BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
September 18, 1968

REGULAR HEARING

IN THE MATTER OF:

Application of Wilson Oil Company for an exception to Order No. R-3221, as amended, Lea County, New Mexico. Case 3859

BEFORE: A. L. PORTER, JR.
Examiner

TRANSCRIPT OF HEARING

MR. PORTER: The hearing will come to order. The next case on the docket is Case 3859.

MR. HATCH: Case 3859. Application of Wilson Oil Company for an exception to Order No. R-3221, as amended, Lea County, New Mexico.

(Whereupon, Applicant's Exhibits Numbers 1 through 11, inclusive, were marked for identification.)

MR. PORTER: Mr. Losee.

MR. LOSEE: Mr. Chairman, A. J. Losee, Artesia, New Mexico, appearing on behalf of the Applicant Wilson Oil Company.

MR. PORTER: Do we have any other appearances in this case? Mr. Heidel.

MR. HEIDEL: Mr. Porter, F. L. Heidel of Lovington, New Mexico, appearing for Southeastern Feeland Owners Association of Lea County and the Lea County Farm Bureau.

MR. PORTER: Mr. Heidel, do you propose to put on any testimony or are you just making an appearance here?

MR. HEIDEL: Possibly for the record, to implement the testimony that was the basis for Order Number 3221, I will, myself, appear as a witness for about three minutes of testimony.

MR. PORTER: Anyone else? Mr. Losee.

MR. LOSEE: I have one witness: Mr. Lamb.

MR. PORTER: Will the witness stand and be sworn, please?

(Witness sworn.)

MR. LOSEE: With the Chairman's permission, in the absence of a roster, can I stay seated while I examine the witness?

MR. PORTER: That will be perfectly all right.

RAYMOND LAMB

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

DIRECT EXAMINATION

BY MR. LOSEE:

Q Would you state your name, please?

A Raymond Lamb.

Q Where do you live, Mr. Lamb?

A Artesia, New Mexico.

Q What is your occupation?

A I'm a Petroleum Geologist for the Wilson Oil Company.

Q How long have you been so engaged?

A More than twenty years.

Q During that period, during that entire period, have you operated or overseen the operation of the producing wells in the Wilson Pool that are the subject of this application?

A I have.

Q Have you previously testified before the Oil Conservation Commission?

A I have.

MR. LOSEE: Are Mr. Lamb's qualifications acceptable?

MR. PORTER: They are.

Q Would you state to the Commission, Mr. Lamb, the purpose of this application?

A The purpose of the application is for an exception to Rule R-3221 for the production of the remainder of the life of this field, exception to the disposal of water in underground wells and be permitted to dispose of the water in pits as we have done for the last thirty years.

Q Do you have an opinion as to how long it will take to deplete the oil in this reservoir?

A My estimate is about three years.

Q Now, previous to this time, on November 1, 1958, the Oil Commission, pursuant to its Order R-1224A, appointed some committees to analyze pollution of fresh water supplies in southeastern New Mexico.

A That's right.

Q Was Wilson Oil Company a member of any of those committees?

A We were a member of the original committee.

Q And with respect to the committee in charge of analyzing pollution in the Wilson Oil Pool?

A We were Chairman of that subject committee, handling

and obtaining of information. There was, at that time, one other producer in the field other than the Wilson Oil Company.

Q What was one of the directives of the Commission in connection with the appointment of Wilson Oil Company as Chairman of the committee?

A To obtain information, periodically, and to keep strict surveillance over the fresh water conditions in the area as possible, pollution from the water disposed from the Yates-Seven Rivers Pool.

Q Pursuant to that directive, did you gather water analyses from the various fresh water wells in the area of the Wilson Pool?

A The first means of obtaining information was in 1958. We have previous records prior to that, but we have continued with the obtaining of the information, periodically, down through this date.

Q Please refer to what has been marked Applicant's Exhibit 1 being the large area map of the oil and gas fields in southeast New Mexico and explain what is portrayed by this exhibit.

A This is a regional map of southeast New Mexico giving the relative location of the Wilson Yates-Seven Rivers Pool with respect to the other production in the area. You will note that it is a small isolated pool, not associated directly with the Eunice Monument platform, but as a Capitan Reef trend to

the west.

Q When was the pool discovered?

A The pool was discovered in 1938 and has continued production down to this date.

Q What is the nature of the producing reservoir?

A The main reservoir is classified as the Yates-Seven Rivers Reef. Some consider it as a reef of the Yates, and others, the reef of the Seven Rivers, but it is at the contact between the Yates and Seven Rivers and is continuous porous zone extending some 1100 feet below.

Q How many was the maximum number of wells that were producing in this field at the height of its producing status?

A About fifty-two wells.

Q How many of those wells were operated by Wilson Oil Company?

A About forty-six of them.

Q Now, is anyone other than Wilson Oil Company operating any wells in this pool at this time?

A No other production except Wilson Oil Company.

Q And how many wells do you presently produce in the pool?

A We are now producing twenty-three. We plugged out eight wells last year. We have some under consideration at this time. We have, remaining, twenty-three producing wells.

Q Please refer to what has been marked Applicant's Exhibit 2 and explain what is shown by this structural contour map?

A The Yates contour map was prepared by myself for the New Mexico Symposium. It is contoured on top of the Yates Formation to give the structural position of the entire pool, and you will note that there are three distinct, what we refer to as lobes. The north lobe was the one of first production and then the development extended to the southwest. A typical log, electric log, is on the right-hand side of the column with the Yates about 3500 feet and the top of the Seven Rivers or the top of pay at about 3780. The yellow area is the area filed with the application for this hearing and contains in excess of 2,000 acres.

Q What are the green dots?

A The green dots are locations of fresh water wells, the major part of those are shallow water. Two are Santa Rosa water wells.

Q Are some of those domestic water wells; that is to say, used for human consumption?

A Yes. The well in the northeast of Section 7 is used for our camp supply.

Q How many people live at that camp?

A Well, there are two at the present time; two families,

and there would be eight people.

Q Please refer to what has been marked Applicant's Exhibit 3 and it's on the board behind the Commissioners, being a map of the entire Wilson area, and explain what is portrayed by this map.

A This is a map enlarged of the one that you have in your packet. The area outlined in black is the same identical area marked in yellow on your regional map.

The green circles are the locations of fresh water wells in the area. There's a well here, a Simms well here, what we refer to as the Jeff Davis well, here, Barren well, the Christmas well, Brian Cochran had a well here at one time. Pan American had a water well at this location at one time.

MR. PORTER: By "this location", would you identify the location, Mr. Lamb.

THE WITNESS: By quarter sections?

MR. PORTER: Yes. No, that one in particular, "this location."

A This would be in the Northeast of the Northeast of Section 24, Township 21, Range 34.

MR. PORTER: That's within your producing area?

THE WITNESS: This was the domestic well and used for Pan American's camp. The reason I used this well, it is the one that we have the earliest record that goes back to 1950. It is

not now in use.

