

November 13, 1968

REGULAR HEARING

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IN THE MATTER OF:)

Application of Minerals,)

Inc., and R. F. Montgomery, et) Case No. 3924

al, for an exception to Order)

Number R-3221, as amended, Lea)

County, New Mexico.)

-----)

BEFORE: A. L. "Pete" Porter, Examiner

TRANSCRIPT OF HEARING

MR. PORTER: We will take up Case 3924.

MR. HATCH: Case 3924. Application of Minerals, Inc., and R. F. Montgomery, et al, for an exception to Order Number R-3221, as amended, Lea County, New Mexico.

MR. KELLAHIN: If the Commission pleases, Jason Kellahin, Santa Fe, New Mexico, appearing on behalf of the applicant. I have one witness I would like to have sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibit Number 1, a multi-page exhibit, consisting of 9 exhibits together with sub-exhibits attached to Exhibits 4, 5, 6, 7, 8, were marked for identification.)

DONALD L. GAREY

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A My name is Donald L. Garey.

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

A I am a consulting geologist and associated with Minerals, Incorporated.

Q Have you done any work for Minerals, Incorporated, in

connection with Case 3924?

A Yes, sir, I have.

Q And do you also represent R. F. Montgomery, the other applicant in this case?

A Yes, sir, I do.

Q Did you do some work for him in connection with this application?

A Yes, sir, I did.

Q Have you ever testified before the Oil Conservation Commission?

A Yes, I have.

Q Your qualifications are a matter of record?

A Yes, sir, that's right.

MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. PORTER: Yes, they are.

Q (By Mr. Kellahin) Mr. Garey, are you familiar with the application in Case 3924 presently before the Commission?

A Yes, I am.

Q What is proposed by the applicants in this case?

A We are asking for an exception to the Order Number R-3221 to dispose of water in our pits in the old Salt Lake Pool.

Q Is that a presently producing oil pool?

A Yes, sir, it is.

Q Now, have you prepared a multi-page exhibit which has been marked as Applicant's Exhibit Number 1 in this case?

A Yes, I have.

Q Referring to Applicant's Exhibit Number 1, would you refer to the Exhibit 1 attached to that exhibit.

A Okay. The Exhibit Number 1 is just strictly a location map. It shows the location of the R. F. Montgomery property, which is the Brooks Federal Lease and it is circled in yellow. The Minerals, Incorporated Bass property is circled in green, which is located in Sections 7 and 18 of 20 South, Range 33 East, respectfully. The producing wells, as you can see, there are a number of old plugged wells in the field. There are only six producing wells now. There is three on the Montgomery Brooks Lease, and there is three on the Minerals Bass Lease, and they are circled in red. The two pits, the disposal pits for the Brooks Lease is, as you can see is indicated in red, adjacent to, or more or less in Unit "N" of Section 7, and the disposal pit for the Bass Lease is in Unit "C" of Section 18, and the areas in green are the locations that is more or less the outline of the bottom of the salt lakes in the area.

Q The large green area in Section 18, is that the lake

that has been designated as Laguna Gatuna?

A Yes, sir, it is. It's Laguna Gatuna, I believe, is the correct name.

Q Are there other salt lakes in the area?

A Yes, sir. There is one northwest of the area around two miles.

Q And that is the Laguna Plata, is that correct?

A Yes, sir, that's correct.

Q Now, referring to Exhibit 2 of the exhibit, would you identify that?

A Well, Exhibit Number 2 is a sub-surface structure map, more or less, showing the sub-surface structure at the Yates level. This particular field produces primarily from the Yates Sands and the top of the Seven Rivers Lease and this is the structure map of the Yates level. The contours, I might say, are positive contours. It is above sea level at this area. Of course, again, the producing wells are circled in red.

Q Now, referring to what has been marked Exhibit Number 2 of Exhibit 1, would you identify that exhibit?

A Exhibit Number 3?

Q Three, pardon me.

A Exhibit Number 3 is just a typical section of the producing pay zones in the field. It shows the top of the Yates

and the top of the Seven Rivers, and it shows more or less where the indication -- some of these wells, of course, are completed in the open holes, and when they are, the oil string is set usually in this dense zone around 2900 feet, and then it is completed open hole from there to around the top of the Seven Rivers. Some of the wells and casings are set through the entire pay section, and when they are, the zones indicated here with the arrows are usually the zones perforated in those particular wells. This is a typical section. It is not any one particular well.

