CASE 3644: Motion of the OCC to consider revision of Para. (1) of Order No. R-3221.

Case No.

3644

Application, Transcript,
Small Exhibits, Etc.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 30, 1967

SPECIAL HEARING

IN THE MATTER OF:

In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the revision of Paragraph (1) of Order No. R-3221, to provide that the effective date for the prohibition of surface disposal of produced water from the North Bagley-Upper Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley-Wolfcamp, and Northeast Bagley-Wolfcamp Pools, Lea County, New Mexico, or within one mile thereof, be changed from November 1, 1967, to some earlier date.

Case No. 3644

BEFORE: Mr. A. L. "Pete" Porter, Secretary-Director
Mr. Guyton B. Hays, Land Commissioner

TRANSCRIPT OF HEARING

Memo

From
IDA RODRIGUEZ
Secretary to Director

August 30, 1967

To Dear Ada:

Enclosed is the register for today's hearing.

Best regards.

P. S. - Mr. Porter would like to have the transcript for today's Case 3644 as soon as possible.

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Use Ex to
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NEW MEXICO OIL CONSERVATION COMMISSION

REGULAR HEARING

SANTA FE, NEW MEXICO

Hearing Date AUGUST 30, 1967 TIME: 9 A.M.

NAME	REPRESENTING	LOCATION
R. H. Fiuken	Gulf Oil	Roswell
Lynn D. Jones	Texas Pacific Oil	Midland, Tex
Dale Holloway	Texas Pacific Oil	Midland, Texas
Ron Freels	Texas Pacific Oil Co.	Dallas, Texas
T. Verne Dwyer	Felmont Oil Corp	Midland, Texas
Joe Miller	Felmont Oil Corp.	midland, Tex.
Doug Sayre	NMSU	Las Cruces
John Hastings	Sunray DX	Roswell
D. H. Stoltz	Stoltz + Co.	Midland
P. C. O'Quinn	Cabot Corp.	Midland
Guy Buell	Pan Am	Fort Worth
V. E. Staley		Hobbs
N Dillsume		Santa Fe
Alton C. Goodrich		Midland
B. D. Baker	Midwest Oil Corp	Midland
Jason Kellahin	Kellahin & Fox	Santa Fe

MR. PORTER: The hearing will come to order, please. This is a special hearing called because of changing conditions in the North Bagley area, Case 3644.

MR. HATCH: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the revision of Paragraph (1) of Order No. R-3221, to provide that the effective date for the prohibition of surface disposal of produced water from the North Bagley-Upper Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley-Wolfcamp, and Northeast Bagley-Wolfcamp Pools, Lea County, New Mexico, or within one mile thereof, be changed from November 1, 1967, to some earlier date.

If the Commission please, George Hatch, appearing on behalf of the Commission and its Staff. I plan to have one witness, Mr. Joe Ramey.

MR. PORTER: I would like to call for other appearances at this time. Anyone else going to make an appearance?

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, appearing on behalf of Stoltz and Company and Rural Pipeline Corporation, and we will offer one witness, S-t-o-l-t-z.

MR. PORTER: Mr. Buell.

MR. BUELL: For Pan American Petroleum Corporation,

Guy Guell. We do not plan at this time to present any testimony or evidence to the Commission.

MR. HATCH: I would like to call to the Commission's attention that we have a telegram of appearnace for Guy T. Buell.

MR. PORTER: I think we can assume it might be the same person. Does anyone have any testimony to present?

MR. GOODRICH: Alton Goodrich for Southland Royalty Company. If the Commission so desires I'll present whatever information we have.

MR. PORTER: Mr. Bill Abbot will also present some testimony. He's on his way in from the airport, I believe.

Mr. Hatch.

MR. HATCH: I would like to have Mr. Ramey sworn.

(Witness sworn.)

(Whereupon, O.C.C. Exhibits 1 through 6 were marked for identification.)

JOE D. RAMEY

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 and position for the record?

A Joe D. Ramey. I am supervisor of the Commission's

District I at Hobbs.

Q Mr. Ramey, in your capacity as supervisor of District I, is it your duty to make recommendations to the Commission concerning the disposal of produced water?

A Yes, it is.

Q Are you familiar with the Case 3644 and what it proposes?

A Yes, sir, I am.

Q Would you review for the Commission what is being sought in Case 3644?

A Before I do that, I would like to give the Commission a little bit of history on this area out here, the North Bagley. First, in February of this year I called a meeting of the North Bagley operators and at that meeting the operators were told that I considered this a critical area and that the operators should consider disposing of the water in some other means than open pits.

In April the Commission heard Case 3551, which was to consider prohibiting open pit disposal in the four southeast producing counties. From this hearing the Commission issued Order R-3221, which among other things prohibited pit disposal after November 1st in the North Bagley field.

I would like to ask the Commission at this time to

take administrative notice of Finding 7 of Order R-3221, which states that there is an eminent threat in the North Bagley area. It now appears that the situation could be classified as a threat more immediate than eminent.

Now, the intent of this case is to advise the Commission of the present status of the water production and how it was being disposed of in the North Bagley field and let them decide whether they should retain the November 1st shutoff date for open pit disposal.

Q What pools might be affected by an order issued as a result of this case?

A It would be the North Bagley-Wolfcamp, the North Bagley-Upper, Middle and Lower Penn Pools and the Northeast Bagley-Wolfcamp Pool.

Q Have you and/or your staff under your direction and supervision made a special study of the North Bagley field?

A Yes, sir, we have. I would like to point out that I have two members of my staff here today. They're at the airport right now; they will be in a little bit later; they will be available for questioning if the need arises, that is Mr. John Runyan and Mr. Leslie Clements.

Q Part of the results of that special study is shown on Exhibit 1?

A Yes, sir, it is.

Q Would you identify Exhibit 1 and explain what it shows?

A Exhibit 1 is a map of the North Bagley area which shows all of the producing wells in the five mentioned pools; the producing wells are the dark circles. We have also located on the map tank batteries which are in the shape of the hexagons, fresh water wells which are the standard fresh water symbols, this is in this instance the circle with the "X" above it is a windmill and over here, the square with the circle in the middle is a, it's either irrigation well or house well or rig well, some other type of water well besides a windmill.

We have also, we have noted under each fresh water well is a reference number and also the chloride content of the water as tested from the well, and in addition we have the pit locations which are the ovals, and superimposed on the ovals is a color coding to indicate the produced water that is going into the pits.

Our color code, in this case the green is somewhere within the range of zero to 100 barrels per day, the blue is within the range of 300 barrels per day. The yellow, 300 to 600 barrels per day. The purple, 600 to 900 barrels per day.

Orange, 900 to 1200 barrels per day, and the red, 1200 to 1600 barrels per day.

Q Mr. Ramey, the study you have made of the North Bagley area, has that revealed a rather drastic change in water production from that reported and considered at the time of the April 18 hearing?

A Yes, sir. If you will refer to Commission Exhibit No. 2, this is a tabulation of the comparison of production for three periods, December of '66. This was the figure we used at the April hearing and then for the month of June, 1967, which is the latest production figures that we have available, or the latest C-115's as submitted by the operators, and then also we have an estimated water figure, or I should say a measured estimate water figure for the month of August which we compiled in our trips to the field.

I might state that the December figures were taken from the New Mexico Oil and Gas Engineering Committee Statistical Reports, the June figures were compiled from the C-115's, as submitted by the operators, and then the August figures were what we compiled on an actual trip to the North Bagley field. The December water production figures indicated 112,572 barrels of produced water during that month. In June of 1967 the produced water figure, as reported by the operator,

was 250,969 barrels. Now, our estimated water figure for the month of August is 633,609 barrels.

I might also point out that in December there were a total of 35 wells in the pool. In June there were 63, and in August there were 67 producing wells. So our well count is nearly doubled from the figure we reviewed at the April hearing.

MR. PORTER: Mr. Ramey, would you give me that December figure again?

A 112,572. That was reported produced water during the month of December, 1966.

MR. PORTER: For 35 wells?

A Yes, sir.

Q (By Mr. Hatch) Would you explain to the Commission how you arrived at your estimated production of produced water for August of 1967?

A These are actual measured estimates. We're not contending that they're 100 percent correct. We do think, however, they are a little more reflective than what was reported in June, certainly. In each instance we went to every pit in the field and depending on the water volume going into the pit, why that depended on the size container that we used to measure the water. This was merely a bucket test with

buckets ranging from five gallons on down and then we would time in each instance how long it took to fill the container and from that time we would calculate the water volume in barrels per day.

Q Do you have an Exhibit 3 marked there? Would you explain the Exhibit 3 to the Commission?

A Before we go to Exhibit No. 3 I would like to turn to page 2 of Exhibit 2. This would be our estimate of the total volume of water which would be disposed of in open pit providing there was no further salt water disposal systems put into operation during that time. It would be our estimate that 1,246,779 barrels would go into open pits between the period September 1 to November 1.

Q That's assuming that the date was not advanced by the Commission?

A Yes, sir, that is correct.

Q Then at the time of Order R-3221, issued at a period that water production was between 100,000 to 200,000, it now appears to be between 600,000 to 800,000 barrels per month?

A Yes, that is correct.

MR. HAYS: When you measured this water you based it on 24 hours?

A Yes, sir.

MR. HAYS: Are those wells running 24 hours a day?

A I think they will run 24 hours a day providing there is no mechanical failure.

MR. HAYS: They have to run 24 hours a day to make their allowable?

A Yes, sir, the vast majority of them, yes, sir. I think our maximum measurement there was five gallons of water in eight seconds.

Q (By Mr. Hatch) Would you explain Exhibit 3 now?

A Exhibit 3 is a comparison of production information. On this exhibit we have various columns, the pit reference number, the pool, the company, the lease, the location of the pit, the number of wells that go into a pit, and then June production figures as to allowable, oil and water, and then our August estimated figures.

In general the water production as reported by the operator is low, however, there are instances where we are in pretty good agreement. Now, for example, on Pit No. 11, these reference numbers are the reference numbers that are depicted on Exhibit 1 by each pit. On Pit No. 11, the June reported daily water production was 200 barrels and our estimate was 245 for August. On Pit No. 23 the operator reported 485

barrels during June and we estimated 447 barrels per day for August.

Then on Pit 33 the operator reported an average of 125 barrels a day, while our estimate showed that the water production would be closer to 964 barrels per day. Then, again, on Pit 44 the operator reported an average of 66 barrels a day and our indication was that it would be 1,286 barrels per day.

The totals for these 53 pits in the area, the operator reported a total of 8,365 barrels per day and our measured estimate indicated 20,439 barrels per day. In some cases the operators, say in Pit 5, the operator reported no water and our indication was 605 barrels per day.

Q Have you or your staff examined the disposal pits in the North Bagley area?

A Yes, sir, we have.

Q All of those pits?

A Yes, sir, all 53.

Q Does your Exhibit 4 reflect that study?

A Exhibit 4 is labeled "Pit Size and Condition, North Bagley Area". Here again we have our pit reference number, operator, the lease, location of pits, pit size, and then a short description of the condition of the pit. I made some

rough calculations on the volume of the pit and the fill-up on the pit, which I would like to cover at this time. If you will refer to Pit No. 3 --

Q Just a minute. You have not made this for all of the pits, only certain ones?

