

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 6, 1958

IN THE MATTER OF,

CASE 1436

TRANSCRIPT OF PROCEEDINGS

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Application of Amerda Petroleum Corporation for a non-standard gas proration unit. Applicant, in the above-styled cause, seeks an order establishing a 320-acre non-standard gas proration unit in the Bagley-Upper Pennsylvanian Gas Pool consisting of the SE/4 of Section 3 and the NE/4 of Section 10, all in Township 12 South, Range 33 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Amerada Mathers No. 2 Well located in the SE/4 SE/4 of said Section 3.

BEFORE:

Mr. Daniel S. Nutter

TRANSCRIPT OF PROCEEDINGS:

MR. PAYNE: Case 1436, application of Amerada Petroleum Corporation for a non-standard gas proration unit.

MR. FOX: I have one witness, Mr. Harold Kidd.

Mr. Examiner, does the application on file show an amendment as to the name of the well being Mathers rather than Mathis and upper rather than lower?

MR. NUTTER: The application has been of record.

MR. FOX: I move at this time the application be amended to appear as it is entered in the Commission's file.

MR. COOLEY: It was advertised properly. That was stamped out when it was filed.

MR. NUTTER: There's no record of it ever having been --

HAROLD C. KIDD

a witness, of lawful age, having first been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. FOX:

Q State your name, please?

A Harold C. Kidd.

Q Where are you employed, Mr. Kidd?

A I am employed as District Engineer for Amerada Petroleum Corporation at Monument, New Mexico.

Q You have not previously testified before this Commission, have you?

A No, sir.

Q Have you testified before the Texas Railroad Commission?

A Yes sir, I have.

Q Will you state your education and experience for the Examiner?

A I have a B. S. degree in petroleum engineering from the University of Tulsa. I graduated from there in the summer of 1948 and have been employed since I graduated as a petroleum engineer by the Creole Petroleum Corporation, the Raby American Oil Corporation and then with Amerada.

Q Where are you presently stationed?

A At Monument, New Mexico.

Q And your present position is District Engineer?

A Yes, sir.

MR. FOX: Will the Examiner accept Mr. Kidd's qualifications?

MR. NUTTER: Mr. Kidd is qualified.

Q (By Mr. Fox) Are you familiar with the application filed in Case Number 1436, Mr. Kidd?

A Yes, sir.

Q Will you describe it?

A It is an application to form a non-standard three hundred and twenty acre gas pro-ration unit for production of gas for Amerada at Mathers Number Two Well located in the Bagley-Upper Pennsylvanian Gas Pool. The proposed unit will be in the section being the southeast quarter of Section 10, Township 12 South, Range 33 East and is an exception to Rule 2-A of Order Number R-1091.

Q And why is it necessary to file this application for approval?

A The proposed unit is non-standard and crosses the Governmental section line.

Q Is Amerada the operator of the lease involved in the application?

A Yes sir, they are.

Q Now referring to Exhibit One, what does this exhibit show?

A Exhibit One applies to the Bagley field. It shows lease ownership and well locations in the field, the location of the proposed three hundred twenty acre gas unit and the location of the proposed unit well and also horizontal lines of the Bagley-

Upper Pennsylvania Gas Pool.

Q Does it also show the well locations in the vicinity of the non-standard proposed pro-ration unit?

A Yes sir, it does. I might also point out that the proposed three hundred twenty acre unit is outlined in red. The unit is circled in red and the horizontal limits are shown in yellow on the exhibit.

Q Mr. Kidd, has there been a communitization agreement executed in respect to this matter?

A Yes sir, it is partially completed in that all the lease owners have signed and it is in the hands of the Federal Government for their signature.

Q Do you expect their approval?

A Yes, sir.

Q With reference to Exhibit Number Two, what does this show?

A Exhibit Number Two is a structure map contouring the base of twenty-five feet. Here again the proposed unit is outlined in red and the horizontal limits of the pool are shown in yellow. The structure map shows that there is a maximum of fifty feet of structural clay over the proposed unit area and that the proposed unit will be approximately on the midpoint of the structure of the unit.

Q The limits of the pool are as defined to the Commissioner and shown in yellow, is that correct?