The brown cirles are the locations of our disposal pits where we have disposed of all produced water from the Wilson Yates-Seven Rivers Pool for the last thirty years.

Q How many pits are there, Mr. Lamb?

A There are seven pits.

Q Looking at the north edge of the black outlined area, I notice two water wells and one pit in close proximity to each other. Would you tell us, approximately, how many feet Pit Number 5 is from your Water Well Number 1?

A This is our domestic water well. Actually, Number 1 and Number 2 are at the immediate location. It's about 200 feet from here to here, from this battery to this one over here. This well is a deep Santa Rosa Well.

Q Now, that Well Number 1 is the well that is used in your camp for drinking water for these families?

A That's right.

MR. PORTER: And it's how close to the pit?

THE WITNESS: It's about 200 feet.

Q Now, referring down to the Section 12 in the middle of the area outlined in black, and I note there's another water well in close proximity to two other brown circles, being Pits 1 and 2. Would you explain how far the water well is away from those two?

A Well, this would be around 1,000 feet across here, probably 1500 feet across there. This well was also used as a domestic well at the time we had a pumper's camphouse here. We have since abandoned that house. This well is now used for water supply for drilling rigs and so forth in the area.

Q Are all of the lands in the proposed exempt area owned by the State of New Mexico?

A They are all owned by the State.

Q And the State is the lessor on all of your leases?

A That's right.

Q You can sit down now, Mr. Lamb. Please refer to what has been marked as Exhibit Number 4, which is a tabulation of oil and water production in the Wilson Oil Pool from 1939 to date by years and explain what is reflected by this tabulation.

A This is the tabulation obtained from the records of the Lea County operators and showing the annual production for all years except 1968, which includes only seven months of records so far, and it also includes the yearly production of all water in the Wilson Yates-Seven Rivers Pool. It gives the company total of 14,253,252 barrels of water; 8,029,567 barrels of oil. The Pool total production of water is 15,949,579 barrels of water, and the oil production is 8,738,595 barrels. That's to August the 8th of 1968.

Q So actually, during the life of this field, from looking

at this exhibit, you draw a conclusion that Wilson Oil Company has produced substantially all of the oil and substantially all of the water in this pool.

A That's right.

Q Based on your twenty years of experience with this pool, Mr. Lamb, do you have an opinion as to how much additional produced water will be produced in conjunction with the remaining primary oil?

A I have estimated about 850,000 barrels of additional water and 122,500 barrels of oil if the operation is continued as it now is established.

Q And that's during the remaining primary life of this pool?

A That's right, and I might add that with the water drive in the Yates-Seven Rivers Pool, no consideration can be given to a secondary recovery project.

Q So that the reservoir will at that time be depleted from all known producing methods?

A That's right.

Q Please refer to what has been marked Exhibit 5, being the production analysis of your existing pits, and explain what is shown by this exhibit.

A This is a seven months' summary of the water and oil production giving the percent of water and the total solids

contained in the water by an analysis taken this year.

In Pits Number 1 and Number 2 which are in this immediate area here --

Q That's in the center of your pool?

A That's right. In here (indicating). We have two batteries on this lease that handles the production from all wells in this area. Those are combined for about 2,066 barrels per month of oil; 16,667 barrels of water with a percentage of 89% and the total solids contained in the recent analysis on these waters is 7,625 parts per million. At this location, which is our --

Q Wait a minute. You may go ahead.

A -- which is our Pit Number 3, we have now seven wells going into that battery. Production is 1180 barrels per month, water production is 12,803; 92% water, total solids: 8,180 parts per million.

Pit Number 4. We have four wells. Actually, two of them are not contributing much production, so basically, there are two wells going into this battery. 162 barrels a month of oil, 1,000 barrels of water; 86% of that is water, and total solids is 7,415 parts per million.

Pit Number 5, which is in the original producing area of the Wilson Pool and is adjacent to the domestic water wells which we use for our camp, we have two wells going into that pit.

305 barrels a month of oil, 4,883 barrels of water; 94% water, and total solids in this water is 3,990 parts per million.

In Number 6, we have four wells going into that battery at the present time. 709 barrels per month, 5,812 barrels of water; 89% water, and the total solids is 5,660 parts per million.

In Pit Number 7, we have four wells into this pit. Actually, two of them are being considered for plugging and abandoning. Total production is 320 barrels per month. Average water production is 3,455; 92% water, total solids, 6,845 parts per million, which will give a monthly average of 4,742 barrels per month total, and 44,621 barrels of water, about 90.4%.

Q Mr. Lamb, on this sheet, I do not notice any analysis of chloride in the water. Do you have an opinion, based upon experience, as to the amount of chlorides in this produced water?

A The amount of chlorides are even more radical than the total solids that we find. We have not a continuous water bed. We have a series of water-producing zones, and the chloride content will vary anywhere from 4500 parts per million to 5,000 parts per million.

As a matter of fact, from one experience we had in deepening a well 100 feet, we encountered four distinct and

different waters, one of which was fresh enough to drink, and the other was black as the chair. So to say exactly what the total solids, the chloride content, it's pretty well impossible because of the variation in the characteristic of the water.

Q Well, in your summary shown here, the highest total solids around your Pit Number 3 is slightly over 8,000 parts per million, is that correct?

A That's right.

Q And your highest chloride average would be 5,000?

A About 5,000, yes.

Q Mr. Lamb, are you familiar with the pamphlet entitled, "The Affect of Saline and Alkaline Waters on Domestic Animals"?

A I know of it.

Q Are you familiar with the standards set forth in this pamphlet for animal consumption of water?

A It has been stated that the tolerance for cattle is about 15,000 parts per million, and for sheep, it's slightly higher. It should be understood that an animal drinking extremely fresh water could not immediately consume this water because of the -- there should be time to develop a tolerance for this number of solids.

Q But as far as the standards set forth in 15,000 parts per million, that is nearly twice as many solids as you find in your produced water in your pits at this time?

A That's right. To my knowledge, in the twenty years that I have been with the Wilson Oil Company, we have not paid damages for one animal for drinking salt water. Now, we have a few from drinking oil, but not salt water.

Q Without getting out of your chair, Mr. Lamb, could you tell me how far to the west of this Wilson Pool is the area that was recently exempted by the Commission from the effect of Paragraph 3 of its Order 3221; how far is the easterly boundary of that exempt area from the Wilson Pool?

A Well, I haven't measured it, but I think it's in the vicinity of twelve miles.

Q Are you familiar with the testimony in that Case Number 3806 as to the volume of water placed on the ground by the potash companies in that exempt area?

A Yes. I have read the transcript, the amount of water being placed on the ground by the potash mines in that exempt area is about 300,000 barrels per day of 200,000 parts per million or more.