A Only certain ones, I just picked a few at random. Pit No. 3, that is a pit that is 100 feet long and 50 foot wide and 12 feet deep. Our indication is that 353 barrels of water per day is going into the pit. With this volume the pit should fill at the rate of 4-3/4ths inches per day, or neglecting evaporation, the pit would fill in 36 days, but yet our inspection of the pit shows the pit to be completely dry and, in fact, the day before we got there, the night before we got there the pumper reported that he had lost 200 barrels of oil into the pit and all water appears, or all water does go into what appears to be a shot hole in the bottom of the pit. There is no water retained in the pit at all.

The next pit is Pit No. 5. This is a small pit, which is 60 feet by 25 feet. Our estimate shows 605 barrels of water daily going into the pit and so with this size pit and the volume of water involved, the pit should fill at the rate of two feet and three inches a day, or should fill in less than five days. Our inspection shows the pit is

approximately half full of water.

Q Has that been used in the last five days?

A Yes, it has. That's a well that has been producing more than a year. All of these pits are, well, at least more than a month old. I don't have the completion dates on each of the wells but they're, for the time involved in all of these instances, why the well was producing at a greater length of time than is indicated on the fill-ups that I will note.

The next pit I have is Pit No. 13. This is one of the larger pits in the area but here again, our estimate is for 1,371 barrels per day and with this large pit and this volume, the pit should fill at the rate of one foot and three inches daily, or should completely fill in about eight days. In this case both of the pits were three-quarters full, so there is a little water being retained in those pits.

The next pit is Pit 19, which is another rather large pit. This pit has 353 barrels per day going into the pit and should fill at the rate of 4-3/4ths inches per day. I gave you information on Pit 3. Let me correct that, Pit 19 has 411 barrels per day and the pit should fill at the rate of 3-1/2 inches per day or fill in 34 days. In this case one of the pits was approximately a third full of water and the other pit was completely dry and there appeared to be several shot

holes in the bottom of the dry pit.

The last one I have is Pit No. 27. This is a large pit, a hundred feet by one hundred feet. The water volume is 857 barrels daily and the pit should fill at the rate of six inches per day. Our inspection shows that pit to be completely dry, that water was going into the ground as fast as it enters the pit. There was no retention of water at all in the pit.

In general, why our inspection shows that the vast majority of the pits are too small to allow for evaporation to be any factor at all in the disposal of water, so we have to conclude that the water is going into the pits and then into the ground directly below the pits.

Q You have observed the water going into the ground in many of the pits?

A Yes, sir, that is correct.

Q Mr. Ramey, are you familiar with the water well located in the Southeast Quarter, Northwest Quarter of Section 15, Township 11 South, Range 33 East, Lea County, New Mexico?

A Yes, I am.

Q Would you explain to the Commission your connection with that particular water well?

A Yes, sir. We received a complaint from a Mr. Lyman Graham, who lives on the west edge of the North Bagley field,

on July 26th, stating that he had a contaminated water well in the North Bagley Pool, which is the well you just referred to, and that he would like to have the matter checked into. We contacted Mr. Graham on July the 27th and went to the well in question. This well had been furnishing water to the Cactus Drilling Corporation rig, which is drilling a well in Unit D of Section 15. A Mr. Bill Haas, who is tool pusher for Cactus on this rig, had contacted Mr. Graham on the 25th stating that they had had to disconnect from the well because of the high mineral content of the water was causing his engines on the rig to run extremely hot.

Before they disconnected from the well, why Mr. Haas had collected a one-gallon sample of the water from the well while it was pumping. Mr. Clements of our Hobbs Office obtained a pint sample from the well by lowering a bottle on a string into the well. The two samples were then taken to our Hobbs Office and analyzed and the pumping sample which was collected by Mr. Haas indicated a chloride content of 7,632 parts per million and the static sample which we obtained by lowering the jar into the well indicated chloride content of 3,472 parts per million.

On August the 2nd I went with Mr. Clements up to see the well, I wanted to get another sample for one thing,

and also just to look over the situation, but when we arrived at the water well location we were unable to locate the well and it appeared that either the well had been plugged or at least it had been covered up. There was fresh digging of the dirt in the area and we were unable to locate the well. We could locate the approximate locality of it but we couldn't find the well, so I contacted Mr. Graham to find out if he had plugged the well and he was completely ignorant as to what had happened to the well, but he said he would check into it and he called me later and said that he had talked to Mr. Haas, who is the tool pusher on the Cactus rig, and that the two of them had gone to the well location and had dug around and had finally found the well and had found that somebody had cut off approximately two feet of the casing of the well and had placed a rock over the well and then had covered the well. But they had uncovered the well and established by mirror and light that the well was not plugged.

Then on August 10th we made another trip to the area with the two Commissioners present and part of the Santa Fe staff and we again went to the well and it appeared that there had been further activity since there was a larger area of disturbed dirt and the well was again hidden, so we made no attempt at that time to find the well, but then on August 22, why

Mr. Clements got together with Mr. Graham and they went to the well and started searching to see what had happened to the well and they were joined by Mr. Haas and a roughneck off of the rig, and after quite extensive search, why they found that the well had been plugged but they dug down and chipped cement from the top of the well down to the casing of the well and it appeared that the well had been plugged from top to bottom with Neat cement and the top of it rounded off pretty well with cement.

So that's the status of our contaminated water well, or what appears to be our contaminated water well.

Q You were not able, then, to get another sample?

A No, we could not.

Q And you don't actually know or have any information as to who plugged the well?

A No, sir, I haven't been able to determine who did plug the well.

Q Did the complaint on the activity of the well cause your office to make an investigation of other water wells in the area?

A Yes, sir. With the thought determined for sure that this well was contaminated, we should take samples and make an analysis of all the other water wells in the area. So we

visited each water well and obtained a sample and this information is reflected on our Exhibit 5. Exhibit 5 again shows a reference number as to each water well, the location of the well, the type of well, whether it is a rig, windmill, house or irrigation, and then the status of the sample as to whether --

MR. BUELL: Are there any extra copies of these tabular exhibits? It's pretty difficult to follow Mr. Ramey without one in front of us.

MR. HATCH: I think Mr. Runyan can find one.

A Unless the staff wants to give up one of theirs.

MR. HAYS: I'll give you mine. I'll look over Pete's shoulder.

MR. BUELL: Thank you very much.

THE WITNESS: Are you ready, Mr. Buell?

MR. BUELL: Yes, sir.

MR. KELLAHIN: The Commission, it would be helpful if Mr. Ramey would give the legal description for the rest of us who don't have anything to look at.

A I am just speaking in generalities here on this particular exhibit, Mr. Kellahin. Exhibit 5, we again have a map reference number, which I referred to on Exhibit 1 as the number beside each water well, and the location of the water

wells, the type of well, whether rig, windmill, house or irrigation, and the status of the sample, whether the well was not pumping or pumping at the time we gathered the sample, and then the chloride content of the water, and we were able to obtain a few water levels from the State Engineer, which really I don't think are relevant to the case, but it was additional information which we posted, and then the date the sample was collected and how it was collected.

Q Are there any particular wells you want to point out on that exhibit?

A On the well we refer to as FW-6A, this is an irrigation well. It's located at the extreme south end of the pool in Section 33. This well was not pumping at the time and we were unable to obtain a sample. The sample we have posted here, which indicates 530 parts per million chlorides, was an analysis which we obtained from the State Engineer which was gathered in 1961. Since we were unable to obtain an analysis of our own to make this comparison, I just more or less ignored this well in relation to the others with the exception of about three wells, and Well No. 18, which in this case is what I consider the contaminated well, which is this particular well which is circled in red, the chlorides on these, oh, in excess of 20 water wells ranges from a low of 34.5 to a high

of 234.3, and then with the exception of three wells in there, the chlorides would range from that low of 35 to a high of slightly over 80 parts per million on chlorides.

The other three wells are, two of them are 124 and 113, and then the other showed on two tests, it showed 230 and 234, but I think this, with the exception of the irrigation well which we were unable to obtain a sample, why it's all good, potable water.

Q Then you would have expected, speaking of the particular well that Mr. Graham reported to you, you would have expected a chloride content in what range under ordinary conditions?

A I would think in the range of 30 to 80. I might point out a few wells, water wells which surround this particular well which we consider to be contaminated. This well, well, both 16 and 17, FW-16 and 17, one well is a northwest diagonal and the other is a northwest diagonal to this one, this No. 16 shows an analysis of 35.5 parts per million chlorides and the No. 17 is a windmill located in the extreme southeast corner of Section 19, it showed a chloride content of 42.6.

Q Is that Section 19 or 9?

A 9, excuse me. The other well is in the northwest

corner of Section 15. Then well, fresh water Well No. 13, which is in the southwest of the southeast of Section 15, on two samples the chloride showed 49.7 and another one of 52.3, so we have extremely good water here and extremely good water here while sitting in the middle we have a well with extremely high chloride.

MR. PORTER: The well that you consider contaminated is fairly close to the middle of the field?

A Yes, sir, I guess you would consider it fairly close to the middle. I think it's a little more to the east than the exact middle but in the north-south direction, why it's approximately right in the middle of the pool or pools.

Q (By Mr. Hatch) Mr. Ramey, do you have an opinion as to whether or not there is such a threat to the fresh water supplies in the North Bagley area that the Commission should advance the date for surface disposal as prohibited in the areas set forth in Order R-3221?

A Well, if there is no further disposal of produced waters in this area instigated by November 1 there will be an additional 1,200,000 plus barrels which will be disposed of into open pits, which the vast majority of this water will go through the pits, through the bottom of the pits and hence toward the fresh water.

I might point out, if you will refer to Exhibit 6, now this is a tabulation of the chloride contents of the waters produced; the Upper Penn, we had two samples which were 45,000 and 33,000, or an average chloride of 39,000. The Middle Penn, our analysis showed 31,000 and 39,000 for an average of 35,500, and the Lower Penn, it was 39,000 and 24,000, or an average of 31,500; and then the Northeast Bagley-Wolfcamp, the analysis of the water indicated 38,000 parts per million chlorides. This couldn't be considered too good a water. However, it may not be considered too bad a water in relation to some other waters, but still it is a definite, the chlorides are such that it would be a threat to fresh water, I believe.

Now, we have in the area one contaminated well, or in my opinion it's contaminated, and so with the thought of another 1,200,000 plus barrels going through the bottom of these pits in the next two months, why I definitely feel that there is an immediate danger to the other fresh water wells in the area.

Q Do you have any recommendations to make to the Commission concerning the possible dates?

A If the Commission will recall, in the April hearing, why I recommended that the cutoff date for open pit disposal

in this area be July 1st and if there were any way to make this retroactive to then, why that would be my recommendation.

Q Mr. Ramey, did you or someone under your supervision prepare Exhibits 1 through 6?

A Yes, sir.

MR. HATCH: I would like to move the introduction of Exhibits 1 through 6 in evidence. That's all the questions I have.

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

(Whereupon, O.C.C. Exhibits 1 through 6 were offered and admitted in evidence.)

CROSS EXAMINATION

BY MR. PORTER:

Q Do you recall how many windmills there are in the area?

A I can count them.

Q Approximately about 18 or 20?

A Well, we had a total of 25 wells in this immediate area. There are other wells in this township which we didn't, we didn't bother to go to, but there are 25 wells depicted on the map, 25 fresh water wells.

MR. HAYS: What's the average depth of these wells?

THE WITNESS: I think they range, I don't have that information, Mr. Hays, but I've heard they're anywhere from around 40 feet to around 80 feet.