Q Now, referring to Exhibit Number 4, of Exhibit 1, 4A, would you discuss that exhibit?

A Yes. Number 4A is just a compilation of the well data of all the old plugged and abandoned wells in the field. It more or less gives a location, and completion dates. As you can see, the field was discovered back in 1941, and it was plugged out around 1948, and this more or less gives accumulative production, the zones completed, the casing settings, the TD's, just general information on these old plugged out wells. As you can see that they produced an average of around 30, to 35,000 barrels of oil before they were plugged out.

Q Now, some of these wells have been re-entered, have

they not --

A Yes, sir, they have.

Q -- by the applicants in this case?

A Yes.

Q Are those wells shown then on Exhibit 4B of --

A They are in Exhibit 4B. These are actually the six producing wells in the field, and, as you can see, the Brooks wells, the No. 3 -- Montgomery No. 3, Brooks re-entered one of the old Continental wells, the No. 4 Brooks re-entered an old Continental well, the No. 6 Brooks re-entered an old Texaco well. That was a 15,560-foot Devonian test.

Q And all these wells were re-completed for production from the Yates Sands of Yates Seven Rivers Formation?

A Yates Seven Rivers, yes, sir.

Q Now, referring to what has been marked Exhibit Number 5A, would you identify that exhibit?

A Exhibit Number 5A shows the total water and total oil production of the Minerals Bass Lease since it was originally drilled in 1963. Now, these are the three producing wells now. This doesn't include, of course, the old plugged out wells. This is strictly the No. 1, No. 2, and No. 3 Bass wells and I think you can see that we can actually total it up on a lease basis per year, or on a per-well basis, but I might say

that actually that these three wells produced a total of 37,234 barrels of oil as of the first of October, and 189,526 barrels of water.

Q Now, that was a total from their date of re-completion in 1963?

A Yes, sir.

Q Normally, on a month-to-month basis, what is this lease producing in the way of water?

A Well, we had a -- took an October GOR Test, and you can see on the bottom of the page that the lease will actually produce around 24 barrels of oil and 55 barrels of water per day at the present time.

Q And this water is presently going into the pits referred to you in your testimony on Exhibit Number 1?

A This particular water is going into the pit in Section 18 in Unit "C".

Q That is an unlined pit?

A That's an unlined pit, yes, sir.

Q Now, referring to what has been marked as Exhibit 5B, would you identify that exhibit?

A Exhibit 5B is a very same exhibit except it is for the R. F. Montgomery Brooks Federal Lease. Again, it shows the oil-water produced on a per-well, or lease basis, for the various

years, and this particular lease as of October 1st of this year has produced 118,045 barrels of oil and 376,966 barrels of water.

Q Now, that is since the wells were re-entered in 1962?

A Yes, sir, that's right.

Q What is the monthly production of water from that lease?

A Well, the GOR Test that we took in October of this year indicates that the lease is -- will make 50 barrels of oil and 251 barrels of water per day.

Q And that water is presently going into the pit shown on Exhibit Number 1?

A Shown in Section 7 on the exhibit.

Q Now, have you made a study of the economics of the operation of this pool?

A Yes, sir, I have.

Q Referring to what has been marked as Exhibit 6A, would you discuss that exhibit?

A Exhibit 6A is -- refers again to just the Minerals Bass Lease. It shows the No. 1, and 2, and 3 wells -- I've totaled 1967 and then I've broken, of course, our gross income and direct operating expenses and therefore net operating income

down on a per-month basis for the nine months in 1968. But, just to sum up the operation, for instance, the No. 1 Bass well in 1967 had a net operating income of a minus \$1650.09. So far this year, the No. 1 well has made \$158.23. This direct operating expense is strictly invoice, operating expenditures.

Q It does not include any intangibles?

A No administrative, no overhead, no insurance or anything like that is injected into that.

Q This is just the actual cost of operation paid out by the operator?

A Yes, that's right. The No. 2 well, as you can see, in the first nine months of this year has lost \$303.48. The No. 3 well has lost, in the nine months of this year, \$6,460.76. Now the reason that figure is a large figure, because in September we fracture-treated the well with 20,000 gallons of Jell Brine, which was roughly a \$6,000.00 invoice, so, without that particular treatment, you could see that it would be around, maybe, \$260.00 to the good.

