STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISON			
STATE LAND OFFICE BLDG. SANTA FE, NEW MEXICO			
3 June 1987			
EXAMINER HEARING			
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IN THE MATTER OF:			
Application of Permian Corporation for an exception to Division Order	CASE 9140		
No. R-3221, as amended, Eddy County, New Mexico.	2 - 1 0		
10 New Mexico.			
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BEFORE: David R. Catanach, Examiner	BEFORE: David R. Catanach, Examiner		
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TRANSCRIPT OF HEARING	TRANSCRIPT OF HEARING		
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A P P E A R A N C E S	APPEARANCES		
21			
For the Division: Jeff Taylor			
Legal Counsel to the			
State Land Office I Santa Fe, New Mexic			
For the Applicant: James E. Snead Attorney at Law			
JONES, SNEAD, WERTH RODRIGUEZ & WENTH			
P. O. Box 2228 Santa Fe, New Mexic	co 87504-		

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MR. CATANACH: We'll call next 1 Case 9140. 2 MR. TAYLOR: The application of 3 Permian Corporation for an exception to Division Order No. R-3221, as amended, Eddy County, New Mexico. MR. CATANACH: Are there ap-6 pearances in this case? MR. SNEAD: Mr. Hearing Exam-8 iner, my name is Jim Snead. I'm with the Jones Law Firm, P. O. Box 2228, Santa Fe, New Mexico, Zip 87501, and I'm ap-10 pearing in behalf of the Applicant, Permian Corporation. 11 MR. CATANACH: Are there any 12 other appearances in this case? 13 Will the witness please stand 14 to be sworn in? 15 16 (Witness sworn.) 17 18

MR. SNEAD: Mr. Hearing Examiner, prior to the hearing we've handed out a series of exhibits, Numbers One through Five, I think you have them there with you, which will be referred to during the course of the -- of the hearing, and in conjunction with, particularly Exhibit Number Three, we will ask that the Commission take administrative notice of its Docket No. 7680 and the

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hydrological study which was a part of that particular hear-
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   ing, which is Exhibit Number Three is this proceeding.
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                                 MR.
                                      CATANACH:
                                                   Mr.
                                                        Snead, do
   you know the case number on that docket?
                                 MR. SNEAD: It's Case No. 7680.
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                                 MR. CATANACH: Okay.
                                 MR. SNEAD: Yes, sir.
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                           JOE D. RAMEY,
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   being
          called as a witness and being duly sworn
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   oath, testified as follows, to-wit:
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                         DIRECT EXAMINATION
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   BY MR. SNEAD:
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                       Would you state your name, sir?
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             Q
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                       Joe D. Ramey.
                       Where do you live, Mr. Ramey?
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                       I live in Hobbs, New Mexico.
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                       And what's your business, Mr. Ramey?
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                       I'm an oil and gas consultant.
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                       Have you previously testified before this
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             Q
   Commission and been qualified as an expert?
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             Α
                       Yes, I have.
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                                       SNEAD:
                                  MR.
                                                We
                                                   then
                                                          submit,
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   based on the record, Mr. Ramey as an expert to testify
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this matter. 1 MR. CATANACH: The witness is 2 considered qualified. 3 Mr. Ramey, are you here today representing Permian Corporation, the applicant in this case? 5 Α Yes. I have been retained by Permian to 6 handle this case. 0 Have you prior to the hearing caused to 8 be prepared a series of exhibits that will accompany your testimony in this case? 10 Α Yes, I have. 11 Would you for the record go through those 12 exhibits and identify them, sir? 13 Exhibit One is just a -- is a plat Α Yes. 14 of the area showing the disposal area in the northwest quar-15 ter of Section 2. 16 Exhibit Two is schematic diagram of 17 equipment to be used in the oil and solid separation prior 18 to disposing of the water into the lake. 19 Exhibit Three is a --20 0 Excuse me, Mr. Ramey, Exhibit Two is a 21 2-page exhibit, is it not --22 Yes, there's --Α 23 0 -- with a description of the --24 -- a description of the flow of the water Α 25

1 through the system.

Exhibit Three is a hydrologic evaluation

of the area.

Exhibit Four is a report from the Artesia Office of the two disposal systems, similar disposal systems, in the area and what they have disposed of in the last six months.

And then Exhibit Five is a letter, a copy of the letter that I sent to the Commissioner of Public Lands and the surface lessee in Section 2.

1) Q So that the proposed disposal site is lo12 cated on State land?

A Yes, it is.

Q And you notified both the Commissioner and the surface rights lessee?