MR. HAYS: Thank you.

Q (By Mr. Porter) Mr. Ramey, you mentioned that you called, I believe you said, a meeting in the Hobbs Office in February?

A Yes, sir.

Q About what time in February?

A I want to think the 9th but I didn't bother to get that information.

Q Was it early in the month, you think?

A I think it was fairly early in the month.

Q What was the response of the producers to this meeting after you called their attention to what you considered a threat, a possible threat to fresh water?

A Well, I think they had some other meetings between February and April when we had the other hearing, and I know that one operator, I didn't mention, which I should right now, that we do have one battery under disposal. This is the Southland Royalty. This particular lease is going into its disposal well, I think that, and they picked up some other producers over in the Inbe which we are disposing into a

Devonian dry hole. But I think from that meeting, Southland went ahead and started working on a disposal system which they now have in operation. I believe Bill Haas, oh, in the not too recent future, or not too long ago, they applied for a dual which would encompass production from the Penn and then and large disposal of the produced water.

In addition I think Mr. Stoltz has designed an extensive system to dispose of the system into playa lake some four miles north of the pool. In general I thought the response was a little slow from the first meeting but there was some activity. The operators do have kind of a tough situation here in finding adequate disposal zones.

Q What seems to be the problem?

A Well, there is nothing above the Devonian which will take the water or take water in this volume. The San Andres was tried to the east in the Inbe Pool and that did not prove satisfactory, it worked for a while but the pressures were extremely high on their injection well and the Inbe has gone to Devonian disposal. I still feel that perhaps a little better progress could have been made.

Q What about the availability of Devonian dry holes in the area?

A I know there's one to the north and then I think

Aqua has obtained approval for a Devonian well in the south near the Bagley Pool, so that is two Devonian wells. Now, whether that would be enough to handle all the produced water, I don't know. I think a lot of the operators have been waiting for the Stoltz application.

MR. PORTER: Does anyone else have a question of Mr. Ramey? Mr. Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q I just want to ask a question to clarify a point to keep the record straight. Now on your Exhibit No. 2 where you show that the operators reported 250,969 barrels of water production for June --

A Yes, sir.

Q -- isn't it a fact that this is not the actual reported production, but the actual reported production was expanded to take care of the days when some of the wells were down and if a well produced 28 days this figure was expanded to show a thirty-day actual water production?

A Yes, that is correct.

MR. NUTTER: Thank you.

THE WITNESS: I would say, going a little further, that that figure probably should have been around 500,000 as the

actual water production if it had been reported properly by the operator.

MR. PORTER: During the month of June?

THE WITNESS: Yes, sir.

MR. PORTER: Does anyone else have a question? Mr. Buell.

MR. BUELL: I have one or two.

CROSS EXAMINATION

BY MR. BUELL:

Q Mr. Ramey, you testified that some of the operators are now handling effectively and efficiently the salt water; I believe you testified that you were aware of their projects that are actively under way to handle produced salt water in the field?

A Yes.

Q But as these projects become operative between now and November 1st, the water that they handle, of course, would reduce your estimate of salt water that would be put on the ground in the interim period between September 1 and November 1?

A Yes, sir. I don't know the --

Q I have one other question with regard to Fresh Water Well 18. Do you have any explanation as to why the two samples that you show on your Exhibit 5 would vary so in parts per

million chlorides?

A Yes, sir. I think that's fairly common. The first test was a pumping test where actually the chlorides were being sucked up out of the well, and this would be a representative sample of the water while it was pumping and then the well had been shut-in for approximately 48 hours and the chlorides had probably settled somewhat to the bottom of the well to where the concentration would not be so high on a static sample.

Also we got our sample from the very top of the water level of the well and the chlorides naturally being heavier would tend to settle to the bottom.

Q If I understand your testimony, you think each sample is representative of the conditions under which it was taken?

A Yes, sir, that's right.

Q Let me ask you this, is parts per million chlorides the only element in these samples that you have compared with the previous sample on Fresh Water Well 18?

A Yes, sir.

Q There are other constituent elements in the North Bagley produced water other than chlorides, are there not?

A Yes, there are. There are carbonates, sulphates.

Q Would it not be revealing to also analyze these elements with the prior sample to see if they, too, have increased in this well?

A That is correct, but all we had available for making analysis is chlorides. That's all we can do in our small lab in the Hobbs Office.

Q Would you suspect that if the contamination is coming from produced salt water from the North Bagley area that the sample would also show an increase in the other constituent elements as well as chlorides?

A Yes, I am sure it would.

Q But you were unable to do that?

A That's right.

Q So your conclusion that the contamination of the fresh water well came from produced North Bagley area water was simply the fact that North Bagley area water has been put in pits and according to your investigation it hasn't all evaporated yet, it has gone somewhere?

A Yes.

MR. BUELL: That's all I have.

MR. PORTER: I didn't hear you conclude that this contamination occurred because of pit disposal, did you?

THE WITNESS: That is my opinion, yes. This

particular well sets, oh, 75 to 100 feet due west of a large disposal pit.

MR. PORTER: So you think there is a possibility of the increase in chlorides did come about because of the salt water disposal?

THE WITNESS: Yes, sir. I think the produced water going into open surface pits and from the open surface pits to the ground and consequently, to the fresh water aquifer, or at least to this well.

MR. PORTER: Mr. Kellahin, do you have any questions?

MR. KELLAHIN: No, sir.

MR. PORTER: Anyone else? The witness may be excused.

(Witness excused.)

MR. PORTER: Does anyone else desire to present testimony before we call on these people who have been authorized some kind of a disposal system? At the time we sent out the notice of the hearing we asked those people who have been authorized some kind of disposal system, I believe there were four, if they would come and give us some information concerning those disposal systems. So at this time, Mr. Kellahin, I believe we will call on you to present your client.

MR. KELLAHIN: We have one witness I would like to

have sworn, please.

(Witness sworn.)

(Whereupon, Burro & Stoltz Exhibit 1 was marked for identification.)

DEAN STOLTZ

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Dean Stoltz.

Q What business are you engaged in, Mr. Stoltz?

A I am a partner in Stoltz and Company, engaged in oil field operation and production in Texas and New Mexico.

Q Is Stoltz and Company the company that was authorized by this Commission to dispose of salt water in playa lake north of North Bagley field?

A This is so.

Q What is Burro Pipeline Corporation?

A It is a New Mexico corporation that was organized for the purpose of operating and maintaining this pipeline.

Q What connection do you have with Burro Pipeline?

A I'm the president of Burro Pipeline Corporation.

Q Are you also, under the name of Stoltz and Company, an operator in the North Bagley field?

A Yes.

Q Are you familiar with the history of this field?

A Yes, I am.

Q Would you, for the benefit of the Commission, give us some discussion of the development of this field?

A I would like to make a few general remarks that cover some of the points that have been discussed here today and also in the earlier hearing in Hobbs in April. It has appeared to me right along to be a little bit unusual that this North Bagley field has been singled out for this early no pit order which is November 1st, 1967, as opposed to a general statewide order of January 1, 1969, especially in light of the fact that this field is about five years old in terms of production and there are fields that have been on production twenty to thirty or forty years in this state that have done nothing about produced water, and I am sure in terms of total volumes of water disposed greatly exceed the figures presented by Mr. Ramey.

Also, another item in our April 19th hearing in Hobbs, it was presented as part of the water engineer's testimony, I believe, that the City of Lovington had drilled

several wells for their fresh water supply, a couple of them were found to be contaminated at an early date and yet a number of fields in the immediate area of Lovington are not shut-in or are they subject to the early no pit order that we are subject to in this rather sparsely populated, a little dependent on the water supply, area. It essentially, the area we are in is a grazing grass lease area.

The third item I would like to mention here, too, I have a feeling that the North Bagley field with some dozen independent ownerships or operators as well as three or four major companies, has probably been better operated than most of the old fields in this state and this is largely due to the fact that the Oil Conservation Commission regulations, of course, have improved through the years and their governmental supervision has been probably more present in this field development than in the fields that have been found in years gone by. Beyond those few general comments I would like to get into the Burro Pipeline Corporation operation and try to qualify and answer to some degree the question posed as to why there has been an apparent lack of activity on the part of some people in getting rid of their water. I intend to evidence that this is not so. That we have been constantly busy from April 19th on. As of May 1st, of course, we got our no pit order

for the North Bagley field effective November 1, 1967. May 17 we applied to the Commission and had a hearing, Case 3570, for the use of the Lane Salt Lake for the use of the salt water disposal, this lake being located four or five miles north of the northern extremity of the North Bagley field.

On May 29th the Oil Conservation Commission issued the order approving the use of this lake for a salt water disposal facility. If any of you are acquainted with what it takes to get 15 to 20 operators, many of them companies with many echelons of command and authority to approve various requests, contracts and conversation relative to getting this thing constructed, you can appreciate a little bit some of the time that has been consumed since.

However, following May 29, the Burro Corporation was organized and it's a corporation in the State of New Mexico. We have circulated contracts, renegotiated and finally signed contracts with Cabot Corporation, United States Smelting Refining Company, BTA Producers, Trobaugh and Associates, Meadco, H. C. Hood, Sunset International, Sam Boren and ourselves, Stoltz and Company. We retained Buckles and Company engineering firm out of Monahans, Texas for the purpose of designing and engineering our salt water system. We have now completed the engineering portion of this system.

I would like to have Jason, if he would, introduce our maps here as exhibits at this point.

Q Mr. Stoltz, referring to what has been marked as the Stoltz and Company and Burro Pipeline Exhibit No. 1, would you identify that exhibit?

A The exhibit is the exhibit presented on the board up there to the left of Mr. Ramey's exhibit?

Q That is correct. What is that exhibit, what does that depict?

A That is the work performed by Buckles and Company, the engineering firm, in connection with designing, sizing, specifying materials and prescribing the best survey layout for the construction and installation of this system, carrying it from the North Bagley field to the Lane Salt Lake.

Q Has that system been constructed as yet?

A It has not.

Q Have you been working on arrangements for the construction of the system?

A We are prepared at this point to go ahead with the work. We could commence as early as Monday. We have just completed securing the final necessary items in terms of materials and also right-of-way in connection with this construction. This system, incidentally, will cost approximately

$375,000.00. The line sizes vary from two-inch to ten-inch, there's a main trunk line running north and south covering about eight miles with the various laterals then going out to the respective leases. There will be 125,000 feet of line involved in the entire system.

One, of course, of the critical parts of $375,000.00 investment, of course, is finding the money to do it. We had a little delay in processing our loan application. We requisitioned and took bids on materials in accordance with the specifications outlined by Buckles and Company. The last step was procuring the right-of-way. Now we're ready to commence construction. This construction will take 45 days, assuming we can start Monday, or approximately September 1st, and that is assuming six to eight ten-hour day weeks. This is barring no interruption due to environmental condition and acts of God and weather and so forth.

Q Will that system handle the volumes of water to which Stoltz and Company testified at the hearing in the application for approval?

A This system is designed to handle up to the 30,000 barrels approved by the Commission in their order in connection with Case 3570. We are going into the system initially with 15,000 or 17,000 barrels per day.

Q That is in accordance with the testimony that Stoltz and Company offered in Case 3570, is it not?

A Yes.

Q Mr. Stoltz, as an operator in the pool, in your opinion would there be any adverse effect if these wells were shut-in pending the completion of salt water disposal system adequate to take care of all the produced water?