A Yes sir, the horizontal limits are shown and I might point

that the proposed unit will complete development within the horizontal limits. T. and P. has a hundred and sixty acre unit in the northeast quarter of Section 4 and Amerada has a three hundred and twenty acre unit in the south half of Section 34 and we have a unit in the process of being formed to take the north half of Section 3.

Q Now, in your opinion and based on the information which you have given us, are you reasonably sure that this well is productive of gas from the pool in question?

A Yes sir, I believe it is.

Q Now, referring to Exhibit Number Three. I might say that Exhibit Number Three is the log and it is not included in your group of exhibits, Mr. Payne. Will you state what this exhibit shows, Mr. Kidd?

A Yes sir, Exhibit Number Three is marked log of Mathers Number Two, the proposed unit well, showing the top and bottom of the Bagley-Upper Pennsylvanian Gas Pool and the proposed producing performances.

Q The performances in this formation are shown?

A Yes sir, the perforations are shown in red from 8605 to 8705.

Q Is this well within the vertical limits of the Bagley-Upper Pennsylvanian Gas Pool as defined by the Commission?

A Yes sir, the vertical limits of the Bagley-Upper Pennsylvanian Gas Pool as defined by the Commission in Order R-1091

from a minus 4250 to a minus 4515 and from a minus 4395 to a minus 4450.

Q Now, with reference to Exhibit Four, Mr. Kidd, what is that, what does it show?

A Exhibit Number Four is a tabulation of the drill stem test data for the Bagley-Upper Pennsylvanian Gas Pool reservoir and the tests for the wells within the proposed area have been underlined in red and shows that Caudill Three tested at a rate of one million, six hundred seventy-two thousand cubic feet per day.

MR. NUTTER: Show us the position of Caudill Three well, please?

A All right. Caudill Three would be in the northeast quarter of the northeast quarter of Section 10. Caudill Number Four would be in the southwest quarter of the southeast quarter of Section 3 and tested at a rate of two million, five hundred forty-three thousand cubic feet per day. Mathers Number Two, the subject well, in the southwest quarter of the southeast quarter of Section 3 tested at eight hundred two thousand cubic feet per day while Mathers Number Three, located in the northwest quarter of the southeast quarter of Section 3, had no show on drill stem tests.

I am not able to explain the test on Mathers Number Three Well. It has good log pay and showed very good sample pay and in my opinion would be productive if perforated. Simmons Number One is located in the northwest quarter of the northwest quarter of Section 11 just offsetting Caudill Number Three. It has a drill

stem test from a hundred and eighty-three thousand to seventy-six thousand cubic feet per day and that well is located as low structurally as any point on the proposed unit will be.

Q Mr. Kidd, have you examined logs pertaining to other wells in this area?

A Yes sir, I have.

Q What did you find on the examination?

A I found from the marker logs pay in all the wells in the unit area. C udill Number One had ten feet of pay, Caudill Number Three, sixteen feet of pay, Caudill Number Four, eleven feet of pay, Mathers Two, fifteen feet of pay and Mathers Three, eight feet of pay.

Q Now, directing your attention to Exhibit Number Five, what is this, what does it show, Mr. Kidd?

A Exhibit Number Five is a tabulation of the productive history of Mathers Number Two, which has produced since completion in April of 1951 in the Bagley-Upper Pennsylvanian Gas Pool. Mathers Number Two is a cululative production of approximately a billion, four hundred thirty-six million cubic feet of gas and fifty-one thousand one hundred forty-six barrels of distillate. The later production tests on the well shows the well producing at four hundred eighty-two thousand four hundred twenty-five cubic feet per day, making twelve and a half barrels of distillate with a G. O. R. of thirty-eight thousand, seven hundred seventy. At that rate the well has a flowing tubing pressure of approximately

two thousand and the graft of the distillate was sixty-eight degrees A. P. I.

Q Mr. Kidd, in your opinion, is this well capable of producing a three hundred twenty acre allowable from the pool in question?

A Yes sir, I believe it is. The well will be easily capable of making a three hundred twenty acre allowable. The well, I feel, was one of the better gas wells in the Bagley field and pressure production calculation presented in Case Number 1325 previously to the Commission showed the well to be draining in excess of two thousand acres.

Q Were the exhibits which have been presented to the Examiner prepared by you or under your supervision or direction?

A Yes sir, they were.

MR. FOX: I would at this time like to move the introduction of these exhibits in evidence.

