BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
CONFERENCE ROOM, STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

Wednesday, November 28, 1973

IN THE MATTER OF:

Application of Roger C. Hanks for creation of a new pool and special rules, Eddy County, New Mexico.

Case No. 5117

BEFORE: Richard L. Stamets,
Examiner

TRANSCRIPT OF HEARING

MR. STAMETS: Case 5117.

MR.CARR: Case 5117: Application of Roger C. Hanks for creation of a new pool and special rules, Eddy County, New Mexico.

MR. CHRISTY: John Christy, of Roswell, appearing on behalf of the applicant.

MR. STAMETS: Are there any other appearances?

(No response)

MR. STAMETS: You may proceed, Mr. Christy.

* * * *

LARRY McINTOSH,

was called as a witness, and after being duly sworn according to law, testified as follows:

DIRECT EXAMINATION

BY MR. CHRISTY:

Q State your name, address, and by whom you are employed, and in what capacity.

A Larry McIntosh. I reside in Midland, Texas. I am employed as a consultant petroleum engineer.

Q Mr. McIntosh, have you previously testified before this regulatory body and had your qualifications accepted?

A I have.

Q Are you familiar with the area and the wells involved in this application and what is sought by this application?

A Yes, I am.

MR. CHRISTY: Are the witness's qualifications satisfactory?

MR. STAMETS: They are.

Q (By Mr. Christy) Now, Mr. McIntosh, what is sought by the application in Case 5117?

A The applicant, Roger C. Hanks, is seeking approval, designation, and special rules for an area of Eddy County, New Mexico. This area consists of eight sections, approximately 5,120 acres, consisting of Sections 24, 25, and 36 of Township 19 South, Range 24 East. And Sections 18, 19, 30, and 31, Township 19 South, Range 25 East. And Section 1 in Township 20 South, Range 24 East.

Q Is that area depicted on Exhibit One and outlined in yellow?

A Yes, it is.

Q Now, you have given us the horizontal limits. What are the vertical limits?

A The vertical limit would be the Cisco Canyon portion of the Upper Pennsylvanian formation.

Q Are there any producing wells producing from the Cisco Canyon within the proposed area outlined?

A Yes. Hydrocarbon production was discovered back in 1964, and to date, there have been six wells completed, Cisco Canyon wells within the proposed area.

Q Are those shown in red on Exhibit Number One?

A That's correct. At the present time, one of these wells is producing under temporary permit; three of the wells are shut in and have been for some time, due to the absence of a gas connection and a salt water disposal facility in the area.

Q Let's identify those wells.

A The producing well is the Roger C. Hanks Federal No. 2, which is in the Southeast of Section 18, 19 South, 25 East.

MR. STAMETS: Is that in the Southeast or the Southwest?

THE WITNESS: The Southwest, excuse me.

A (Continuing) The three shut-in wells are the Barbara Federal No. 1, which is in the Northeast of Section 18; the Roger C. Hanks Stagger Draw No. 1, which is in Section 30; and the Roger C. Hanks Cathy "R" Fed, which is in Section 31. These are all in Township 19 South, Range 25 East.

Q Now, there are also two that have ceased to produce.

A Yes.

Q What are those?

A Those are the Atlantic No. 1 Hondo Fed, which is in Section 24 of 19 South, 24 East. And then we have the Yates Petroleum No. 1 Foster, which is in Section 1 of 20 South.

MR. STAMETS: Are those plugged and abandoned?

THE WITNESS: The Atlantic Well is plugged and abandoned. The Yates is plugged back to the Wolfcamp gas pipe.

Q (By Mr. Christy) What is the approximate time frame in which these wells have been drilled and completed?

A The initial production was established in 1964, November of 1964, and the first wells were the Atlantic Well in Section 24 and the Monsanto Hondo Well in Section 31.

Q The Monsanto Well is now known as the Cathy Erie?

A That's correct. These wells were completed in 1964, and then the Yates Well in Section 1 was completed in April of 1965.