Q Now, with reference to your Exhibit 6A, insofar as the operation of Minerals, Incorporated, on the Bass Lease are concerned, would you consider those marginal operations?

A Yes, sir. As a matter of fact, if we don't -- we are studying the field in more detail now -- if we don't come

up with something and better the production, you can see we can't keep operating the lease as it is, at a loss.

Q Now, if you were required to drill a salt water disposal well, or re-complete an old, abandoned well for the purpose of a salt water disposal, would this lease be able to carry that additional expense?

A Not at all. As a matter of fact, if we had to do that we would have to plug it.

Q Now, referring to what has been marked Exhibit 6B, would you discuss that exhibit?

A Well, it is the very same exhibit as 6A, except it is for the R. F. Montgomery Brooks Lease. Again, it shows the very same thing. The No. 3 well, as you can see, for the first nine months of this year, has made \$926.49. The No. 4 well has made some \$7,343.80. The No. 6 well has made \$12,148.20.

Q Again, the direct operating expenses do not include any overhead or administrative costs? These are invoice costs?

A Strictly invoice costs.

Q Would you consider this lease as marginal?

A Well, this lease is a little above marginal. It hasn't quite reached that point yet. The No. 3 well is, yes, you can see the last three months for the No. 3 has definitely been a loss. The No. 4 and the No. 6 are approaching marginal wells,

but as yet they are not.

Q Now, have you made an analysis of the fluids produced from the producing wells?

A Yes, sir, I have.

Q Referring to what has been marked as Exhibit 7A, B, C, D, E, and F, would you discuss those exhibits?

A Yes. These are water analyses of the formation water being produced at the present time. Exhibit 7A is the analysis on the Minerals, Incorporated No. 1 Bass, and I'll use the chlorides as a comparison of the water analysis, and not get into the other ingredients. As you can see, the formation water has got 6600 milligrams per liter in the Bass No. 1. In the Bass No. 2, in Exhibit 7B, the chlorides are very much the same at 7500 milligrams per liter. Now these wells are all producing from the same formation, and they should have the same water analysis. The Bass No. 3 has got 25,235 parts, milligrams, per liter. There's a reason for this. We just got through fracture-treating the well with Jell Brine and we are still getting some contamination from the Jell Brine.

Q You wouldn't consider this a representative sample of the formation water?

A No, not at all, but it is the sample we took when we

took all the other wells.

Q Is this the same producing formation as the No. 1 and 2?

A The very same, yes.

Q You would anticipate, then, once you have recovered all your fracture fluid the analysis would be the same?

A Yes, I sure would.

Q Now, the No. --

A Now, this is a Brooks 3, and this would more or less prove just what I said. Of course, it is the same producing formation and here we have the milligrams per liter again at 6700, very close to the others. Exhibit 7E is the No. 7 Brooks, and there the Milligrams per liter is 5900. Exhibit Number 7F is the R. F. Montgomery No. 6 Brooks, and the milligrams per liter is 5700. So you can see that the formation water is safely around 6,000 milligrams per liter, in round figures.

Q Now, are there any water wells in that area?

A Yes, sir, there sure are.

Q Have you compiled some information on those wells?

A Yes, Exhibit Number 8A is actually a compilation of the water wells in the area, where they are located, what their TD's are, whether they were completed in the Quaternary,

or Triassic formations and what their status are as to whether or not they are being produced, whether they were abandoned or they are listed as non-producing, and this is all found in Exhibit 8A. I might say that the Quaternary wells in the area usually will find water evidently around 50 to 60 feet in depth, and the Triassic will have to go as deep as 400 -- 450 feet or so before they get water in the Triassic Red Beds.

Q Now, is all this water suitable for domestic or livestock use?

A No, sir, it is not.

Q You have noted this on your Exhibit 8A, have you?

A Right. In other words, I actually might refer to this last exhibit, Mr. Kellahin, while we are talking about these water wells; it might make it a little easier.

Q The map, Exhibit Number 9?