MR. NUTTER: One through five?

MR. FOX: Yes sir, one through five.

MR. NUTTER: Is there any objection to Amerada's exhibits? If not, they will be received.

Q (By Mr. Fox) One further question, Mr. Kidd. In your opinion, is the approval of this application in the interests of prevention of waste and protecting correlative rights?

A Yes sir, I believe it is.

MR. FOX: That is all I have.

MR. NUTTER: Anyone have any questions of Mr. Kidd?

CROSS EXAMINATION

BY MR. UTZ:

Q What is your name again, Kidd?

A Kidd, K-I-D-D.

Q Is Amerada the owner of the leases to the west under your proposed units?

A No sir, I believe we let most of those go.

Q Do you know whether or not any drilling is being done in that area?

A No sir, I don't believe there is. I believe we do have the north half of the southwest quarter of Section 3, but I believe everything else in that area has been released.

Q The structural map indicates that the area might be productive.

A Yes sir, it does.

Q Can you explain why there is no anticipated development in that area?

A Actually, production from this Bagley-Upper Pennsylvanian Gas Pool depends more on the old perosity developments rather than it does the structural features and I don't know whether you would want to go out there and drill or not. It would be a risk.

Q Would the northeast quarter of ten be dry?

A The northeast quarter?

Q Yes.

A No sir, we actually have a flowing drill stem test in Caudill Number Three in that section and on Caudill Number One we didn't test, but it shows good marker log pay and also had good sample pay in it.

Q What is the base of your control to the west of this proposed unit?

A Actually, there isn't too much control there, just more or less our Geological Department's interpretation of the structural features in that area.

MR. UTZ: That is all I have.

CROSS EXAMINATION

BY MR. COOLEY:

Q Do you feel the northwest quarter of Section 3 is producing from the Bagley-Upper Pennsylvania Gas Pool?

A Northwest --

Q Yes.

A Quarter of Section 3?

Q Yes.

A Yes sir, I do.

Q The northwest quarter of Section 3?

A We have a well actually completed there now.

Q Producing a substantial quantity of gas?

A We are producing from the Bagley-Lower Pennsylvanian in that well but I believe we never produced the Bagley-Upper Pennsylvanian. It has tested, though, as productive.

Q It has tested as productive?

A Yes, sir.

Q In the northeast quarter of Section 4, a T.P. Well is producing a considerable quantity of gas from the Bagley-Upper Pennsylvania Gas Pool in the southeast quarter of Section 3. Isn't it reasonable to assume that production on three sides of it, that the southwest quarter of Section 3 would likewise be productive from the Bagley-Upper Pennsylvania Gas Pool?

A Yes, sir. Actually in our interpretation as I recall when we were on the first hearing we were showing that that area was productive but we were contested at the hearing on the nomenclature on the field and that cut the acreage out.

Q Now, Mr. Kidd, the Commission determinations as to nomenclature are by excluding acreage and not determinations by this Commission in most instances that the acreage is dry, but merely that it has not been proven productive in a given --

A Yes sir, and I believe it would require a well in that area to prove it productive. Like I say, that the pay in this zone is more perosity development than it is structure but you take east of the horizontal limits and the field is structural and there is pay in all or most of the wells. Where we did test them, we of course got no gas.

Q But the perosity development is sufficient on three sides of the well in the quarter of Section 3 to render a substantial quantity of gas from that pool, is it not?

A Yes, sir.

Q Do you feel that any drilling will be warranted in Section 10 in the Bagley-Upper Pennsylvanian Gas Pool?

A Well, I think you could make a productive well there, it would be, oh --

Q Do you think you could drill a commercial well there?

A Yes sir, I do.

Q It might be warranted there, but in your opinion it wouldn't be warranted in --

A No.

Q If you can drill a commercial well there, what about the limit of --

A Actually, I don't believe a hundred and sixty acre well is profitable to drill. It requires three hundred and twenty acres to pay out.

Q That's precisely my point. You dedicate the northwest quarter of Section 10 to your existing wells in the southeast quarter of Section 3 and you will then have destroyed the possibility of forming a three hundred and twenty acre well to the north side of Section 10, will you not?

A Yes sir, I questioned whether you would ever be able to profit to the north. I may have misunderstood you a while ago that the northwest quarter of Section 10 would be productive.