Subsequently, all three of these wells were abandoned, the Yates Well being plugged back, and the other two being plugged and abandoned. There was no additional development in the area until 1970. At this time, Roger C. Hanks completed the No. 1 Dagger Draw Well in Section 30. Then in 1971, he re-entered the Monsanto Well, and recompleted that well.

Then he drilled the Barbara Federal No. 1 in Section 18. These wells produced for a few months, and were then shut in in the latter part of 1971 and the early part of 1972.

There had been no additional activity in the area until June of this year when Roger C. Hanks completed

the Barbara Federal No. 2 in Section 18.

Q Now, very briefly, on Exhibit One, I notice there are a number of other red-marked wells and some green-marked wells. Would you explain those, please?

A On this exhibit, which is the lease plat of the area, the producing wells in the Cisco Canyon are shown in red circles while wells that penetrated the Cisco, but either did not attempt completion or were unsuccessful with completions, those are shown with green squares.

This proposed area is part of a large producing trend which covers a lot of Cisco Canyon production.

We have here (indicating) the Indian Basin Field, which is a large field just north of the Dagger Draw Field. Just north of that is the Boyd Cisco Field, which has one gas well. Over to the left of the map, you have the Antelope Sink Field, which has one gas well.

Q Returning to the area involved in the application, I would like to ask you if you made a cross section study of the wells, and I refer you to Exhibit Two.

A Yes. Exhibit Two is a cross section which shows the logs of the producing intervals on each of the six wells within the area which have produced from the Cisco Canyon. The Cisco Canyon is composed of a carbonate reef, and the reservoir rock is described as limestone containing varying degrees of dolomite. The porous portions of the

reef, those which have been found to be productive, are predominantly dolomite. I think the cross section shows there are several porosity zones within the Cisco Canyon. Some of the zones appear to correlate from well to well, and appear to be continuous, while others do not.

Q We have many little stringers within the Cisco Canyon formation, do we not?

A That's correct.

Q What kind of pressures do we have on these wells?

A We have a very limited amount of pressure data at the present time, because the wells have been shut in most of the time. There were some pressures taken back in 1971 and 1972 when three wells were producing. The bottomhole pressures were taken when the wells were shut in in November of 1971, and the pressure taken on the Cathy Erie in Section 31 showed pressure of 2222 PSI at a depth of 7500 feet.

Approximately two months later, the Dagger Draw No. 1 Well in Section 30, which is more than one mile from this well, was also shut in,and the bottomhole pressure taken on this well-- They were unable to get to the bottom of the well, they stopped at 6200 feet, and the pressure at that point was 1917 pounds, and we were not getting fluid.

This is the reason we can't accurately project what

the pressure on this well would have been at the reservoir depth. It appears that they would have been very close together, though.

The other well that was producing at that time was the Barbara Federal No. 1 in Section 18. This well, in my opinion, is producing from some upper stringers in the Cisco Canyon not open in these other two wells. It showed a pressure of 2806 pounds. That was in December of 1971.

Subsequent to that, we do not have any pressures on any of the producing wells.

Q What are the drive mechanisms?

A It is my opinion that the predominant drive mechanism is solution gas drive.

Q I notice on your second chart in Exhibit Number Two reference is made to the Monsanto Hondo No. 1. That is the same well that was the Cathy Erie, is it not?

A Yes, it is. This well was re-entered by Roger Hanks, and subsequently renamed.

Q Now, would you tell us the production to date from the wells within the area, and may I refer you to Exhibit Number Three?

A Exhibit Three is a tabulation of the oil and water production from the six wells that have produced from this area. At the bottom of the tabulation are the totals

of oil and water for each of the wells through October of this year.

Starting on the left with the Atlantic Refining Company Federal No. 1, production had been 4168 barrels of oil before it was abandoned.

On the Monsanto Hondo Federal No. 1, we had production of slightly under 6000 barrels of oil. Roger Hanks then re-entered this well, and it produced an additional 5759 barrels. At the time the well was shut in in December of 1971, the well was making 50 barrels of oil daily, with about ninety-five percent water.

The third well, the Yates Petroleum Foster No. 1, made 6114 barrels of oil before being plugged back.