Q Now, referring in effect to your testimony that in the remaining life of the Wilson Pool you would produce about 850,000 barrels of water and with a total solids calculation of six or 7,000 parts per million being the average, have you made a computation as to the amount of solids that will be placed on the ground by Wilson Oil Company in its remaining

operation in comparison to the solids placed on the ground by the potash companies in the exempt area?

A I have. Taking into consideration those figures which I have now presented and using a figure of not in excess of 10,000 parts per million, the amount of total solids that we will place on the ground in the remaining life will be equal to that amount put on by the potash mines in about four hours.

I might also add that the water we're talking about is less than 10,000 parts per million. The time rated average of the water in the Pecos River at Red Bluff is 10,300 parts per million total solids.

Q Mr. Lamb, please refer to what has been marked as Exhibit 6, being a tabulation on the first page of the water wells that you have in the area and that are shown with green circles on Exhibit 3 and explain what is shown by this tabulation.

A Some of the wells on this tabulation are not covered by this map, so I will cover only those that can be identified by this map.

The Jeff Davis Well, which is the third well on the tabulation 6, is this well. It's 79 feet deep. The water level is 70.7 feet from the surface. There are two producing wells at that site.

In Section 8, referred to as the Barren Well, is 120

feet deep. The water level is 105.5 feet. The Wilson Well in Section 13 which is our Number 3 is 234 feet deep. We haven't had to pull the pump yet, so we don't know what the fluid level is.

Well Number 4, which is the lower well, to the shallow well, is 197 feet deep. It's 104.4 feet to the water level. This well is a Santa Rosa Well and is somewhere around 1,000 feet deep.

The next well, which has been abandoned, is a Tidewater Well, which is 115 feet deep; 82.1 feet to the fluid level. The next well is the Christmas Well which is 84 feet deep; 64.4 feet to the water level.

Now, in Section 7, 21-35 which is our camp Well Number 2, is 431 feet deep.

In Section 15, the Scarbrough Well is 184 feet deep, 174 feet to the fluid level.

The Shell Well in 24 is off the map. The well in 28 which is known as the Nose Well is 27 feet deep and 24.5 feet to the fluid level. And lastly, the North Well is 50 feet deep and is 36.3 feet to the fluid level.

These wells will supply enough water for some domestic use, a little commercial use and for ranching use.

Q Now, Mr. Lamb, just generally, without detail, what does the second page of this Exhibit 6 reflect?

A The second page is a list showing the stratigraphic unit of the sedimentary beds and the surface beds, and their thickness, the character of the rocks which make up this system and the description as to the water-bearing properties of these particular zones.

In support of this tabulation, you will find a series of drillers' logs taken from the drilling of cable to the wells in the Wilson area by the Wilson Oil Company, and they will give you an idea as to the conditions of the water in the area.

You will note the first shallow water is a meager supply of potable water for stocks and domestic wells. The second is about the same, if you have enough thickness of the formation. The third, in cases, will yield up to 30 to 40 gallons per minute with everything being at its best. Then in the Santa Rosa water, it's capable of yielding up to 60 gallons per minute in a properly constructed well, but you have a list of about 600 feet, and from there on down, the water to the top of the Rustler Formation is pretty well insignificant.

Q Mr. Lamb, using this exhibit as a basis -- Strike the question. Have you reviewed the water-bearing character of the shallow formations in the exempted potash area?

A I have.

Q And using that review and this exhibit as a comparison, is there any way to compare the water-bearing formations in the

exempted potash area to the water-bearing formations in the area of the Wilson Pool?

A They are very comparable. They are erratic. There's no uniform water sands contained over the entire area. I think you can see that from the depths of the wells on the first tabulation.

Possibly, if you wanted to get down to the point, maybe the water in this area is slightly better, but that would be the best classification that you could bring.

Q Mr. Lamb, is there any irrigation carried out in the area of the Wilson Pool?

A Well, none of any significance. One of my roustabouts has three tomato plants.

Q The water in the area is used entirely for stock and for domestic purposes?

A A little is used for drilling purposes, to drill oil wells in the area.

Q Please refer to what has been marked Exhibit 7, being the analysis you have gathered over the years in response to -- the analysis of the fresh water in the area pursuant to the directive of the Commission made to Wilson Oil Company in 1958.

A This is the summary of the complete data. It shows only the chloride content and the total solids. Our Wilson Well Number 5, which is here, in 1958 carried 92% chlorides and

500 -- Excuse me. 92 parts per million and 500 parts per million total solids.

Ten years later, the total chloride content was 35 parts per million with a total solids at 317.

Q Now, where is that well located?

A That's this well (indicating).

Q In Section 23?

A That's right.

Q Now, how far away is that well from the brown pit in Section 23?

A Well, this would be about 1800 feet in that direction, but you also see there are pits to the northeast and to the east and all around.

Q Do you have a conclusion as to the change in potability of any in that fresh water over the ten-year period?

A Well, after making a complete observation of all of these, including the ranch wells and so forth, we occasionally run into seasonal variations, and that's about the major significance that could be put to it. Sometimes, we're up a little and sometimes, we're down, but it can be classified, I think and in my opinion, as seasonal.

Q Let's go to your second well which is your Santa Rosa well in Section 23 and the analysis you have on it.

A This Santa Rosa Water Well is our original Well

Number 17 which was converted to a Santa Rosa Water Well. The analysis of that water in 1967 was 300 parts per million of chloride and 680 parts per million total solids.

Now, also, these two waters, mixed, gave a composite analysis of 250 parts per million with a total solids of 637. That 250 is the chloride content.

Q Refer to the north well which is the Merchant Well in Section 30.

A You will recall that this well is 50 feet deep. In 1956, the chloride content was 93, no total solids calculation. In 1958, the total chlorides was 52 with 614 total solids and in 1967, it was 150 chlorides and 428 total solids which is a seasonal variation that you see occasionally in observing these figures.

Q Before you turn to the next one, Mr. Lamb, that well is located southeast of the Wilson Pool, is it not?

A That's right.

Q And is that the area in which the surface falls away to the southeast?

A The drainage is to the southeast.

Q Refer on your exhibit to Wells 1 and 2, the Wilson wells.

A Our camp wells, which are Number 1 and Number 2, and these are composite analyses in that all the water goes into the same tank. In 1956, the chloride was 24.8 with a total

solids of 26.4.

In 1958, the chloride was 23 with 654 total solids.

In 1967, it was 100 chloride with 473 total solids, and this year's analysis was 40 chloride and 370 total solids. This is the well that's being used in our camp for domestic use.

Q Refer to Pan American's well.

A The reason for this well, as I stated earlier, is one of the earliest wells in the entire area that we had an analysis on and it goes back to 1950. And reading from 1950, '51, '52, '55 and '56, the total chloride read this way: 89, 85, 82, 78 and 78.

The total solids was 551, 507, 543, 547 and the last one we have is 517.

MR. PORTER: My exhibit shows 457, Mr. Lamb.

THE WITNESS: In 1955?

MR. PORTER: In 1955. I believe you read that as 547.

THE WITNESS: Right.