A Mr. Kellahin, when we started in this field two and a half years ago there were a few wells in the field at that time producing a few barrels of oil. We developed production in there that produced one barrel of oil and approximately three barrels of water. We could not project any reserves at this point.

We labored one well at a time until it reached a point where after a year to eighteen months we realized that the cumulative production indicated that this was probably a substantial reservoir and yet even today you cannot find an accredited engineer that will stand very long on their reserve estimate in this area due to the fact that where there is this much water produced there is just a great deal of uncertainty.

I would like to say that in the past two and a half years, Stoltz and Company has invested five million dollars

in this area. We are prepared to invest another $375,000.00 in this salt water disposal system. We are a long ways from getting our investment back in this area in direct answer to your question, Mr. Kellahin, relative to what would happen if we had to shut these in prematurely or prior to completion of our salt water disposal system we cannot postulate what might happen, we can only fear that there would be some possible reservoir damage and individual well damage as a result of this.

Q I gather from your testimony that you can't make a reservoir estimate in this field, is this correct?

A I can but an engineer would not.

Q An engineer would not. But in that sense you are taking a considerable risk in the construction of the disposal system you propose, are you not?

A Yes, sir, we are.

Q Because the life of the field could be shorter than you might anticipate, is this correct?

A That is correct.

Q Was Exhibit 1 prepared for you by Buckles and Company?

A Yes.

MR. KELLAHIN: At this time I would like to offer

in evidence Exhibit No. 1.

MR. PORTER: If there is no objection, the Exhibit 1 will be admitted.

(Whereupon, Burro & Stoltz Exhibit No. 1 was offered and admitted into evidence.)

CROSS EXAMINATION

BY MR. PORTER:

Q What kind of pipe do you propose to use for your gathering and transmission system?

A It is a composition material, Johns-Manville material called Transite, which is an accepted water supply pipeline material used by all the major pipeline companies.

Q It is not a metal pipe, then? You say if you start Monday on construction and you have no interruption it will take you 45 days to complete this whole system. Does that mean all of your gathering system plus your transmission pipe to the lake?

A It would be the system indicated there in our Exhibit 1.

Q So it would be approximately the middle of October before you could have your line in operation?

A Yes.

MR. PORTER: Does anyone else have a question?

Mr. Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Stoltz, I would like to be sure that I have got everyone listed here that you said you had contracts with. I'll read them to you and you can tell me if I am leaving someone out. U. S. Smelting, Cabot, BTA, Trobaugh, Meadco, Hood, Sunset, Boren.

A Stoltz and Company.

Q And Stoltz and Company, sure, thank you. That's all.

THE WITNESS: I would like to make one other comment, if I might, Mr. Porter.

MR. PORTER: Yes, sir.

THE WITNESS: To date the chief beneficiary, I think, from our operations, as well as other operators in the North Bagley field, would have to be the State of New Mexico in terms of being on the profit side of the ledger. We, with respect to our own operations, ran off some figures here which reflected to date that the state has realized about $612,000.00 from our operations. This is a combination figure which represents your state royalty as well as state sales tax, three percent, and severance and pipeline tax. We feel that

the few barrels that were being produced there two and a half years ago and the some 200,000 barrels a month that are being produced mostly on State of New Mexico lands should have some bearing in this case; as Mr. Ramey pointed out, there are some 67 wells producing in the area now from a half dozen or so two and a half years and six rigs presently running in the area.

It is our committed opinion and feeling that the Commission, in considering this hearing today and the information and data presented, should thoughtfully consider a request on our part that this no pit order be extended to December 1, 1967, to give us adequate latitude to complete the job properly and in good order.

I feel that the 45 days that we have indicated in terms of construction time is probably fair and adequate. However, we cannot foresee into all the eventualities that might conflict or hamper the construction of this line.

MR. PORTER: Mr. Stoltz, under, I don't recall the order number, you were granted authority to dispose of up to 30,000 barrels of salt water per day into this Lane Lake. Now, you have your pipeline surveyed and you are ready to go ahead with your construction. Do you foresee anything that would hinder you as far as right-of-way or use of portions of the lake are concerned?

THE WITNESS: I think at this point not. I think that --

MR. PORTER: You think that any delay that you might experience here would have to be the result of slow down in construction?

THE WITNESS: Weather or some unexpected delay in the delivery of materials.

MR. PORTER: Anyone else have a question? You may be excused. Thank you, Mr. Stoltz.

(Witness excused.)

MR. KELLAHIN: That's all we have to offer, Mr. Porter.

MR. PORTER: We also requested Southland Royalty Company to appear. I believe we have Mr. Goodrich present. Would you come forward, please? Mr. Hatch, would you swear the witness, please?

(Witness sworn.)

(Whereupon, Southland Royalty's Exhibit No. 1 was marked for identification.)

ALTON G. GOODRICH

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

DIRECT EXAMINATION

BY MR. PORTER:

Q Mr. Goodrich, you were authorized, I believe, the use of a well for disposal some time ago.

A Yes, sir.

Q Would you just proceed and tell us anything that you might want to inform us concerning when the well will be available for disposal, what the capacity may be and what potential customers you may have and so forth?

A Yes, sir. This well is located in the north end of the Bagley field in Section 31, Township 10 South, Range 33 East. It is completed in the Devonian as a salt water disposal well and is currently in operation. We are injecting water into this well from Southland's properties in the Inbe-Penn field and from one lease in the North Bagley field.

The well currently is equipped with two and a half-inch tubing and we think we have never had adequate water to run a full scale injective test on this well, but indications are it will take around 5500 to 6500 barrels per day with two and a half-inch tubing. We plan to change the tubing out in the next month to three and a half-inch, we think based on other Devonian wells in the area, Rice has one and I believe Amerada has one to the south that the well should take between eight and nine thousand barrels of water per day.

We have signed contracts with Gulf Oil Corporation, Felmont, General American Oil Company, Southern Natural, and those two happen to be over in the Inbe field, with Pan American, Texas Pacific and Charles Gillespie.

Q I believe I got Gulf, Felmont, General American, Pan American, Texas Pacific, Charles who?

A Gillespie, Mr. Porter. Southern Natural, you didn't call out.

Q Southern Natural?

A Yes. Our best estimates are that that is between 6500 and 7,000 barrels of water per day. We did not and have not tried to contract or obtain too much water to go into this well until we have changed the tubing out and can ascertain what the injective capacity of the well will be.

Q How long will this changing of the tubing take?

A Well, this will only take a couple or three days.

Q Have you definitely decided that you will put in the large tubing?

A Yes, sir. This system from the Inbe-Penn field to the north part of the Bagley field to this well is in operation. The gathering system to pick up water from all these companies listed is not installed and will have to be installed prior to picking up their water. We initiated injection into this well,

this is Southland water from the Inbe-Penn field on June 25th, and to date have put about 100,000 barrels of water in the well with no indication of any problems at all.

If the Commission would like to see it, I have here a map of the system that we have designed to pick up water from the people that I have contacted.

Q I wonder if you would put that up on the board.

A This dotted system is in operation at the present time. This will have to be added to pick up operators that I have pointed out. All this is solid lines. There are some lines that are hashed out here which these people indicated they are interested in getting into this system and later decided to go with Mr. Stoltz.

Q You say this part of the system up here is in operation?

A Yes, in the Inbe field in this area.

Q You are picking up from one lease?

A From our own lease here.

Q From how many wells, one or two?

MR. BUELL: May I suggest that you put a general area of which you are speaking into the record because the reporter is not getting your finger into the record.

MR. PORTER: Thank you, Mr. Buell.

Q (By Mr. Porter) Would you describe by section and township and range the area that will have to be constructed?

A From the batteries involved in Section 3, 10, 15, 21 and 22, and I believe they're all in 10-33, 11-33, pardon me.

Q Do you have any projected date as far as establishing this gathering system?

A We intended and promised these people that we would have this system in operation by November 1st. I agree with Mr. Stoltz that it takes quite a bit of doing to get people lined up to sign these contracts after you present them with a contract, it's often a month and we have had to call some of them, they needed to decide which way they had to go. It takes some time to get contracts signed and back and these you have to have back before you can design the system.

We just started this system. We have had it surveyed and, as in his case, we plan to start it shortly. We think that barring any unforeseen problems we could probably put our part of this system in in thirty days, but I'm not sure of this.

Q To satisfy these customers that you have contracted with?

A Well, of course, all we are trying to do as far as these customers are concerned, in light of the order, was to

put it in by November 1st. I couldn't promise the customers that we would get it in in thirty days. The system that we put in, it took about one and a half times as long to install as we had planned for it to take. There are unforeseen problems involved in these things.

MR. PORTER: Anyone have a question of Mr. Goodrich?

MR. BUELL: May it please the Commission; as I understood your testimony, it was that the earliest possible date would be October 1 and you feel sure that you will make your target date of November 1?

THE WITNESS: That's true. I would like to add one thing, if I could. I don't know exactly how long this field has been producing. Mr. Ramey testified that in the next two months an additional 1,240,000 or thereabouts would be injected into pits. According to the monthly figures that he indicated here, I am sure there has been at least 125,000,000 barrels of water already put in the pits over the years. It seems to me that an additional one percent is not really very dangerous as far as water contamination is concerned in this area.

MR. PORTER: Does anyone else have a question? Thank you, Mr. Goodrich.

(Witness excused.)

MR. PORTER: Mr. Abbott, I believe you have also been

authorized a disposal well in this area, or the company that you represent. I would like to have you tell us what the status of your proposed system is and ask Mr. Hatch to swear you in as a witness.

(Witness sworn.)

BILL ABBOTT

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

DIRECT EXAMINATION

BY MR. PORTER:

Q Mr. Abbott, will you proceed to give us a rundown on what your proposed operation is and what the present status is and any projected dates of completion that you may have?

A Yes, sir. Actually I'll give you a rundown of facts and a time table. Sometime in June some of the operators came to me and were interested in subsurface disposal. So I sent out a letter to them June 22, more or less a letter of intent, what Aqua planned to do and highlighting the contract. On July 12th I sent out contracts to these operators that indicated in our letter of intent that they were interested. On July 26th Aqua had the hearing before the Conservation Commission for approval to dispose of the water in the Amerada State BTC No. 2, and this was approved by the Commission in an order dated

August 1st. Also we received approval from Amerada in a final agreement July 27th to use their well.

At this time there is no activity, the operators that indicated some interest were contacted and the contracts sent to them, but in the meantime they have gone other directions, with Southland Royalty or with the Stoltz system. So at this time we don't plan on reworking a well or spending any money.

Q So far all you have had is authorization to use a well?

A That is correct.

MR. PORTER: Any questions of Mr. Abbott? Thank you, Mr. Abbott, you may be excused.

(Witness excused.)

MR. PORTER: We also authorized a disposal well, I believe, for Bell Petroleum. Mr. Salman, do you have something to say about that?

MR. SALMAN: Yes, sir.

(Witness sworn.)

HORAN SALMAN

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

DIRECT EXAMINATION

BY MR. PORTER:

Q Mr. Salman, would you give us your complete name?

A My name is H-o-r-a-n Salman and I am with Bell Petroleum Company.

Q Would you proceed to tell us what kind of a system you have been authorized and what the status is and capacity?

A We have an approval from the Oil Commission, I believe Order No. R-3271, which was granted on July 10th, 1967 to convert our well to a dual producing well, producing it from the five and a half-inch casing as an oil well from the Strawn formation, and dispose of the water into the San Andres formation, and the annular spacing with the eight and five-eighths-inch casing and five and a half-inch casing.