The next well, the Roger C. Hanks Dagger Draw Unit No. 1 Well, has accumulative production of 22,629 barrels of oil. At the time this well was shut in, it was making about thirty barrels daily,with about ninety percent water.

The next well, the Roger C. Hanks Barbara Federal No. 1, this well had accumulative oil production of 25,011 barrels. When it last produced, it was making about 35 barrels daily, with ninety-six percent water cut.

The last well in the tabulation is the Roger C. Hanks Barbara Federal No. 2. This well has just been producing since June. From all indications from early

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production on the well, it is going to be a somewhat better well than the other wells in the area. The accumulative production to November 1st was 12,720 barrels of oil. In October, it averaged about 138 barrels daily, and was making about seventy-five percent water.

Q I gather from your testimony that these wells are not barn burners?

A No, they are not. The production of the wells has been quite good, but as this tabulation shows, the water production has been very high. As a result of the high water percentage, the six wells have accumulative production of less than 60,000 barrels of oil. These wells cost about $215,000 to drill, and equipped with hydraulic pumpers, it would appear that unless the oil rate on these wells improve rather drastically, at least five of the six out there will be unprofitable.

Q You mentioned this large amount of water. How is the water disposed of?

A There is a salt water disposal well, which I believe is this one (indicating).

Q That is the one in the Southwest of the Southeast of Section 6?

A No, I believe it's in Section 5 of 20 South, 25 East; the Northwest corner of that lease.

Q There is a salt water disposal well for this large amount

of water?
A Yes, sir.
Q Is this the same salt water disposal well testified to before this regulatory body in about July or August of this year under Order R-4637?
A Yes, that's right.
Q We talked a little bit about the bottomhole pressures. Do you have any indication as to whether or not these wells in the producing area are within communication of each other other than the pressure tests you have mentioned?
A The pressure tests are not entirely conclusive, although they are indicative of communication between the wells. Other than that, it is my opinion that they are in communication because the wells have indicated good permeability, and each of the wells has at one time produced a fluid rate in excess of 800 barrels of fluid per day. Because of this, it is my belief that these wells probably are in communication and are capable of draining a rather wide area.
Q Would that wide area at this time be as much as 320 acres for each well?
A I believe so.
Q I believe the area involved in this application is presently a portion of the Dagger Draw Upper Pennsylvanian

and the Parrish Ranch Upper Pennsylvanian Pools. Do you have an opinion as to whether or not these are all one common source of supply?

A Yes, it is my opinion that they are.

Q Now, let's turn-- I think the application calls for special pool rules, is that correct?

A Yes, this is true.

Q What type of GOR, limiting GOR, are you proposing in the rules?

A A limited GOR of 2000 cubic feet.

Q What is the present GOR for these wells?

A There has been no gas sales from these wells, and we don't have what we would consider reliable gas volumes available.

Q Would you think they would fall within your proposed limiting rules?

A Yes, I do.

Q What type of oil allowable would you propose under the rules?

A We are proposing a maximum daily oil allowable of 427 barrels of oil. This would be the normal allowable for wells drilled on 160-acre spacing in the seven to eight thousand foot range. Although we are proposing that 320-acre spacing be established here, this allowable would be adequate for all of the existing wells, and it would safeguard against any excessive withdrawal if closer

spacing should prove desirable at some time.

Q Speaking of closer spacing, would you propose these rules be made permanent at this time, or when would we take a look-see to see whether or not the GOR and the 320 acres is acceptable?

A I propose they be made temporary at this time. As the wells are produced, some additional pressure information will be available, and we will be able to determine a great deal more about the nature of the reservoir.

Q For about what? Two years?

A I would think that a two-year period should be adequate.

Q Do you have an opinion as to whether or not the granting of this application will result in the prevention of waste, including economic waste, and at the same time protect the correlative rights and interested parties involved in the application?

A Yes, I believe that these proposed rules will both effectively prevent waste and they will permit the production of recoverable hydrocarbons from the reservoir, and at the same time protect the correlatives rights of all the interested parties.

Q Do you have an opinion as to whether or not the proposed special rules would result in the effective production of the maximum hydrocarbons under the area involved?

A Yes, I believe they would.

Q Were Exhibits One through Three prepared by you or under your supervision?