A You will notice also that this well is to the southeast of the main production area.

Q It's in Section 24?

A That's right.

Q Mr. Lamb, you earlier mentioned that well was plugged. Did the potability of the water have anything to do with the

plugging of the well?

A Well, the oil was depleted and the camp was moved away and the house was moved away and the well was no longer in use, but it was not for a reason of poor water.

Q Mr. Lamp, on the analysis on these five wells, and using the accepted standard for human consumption, were any of these wells not potable for human consumption?

A All are potable for human consumption and are being used from day to day.

Q Now, does it not also show from these analyses of these various fresh water wells that there has not been any substantial change in the quality of the water from 1950 when the first analysis was made down to today?

A That's correct.

Q Now, in the hearing before the Oil Commission which was in April or May, April of last year in Hobbs, New Mexico, which resulted in the promulgation of Order R-3221, did Mr. Lawrence Merchant make a statement to the Commission as president or chairman of the Cattlemen's Association with respect to operations in your area?

A He did, and I might point out that all of the operations which we have are on the Merchant livestock ranch or the San Simon Ranch.

Q And Mr. Merchant was, at that time, the operator of the

San Simon Ranch?

A He was a partner in the operation.

Q All right. Now, subsequent to that hearing, Mr. Lamb, did Mr. Merchant write you a letter with respect to the water wells in the area of the Wilson Pool?

A He wrote me a letter dated May 2nd, 1967.

Q Has that been marked Exhibit 8?

A 8. It has been. He outlined the depths and the fluid level and the location of the various wells that we have previously discussed.

Q Would you read the portions of the letter which state when these various water wells that we've been talking about were first drilled.

A After the tabulation, the paragraph reads this way: Jeff Davis, the north wells, are two of the original watering establishments established in about 1900. The Christmas Well was established in 1912; the Nose Well in 1912. The Barren Well in 1914, and the Shell Well in 1935. And his final paragraph reads, "No increase in hardness evidenced in any well to date. All potable. Lawrence Merchant. May 2nd, 1967."

Q Now, Mr. Lamb, the north well as he referred to as having been established in 1900, is that the well that you earlier referred to in Section 30 located to the Southeast in the drainage area of the Wilson Pool?

A That's correct.

Q And referring back to your prior exhibit, the last analysis of the water on this well shows 150 parts per million chloride and 428 parts per million in total solids.

A Yes, and you will note that that was in the year 1967 and due to the seasonal situation, most all of the wells were slightly up during that year.

Q And that's the 68 year old water well after 39 years of oil production in the adjoining area?

A 30 years of oil production.

Q 30 years. Now, Mr. Lamb, have you recently gone to the scene of the Wilson Pool with a camera and taken some pictures of the pits and the water wells?

A I have.

Q With respect to the vegetation. Will you, by groups and by use of the maps, point out the area in which those pictures were taken and then hand them to the Commissioners, if you will.

A The first group of pictures was taken at or near our camp, to give you the relationship of the water wells and the pits and, of course, an observation as to the vegetation in the area.

This picture is taken in the direction of Southeast. It shows the corner of our camp. You can see this little

mound here is the disposal pit from our Pit Number 5.

Q Now, those pictures are of campsite up in Section 7?

A That's right. Here is a picture of an additional part of the camp, Water Well Number 1, and the overhead water tower. I guess there's no reason to apologize for the color on the pictures because it was an overcast day and besides that, it was Friday the 13th.

Here's a picture of our Water Well Number 2 looking east. These two pictures were taken on the east side of Pit Number 5 with the battery in the right-hand corner, the right-hand side of the water tank immediately forward, and the pit is between myself and the water tank.

You can see there how close the pit is to the water supply well. That has to do with our wells in Section 7, 21-34.

Here's another series of pictures taken from the north well in Section 30. Here's this location. Their random shop, showing the vegetation of the trees in the pit in the dirt tanks and the windmills and a cow or two on there.

Q Mr. Lamb, that's the 68 year old well that Mr. Merchant --

A That's right. The Barren Well, at this location (indicating). I have one view of it.

Q Would you give the section and township and range of that?

A It's 8, 21-34. And the Jeff Davis Well is at this location in Section 1, 21-34. There are two wells at that location. The last picture was taken from about this location with Pit Number 2 in the right-hand part of the picture. This pit in about the center of the picture and the water tower a little to the side to give you the relationship between the two pits and the camp water well.

Q Now, that's the water well in the center of your pool in Section 13?

A 13, 21-34.

Q Mr. Lamb, please refer to the estimated realization schedule which has been marked as Exhibit 10 and explain what is shown by this schedule.

A Exhibit 10 is a realization schedule which I prepared showing the estimated production for the year 1968 at 65,000 barrels of oil and 400,000 barrels of water. The estimate is extended through the next year period, the next period which we believe will be the life of the pool. 1969, there will be 16 wells at 55,000 barrels of oil and 350,000 barrels of water.

Q Mr. Lamb, excuse me just a second. Starting on January 1 of '69, this schedule has been prepared, am I not correct, as if the pool were to be continued to be operated in the same way as it is now?

A That's correct.

Q And as an exception to 3221?

A That's right.

Q Go ahead.

A 1970, we should have about 11 wells producing, 42,500 barrels of oil, and 300,000 barrels of water. In 1971, we'll be down to six wells with an annual production of about 25,000 barrels with 200,000 barrels of water which gives a future recovery, with the exceiption of 122,500 barrels of oil, 850,000 barrels of water; net income to Wilson Oil Company after taxes and royalty, $257,250.00; state's royalty, $43,750.00. The direct operating expense which is an actual figure based on our four men that we have operating the field and, by the way, we do our own pulling of the wells, we do all our own work and we have very little outside contract work--that total for the three years would be $188,375.00.

The administrative and indirect cost, and as I see this figure of $35.00 per well per month is an absolute minimum without question, and that total is $13,860.00 or a profit of $55,015.00 over a three-year period. I have also estimated the royalty to the state and the taxes to the state for a total of $58,250.00.

Q Now, Mr. Lamb, actually, this column on state's royalty, royalty to the state in dollars, would be deducted before the column of Wilson Income, would it not?

A Well, yes. The figure that we have for Wilson Income is after taxes and royalty.

Q Now, how did you get this direct charge per barrel shown at $1.45 for the year 1968?

A Well, this isn't difficult because this is the only operating property which we have.

Q And this is actual expense from experience during the first seven months of this year?

A That's right. That's right.

Q Please refer to the estimate realization schedule shown as Exhibit 11 and point out the distinction between this schedule and the preceding schedule.

A This is a similar estimate of the realization schedule, but with the disposal of water, and I might add in the beginning, the situation, if you'll refer back to -- I believe it's Number 5, Exhibit Number 5 -- you will note that this area of Pit Number 1 and Number 2 with 2,066 barrels per month could be maintained, but we would abandon the Number 2 Pit and go in this direction and have a single installation there. The other operation would be Pit Number 3. We would maintain it with a disposal well in that it carries 1180 barrels per month and 12,803 barrels of water.