A Yes. In looking at Exhibit Number 8A, and going down the list of the wells that I have been -- the information that I have listed, if we will use Exhibit 9 to -- as a reference as I talk about the wells -- well, in Section 4 of 2023, there's a Quaternary water well that had a TD of 58 feet, and it is an abandoned stock well, and the ranchers state that the water was jippy and the cattle would walk greater distance to another water source. In other words, they wouldn't drink this particular

water.

MR. PORTER: Mr. Garey, I notice you refer to the rancher, and also your exhibit refers to the rancher. Who was that; was that Mr. Smith?

THE WITNESS: No, sir, this is Mr. Bingham.

MR. PORTER: Beene?

THE WITNESS: Bingham.

MR. PORTER: I see.

Q (By Mr. Kellahin) Would you go ahead with your discussion of the wells in Section 5?

A Yes. In Section 5 is a Triassic well. This well was used by Pan American in drilling a deep test, and, in other words, it was used for drilling purposes strictly.

Q Is it presently being used for any purposes?

A Not at all. It is listed as a commercial well with the State Engineer's Office.

Q Now the well in Section 18; what was the situation as to it?

A Section 18 was completed in the Triassic Red Beds, originally. Now, this TD of 456 feet is a depth that was given by the man that drilled the well back in 1942; he remembered it. It was an old Continental camp at that time, and it was reportedly not potable at that time, and that they used it strictly for washing around the camp.

Q What is the present situation; is that well --

A It is completely -- it's plugged.

Q Now, the well in Section 21.

A It was completed in the Quaternary. It is also -- it was a stock well, originally. It is now an abandoned stock well.

Q Then the second well in Section 24.

A It was completed in the Triassic, and it is a stock well presently used as a stock well.

Q Now, moving over to the wells in Range 32. Would you discuss those?

A Yes. There is a well in Section 1 at the old Salt Lake Branch, and it was completed in the Quaternary and is now listed as a non-producing well. It wasn't -- the State Engineer's Office didn't have a TD on it, and the rancher again, which is Mr. Bingham, told me that the wells were too salty for the cattle to drink, and that it has been plugged out, actually, about twenty years, so it's an old well.

Q Now, the wells in Section 23, there appears to be two wells there.

A Yes. Deep wells -- this is the old Halfway Bar, there, on the highway, and these two wells are used for domestic and stock. Of course, I've got here, in my Exhibit 8A, I've mentioned

that they are only two and half miles, of course, from the Laguna Plata Lake where some 3,000 barrels of water per day are being disposed of, I understand, at the Potash Mine.

Q Is that the Potash Mine water?

A Yes.

Q Now, the wells in Section 25.

A The wells in 25, these are two stock tank wells, and they are both being used at the present time. All these wells in this area are, of course, in the Quaternary.

Q Then the wells in Section 36.

A The wells in Section 36 are around the Bingham Ranch. There's three wells there, one of them is being used for domestic and the other two are abandoned, and one is listing, actually, as non-producing.

Q Now, the closest fresh water supply, then, to the area where you are disposing salt water, would be how far, Mr. Garey?

A For domestic use?

Q Yes, sir.

A Well, it would be actually around two miles southwest of the area.

Q And that would also be true as to stock use?

A Right.

Q About two miles?

A Two, to two and a half miles, it looks like on the map.

Q Do you have an analysis on the water in Laguna Gatuna?

A Yes, sir, I have.

Q Referring to what has been marked as Exhibit 8B, would you identify that exhibit and discuss it?

A Yes. We walked out into the lake and got a sample of the water that was standing in the lake. Now, of course, I'm sure we can all understand this will vary according to how soon after a rainfall, and at this particular time, I believe it was a week or two after a rainfall, but, at any rate, the analysis of that particular sample of water taken out of the lake itself is Exhibit 8B, and, as you can see, it had chlorides of 158,000 milligrams per liter, and I personally feel, of course, that any rain water that hit the lake is immediately contaminated from the salt lying in the bottom of it.

MR. PORTER: Is that Laguna -- what is that?

THE WITNESS: That is the Laguna Gatuna. It's the lake in Section 18.

MR. PORTER: That is the well immediately adjacent to your disposal pit, is it not?

THE WITNESS: That's the lake immediately adjacent,

yes, sir.

MR. HAYS: How much water did it have in it when you took your sample?

THE WITNESS: It looks like about -- I would say about a third to a half of the bottom covered. It's never very deep.

MR. HAYS: Was it a foot deep?