A Yes, they were.

Q Is there anything else I haven't asked you that you think would be of interest to the Commission in the consideration of this application?

A No, I think we have covered everything. While the dominant reason for us proposing this 320-acre spacing at this time is economic, at this point, it is also my opinion that the wells will effectively drain areas this large, and that we can produce the field efficiently in this manner.

Q As a petroleum engineer,and based upon the cost figures you have given and the results obtained so far from the area, would you recommend further drilling?

A No, I wouldn't at this time. Of course, there are a number of Upper Pennsylvanian fields in the Southeastern New Mexico region which have shown a tendency to increase in oil production as water is depleted within the reservoir, and these wells have been produced in the hopes that this will happen.

At this time however, until we have additional information that would indicate it is going to happen, I wouldn't recommend it.

Q That would be strictly from an engineering standpoint?

A Yes.

MR. CHRISTY: That's all I have.

MR. STAMETS: Do you want to offer the exhibits now?

MR. CHRISTY: Not yet.

* * * *

CROSS EXAMINATION

BY MR. STAMETS:

Q Looking at Exhibit Number One, the Foster Well in Section 1, I believe you said was a Wolfcamp gas well. Did you mean an oil well?

A It was initially, but it was plugged back to the Wolfcamp.

Q So far as you know, you don't have the same situation here that you do in the South Dagger Draw Upper Pennsylvanian Pool?

A I think not. From all we have seen to date, everything would indicate that this is predominantly an oil reservoir, whereas the other one seems to be predominantly gas.

Q The Cisco Canyon is commonly referred to as the Upper Pennsylvanian in this area, isn't that correct?

A That's right.

Q Do you anticipate there will be gas connections in this field in short order?

A Yes, there is pipe being strung now, and it is being connected out there right now to route the gas from this

field to the Marathon Plant in Indian Basin.

Q There seems to be more acreage set out on your Exhibit Number One than is absolutely necessary. I notice quite a bit of either unapproved acreage or acreage with dryholes. Would you have any objection to the resulting pool being somewhat smaller than what you have proposed here if it takes in all of the producible wells?

MR. CHRISTY: I think I would rather answer that. It depends on what you would like to eliminate. Are you thinking in terms of taking out Section 25?

MR. STAMETS: Yes.

MR. CHRISTY: Yes, I will go for that. The reason they were put in was so they would be connected. We also have the situation here with two pools with some production, even though they are abandoned at the present time.

Q (By Mr. Stamets) Is it your testimony, Mr. McIntosh, that these wells cannot be economically developed on less than 320-acre spacing at the present time?

A Yes, that's my testimony at the present time. They could not be economically developed on less than 320 acres. Of course, it is doubtful that they will be economically produced on 320 acres even.

Q And in order to create this new pool, you have proposed that it will be necessary to abolish the Parrish Ranch

and Dagger Draw Upper Pennsylvanian Pools?

A That's correct.

Q And at the present time, there is either no production in both of those pools or it is only by Mr. Hanks?

A That's right, yes.

MR. STAMETS: Are there any other questions of the witness?

(No response)

MR. STAMETS: If not, he may be excused.

(Witness excused.)

MR. CHRISTY: At this time, we offer into evidence Exhibits One through Three inclusive.

MR. STAMETS: Without objection, they will be admitted.

(Whereupon Applicant's Exhibits One through Three were admitted in evidence.)

MR. CHRISTY: That's all for the applicant.

MR. STAMETS: Is there anything further in this case?

(No response)

MR. STAMETS: Case 5117 will be taken under advisement.

* * * *

C E R T I F I C A T E

I, RICHARD E. McCORMICK, Certified Shorthand Reporter, 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; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Richard E. McCormick
CERTIFIED SHORTHAND REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 5117, heard by me on Nov 28, 1973.

Richard L. Stamets, Examiner
New Mexico Oil Conservation Commission

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I N D E X

E X H I B I T S

EXHIBIT		ADMITTED	OFFERED
Applicant's #1	Lease plat	17	3
Applicant's #2	Cross section	17	6
Applicant's #3	Tabulation	17	8