Q You would abandon the wells up in Section 7 and in Section 18?

A No question about it, and also, these in 24. They would be abandoned immediately as of January the 1st, 1969.

Q Now, in your preparation of this realization schedule, you have assumed the installation of what equipment to dispose of the water?

A We would use two of the present wells which we now have if we can find one which will take the water at a reasonable pressure, and we have some doubts about this because we have attempted to inject water in Section 7, 21-34, and the pressure reached an unreasonable amount, but conditioned upon us finding a well which would take 1,000 barrels of water at 1,000 pounds pressure, the installation cost with two tri-plex pumps, gas engines, would run $12,000.00; two storage tanks, one at each location for the accumulation of water pumped into the ground would be $6,000.00. The acidizing and re-working of the wells -- I'm afraid of this figure of $9,000.00 because there maybe additional costs in making the water enter the zone at which we prefer that it go because you must realize that these wells are several years old and you cannot be absolutely sure about the pipe conditions so we may have to take remedies to take care of that. Lines and equipment, we planned on or figured on plastic lined that would stand this pressure and carry this fluid. That would be a total of about $35,000.00 installation cost.

Q Where did you obtain your figures for this estimate of installation cost?

A I obtained these figures from suppliers in Artesia.

Q Before you start to explain further what this portrays, there is a typographical error in the exhibit in that the $35.00 per well per month; in the heading, it's shown under New Equipment Cost and it should be over there in the charge for Administrative and Direct Overhead.

A That is correct.

Q Would you give us the total on this realization schedule, assuming compliance with Order 3221?

A Would you want them by years or just the total?

Q I think just the total, January 1.

A I should note that in '69, we would have eight wells; '70, probably seven wells, and '71, down to four wells. This gives us a total of 65,500 barrels of oil, 450,000 barrels of water. Income to Wilson: $141,750.00. Operating expense, direct: $105,750.00. The Administrative Overhead at $7,980.00. New Equipment Costs and the operation of that equipment for a period of three years at $50,000.00.

The first year, our loss would be $25,360.00. We would show a profit of $3,310.00 for 1970, and a $70.00 profit for 1971, or a total loss of $21,980.00.

Q Now, Mr. Lamb, based on the preparation of these two

realization schedules, have you made a recommendation to the management?

A I have.

Q With respect to operation after January 1, if compliance with Order R-3221 is deemed necessary by the Commission?

A Well, there is no question in that I have used conservative figures throughout on the cost and so forth. There would be this loss of $21,980.00 and there is no just reason to lose it. The well should be plugged out and abandoned as of January 1st, 1969.

Q Is that true of all the wells in the Wilson Pool?

A Basically, yes.

Q Does that mean that this 122,500 barrels of oil that you have estimated would be recovered or be lost?

A That's correct, because the amount estimated with the disposal of the water cannot be justified for expenditure to recover, so the total loss would be 122,500 barrels of oil.

Q Now, what royalties to the state would be lost?

A I've estimated $58,250.00.

Q Do you have an opinion as to whether or not oil will be lost that would otherwise be recovered unless the application of Wilson Oil Company for an exception to Order R-3221 is granted?

A Without a doubt.

MR. LOSEE: I have no further testimony from this witness at this time.

MR. PORTER: Does anyone have any questions of the witness? Mr. Nutter.

MR. NUTTER: Go ahead, Mr. Heidel.

MR. PORTER: Excuse me, Mr. Heidel.

CROSS EXAMINATION

BY MR. HEIDEL:

Q I'd like to inquire, a couple of questions for clarification. In the north water well in the pool where the pit is about 200 feet, I believe you said, from the water well, that water well, I believe you said, was the Santa Rosa well?

A No. No. These two domestic wells used at our camp are here (indicating). The Santa Rosa Water Well is right here.

Q In that general area of the pool, how deep is the Red Bed from the surface?

A I think we have the Well Number 4, which is in that same section, the top of the Red Beds would be about 121 feet.

Q So the wells in the pool and in the area that are more shallow would be above the Red Bed and the other wells would be below the Red Bed?

A That's right. Some are above the Red Bed and some are below and some are in the Santa Rosa. As a matter of fact, this well was drilled with cable tools and no water was found in

the shallow beds at all. This is in the Northeast Northeast of 19, 21-35. So it's erratic. Usually, you start out with a drill to locate shallow water and you stop when you find it.

Q Are all of these wells pumping wells?

A Yes. I have the tabulation of the level to the water?

Q I mean, all of the oil wells now, are they pumping?

A Oh, yes.

Q And it's your testimony that you could not inject into any of those, to the best of your knowledge, without using pressure?

A Oh, I don't think there's any doubt about that. I think we have to pressure, because we have experimented with this well and we couldn't put the water away with 1,000 pounds. We're hoping to find a better one, by the way.

REDIRECT EXAMINATION

BY MR. LOSEE:

Q Mr. Lamb, I just have one other question. With the exception of the photographs which you've previously testified to, were Exhibits 1 through 11 prepared by you or under your supervision?

A That's correct.

MR. LOSEE: We move to have these exhibits, 1 through 11, admitted.

MR. PORTER: If there are no objections, the exhibits will be admitted.

(Whereupon, Applicant's Exhibits Numbers 1 through 11, inclusive, were admitted in evidence.)

MR. PORTER: Mr. Heidel, does that conclude your questioning at this point?

MR. HEIDEL: Yes, sir.

MR. PORTER: Mr. Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Lamb, at the present time, do you have 23 wells producing?

A Yes.

Q What is the range on productivity of those wells, as far as barrels per day is concerned

A Well, they will run from one to top allowable. We have one top allowable 40-acre unit.

Q That will make a top allowable of 58 barrels a day?

A Yes, one proration unit.

MR. PORTER: That has two wells on it?

THE WITNESS: Two wells on it.

Q And you're sitting there, Mr. Lamb, telling us that if the salt water disposal order affecting this area should go into effect on January the 1st, as it is required to do by the order,

that all wells in this area would be plugged, including that top allowable well?

A Well, Mr. Nutter, I realize that there is a top allowable well, but what are you going to do with the water that that 40 acres produces?

Q I asked you and you said that you'd plug all the wells.

A That's right, because you really have nothing to do with the well, water that produces from the 40 acres --

Q How much water is that well actually making?

A Well, there are two wells on there. One of them will make about 100 barrels a day, and the other will make about fifteen or twenty.

Q Now, this estimate that you've got here for new equipment for $35,000.00, is this that pit you stated you have one disposal well or --

A Two.

Q Two disposal wells. Actually, every one of these leases that you got here has an abandoned well on it, hasn't it?

A That's right.

Q Currently abandoned?

A That's right. That's the one we planned on using.

Q Now, wouldn't it be possible to find a well on each of the leases and put the water in it?

A Well, you're still going to have to go to the equipment.