Our system is almost operational. We have our seven tanks and water system put in. All we need now is a few automatic controls and we should be operational, I would say, within a week or two.

Q Mr. Salman, are you operating this just for your own wells, for Bell Petroleum wells?

A Yes, sir. We have no desire to take any other wells.

Q You don't know what the capacity will be yet?

A The capacity of the wells should be in excess of 1600 barrels a day.

Q 1600?

A Right.

Q How many of the wells are you operating?

A Right now we have one. We may have another one.

Q You have prospects for another well?

A Yes, sir.

MR. PORTER: Does anyone have a question of Mr. Salman? Thank you, Mr. Salman. You may be excused.

(Witness excused.)

MR. PORTER: If no one else has any testimony they want to offer, at this time we will hear any statements that you may have or any comments on the case. Mr. Buell.

MR. BUELL: May it please the Commission, for Pan American Petroleum Corporation. I believe this record will certainly support that the operators have been diligent in attempting to handle their produced salt water problem in the North Bagley area. Unfortunately it does take time. In addition to the reports you have heard this morning from systems that were proposed and designed to handle the water there was another offer active in the field, so actually Pan American Petroleum Corporation, from Mr. Staley in Hobbs to the division office in Fort Worth, has had to evaluate and analyze four separate and distinct proposals, and it does take time.

We expedited it as much as we could, we have now, as the record will reflect, executed a contract with Southland Royalty. I do feel that not only Pan American but all the operators in this pool have been as diligent as possible under the circumstances. Pan American certainly shares Mr. Ramey's concern and the Commission's concern with the possibility of any contamination of any fresh subsurface waters anywhere in the State of New Mexico, not just the North Bagley area.

We do have to go about handling these problems in a way differently than the Commission would due to the fact that we are in business to make a profit and we have to analyze each proposition to see which one will fit the bill and which one will do it the most economically.

I would like to relate an experience that Pan American has had which corroborates Mr. Stoltz' testimony to the fact that shutting in of these wells in this area could cause waste by adversely affecting the reservoir conditions or well bore conditions. We had a strong flowing well that we shut-in to install a Kobe pump. It took us a tremendous amount of pumping and producing after we had completed the installation to return that well back to oil production. To this day it is not producing oil on this pump as high rates as it was flowing, so certainly our experience would indicate that shut-in even

for a day or two period of time while you are doing work or installing a pump is harmful, at least to the well bores, so it would be rather drastic action to shut-in this field to keep from putting salt water on the ground and then discover when we spent money on these systems and reopened it we didn't have a field.

Pan American would certainly recommend to the Commission under this record here today that the deadline of 11-1-67 certainly not be advanced.

MR. PORTER: Anyone else have a statement?

MR. GOODRICH: I do not believe that I was asked for a recommendation, but I would like to pose the same recommendation that the date of 11-1 be allowed to stand.

MR. PORTER: Any other comments?

MR. BUELL: May it please the Commission, maybe, perhaps I should say for the record that I recommend that the date not be advanced. I didn't intend to infer any objection to Mr. Stoltz' recommendation of December 1, 11-1 suits us fine because Southland Royalty says they will have their system in operation by then.

MR. PORTER: I believe the call of the hearing was to consider moving the date forward. Anyone else have a comment, any statements? The Commission will take the case under advisement, and the hearing is adjourned.

I N D E X

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, 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 September, 1967.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1971.

DOCKET NO. 26-67

DOCKET: SPECIAL HEARING - WEDNESDAY - AUGUST 30, 1967

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 3644: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the revision of Paragraph (1) of Order No. R-3221, to provide that the effective date for the prohibition of surface disposal of produced water from the North Bagley-Upper Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley-Wolfcamp, and Northeast Bagley-Wolfcamp Pools, Lea County, New Mexico, or within one mile thereof, be changed from November 1, 1967, to some earlier date.

NOTE: A COPY OF THIS DOCKET WAS MAILED TO ALL PRODUCERS IN THE ABOVE-MENTIONED POOLS ON AUGUST 11, 1967.

NORTH EAGLEY POOLS - PRODUCTION INFORMATION

EXHIBIT 3
LESLIE A. CLEMENTS

MAP PIT REFERENCE NUMBER	POOL	COMPANY	LEASE	LOCATION OF PIT (UNIT LETTER)	S T R	NO. OF WELLS PRODUCING WATER INTO THIS PIT	JUNE 1967 DAILY ALLOW. BBLS.	JUNE 1967 DAILY REPORTED OIL BBLS.	JUNE 1967 DAILY REPORTED WATER BBLS.	AUGUST 1967 DAILY ESTIMATE WATER BY OPER. BBLS.
1	U.P.	Southland Royalty	Graham State	O	3-11-33	(1) 0	225	53	314	(1) 0
2	U.P.	Chas. B. Gillespie, Jr.	State "A"	N	3-11-33	1	130	88	303	214
3	L.P.	Stoltz & Co.-Clark	Sohio State	P	4-11-33	1	220	142	61	(2) 353
4	M.P.	Stoltz & Co.-Clark	Sohio "B"	P	5-11-33	1	New Well	No C-115 for June		1,286
5	L.P.	Sam Boren	Gulf-Sohio State	H	8-11-33	1	140	123	0	605
6	L.P.	Stoltz & Co.-Clark	Champlin	I	8-11-33	1		113	169	294
7	L.P.	Sam Boren	Collier	D	9-11-33	1	New Well	No C-115 for June		224
8	L.P.	BTA Oil Producers	Bagley	A	9-11-33	1	90	69	4	(3) 150
9	U.P.	Stoltz & Co.-Clark	Collier	F	9-11-33	1	225	220	166	(4) 350
10	L.P.	David Faskin	Felmont-Collier	H	9-11-33	1	170	77	120	(5) -
11	U.P.	Stoltz & Company	Hissom "A" State	I	9-11-33	1	120	133	200	245
12	L.P.	Gulf Oil Corp.	"OE" & H.P. St.(CTB)	P	9-11-33	2		110	23	144
13	U.P. M.P.-SI	Texas Pacific Oil Co.	J. P. Collier (CTB)	F	10-11-33	3	675	362	221	(6) 1,371
14	L.P. M.P.	Sunset-International	T.P. "A" State (CTB)	J	10-11-33	2	410	207	150	257
15	U.P.	Felmont Oil Corp.	State "F"	K	10-11-33	1	210	108	198	79
16	U.P.	Texas Pacific Oil Co.	State "AK"	N	10-11-33	1	208	140	160	137
17	L.P.	Southern Nat. Gas Co.	State "C"	E	11-11-33	1			0	62

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
OCC Exhibit No. 3
Case No. 3644

MAP PIT REFERENCE NUMBER	POOL	COMPANY	LEASE	LOCATION OF PIT (UNIT LETTER)	S T R	NO. OF WELLS PRODUCING WATER INTO THIS PIT	JUNE 1967 DAILY ALLOW. BBLS.	JUNE 1967 DAILY REPORTED OIL BBLS.	JUNE 1967 DAILY REPORTED WATER BBLS.	OCTOBER 1967 DAILY REPORTED WATER BBLS.
18	L.P.	Meadco	Cabot State	H	15-11-33	1	New Well	No C-115 for June		514
19	M.P.	Felmont Oil Corp.	Hissom State	F	15-11-33	1	225	224	783	411
20	M.P.	Allen K. Trobaugh	Dallas	N	15-11-33	2	395	344	510	348
21	U.P.	Cabot Corp.	Mary E. Dallas	P	15-11-33	1	76	47	4	TSTM
22	L.P.	U. S. Smelting	Bagley State	G	16-11-33	(7) 3	248	264	122	(7) 686
23	M.P.	Pan American Pet. Corp.	State DG	F	16-11-33	1		41	485	447
24	L.P.	Stoltz & Co.-Clark	Christensen State	L	16-11-33	1	110	123	288	551
25	L.P.	Stoltz & Co.-Clark	Enfield	I	16-11-33	1	180	144	96	147
26	U.P.	Stoltz & Company	State NBN	N	16-11-33	1	175	93	139	351
27	U.P.	Pan American Pet. Corp.	State DC	P	16-11-33	1	50	53	758	857
28	M.P.	Stoltz & Co.-Clark	Andover Federal	P	17-11-33	1	225	189	126	406
29	L.P.	Stoltz & Co.-Clark	Huber-Collier	J	18-11-33	1		11	6	574
30	M.P.	Stoltz & Company	Bell "A"	C	21-11-33	1	225	116	77	454
31	U.P.	Stoltz & Company	Bell	A	21-11-33	3	250	258	387	(8) 643
32	L.P.	Stoltz & Company	Bell "B"	E	21-11-33	1	220	56	84	227
33	L.P.	Bell Petroleum Co.	State "K"	K	21-11-33	1	212	79	125	964
34	L.P.	Pan American Pet. Corp.	State "DH"	I	21-11-33	2	410	365	642	791
35	U.P.	Stoltz & Company	Gulf State	D	22-11-33	1	225	151	153	187
36	U.P.	Stoltz & Company	State NBF	F	22-11-33	1	135	91	91	43
37	U.P.	Felmont Oil Corp.	State 262	G	22-11-33	1	140	72	24	38

MAP PIT REFERENCE NUMBER	POOL	COMPANY	LEASE	LOCATION OF PIT (UNIT LETTER)	S T R	NO. OF WELLS PRODUCING WATER INTO THIS PIT	JUNE 1967 DAILY ALLOW. BBLS.	JUNE 1967 DAILY REPORTED OIL BBLS.	JUNE 1967 DAILY REPORTED WATER BBLS.	AVERAGE DAILY DISPOSAL WATER IN BBLS.
38	U.P.	Stoltz & Company	J. D. Guye	H	22-11-33	1	30	8	7	TSTM
39	U.P.	Stoltz & Company	Sinclair State	K	22-11-33	2	364	310	310	996
40	U.P.	Stoltz & Co.-Clark	Sinclair "A" State	O	22-11-33	1	170	162	162	406
41	N.B. WC U.P.	Cabot Corp.	CTB	D	23-11-33	4	97	84	37	TSTM
42	U.P.	Stoltz & Co.-Clark	Clark State	D	27-11-33	1	225	220	12	32
43	U.P.	Stoltz & Company	Humble "B"	E	27-11-33	1	New Well - No C-115 for June			193
44	L.P.	Stoltz & Co.-Clark	Sinclair "B" State	G	27-11-33	1	178	44	66	1,286
45	U.P.	H. C. Hood	Warren State	H	28-11-33	1		125	8	514
46	L.P.	Stoltz & Co.-Clark	Warren State	G	28-11-33	1		116	174	171
47	U.P.	Stoltz & Company	Kelsay	M	28-11-33	1	30	43	130	1,543
48	L.P.	Stoltz & Co.-Clark	State "AS"	G	29-11-33	1	185	129	194	386
49	L.P.	Stoltz & Co.-Clark	Sunray "B" State	K	29-11-33	1	220	137	206	406
50	N.B. WC	Pennzoil Company	Cabot State	I	14-11-33	1	50	31	0.63	TSTM
51	NE.B. WC	Southern Nat. Gas Co.	State "C"	C	11-11-33	1	188	260	0	TSTM
52	NE.B. WC	Natural Gas & Oil Corp.	State of N. M.	N	2-11-33	1	212	(9) 199	0	TSTM
53	NE.B. WC	Sunset International	T. P. State	L	11-11-33	1	141	91	70	98
									8,365	20,439

NORTH BAGLEY POOLS - PRODUCTION INFORMATION

REMARKS

(1) This lease is in a disposal system. Date first water to system May 17, 1967.

