil production in the Langlie-Mattix Oil Zone, and it tested a very small amount of oil at that time, and also, at that time, we had placed the base of the Seven Rivers at a different point than we now place it, at a further base.

We placed it further up the hole, and therefore, part of the perforations finally developed that they were in the Jalmat interval rather than in the Langlie-Mattix, and therefore, the well is now to be completed, and produced entirely from the Jalmat interval. Notice the perforations that are shown on Exhibit No. 3. 4, pardon me, Exhibit No. 4.

Q Then the well was plugged back and the Langlie-Mattix perforations were plugged off, is that correct?

A Well, the well has not been plugged back as yet, and as far as I know, there has been nothing done to plug off those perforations. There are two things that we can do there. The packer now set at 2990 feet, which is between the Yates and the Seven Rivers, all we have to do is move that packer down below the Seven Rivers interval and put a blank choke and produce through the casing, or we can go in and squeeze those lower perforations, which tested, incidentally, very little production. I don't think that we will ever get anything out of it.

Q And at this point you are not ready to indicate that both sets of gas perforations will be produced together through the tubing?

A No, they will not.

Q Produced through the casing? A Through the casing.

Q What would be produced through the tubing?

A It wouldn't --

Q It would be plugged?

A Not unless we go in and set that packer lower, or plug the bottom off.

Q You do have two sets of perforations, two sets of perforations at the present time? A Yes, sir.

Q Separated by a packer? A Yes, sir.

Q To be able to produce both, you would have to remove those packers or produce one through the tubing and one through the casing, would you not? A That's right.

Q This will not be dual completion?

A It will not be dual completion.

Q And it will be production from the Yates and Seven Rivers?

A It will be production from the Jalmat interval.

Q Would you say that that was the Yates and the Jalmat interval of the Seven Rivers? A Yes, sir.

MR. MANKIN: That's all.

MR. NUTTER: Does anyone have any questions of the witness?

MR. UTZ: I have one more question.

BY: MR. UTZ:

Q Mr. Christie, if the NE/4 of Section 3 should be offset on the North, or the East by a dry hole in the Yates-Seven Rivers Formation, would that change your opinion as to whether or not the NE/4 is productive of gas or not?

A I don't know that it would change my opinion. I think it might lower the value of the amount of reserves under the NE/4. It would depend on how far they are offset, of course.

MR. UTZ: That's all.

MR. NUTTER: Does anyone else have any questions?

MR. BUSHNELL: I have one question.

REDIRECT EXAMINATION

BY: MR. BUSHNELL:

Q Mr. Christie, Exhibit No. 3 was prepared by you or under your supervision, is that correct?

A Yes, sir, also Exhibit No. 4.

MR. BUSHNELL: That's all I have.

MR. NUTTER: Does anybody else have any questions of the witness? If not, you may be excused.

MR. BUSHNELL: That is all the witnesses we have, and I would like to offer these four exhibits into the record.

MR. NUTTER: Is there any objection to the introduction of Amerada's Exhibits Nos. 1 through 4 as evidence in this case? If not, they will be received. Does anyone have any statements they wish to make in this case? We have a wire we received from the Southern California Petroleum Corporation, addressed to the New Mexico Oil Conservation Commission, Mabry Hall, Santa Fe, New Mexico. Re: Case 1209 set for hearing February 20. Southern

California Petroleum Corporation recommends 160-acre proration unit and objects to 320-acre proration unit for Amerada Petroleum Corporation's Cagle "C" No. 1 Well. We will not be represented at hearing. Letter follows. Signed Southern California Petroleum Corporation.

MR. BUSHNELL: Did the letter follow.

MR. NUTTER: We have not received the letter, to my knowledge.

MR. BUSHNELL: May I make a comment?

MR. NUTTER: Yes, sir.

MR. BUSHNELL: We have no objection to the telegram insofar as they state their objections, but if the subsequent letter attempts to state or conclude that there is no evidence of possible productive sands in the northeast, we would object to that bearing any weight.

MR. NUTTER: We recognize the fact that the letter is not subject to any rebuttal, as it has not been received yet, and it will be taken for what it is worth, sir.

MR. BUSHNELL: That is stated for the record.

MR. NUTTER: If there is nothing further in this case, we will take the case under advisement and proceed to Case No. 1210.

STATE OF NEW MEXICO)
)
COUNTY OF BERNALILLO) ss

I, J. A. Trujillo, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me; and that same is a true and correct record to the best of my knowledge, skill, and ability.

WITNESS my Hand and Seal, this, the 1st day of March, 1957, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

J. A. Trujillo

NOTARY PUBLIC

My Commission Expires:
October 5, 1960