Q Well, I'm going to get to this in a minute.

A Okay.

Q But wouldn't there be an abandoned well on each of the leases so that the water wouldn't have to be transported two or three miles to a disposal well?

A Well, that wasn't the problem of selecting the two locations. The problem of selecting these two locations is the topography. These two areas here, these two pits are in low areas with a higher range in between. If you could gravity it over, it would be one thing; but you don't. You've got to set a pump installation or lay your line here and pump it there. Why not try to put the water from this pit, this pit into that well, and the water from this pit into that well? I think the cost is less when you put --

Q How about the water in the wells up farther to the north?

A Well, they don't make enough oil to justify the expenditure to buy the equipment to put the water away.

Q You wouldn't even bother to --

A No, I really wouldn't.

Q -- try to take care of them at all?

A I think if you look at this schedule which is Exhibit Number 5 which is Pit Number 3, Pit Number 4, these wells that are producing here produce 162 barrels a month.

Q You said you had two on that one that you were getting ready to plug, didn't you?

A Well, two are not producing. Two are in the semi-production stage now, but you got 162 barrels a month. You can't even get a well ready to put water in the ground, if this leaves up here on the north end, which is Pit Number 5, even 305 barrels; but you've got 4,883 barrels of water to put away.

Q What is the bottom hole pressure in these wells, Mr. Lamb?

A The figure that I gave or the statement that I gave you awhile ago that we are under an active water drive; the fluid level has not declined over the entire history of the field. Our fluid level of water will vary from 800 feet to the surface to 1200 feet from the surface. So when you go to put water away on a gravity basis, it gives you 800 feet of hydrostatic head or 1200 feet of hydrostatic head which, in our experience, has not been enough in most cases to dispose of any volume of water.

Q No attempt has been made to dispose of water into the Seven Rivers in this pool, however, has there?

A Well, except this Shell Well Number 2 that we tried to dispose of water in in 1958 on an experimental basis, and we used our rig pump, which is a thousand-pound pump, and in

about thirty days, the pressure in this well, the surface, was in excess of our pump capacity.

Q Has that well been cleaned off for disposal purposes?

A Yes. It has been cleaned out. It has now been plugged.

Q But the formation has been washed or acidized?

A Oh, yes. Well, you don't ever acidize the Seven Rivers reef. You have it or you don't have it.

Q That is, if you take the water on a thousand-pounds pressure?

A That's right, after about a thirty-day period.

Q What was the problem? The formation was full or do you think that there was a build-up of some mineral or --

A We didn't find any build-up of mineral. It just seemed to us that the formation pretty well filled up.

Q Mr. Lamb, when the wells were completed, an attempt was made, was it not, to keep the pits up above the main aquifer of water in the wells? I mean, you didn't want to penetrate down into the main body of water that is in the Seven Rivers reef?

A Well, that question really doesn't have an answer, Dan.

Q Well, isn't it possible that --

A Let me tell you why.

Q -- some of these wells may be opened up, maybe another ten feet, might get down into the aquifer and would just suck

that water up without having any $12,000.00 tri-plex pump on them?

A Well, we have two pumps.

Q So two of them are tri-plex?

A Yes.

MR. PORTER: Mr. Nutter, let the witness explain his first answer.

A When you drill into the top of the Seven Rivers Reef, you do not have access to the entire reef. You have access in that particular penetration to only a few feet below the total depth of the hole.

Now, we have deepened wells, as many as five times, four times. The well that we're talking about is on this 40-acre unit that's top allowable now. The well was originally completed at 3691 feet. It was deepened 32 feet and separated the water from the upper zone from the oil in the new zone.

Then the well was deepened again and the same thing happened, and it has been deepened a third time, and you get a different zone each time. Now, to say that when you enter the top of the Seven Rivers Reef, you have access to all of it, is not the case. Each zone is its own and, actually, as a matter of fact, some of the zones in the Seven Rivers Reef have been pumped completely dry of fluid.

Q Then there's no water encroachment into those zones?

A That's right.

Q There is a main aquifer in there that's loaded with water, is there not?

A Well, when you enter the top of the reef, in time, you will have water in all of it. Just like in that Wilson Number 5 of ours at 3691, we originally had oil. It went to water. You have a flank encroachment, not a bottom water encroachment. You have a flank encroachment of the water.

Q Does the Seven Rivers Reef appear any different than the Seven Rivers over in the Jalmat Pool?

A Probably not. I've drilled both places. I wouldn't think so.

Q It was my understanding they're not having much difficulty putting water into the Seven Rivers over in the Jalmat area. I wondered if there was a difference here.

MR. NUTTER: I believe that's all, Mr. Lamb.

Mr. Porter, I would like to make a couple of motions here. Inasmuch as reference has been made to comments by Mr. Merchant in Case Number 3551 and also because of various data that was presented to the Commission with respect to this particular area by both Commission personnel and by Mr. Lamb and also with respect to general evidence concerning the general problem of salt water disposal in southeast New Mexico, I'd like to move that the record in Case Number 3551 be incorporated

by reference in the record in this case. Now, that was the case in which Order R-3221 was issued.

Also, since certain reference has been made to the area exempt from the pit prohibition order due to its proximity to the potash tailings ponds in the Nash Draw and Clayton Basin, I'd like to move that the record in Case Number 3806 be incorporated by reference into the record in this case.

MR. PORTER: Any objection to the motion?

MR. LOSEE: One brief statement, if the Commission please, with respect to the motion on the order and the testimony that serves as the basis of the Order 3221, we don't have any objection to it. We realize the testimony in that case was the basis for the hearing which resulted as the basis for the order which we are here asking an exception on the grounds that the area in question in this application is different from the entire testimony in 3221, so we recognize that we have the burden of showing we're entitled to an exception and if, in order to do so, we have to look at the testimony in that earlier case, that's very fine.

MR. NUTTER: How about 3806? Any objection?

MR. LOSEE: I have no objection.

MR. NUTTER: You have no objection to the entry, by reference, to either of the records?

MR. LOSEE: No.

MR. PORTER: The cases referred to will be incorporated by reference in this record of proceedings.

Now, does anyone else have a question of Mr. Lamb? He may be excused.

MR. LAMB: Thank you.

MR. PORTER: This concludes your testimony?

MR. LOSEE: Yes, sir, this concludes our testimony.

MR. PORTER: Mr. Heidel, would you like to make a statement?

MR. HEIDEL: If it please the Commission, to expedite the matter, I would like to, by way of testimony, make a statement concerning primarily implementing the general information concerning contamination. You might say, implementing primarily the matter of Case 3551 which resulted in Order 3221.

MR. PORTER: All right. Would you raise your hand, please, and be sworn.

(Witness sworn.)

F. L. HEIDEL

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

DIRECT EXAMINATION

BY MR. HATCH:

Q Would you state your name, please?