(2) This water figure per pumper

(3) Bleeder line under water. No way to estimate water. This water figure per BTA foreman.

(4) This water figure per pumper

(5) This well being worked over due to casing collapse

(6) This water estimate figure includes well No. 4-Y which was not reported producing in June.

(7) Well No. 3 did not produce in June.

(8) One well SI during June (No. 2-A)

(9) Assumed thirty days. Did not report days produced on C-115

COMPARISON OF NORTH BAGLEY POOL PRODUCTION INFORMATION

EXHIBIT 2

POOL	NO. OF WELLS	REPORTED OIL VOLUME - BBLS.	REPORTED WATER VOLUME - BBLS.	EST. VOLUME WATER BBLS.	AVERAGE CHLORIDES	
North Bagley Lower Penn	4	3,595	1,027	None	35,550	
North Bagley Middle Penn	5	21,395	45,951	None	25,205	For Month of December 1966
North Bagley Upper Penn	26	75,232	65,594	None	40,470	
Totals	35	100,222	112,572	-	-	
North Bagley Lower Penn	24	21,707	72,300	None	None	
North Bagley Middle Penn	7	31,634	63,030	None	None	For Month of June 1967
North Bagley Upper Penn	27	82,208	113,520	None	None	
All Penn Totals	58	135,594	248,850	-	-	
North Bagley Wolfcamp	3	2,224	19	None	None	
Northeast Bagley Wolcamp	2	10,263	2100	None	None	For Month of June 1967
All Wolfcamp Totals	5	12,487	2119	-	-	
Totals Wolfcamp and Penn	63	148,081	250,969	-	-	

				DAILY EST. WATER BBLS.	MONTHLY EST. WATER BBLS.		
North Bagley Lower Penn	26	--	--	8,599	266,569	31,540	
North Bagley Middle Penn	8	--	--	3,347	103,757	35,500	For Mont of August 1967 Water Est.
North Bagley Upper Penn	28			8,395	260,245	39,405	
ALL PENN TOTALS	62			20,341	630,571	-	
North Bagley Wolfcamp	3			-0-	-0-	None	
Northeast Bagley Wolfcamp	2			98	3,038	38,340	
All Wolfcamp Totals	5			98	3,038	-	
Totals Wolfcamp and Penn	67			20,439	633,609		

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
OCC Exhibit No. 2
Case No. 3644

COMPARISON OF NORTH BAGLEY POOL PRODUCTION INFORMATION

POOL	TOTAL ESTIMATED WATER FROM SEPTEMBER 1 TO NOVEMBER 1, 1967
North Bagley Lower Penn	524,539
North Bagley Middle Penn	204,167
North Bagley Upper Penn	512,095
All Penn Totals	1,240,801
North Bagley Wolfcamp	-0-
Northeast Bagley Wolfcamp	5,978
All Wolfcamp Totals	5,978
Totals Wolfcamp and Penn	1,246,779

EXHIBIT 4
LESLIE A. CLEMENTS

PIT SIZE AND CONDITION NORTH BAGLEY AREA

PIT REF. NO.	OPERATOR	LEASE	UNIT LETTER	S T R	PIT SIZE L x W x D	CONDITION
1	Southland Royalty	Graham State	O	3-11-33	50 x 50 x 10	Pit dry. This lease is in a SWDS.
2	Chas. B. Gillespie, Jr.	State "A"	N	3-11-33	120 x 60 x 10	Pit 3/4 full of water.
3	Stoltz & Co.-Clark	Sohio State	P	4-11-33	100 x 50 x 12	Pit has shot hole in bottom. 200 bbls. of oil was lost to pit August 21, 1967. No oil in pit-A.M. of 2[illegible] All oil and water goes underground in this shot hole.
4	Stoltz & Co.-Clark	Sohio "B"	P	5-11-33	60 x 20 x 10	Pit 1/3 full. Water goes into ground fast.
5	Sam Boren	Gulf-Sohio State	H	8-11-33	60 x 25 x 10	Pit ½ full of water.
6	Stoltz & Co.-Clark	Champlin	I	8-11-33	50 x 10 x 10	Pit ½ full of water.
7	Sam Boren	Collier	D	9-11-33	25 x 25 x 10	Water goes into ground as fast as it enters pit.
8	BTA Oil Producers	Bagley	A	9-11-33	90 x 45 x 10	(Double pit) First pit full. Second pit ½ full of wat[illegible]
9	Stoltz & Co.-Clark	Collier	F	9-11-33	30 x 30 x 10	Pit ½ full of water.
10	David Faskin	Felmont Collier	H	9-11-33	100 x 80 x 8	Pit dry. Well down. (Workover)
11	Stoltz & Company	Hissom "A" State	I	9-11-33	120 x 60 x 10	Double Pit. Both full of water (each 60 x 60)
12	Gulf Oil Corporation	CTB	P	9-11-33	90 x 30 x 8	Very little water in pit.
13	Texas Pacific Oil Co.	CTB J. P. Collier	F	10-11-33	150 x 40 x 10	Double pit. Both 3/4 full. (Each 75 x 40)
14	Sunset-International	T. P. "A" State	J	10-11-33	45 x 45 x 8	Very little water in pit. Going into ground about as fast as it comes into pit.
15	Felmont Oil Corp.	State "F"	K	10-11-33	90 x 60 x 8	Double pit. One 45 x 45 ½ full of water. One 45 x 60 dry.
16	Texas Pacific Oil Co.	State "AK"	N	10-11-33	60 x 20 x 10	Pit has very little water in it.
17	Southern Natural Gas Co.	State "C"	E	11-11-33	45 x 45 x 8	Pit ½ full of water.
18	Meadco	Cabot State	H	15-11-33	30 x 60 x 12 100 x 50 x 12	L shaped pit 3/4 full of water

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
OCC Exhibit No. 4
Case No. 3644

PIT REF. NO.	OPERATOR	LEASE	UNIT LETTER	S T R	PIT SIZE L x W x D	CONDITION
19	Pelmont Oil Corp.	Hissom State	F	15-11-33	100 x 80 x 10	Double pit complex 100 x 40 1/3 full of water. Next pit 100 x 40 dry. Shot holes in bottom.
20	Allen K. Trobaugh	Dallas	N	15-11-33	85 x 30 x 10	Pit ½ full of water.
21	Cabot Corporation	Mary E. Dallas	P	15-11-33	50 x 50 x 8	Pit has very little water in it.
22	U. S. Smelting	Bagley State	G	16-11-33	35 x 65 x 8	Water going into ground as fast as water enters pit.
23	Pan American Pet. Corp.	State DG	F	16-11-33	200 x 150 x 8	Pit ½ full of water.
24	Stoltz & Co.-Clark	Christensen State	L	16-11-33	40 x 20 x 8	Pit ½ full of water.
25	Stoltz & Co.-Clark	Enfield	I	16-11-33	40 x 40 x 10	Pit ½ full of water.
26	Stoltz & Company	State NBN	N	16-11-33	30 x 50 x 10 75 x 45 x 10	3 pit complex ½ full of water.
27	Pan American Pet. Corp.	State DC	P	16-11-33	100 x 100 x 14	Water going into ground as fast as it enters pit.
28	Stoltz & Co.-Clark	Andover Federal	P	17-11-33	30 x 30 x 8	Pit ½ full of water.
29	Stoltz & Co.-Clark	Huber-Collier	J	18-11-33	20 x 40 x 12	Pit ½ full of water.
30	Stoltz & Company	Bell "A"	C	21-11-33	120 x 120 x 8	Water rapidly going into ground.
31	Stoltz & Company	Bell	A	21-11-33	130 x 50 x 10	Pit ½ full of water.
32	Stoltz & Company	Bell B	E	21-11-33	50 x 45 x 12	Double pit. Both ½ full of water.
33	Bell Petroleum Company	State K	K	21-11-33	50 x 30 x 10	2/3 full of water.
34	Pan American Pet. Corp.	State DH	I	21-11-33	80 x 30 x 10 80 x 30 x 10	L shaped pit. Pit ½ full of water.
35	Stoltz & Company	Gulf State	D	22-11-33	105 x 50 x 10	Double pit. Pit ½ full of water.
36	Stoltz & Company	State NBF	F	22-11-33	85 x 36 x 10	Pit ½ full of water.
37	Pelmont Oil Corp.	State 262	G	22-11-33	45 x 42 x 8	Pit ½ full of water.

PIT REF. NO.	OPERATOR	LEASE	UNIT LETTER	S T R	PIT SIZE L x W x D	CONDITION
38	Stoltz & Company	J. D. Guye	H	22-11-33	30 x 30 x 4	Very little water in pit.
39	Stoltz & Company	Sinclair State	K	22-11-33	170 x 45 x 12	3 pit complex. Water in all three pits. Pits ½ full of water.
40	Stoltz & Co.-Clark	Sinclair "A" State	O	22-11-33	125 x 50 x 10	Double pit complex. Both pits ½ full of water.
41	Cabot Corporation	CTB	D	23-11-33	50 x 50 x 6	Very little water in pit.
42	Stoltz & Co.-Clark	Clark State	D	27-11-33	40 x 40 x 8	Pit 1/4 full of water.
43	Stoltz & Company	Humble "B"	E	27-11-33	10 x 45 x 8	Pit ½ full of water.
44	Stoltz & Co.-Clark	Sinclair "B" State	G	27-11-33	10 x 60 x 10 100 x 60 x 10	10 x 60 x 10 pit ½ full of water. Large pit was dry.
45	H. C. Hood	Warren State	H	28-11-33	45 x 20 x 8	Pit ½ full of water.
46	Stoltz & Co.-Clark	Warren State	G	28-11-33	24 x 60 x 10	Pit ½ full of water.
47	Stoltz & Company	Kelsay	M	28-11-33	35 x 35 x 8	Pit 1/3 full of water.
48	Stoltz & Co.-Clark	State AS	G	29-11-33	24 x 54 x 10 100 x 54 x 10	24 x 54 x 10 pit ½ full of water. Large pit was dry.
49	Stoltz & Co.-Clark	Sunray "B" State	K	29-11-33	40 x 40 x 10	Pit ½ full of water.
50	Pennzoil Company	Cabot State	I	14-11-33	35 x 35 x 8	No water in pit.
51	Southern Nat. Gas Co.	State "C"	C	11-11-33	50 x 50 x 8	Pit almost dry.
52	Natural Gas & Oil Corp.	State of New Mexico	N	2-11-33	45 x 25 x 4	Pit dry.
53	Sunset-International	T. P. State	L	11-11-33	35 x 35 x 8	Pit 1/8 full of water.