Q Do you feel that the quarter section to the west, we will say the northwest quarter of Section 10 and the southwest quarter

of Section 3 is less likely to be productive than the acre directly offsetting those quarter sections to the east where you have actually drilled and completed and found gas to exist?

A I am not sure I understood your question.

Q What are the conditions in the southwest quarter of 3 and the northwest quarter of 10 that make you believe that drilling would not be warranted in either of those locations?

A Actually, there's nothing to prove that that acreage would be productive, but until there's a well in there, why you have no control and since it is a perosity development, it would be I think just a risk to drill a well there for just gas.

Q Isn't it substantially a risk to drill where the Mathers Number Two is? Isn't that a risk?

A That well was drilled more or less for oil, all these wells that we have and in the process of drilling them, why we found that upper zone gas was productive.

Q But these are more or less salvage operations where wells were drilled for oil and found to be non-existant and you are trying to salvage these wells by making them gas producers?

A All the wells with the exception of one have been previous producers in the oil zone.

Q However, I believe you did state that you felt that you could complete a commercial well in the northwest quarter of the northeast quarter of Section 10?

A Yes sir, on the basis of the drill stem tests on your

Caudill Number Three.

Q What has been the defense of Amerada to the development of the Bagley-Upper Pennsylvanian Gas Zone if they can obtain commercial production there?

A Well, until just recently, why we had no field rules for gas and no one was producing gas in that area. It has just been in the last eight months or a year that anyone has attempted to make a gas well.

Q Do you think there will be further development in the Bagley-Upper Pennsylvanian for gas larger than is presently outlined?

A No sir, actually I believe that they have completed development of the Bagley-Upper Pennsylvanian.

Q Why do you believe this is so?

A Well, actually here again is a combination of porosity and structure and there are no indications as yet, of we will say to the west here being productive or having any gas pay in it.

Q To the same extent, there's been no wells drilled down there?

A Yes, sir.

MR. COOLEY: That's all the questions I have.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Kidd, do you have a map showing contours of the top of the Upper Pennsylvanian Gas Zone?

A No sir, I don't.

Q Has any such map been prepared to your knowledge by Amerada?

A Yes sir, when I was in Tulsa, I prepared a map of the top of it and one of the base and I sent for the structural map on preparation for this hearing and that's the one I got. We do have one of the top, it is almost a mirror picture of it.

Q The top of the pay or the top of the upper pay.

A The top of the upper pay, gas and oil.

Q I wonder if you can furnish us with a copy of that map?

A Yes, sir.

Q We sure would appreciate receiving one. You say that the preparation of this well is within the vertical limits of the Bagley-Upper Pennsylvanian Gas Pool and defined to the Commission?

A Yes, sir.

MR. NUTTER: Any further questions of Mr. Kidd?

CROSS EXAMINATION

BY MR. STAMETS:

Q Do you have a map such as this comparing the relative porosity of the wells?

A No sir, I don't

MR. STAMETS: That is all.

MR. NUTTER: Any further questions?

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Kidd, is it a fact that you don't feel that the area to the west of your proposed unit is productive of oil or gas,

that you won't recommend drilling or development in there?

A I don't feel it is productive of oil for sure and I would really question whether it would be productive of gas. It would be a distinct risk to drill a well there.

Q If you felt it was productive in oil, you would probably drill it?

A Yes, sir.

Q You would take a chance on it?

A Yes, sir. Actually, the oil wells in that area are very poor Pennsylvanian oil wells.

MR. UTZ: That is all.

MR. NUTTER: Are there any further questions?

(No response).

MR. NUTTER: If not, Mr. Kidd may be excused.

(Witness excused).

MR. NUTTER: Does anyone have anything further to say in Case Number 1436?

(No response).

MR. NUTTER: The case will be taken under advisement.

C E R T I F I C A T E

STATE OF NEW MEXICO)
 : ss
 COUNTY OF BERNALILLO)

I, JERRY MARTINEZ, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript under my personal supervision, and that the same is a true and correct record of the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 8th day of May, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Jerry Martinez
 Notary Public

My Commission expires:
 January 24, 1962

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Examiner hearing of Case No. 1436
 heard by me on 5-6, 1958.

[Signature], Examiner
 New Mexico Oil Conservation Commission