A My name is F. L. Heidel of Lovington, New Mexico, and

the purpose of my testimony is to bring to the Commission's attention some of the problems in Winkler County, Texas; Winkler County, Texas joining Lea County directly to the south. Studies have been made there through the years and one of the first studies was made starting in 1950 and, recently, there has been completed a further study by R. D. Reeves, U. S. Geological Survey. That study has not yet been published. It's been submitted to the higher authorities in the Geological Survey for their approval and, apparently, for subsequent release; but there are one or two items that I would like to read from the unpublished report that I just secured yesterday.

MR. LOSEE: Mr. Porter, if it please, I would at this time object to the reading of this unpublished report about Winkler County, Texas until the witness can testify that the conditions, the fresh water conditions and the disposal practices in Winkler County, Texas upon which this report was based, are similar to those carried on, existing in the Wilson Pool. I think they have no relationship to the case unless and until the witness shows a similarity of conditions.

MR. PORTER: Mr. Losee, the Commission will hear the testimony on this point, and will assign to it whatever weight it deems. It might have a bearing on this case.

MR. LOSEE: Well, maybe I don't make my point clear. I think it's hearsay, but I grant you there are many times the Commission in the past has admitted hearsay. But what if the

report were on the water conditions that existed in Egypt or the Nile Basin? Under this theory, they'd be just as admissible and, yet, they surely would have no bearing in that instance. I feel like until, if the statement shows that the conditions are the same, that might be something else. But until we're talking about the same conditions --

MR. PORTER: Well, suppose we go ahead and see what the statement does state.

A The introduction states: In the late 1950s, the U. S. Geological Survey in cooperation with the Texas Water Development Board and the Commissioners Court of Winkler County made a study of the ground water resources of Winkler County and refers to the Garzo and Wesselman Report, that Garzo, Sergio and Wesselman Report published in 1959. It's the Texas Board of Water Engineers Bulletin 59-16, two hundred pages and fifteen figures.

Since that time, the apparent increase in the contamination of ground water supplies from the disposal of oilfield wastes caused great concern to the water users, particular the City of Kermit. Consequently, the City of Kermit and the Commissioners Court of Winkler County requested the Geological Survey to reappraise the ground water resources with particular emphasis on the extent of contamination in areas most favorable for future development.

And then it goes into the study it consisted of and I will not burden the record with that and go directly to the matter of contamination of the ground water.

In their report, Garzo and Wesselman indicated that as of 1956, the ground water in the Cenozoic alluvium and the Santa Rosa Sandstone, the principal sources of water for minicipal, industrial and irrigation needs apparently has been contaminated in several areas in Winkler County and that most of the contamination had been caused presumably by leakage of salt water from unlined earthen pits.

Contamination left there, also, by salt water entering the aquifer from poorly cased or poorly plugged oil wells, from salt water disposal wells, from injection wells or from allowing salt water to flow back into a well that supplies fresh water for waterflooding.

Although the areas of ground water contamination were small in extent, contamination had reached within two and a half miles of the wellfield supplying water to the City of Kermit.

And skipping on through, contamination of the ground water supplies is not necessarily restricted to those wells of areas as shown in Figure 2, but undoubtedly, has occurred in other parts of the County where unlined disposal pits are or were used. Because of the slow movement of the ground water or

because wells are not available for sampling, contamination has not been detected elsewhere. And skipping on through, even if disposal of brines to open, unlined pits is stopped, the total quantity of contaminants accumulated below the land surface would not be diminished, and for many years, these contaminants will be dispersed even more widely in the aquifer.

The findings are that between 19 -- the studies, the '50s and the studies of this report was that this contamination had moved from two and a half miles of the Kermit City water wells to within one mile of the City water wells, and we wish to generally add that information to the entire subject of water contamination.

MR. PORTER: Mr. Losee.

CROSS EXAMINATION

BY MR. LOSEE:

Q Mr. Heidel, you're a lawyer by profession, are you not?

A That's correct.

Q How far away is Winkler County from the area in question, do you know?

A Well, as I mentioned awhile ago, Winkler County joins Lea County, New Mexico, directly to the south and this area in question, we're talking about Township 21 South, and I believe the extreme bottom of Lea County is about Township 25 South, 26 South.

Q How many miles is that?

A That would be about five townships, about thirty miles.

Q Do you know what waterbearing formations were shown in that report to have been contaminated?

A All zones. The abstract of water wells as shown run from shallow wells with water levels of 64 feet and on down to several hundred feet.

Q Do you know if the same waterbearing zones that exist in Winkler County or at least in the area which was the subject of that report are present in this Wilson Oil Company area?

A This report so shows.

Q Now, does the report show that present in the Wilson Oil Company area?

A No, the report does not refer to the Wilson, but from the testimony here by Mr. Lamb as to the general water formation in the Wilson area, why, this report would match up.

Q Well, what water formations were contaminated in that report, by name?

A As I mentioned, they have the shallow wells, less than 100 feet going down to the Santa Rosa Sandstone that I'd have to check the report here as to the exact depth of the Santa Rosa Sandstone wells.

Q Well, do you know what shallow zones they're referring to?

A The more shallow ones, I'm not sure whether the ones in the Wilson area referred to are as Ogalalla or one of the lower zones.

Q Do you know if the Ogalalla is present in the Wilson Oil Company area?

A It's debatable.

Q Well, is it there or is it not there, do you know?

A I do not know. I've heard experts testify, "Yes", and some experts say, "No."

Q Do you know whether the contamination in the Winkler area came from produced water going down the well bore?

A I do not know.

Q Do you know whether or not most of the wells, the old wells in Winkler County were completed without the use of any cement around the surface pipe?

A I personally do not know.

Q Could that have been the basis upon which that conclusion was reached that the contamination occurred, that the produced water was going around the well bore on uncemented surface pipe?

A I have no personal knowledge of that. I was just taking it from what this report stated by the U. S. Geological representative as he has studies on.

Q Have you read the whole report?

A Hastily.

Q Well, do you know whether it says that's the way the contamination occurred in Winkler County?

A It refers back to the original report for most of that information.

Q Do you know whether or not any or all of the wells in the Wilson Pool have the surface pipe cemented solid?

A I do not know.

Q The period of time covered by that report is 1956 down to date. How many years is that, Mr. Heidel?

A Well, the first studies commenced in 1950, so down to date, that would cover 28 years.

Q Do you know how long these studies of the Wilson Pool have covered from the testimony of Mr. Lamb?

A Well, I assume the first real studies were made by Mr. Lamb, I imagine starting about 1958.

Q Well, I believe some of the analyses were made as early as 1950, and the pool was actually discovered in 1939 based on his testimony. Was it not?

A I don't recall that precise.

Q Do you recall his statement that he has been actively engaged in operating this property since 1948?

A Right. Let me answer the question regarding the depth of these wells and so forth. Here, in this report, it

does show that since 1956, that there's been 58 large Basque wells drilled. It shows what uses: industrial, irrigation and so forth. Of these wells, nine were in the Santa Rosa Sandstone and two were in the Rustler Formation, and the rest were in the alluvium in the site on Table 1.