EXHIBIT 5

JOHN W. RUNYAN

NORTH BAGLEY AREA
FRESH WATER WELLS

MAP REFERENCE NUMBER	LOCATION	TYPE WELL	STATUS OF SAMPLE	CHLORIDES PPM	WATER LEVELS (FROM SURFACE) 1961	1966	DATE SAMPLE COLLECTED	COLLECTED BY
FW-1	SW/O-22-11-33	Rig	Static	70.0	-	-	8/14/67	O. C. C.
FW-2	SE/F-28-11-33	Windmill	Static	56.8	-	-	8/14/67	O. C. C.
FW-3	-/J-29-11-33	House	Pump	46.2	-	-	8/14/67	O. C. C.
FW-4	NE/C-26-11-33	House	Pump	124.8	-	-	8/21/67	O. C. C.
FW-5	NE/C-26-11-33	Windmill	Pumping	113.6	-	-	8/21/67	O. C. C.
FW-6 } Same	NW/D-33-11-33	House	Pump	234.3	-	-	8/14/67	O. C. C.
FW-6 } well	NW/D-33-11-33	House	Pump	230.8	-	-	8/21/67	O. C. C.
FW-6A	SW/D-33-11-33	Irrigation	Pump	530.0	47.42	59.82	W-1961	St. Eng.
FW-7	NE/L-23-11-33	House	Pump	49.7	-	-	8/21/67	O. C. C.
FW-8	SE/O-21-11-33	Windmill	Static	74.6	-	-	8/14/67	O. C. C.
FW-9	SE/D-28-11-33	Windmill	Static	53.3	-	-	8/14/67	O. C. C.
FW-10	-/G-20-11-33	Windmill	Static	56.8	-	-	8/14/67	O. C. C.
FW-11	NE/K-17-11-33	Windmill	Static	56.8	51.99	NR	8/14/67	O. C. C.
FW-12	NE/E-23-11-33	Windmill	Pumping	53.3	-	-	8/14/67	O. C. C.
FW-13 } Same	SW/O-15-11-33	Windmill	Static	49.7	NR	37.43	8/2/67	O. C. C.
FW-13 } well	SW/O-15-11-33	Windmill	Static	52.3	-	-	8/15/67	O. C. C.
FW-14	SE/O-13-11-33	Windmill	Pumping	53.3	27.99	29.59	8/15/67	O. C. C.
FW-15	NW/J-18-11-33	House	Pump	81.7	-	-	8/21/67	O. C. C.

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
OCC Exhibit No. 5
Case No. 3644

MAP REFERENCE NUMBER		LOCATION	TYPE WELL	STATUS OF SAMPLE	CHLORIDES PPM	WATER LEVELS (FROM SURFACE) 1961	1966	DATE SAMPLE COLLECTED	COLLECTED BY
FW-16	Same	NW/D-15-11-33	Rig	Pumping	35.5	-	-	8/2/67	O. C. C.
FW-16	well	NW/D-15-11-33	Rig	Pumping	35.5	-	-	8/15/67	O. C. C.
FW-17	Same	SE/P-9-11-33	Windmill	Static	42.6	-	-	8/2/67	O. C. C.
FW-17	well	SE/P-9-11-33	Windmill	Static	42.6	45.34	47.39	8/15/67	O. C. C.
FW-18	Same	NW/F-15-11-33	Rig	Pumping	7632.5	-	-	7/25/67	Cactus Drlg.
FW-18	well	NW/F-15-11-33	Rig	Static	3471.9	-	-	7/27/67	O. C. C.
FW-19		SE/P-3-11-33	Windmill	Static	39.1	-	-	8/21/67	O. C. C.
FW-20		NW/O-2-11-33	Rig	Static	49.7	-	-	8/15/67	O. C. C.
FW-21		NW/N-17-11-33	Windmill	Static	85.2	-	-	8/21/67	O. C. C.
FW-22		-/J-32-11-33	Windmill	Pumping	71.0	-	-	8/21/67	O. C. C.
FW-23		-/N-8-11-33	Windmill	Static	39.1	-	-	8/15/67	O. C. C.
FW-24		NW/G-9-11-33	Windmill	Pumping	63.9	54.45	65.75	8/15/67	O. C. C.
FW-25		SE/H-9-11-33	Rig	Pumping	42.6	-	-	8/15/67	O. C. C.

Average chlorides from North Bagley Pool area 60.85 P.P.M. (24 wells)

Range: Low of 35.5 P.P.M. to a high of 124.3 P.P.M.

EXHIBIT 6
JOHN W. RUNYAN

NORTH BAGLEY POOLS
PRODUCED WATER

MAP/PIT REFERENCE NUMBER	OPERATOR	LEASE	LOCATION	POOL	CHLORIDES PPM	AVERAGE POOL CHLORIDES
16	Texas Pacific Oil Co.	State "AK" #1	N-10-11-33	Upper Penn	45,440	
47	Stoltz & Company	Kelsay #1	M-28-11-33	Upper Penn	33,370	39,405
7	Stoltz & Company	Bell "A" #1	C-21-11-33	Middle Penn	31,240	
23	Stoltz & Company-Clark	Sohio "B" #1	P-5-11-33	Middle Penn	39,760	35,500
19	Felmont Oil Corp.	Hissom State #1	F-15-11-33	Lower Penn	39,050	
49	Stoltz & Company-Clark	State "AS" #1	G-29-11-33	Lower Penn	24,030	31,540
53	Sunset-International	T. P. State #1	L-11-11-33	Northeast Wolfcamp	38,340	38,340

North Bagley Wolfcamp water samples were unavailable due to:

(1) Commingled with Penn in central tank batteries or

(2) Produced no water

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
OCC Exhibit No. 6
Case No. 3644

(1)

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission

'67 AUG 3 PM 1 06

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

P. O. BOX 1980
HOBBS

August 1, 1967

Mr. A. L. Porter, Jr., Director
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Dear Mr. Porter:

On July 28, 1967 Mr. Lynam Graham, who lives west of Tatum, called this office stating that he had a contaminated water well. Mr. Leslie Clements from this office visited Mr. Graham the next day and obtained two water samples from the well. One sample was a sample taken while the well was not pumping and the other was a sample obtained from Mr. Graham, which he stated had been gathered when the well was pumping the previous day. Our analysis of the sample showed a chloride content of 3,472 parts per million on the static test and 7,632 parts per million on the flowing test, which indicates the well is definitely contaminated. There was no evidence of oil or gas in the well, so it must be concluded that the well was contaminated by open surface disposal.

This well is located in the NE/4 of Section 15, T-11-S, R-33-E, which is in the North Bagley Field proper. The well is located some 75 to 100 feet west of the Felmont Oil Co. Hissom State disposal pit.

If you desire any further information on this well, please advise.

Yours very truly,

OIL CONSERVATION COMMISSION

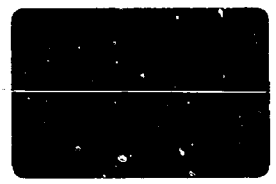
Joe D. Ramey
Supervisor, District 1

JDR/mc

COLOR TRANSPARENCY

THIS SIDE TOWARD SCREEN

COLOR TRANSPARENCY



THIS SIDE TOWARD SCREEN

COLOR TRANSPARENCY

THIS SIDE TOWARD SCREEN

26 AUG 6 7

25 AUG 6 7

COLOR TRANSPARENCY

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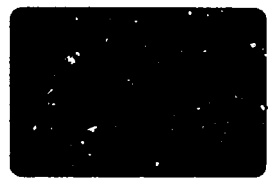
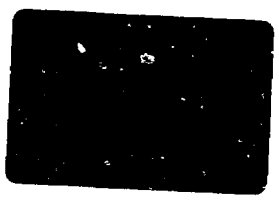
THIS SIDE TOWARD SCREEN

COLOR TRANSPARENCY



THIS SIDE TOWARD SCREEN

24 AUG 6 7



23 AUG 6 7

21 AUG 6 7

22 AUG 6 7

13 AUG 6 7

10 AUG 6 7

12 AUG 6 7

11 AUG 6 7

9 AUG 6 7

NEW MEXICO
OIL CONSERVATION COMMISSION

FIELD TRIP REPORT

DATE 7/27/67

Name of Employee Leslie A. Clements

Time of Departure 7:00 A.M. Time of Return 5:30 P.M.

Miles Travelled 149.4

In the space below please indicate purpose of trip and duties performed, listing wells or leases visited.

To Bagley Area - Checked complaint made by Mr. Lynam Graham, area rancher, on water well that has turned salty. Well in question is located approximately 75' West of a Large Salt Water Pit used by Felmont OilCo., Hissom State Battery N/2 Sec. 15 T11S R33E. No H_2O standing in this pit - all H_2O is going underground as fast as it enters this pit. Mr. Graham said that last week (17th thru 22nd) that water was standing in pit, he doesn't know what happened to this H_2O. This well is approximately 15 years old, TD is 80', well is cased and graveled packed. Well has been used to furnish water for a number of drilling rigs in this area. Cactus Drilling Co. made the first complaint the night of July 25th, 1967. Water is bad enough that Cactus moved off and drilled a new water supply well. Made Physical Inspection of Area with Mr. Graham - most all pits in this area have been shot and water is disappearing into ground at about the same rate that it is going into the pits.

Mr. Graham voiced concern over all fresh waters in this area.
I got two samples from this well, one that Mr. Graham had taken while it was being pumped by Cactus after their complaint, the other one I took with a fruit jar being lowered into the well on some string, the well was static. John Runyan ran a chloride test on both samples:

The produced sample tested 7,632.5 PPM Cl.
The Static Sample tested 3,471.9 PPM Cl.

MAIN OFFICE
'67 AUG 4 PM 1 4

Leslie A. Clements
Employee's Signature
District # 1

ATWOOD & MALONE
LAWYERS

P. O. DRAWER 700
TELEPHONE 505 622-6221
SECURITY NATIONAL BANK BUILDING
ROSWELL, NEW MEXICO
88201

JEFF D. ATWOOD (1883-1960)
CHARLES F. MALONE
RUSSELL D. MANN
PAUL A. COOTER
BOB F. TURNER
ROBERT A. JOHNSON
JOHN W. BASSETT, JR.
ROBERT E. SABIN

August 28, 1967

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico

RE: Case No. 3644 on the docket for special hearing on August 30, 1967

Dear Mr. Porter:

Would you please file the enclosed Entry of Appearance on behalf of Pan American Petroleum Corporation in the above captioned case. The actual presentation will be made by Mr. Guy T. Buell, a member of the Texas Bar, and one of Pan American Petroleum Corporation's Fort Worth attorneys.

We enclose also a copy of our telegram to you this date setting forth the above information.

Thank you.

Very truly yours,

ATWOOD & MALONE

R. D. Mann

RDM:sah

Encl.

MAIN OFFICE
'67 AUG 30 AM 8 48

DOMESTIC SERVICE

Check the class of service desired; otherwise this message will be sent as a fast telegram

TELEGRAM	X
DAY LETTER	
NIGHT LETTER	

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WESTERN UNION
TELEGRAM

1206 (4-55)

W. P. MARSHALL, PRESIDENT

INTERNATIONAL SERVICE

Check the class of service desired; otherwise the message will be sent at the full rate

FULL RATE	
LETTER TELEGRAM	
SHORE-SHIP	

NO. WDS.-CL. OF SVC.	PD. OR COLL.	CASH NO.	CHARGE TO THE ACCOUNT OF	TIME FILED
	PD		ATWOOD & MALONE	

Send the following message, subject to the terms on back hereof, which are hereby agreed to

AUGUST 29, 1967

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico

WE ARE MAILING THIS DATE ENTRY OF APPEARANCE ON BEHALF OF PAN AMERICAN PETROLEUM CORPORATION IN CASE NO. 3644. ACTUAL PRESENTATION WILL BE MADE BY GUY T. BUELL.