THE WITNESS: I would say a foot to two feet.

Q (By Mr. Kellahin) Now, that 158,000 milligrams per liter compares with approximately 6,000 milligrams per liter chlorides in your produced water?

A Yes, sir, that's right.

Q And if you put it in the lake, it would improve the quality of the lake, would you not?

A It would make it look fresher.

Q Now, are there some springs feeding this particular lake?

A Yes, sir. There's natural springs in the area. They actually go into the lake.

Q Now, referring to Exhibit 8C, would you discuss that exhibit?

A Well, it is actually a water analysis of one of these natural salt springs. This particular spring is at the south end of the lake, and again comparing just the chlorides of the

analysis, you can see that the natural salt springs at 51,736 milligrams per liter of chlorides.

MR. PORTER: Let me ask you a question in connection with that spring. Do you know what part of the year it flows?

THE WITNESS: No, sir, it -- I think it varies somewhat with rainfall.

MR. PORTER: But there are times of the year, I suppose, when it doesn't flow at all?

THE WITNESS: Yes, sir, I would suppose, myself. Yes, sir.

Q (By Mr. Kellahin) Now, referring to what has been marked as Exhibit 8D, would you identify that exhibit?

A Exhibit 8D is a water analysis of the water wells in Section 21 of 20 South, 33 East. It's an old stock tank well that had been plugged out, and again, comparing the chlorides, you can see that this particular water well has 3518 milligrams per liter in chlorides.

Q Now, would that content be suitable for domestic or stock use?

A It definitely wouldn't be suitable for domestic, and as far as stock is concerned, I understand that you get above 2,000 milligrams per liter and you are getting -- you are getting pretty salty for even stock.

Q Now, referring to what has been marked as Exhibit 8E, would you identify that exhibit.

A Exhibit 8E is a water analysis of the water wells located in Section 4 of 20 South, 33 East, and it's the old plugged out and abandoned water well which is also a Quaternary well, and it again, has chloride -- in comparing chlorides -- it had 12,978 milligrams per liter. It's pretty easy to see why they abandoned it as a stock well.

Q It was probably never used, was it?

A I don't know whether it was ever used, actually.

Q Now, Exhibit 8F; would you identify that exhibit?

A Exhibit 8F is a water analysis of the old water well in the old Continental camp, the Salt Lake Pool located in Section 18 of 20 South, 33 East, and now this is Triassic water, and again comparing the chlorides it had 21,013 milligrams per liter in chlorides. This is right adjacent to one of the disposal pits on the Bass Lease, or of the disposal pit on the Bass Lease, which is, of course, 7,000 parts milligrams per liter.

Q Now, Exhibit Number 9, you have already discussed it, but would you identify it for the record.

A Exhibit Number 9 is a water well location map, and it's superimposed on a U.S.G.S. topographic map which is entitled

Laguna Gatuna, New Mexico.

Q Now, Mr. Garey, have you made an examination of the area involved in this application?

A Yes, I have.

Q In your opinion, what would be the direction of drainage, if any occurred, from these unlined surface pits presently being used by the applicants?

A Well, I think the drainage would be directly toward the Laguna Gatuna.

Q Would the surface drainage also be in the same direction?

A Same direction.

Q Would there be any possibility of drainage taking place or occurring either on surface or underground in a southwesterly direction?

A No, sir. I think if there is any drainage in the area, it would strictly be -- in other words, from the north it would be south into south into this synclinal depression, and it would be from the south north into the center of it, and then from that point west.

Q So, actually, you are in a basin at that location; there would be no outward drainage in any direction?

A None whatsoever. I think the water would drain into

the basin and then drain westward from that point.

Q Drain westward from the basin?

A Once it got into the synclinal sink then it would drain westward because it's plunging westward.

Q Could that have any effect on the fresh water wells located to the southwest on the Quaternary wells?

A No, none whatsoever. I think it's actually on the south flank of the synclinal sink, so the water would not drain to the wells. Actually, the water at the Halfway Bar in that area would drain ~~south~~^{north} to the synclinal sink.

Q It would go the same direction?

A Right, it would go ~~south~~^{north}. Water wouldn't come up to those parts at all.

Q In your opinion, would the continued use of the surface pits presently being used by the applicants cause any contamination to any fresh water supply anywhere, either surface or underground?