MR. LOSEE: Mr. Porter, I would again renew my objection to the portions of the report which we, of course, have not reviewed. But that's not the basis of my objection.

We understand that the burden is on us to show that the area of the Wilson Oil Company, the Wilson Pool, is entitled to an exception under Order R-3221 and contamination, generally, was shown to support the order, but we surely don't think we have to fight contamination thirty-five miles away in an area of which, based on my understanding, the old wells were actually drilled without surface pipe cemented and that, frankly, most of the studies reveal that contamination occurred around the well bore, which is surely not present here, that the Ogalalla is the aquifer in Winkler County, and based on the exhibit we've introduced, is not present in the Wilson Oil Company area.

We just don't think that any of the conclusions reached in that report are applicable to this case.

MR. PORTER: Mr. Losee, the Commission will accept the statements of Mr. Heidel as pointing out the danger, the possibility of contamination of fresh water in a general way

from salt water disposal. Certainly, the testimony that he has given here has no direct bearing, no direct relationship to the question before the Commission here today in this specific area.

MR. LOSEE: Well, if the Commission please, I want to call Mr. Lamb to show the differences if the Commission is going to consider any more than your first statement, to-wit: that the report shows the disposal of produced water does, in some areas, causes contamination.

MR. PORTER: No, there is no direct relationship between the testimony that he has given here and the contamination in the area of the Wilson Pool.

Does anyone else have any questions of Mr. Heidel?

MR. HATCH: Mr. Heidel, the Secretary down here wondered who you were representing. Will you repeat that, please?

MR. HEIDEL: The Southeastern Feeland Owners Association of Lea County, New Mexico, and the Lea County Farm Bureau Association.

MR. PORTER: You may be excused. Does anybody else have any testimony to offer in the case? Any statements? Mr. Heidel, do you have a statement to make? Mr. Losee, do you have another statement?

MR. LOSEE: Yes, but I think Mr. Hatch has a letter I'd like to get into the record.

MR. PORTER: Do you have any communication, Mr. Hatch?

MR. HATCH: Mr. Losee delivered to the Commission a letter addressed to the Oil Conservation Commission from the Merchant Livestock Company dated September the 12th, 1968; Attention: Mr. A. L. Porter, Jr., Secretary-Director.

"This letter refers to the application of Wilson Oil Company for an exception to the no-pit order number R-3221 of the Oil Conservation Commission.

"In this application, we understand that Wilson Oil Company seeks authority to continue to dispose of produced waters in seven unlined surface pits located in Sections 13, 23 and 24, Township 21 South, Range 34 East; Sections 7 and 8 in Township 21 South, Range 35 East, Lea County, New Mexico.

"We understand that this case has been docketed as Number 3859, set for hearing on September the 18th, 1968 before the Oil Conservation Commission.

"We are the owners of the San Simon Ranch comprising approximately 180 sections of land in Lea County, New Mexico. The above named seven unlined surface pits are all located within the boundaries of our ranch. We know that Wilson Oil Company has been disposing of its produced water into these pits for the past fifteen to twenty years. We do not believe that the disposal of water produced from Wilson Oil Company, in conjunction with production of oil from this well, Wilson Yates-Seven Rivers Pool, Lea County, New Mexico, constitutes a

hazard to the fresh water wells in the area and all located on our ranch.

"Accordingly, you are advised that we have no objection to the proposed application of Wilson Oil Company for permission to continue to dispose of produced water in the above-mentioned seven unlined pits.

"Respectfully submitted, Merchant Livestock Company." I believe it's J. D. Merchant, President.

MR. PORTER: Do you have any other letters, Mr. Hatch?

MR. HATCH: No.

MR. PORTER: Mr. Losee.

MR. LOSEE: In summary, Mr. Porter and Mr. Hays, really, of our evidence here, I think it shows that there have been thirteen stock and domestic fresh water wells in this area, some drilled as early as 1900 by the ranchers and still in use.

Pursuant to the '58 direction of the Commission, Mr. Lamb gathered water analyses of these fresh water wells. And those analyses, starting from 1950 down to date, show conclusively as five stock and domestic wells, that they are still potable for human use. Those wells are located within the exact area of the Wilson Pool. They are also located to the southeast in the area of drainage and they're still sufficient for human consumption.

Mr. Merchant says that's true of all the thirteen wells

that he has access to in this area. The foregoing water analysis occurred after approximately 16,000,000 barrels of water, produced water, had put in these seven unlined pits in the Wilson Pool over the past 29 years.

If the estimate now is correct, there will needed to be put on the ground only an additional 150,000 barrels over three years or approximately 5% of the total.

Now, we submit that if sixteen thousand barrels did not affect the fresh water supply in the area, I don't see how anyone can say 850,000 or 5% of that total will constitute a hazard to the fresh water in the area. To the contrary, I believe that the history and the evidence of the fresh water supplies in the Wilson Pool will support a statement of fact, and that is, that an additional 850,000 of produced water in the unlined surface pits will not and cannot constitute a hazard to the fresh water supplies in the area.

All of this acreage of Wilson Oil Company is on lands owned by the State of New Mexico. The three remaining years life of the pool will result in a recovery of 122,500 barrels of oil, $43,750.00 in royalties to the state of New Mexico, and $14,500.00 in taxes with a $55,000.00 profit to the operator; that is, if he is permitted to operate the pool in the same manner in which it has been operated for the last 29 years. Otherwise, if Wilson Oil Company is required to

dispose of its water and does so in the two disposal wells and purchases equipment of $35,000.00, it will result in a $22,000.00 loss for the operator; and if the management follows Mr. Lamb's recommendations, they will plug the wells. The employees at the camp, the camp will be terminated, 122,500 barrels of oil will not be recovered, the State will lose royalty of $43,750.00, the taxes will not be paid of $14,500.00.

In summary, I would submit that if an exception is made to Order R-3221 to permit Wilson Oil Company to continue for the remaining life of the pool, estimated to be three years, one: no harm will come to any of the fresh water supplies in the area, and two, oil will be recovered, 122,500 barrels, that would not otherwise be recovered.

Based on this evidence, we respectfully ask that the Commission consider this as a proper case for an exception to Order R-3221.

MR. PORTER: Does anyone else have anything else to offer?

MR. UTZ: Mr. Losee, you referred to sixteen thousand barrels, didn't you?

MR. LOSEE: Yes.

MR. PORTER: Did you get that question?

MR. LOSEE: Our estimate was 16,000,000 barrels.

MR. PORTER: If there's nothing further to be offered in this case, we'll take it under advisement and take a very short recess before taking up Case Number 3860.

I N D E X

E X H I B I T S

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, CHARLOTTE MACIAS, 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; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 1st day of November, 1968.

Notary Public

My Commission Expires:

February 10, 1971.

I do hereby certify that the ... New Mexico Oil Conservation Commission