ATWOOD & MALONE
Post Office Drawer 700
Roswell, New Mexico

BEFORE THE OIL CONSERVATION COMMISSION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE MOTION OF THE OIL CONSERVATION COMMISSION TO CONSIDER THE REVISION OF PARAGRAPH (1) OF ORDER R-3221	))))	No. 3644

ENTRY OF APPEARANCE

COMES NOW Atwood & Malone of Roswell, New Mexico, and enters its appearance herein as New Mexico counsel for Pan American Petroleum Corporation.

DATED this 29th day of August, 1967.

ATWOOD & MALONE

By C. D. Mann

Post Office Box 700
Roswell, New Mexico

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, CHAIRMAN OF THE BOARD
R. W. McFALL, PRESIDENT

SYMBOLS
DL = Day Letter
NL = Night Letter
LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

LA119 NSA514

NS MDA112 PD=MIDLAND TEX 30 408P CDT=
1967 AUG 30 PM 3 38

=STATE OF NEW MEXICO OIL CONSERVATION COMM=
ATTN A L PORTER JR, SECRETARY DIRECTOR

SANTAFE NMEX=

:REF DAVID FASKEN FLEMONT COLLIER #1 NORTH BAGLEY FIELD AND SPECIAL HEARING AUGUST 30 1967. WE ARE RE-DRILLING THE SUBJECT WELL DUE TO COLLAPSE CASING UPON COMPLETION NEGOTIATIONS FOR DISPOSAL OF PRODUCED WATER WILL BE COMPLETED=

HENRY ENGINEERING==

MAIN OFFICE

:#1 30 1967

'67 AUG 30 PM 3 51

WU1201 (R2-65) THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, CHAIRMAN OF THE BOARD
R. W. McFALL, PRESIDENT

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LA115 SSJ408

1967 AUG 29 PM 2 15

L RWA033 PD=ROSWELL NMEX 29 110P MDT=

:A L PORTER JR=

SECRETARY DIRECTOR OIL CONSERVATION COMMISSION

POST OFFICE BOX 2088 SANTA FE NMEX=

:WE ARE MAILING THIS DATE ENTRY OF APPEARANCE ON BEHALF OF PAN AMERICAN PETROLEUM CORP IN CASE NO 3644 ACTUAL PRESENTATION WILL BE MADE BY GUY T BUELL=

ATWOOD AND MALONE POST OFFICE DRAWER

700 ROSWELL NMEX=

=3644 700=

WU1201 (R2-65) THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO

August 11, 1967

COPY

Mr. W. G. Abbott
Agua, Inc.
Post Office Box 1978
Hobbs, New Mexico 88240

Dear Sir:

Attached are a notice of hearing and a memorandum which are self-explanatory.

With reference to the next to last paragraph of the memorandum, it will be greatly appreciated if you or your representative will appear at the hearing and give us the information to which we refer.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Enclosures

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO

August 11, 1967

COPY

Mr. Orhan Salman
Bell Petroleum Company
Suite 400
700 Wilshire Boulevard
Los Angeles, California 90017

Dear Sir:

Attached are a notice of hearing and a memorandum which are self-explanatory.

With reference to the next to last paragraph of the memorandum, it will be greatly appreciated if you or your representative will appear at the hearing and give us the information to which we refer.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Enclosures

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO

August 11, 1967

COPY

Mr. Deane Stoltz
Stoltz & Company/Stoltz & Company-Clark
Post Office Box 1714
Midland, Texas 79701

Dear Sir:

Attached are a notice of hearing and a memorandum which are self-explanatory.

With reference to the next to last paragraph of the memorandum, it will be greatly appreciated if you or your representative will appear at the hearing and give us the information to which we refer.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Enclosures

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO

August 11, 1967

C

O

P

Y

Mr. Alton C. Goodrich
Southland Royalty Company
1405 Wilco Building
Midland, Texas 79701

Dear Sir:

Attached are a notice of hearing and a memorandum which are self-explanatory.

With reference to the next to last paragraph of the memorandum, it will be greatly appreciated if you or your representative will appear at the hearing and give us the information to which we refer.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Enclosures

Memo No. 1-67

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

MEMORANDUM

TO: All Operators in the North Bagley Upper-Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley-Wolfcamp and Northeast Bagley-Wolfcamp Pools

FROM: A. L. PORTER, Jr., Secretary-Director

SUBJECT: Special Hearing on August 30, 1967, 9 a.m., Morgan Hall, State Land Office Building, Santa Fe, New Mexico.

Attached is a copy of the notice of a special hearing which is self-explanatory.

A recent evaluation of conditions in the area which will be considered at the hearing has confirmed one report of water-well contamination and has revealed that a much greater volume of salt water is being produced than has been reported.

In view of these developments, the Commission has scheduled the above-mentioned hearing to determine what can be done to expedite the elimination of surface disposal of brines.

In addition to the evidence that will be presented by the staff and other interested parties, the Commission will request that all companies and individuals who have received authorization for disposal facilities for this area appear and testify as to the current status, the expected capacity, date of availability, and other pertinent information concerning these facilities.

Pending the hearing and its outcome, the Commission will expect diligent efforts on the part of all producers toward the elimination of this problem.

AUGUST 11, 1967

ALP/ir

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION
SANTA FE - NEW MEXICO

The State of New Mexico by its Oil Conservation Commission hereby gives notice pursuant to law and the Rules and Regulations of said Commission promulgated thereunder of the following public hearing to be held at 9 o'clock a.m. on AUGUST 30, 1967, MORGAN HALL, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO.

STATE OF NEW MEXICO TO:

All named parties and persons
having any right, title, interest
or claim in the following cases,
and notice to the public.

CASE 3644:

In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the revision of Paragraph (1) of Order No. R-3221, to provide that the effective date for the prohibition of surface disposal of produced water from the North Bagley-Upper Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley-Wolfcamp, and Northeast Bagley-Wolfcamp Pools, Lea County, New Mexico, or within one mile thereof, be changed from November 1, 1967, to some earlier date.

GIVEN under the seal of the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 11th day of August, 1967.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

A. L. PORTER, Jr., Secretary-Director

S E A L

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION UPON ITS OWN MOTION TO CONSIDER THE REVISION OF PARAGRAPH (1) OF ORDER NO. R-3221, TO PROVIDE THAT THE EFFECTIVE DATE FOR THE PROHIBITION OF SURFACE DISPOSAL OF PRODUCED WATER FROM THE NORTH BAGLEY-UPPER PENNSYLVANIAN, NORTH BAGLEY-MIDDLE PENNSYLVANIAN, NORTH BAGLEY-LOWER PENNSYLVANIAN, NORTH BAGLEY-WOLFCAMP, AND NORTHEAST BAGLEY-WOLFCAMP POOLS, LEA COUNTY, NEW MEXICO, OR WITHIN ONE MILE THEREOF, BE CHANGED FROM NOVEMBER 1, 1967, TO SOME EARLIER DATE.

CASE No. 3644
Order No. R-3221-A

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 30, 1967, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 31st day of August, 1967, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That effective November 1, 1967, Order (1) of Order No. R-3221 forbids the disposal of water produced in conjunction with the production of oil or gas, or both, from the North Bagley-Upper Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley-Wolfcamp, and Northeast Bagley-Wolfcamp Pools, Lea County, New Mexico, or within one mile thereof, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which will constitute a hazard to any fresh water supplies in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(3) That upon considering the evidence presented in Case No. 3551 which resulted in the issuance of Order No. R-3221, the Commission found the production of salt water in the North Bagley Field to be so great as to constitute an imminent threat to the fresh water supplies designated by the state engineer and found that it would be necessary to prohibit surface disposal of said salt water no later than November 1, 1967, in order to afford reasonable protection against contamination of said fresh water supplies.

(4) That the evidence presented in Case No. 3644 establishes that the volume of salt water being produced in conjunction with the production of oil or gas, or both, in the North Bagley Field greatly exceeds the volume of produced salt water anticipated by the Commission when it issued Order No. R-3221.

(5) That the evidence presented in Case No. 3644 establishes that the excessive amounts of water being produced in conjunction with the production of oil or gas, or both, in the North Bagley Field constitute an even more immediate threat to the fresh water supplies than anticipated by the Commission at the time Order No. R-3221 was issued.

(6) That the testimony presented in Case No. 3644 indicates that all salt water disposal systems in the North Bagley Area heretofore authorized by the Commission can be in operation by approximately the middle of October, 1967.

(7) That the aforesaid salt water disposal systems will be capable of handling all salt water being produced in the North Bagley Field in mid-October.

(8) That the prohibition of water produced in conjunction with the production of oil or gas, or both, in the North Bagley Field, or within one mile thereof, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which will constitute a hazard to any fresh water supplies on or after November 1, 1967, in the area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, will not afford reasonable protection against contamination of fresh water supplies designated by the state engineer.

(9) That in order to afford reasonable protection against contamination of fresh water supplies designated by the state engineer, Order (1) of Order No. R-3221 should be amended to

prohibit the surface disposal of water produced in conjunction with the production of oil or gas, or both, in the North Bagley Field, or within one mile thereof, on or after October 16, 1967.

IT IS THEREFORE ORDERED:

(1) That Order (1) of Order No. R-3221, dated May 1, 1967, is hereby amended to read in its entirety as follows:

"(1) That effective October 16, 1967, the disposal of water produced in conjunction with the production of oil or gas, or both, from the North Bagley-Upper Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley-Wolfcamp, and Northeast Bagley-Wolfcamp Pools, Lea County, New Mexico, or within one mile thereof, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which will constitute a hazard to any fresh water supplies, is hereby prohibited in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico."

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

A. L. PORTER, Jr., Member & Secretary

esr/

Bill Abbott
P.O. 1978
Hobbs
Cegua, In.

Beel Petroleum Company
Suite 900
700 Wilshire Blvd.
LA Calif 90017

Tom Vaughn Atty

Sam Boren
Box 963
Midland, Texas

BTA Oil Producers
104 South Pecos
Midland Texas 79701

Cabot Corporation
P.O. Box 4395
Midland Texas

David Fasken
608 First National Bank Bldg
Midland Texas 79701

Felmont Oil Corp.
P.O. Box 1855
Midland Texas 79701

Charles B. Gillespie Jr
P.O. Box 1179
Midland Texas 79701

Pan American Petr Corp.
P.O. Box 1410
Fort Worth Texas 76101

Gulf Oil Corporation
P.O. Box 1938
Roswell, New Mexico 88201

Pennzoil Company
1007 Midland Savings Bldg
Midland Texas 79701

Southern Natural Gas Company
P.O. Box 1513
Houston Texas 77001

Southland Royalty Co
1405 Wilco Bldg
Midland, Texas 79701

Staltz and Company
Box 1714
Midland

Staltz and Company - Clark
Box 1714
Midland Texas

Sunset International Petr. Corp
201 Wall Bldg Suite 308
Midland, Texas

Texas Pacific Oil Company
P.O. Box 747
Dallas

Allen K. Trobaugh
509 First National Bank Bldg
Midland Texas 79701

U.S. ~~Smelting~~ Smelting Refining & Mining Co.
P.O. Box 1877
Midland Texas

H.C. Hood
~~522 Bank of the Southwest~~ Box ~~box 524~~ 524
Midland Texas 79701

Natural Gas & Oil Corp.
206 First Savings Building
Midland Texas 79701

Meadco Properties, Ltd.
1210 Vaughn Bldg
Midland Texas 79701

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