A I do not think so, whatsoever. I think that this area has been nature's disposal pit for several hundred thousand years, and there isn't anything that we can do to contaminate it further. As a matter of fact, our water is much less fresher than any of the water in the area, and I don't see how we could possibly contaminate it any further.

Q It's fresher than the lake water, and it's also fresher than the spring water?

A Than the spring water, right, and it's also fresher than the water in the water well right adjacent to the pit.

Q Now, in the event this application isn't approved by the Commission, what alternatives do the applicants have, Mr. Garey?

A Well, of course, we would have to consider the economics of disposing of the water. The Bass Lease couldn't justify it. I made a few preliminary studies. I think -- these are just round figures -- it depends on how much surface equipment you need, but just in round figures it could cost very easily as much as \$10,000.00 to convert a well into a disposal well. The Bass Lease could not justify it. I think we would have to plug the lease out. The Brooks Lease -- we would have to study it -- and right now I couldn't say without making a study of it.

Q Would such an expenditure, in your opinion, be an unnecessary expenditure which would constitute waste?

A Yes, sir. I think it is because I don't believe that -- I don't believe that we could contaminate the area whatsoever with the water being disposed as it is, and I think that any other expenditures to dispose of water would be -- just wouldn't

be justified.

Q Was Exhibit Number 1, a multi-page exhibit consisting of nine exhibits, together with sub-exhibits attached to Exhibits 4, 5, 6, 7, and 8, prepared by you or under your supervision?

A Yes, it was.

MR. KELLAHIN: At this time, I'll offer in evidence Exhibits Number 1.

MR. PORTER: No objections, the exhibits will be admitted.

MR. KELLAHIN: That completes the direct examination of the witness, Mr. Porter.

CROSS EXAMINATION

BY MR. PORTER:

Q Mr. Garey, how many disposal pits are there; did you testify as to that?

A Yes, sir, I believe I said that there was one in Unit "N" of Section 7, and one in Unit "C" of Section 18, of Township 20 South, Range 33 East.

Q So you only have two pits?

A Yes, sir.

Q Two disposal pits?

A Two disposal pits.

Q And they are relatively close to this salt lake, or the Laguna Gatuna, is that it?

A Yes, sir.

Q And one is northwest and the other is west of that section?

A Yes, sir. There's one northwest about two miles, two to two and a half miles --

Q I see.

A -- and that's called the Laguna Plata, that particular salt lake.

Q Now, on this map here on Exhibit Number 9, you show the Salt Lake Ranch. Is that the Snyder Ranch?

A Yes, sir.

Q Now, is that the former Snyder Ranch headquarters; is it occupied now; anybody living there?

A Yes, sir, there's someone living there.

Q Where do they get their water?

A They get their water from this Potash pipeline that comes across the south of the ranch. You'll see it there, a dotted line.

Q They have this one well, water well, there? Do you know how long that well -- I think you testified on that. How long that's been abandoned.

A At the old ranchhouse?

Q Yes, sir.

A From what I understand, from Mr. Bingham, for about twenty years.

Q About twenty years?

A Yes, sir.

MR. PORTER: Thank you. Anyone have any other questions?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Garey, what type of reservoir drive do you have here in this Salt Lake Pool?

A It's strictly solution gas.

Q No water?

A None to speak of. Of course, we produce water, but it's not a big water drive whatsoever; primarily, the production is coming from the Yates Sands.

Q Now, I notice here on your Exhibit Number 4A, the second well from the bottom, there is a Montgomery Bass 4 located in Unit "K", of Section 18, has seven-inch pipe at 2721 that was drilled as a dry hole, and evidently the pipe was not pulled according to the ledger over to the right, it just says cement plugs. Now, if we refer to your Exhibit Number 2, the structure map, we find that that well would be low on the structure. Now,

what's to prevent you from drilling out those cement plugs and putting that water in that well?

A Mechanically, nothing.

Q Except the economics of drilling out the well?

A Yes, except the economics of making it into a disposal well.

Q You estimate it would cost as high as \$10,000.00 to plug that well?

A Yes, sir. It depends on how much surface pressure is required. It depends an awfully lot on that and you don't know until you actually start disposing.

Q I see. You don't have any measure of the permeability that you had in that well, or anything?

A No, sir, we didn't core it or anything like that. We have no idea.

Q There are other wells in the area, but for the most part, according to that one exhibit, the pipe was pulled when they were plugged?

A Yes, sir, the hole was pretty well torn up.

Q There's another one there that just has cement plugs in it. That's this Conoco Brooks 7. I don't know what the location of it is, it's in "K" of 7.

A That well we re-entered.

Q That has been re-entered?

A Yes, sir. That is now the Montgomery No. 4 Brooks.

Q Is that producing now?

A Yes, sir.

Q Now, with respect to this fresh water that you have in the area, structurally, where is this water located with respect to these pits and the Laguna Gatuna?

A The fresh water that's being used for domestic purposes and stock purposes?

Q Yes, sir. Down here halfway, and then the wells there in 25 and also down to the Bingham Ranch in 36.

A It's structurally updip.

Q How far above the lake is this water?

A As you can see, topographically, it's in -- I say structurally -- I'm going to lean a little bit on the testimony that was given last month by Mr. Gray for the Hudson and Hudson presentation. He got into, of course, the Red Bed structure and in the -- he referred to an engineering report that proved that the structure actually followed the topographic contours in the area.

Q No, I'm not concerned with the Red Beds, Mr. Garey. I'm talking about the surface structures here. You have a contour map here in your Exhibit Number 5.

A Yes. Those wells are found at 3550, and --

Q That would be the Halfway wells?

A The Halfway wells.

Q They are 3550, and what is the elevation at your pit?

A And the elevation at the pits is 3520.

Q All right. Now, with respect to the wells in Section 25, what would be the elevation of those wells?

A They are at 3560.

Q So they're some 40 feet above the lake bed, or the pits?

A Yes, sir.

Q Now, with respect to the Bingham wells, what's the elevation of those?

A The elevation is around 3590, and so they're some 70 feet.

Q Now, if we take the Bingham wells, say they are at 3590, then we come back to your Exhibit Number 8A, we find that the depth of the one well that's being produced is 50 feet so the bottom of that well would be some 40 feet above the lake bed, is that correct?

A That's correct, yes, sir.

Q Now, the wells in Section 25 are at 3560; they're some 40 feet, I guess, above the lake bed, then, and the depth of them is 65 feet, so the depth of the water there would be

lower than the lake, is that correct?

A That's correct.

Q And this would also be true with respect to the Halfway ones?

A That's right.

Q So we do have seven water wells that you are talking about. Three of them, the bottom of the well would be lower but the bottom of the well would be higher than the lake, and four of the seven the bottom of the well or the source of water would be lower than your lake?

A Datumwise, yes.

MR. NUTTER: I believe that's all. Thank you.

MR. PORTER: Anyone else have a question?

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Garey, in line with Mr. Nutter's question, if the bottom of the well were lower than the lake bed and they were still producing fresh water, would that indicate any communication between the lake bed and the wells was occurring?

A I don't think there's any whatsoever, because this same condition has existed for several hundred thousand years, and if that lake hasn't contaminated that water by now, it's never going to.

MR. NUTTER: Those wells haven't been there that long.

THE WITNESS: Well, I mean the water has been in the formation that long, that they are producing from.

MR. NUTTER: I think an examination of the geological water report for this area will show that the ^{well} force of water in these wells is from the south moving north.

THE WITNESS: You're absolutely right. In other words, the lake would not move south; the contaminated water from the lake will not move south updip into the wells.

MR. NUTTER: Probably the source of water would be the water that's moving from the south north and is the source of water for that spring in the southeast into the lake.

THE WITNESS: That's true. In other words, the water would not move south to these wells; the water at the water wells would move south into the lake area.

MR. NUTTER: Moving north in the lake area.

THE WITNESS: Yes, sir, north; that's right.

MR. PORTER: Does anyone else have a question? The witness may be excused. Does anyone have anything further to offer in Case No. 3924? If not, we'll take the case under advisement.

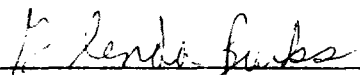
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<u>EXHIBITS</u>	<u>MARKED</u>
Applicant's Exhibit Number 1, a multi-page exhibit, consisting of 9 exhibits together with sub-exhibits attached to Exhibits 4, 5, 6, 7, 8	2

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, GLENDA BURKS, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.



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