16 A Yes, I have.

Now, Mr. Ramey, if you would particularly, sir, refer to Exhibit Number One and I believe that could be taken in conjunction with a more detailed local map, which is shown on page six of Exhibit Three, and describe to the Hearing Examiner what -- where this proposed disposal site is located.

A Yes. On Exhibit One it is the northwest quarter of Section 2. It is outlined in red and as you can see, it's -- it's very close to State Highway 128. It will

only be necessary to build a road about 300 feet off of that highway to the disposal site.

Referring to page six of Exhibit Three, that shows -- shows all the -- all the small lakes in the area and it shows the present two operating disposal systems of B&E and UniChem, and then the Permian system, which is on the lake just to the west of the lake labeled Laguna Tres.

Q And you have then added to the original Exhibit Number Three the designation of where the Permian site would be located?

A Yes, I have. Also there is a -- to the north there on Lindsay Lake, there is a system that has been authorized to Requeza, and that system is not in operation at this time. It's my understanding that B&E bought them out and that -- that system will never -- never be operated.

Q Is Permian Corporation utilizing any disposal site currently in this area?

A Yes, they are disposing, presently disposing of their water that they're hauling to B&E at this time.

Q Would you just in general describe for the Division what -- what this particular area consists of, the lakes, and so forth.

A Very briefly, the Rustler formation outcrops in this area. There has been subsidence in the Rustler, which -- which created Nash Draw, and all of these lakes are in Nash Draw.

Referring to page six on Exhibit Three, International Minerals and Chemical Corporation is disposing of around 3,244 gallons per minute into Laguna Uno. There is no -- this is a completely closed lake and it's higher in elevation than the rest of the lakes.

In the summertime it is -- it is thought that the majority of this water evaporates out of Laguna Uno, but in the wintertime, why, it seeps into the ground and becomes part of the groundwater system and then pops up in the other lakes down dip, Laguna Dos, Laguna Cuatro, Laguna Tres, Requeza -- Lindsay Lake, and (not understood), and Laguna Seis, and then there are four other unnamed lakes in this area.

Then through -- through groundwater flow or through underground flow and through surface flow, the water eventually, some of the water eventually ends up into the Salt Lake, which is down to the southwest of the area. It is -- it is the lowest point in this area and this is a -- this is a huge, huge salt lake that is fed primarily from -- from the International Minerals and Chemical Corporation's potash disposal.

Q Now referring in general to Permian Exhibit Number Three, can you tell us, sir, whether that is a

hydrological evaluation that was done for the prior case and utilized by the Commission, and by the applicant there to show what the hydrology of this area is?

A Yes. This was a study that was submitted in September of 1982 by GeoHydrology Associates, Mr. T. E. Kelly, President.

And I don't think, you know, there's been any change in the area. I've made a surface inspection and things -- things are still as -- as mentioned in the report there.

Now, Mr. Ramey, would you tell the Division what the proposal was with UniChem with regard to its disposal and what was already in existence at the time you began to -- submitted this application?

A There were already -- the Division had already approved the B&E disposal and had approved the Requeza proposal when UniChem made their application. Uni-Chem's was just an application to dispose into Laguna Tres.

Q And I would direct your attention to pages 10 and 11 of Exhibit Number three, Mr. Ramey, and ask you first with regard to the graph shown on Exhibit Number Ten whether that graph, absent the Permian Corporation's addition, was submitted as a part of this evaluation in 1982?

A Yes. The graph was submitted. It shows the maximum evaporation in wintertime according to this re-

port, was 508 gallons per minute. This graph showed the Requeza of about 90 gallons per minute, and then the B&E of something in excess of 200 gallons per minute, and then Uni-Chem was around 50 gallons per minute, and then I've added the Permian, which -- which will bring the total autorized disposal up to around 400 gallons per minute, or around 78 percent of the evaporation potential, winter evaporation potential. So that would leave approximately 22 percent margin for a safety margin.

A Yes.

Q And in your opinion is that sufficient safety margin in this area?

A Yes, it is.

Q Would you then refer to page 11, the next page, in other words, particularly paragraph number 2 of Exhibit Three, and tell the Division whether that was the hydrological report on what UniChem proposed to add to the disposal water?

A Yes. At that time, and still -- still is, based on evaporation rates that were taken at the big lake which is labeled Salt Lake, it was 509 gallons per minute for the smaller lakes, not counting -- not counting the big lake, and at that time, why, the total discharge would have been about 364, and you add -- add the Permian's of I think it's 29 gallons per minute, why, that brings it

up to almost 400 of the -- 509 winter evaporation rate.

Q And you have previously referred to Exhibit -- Permian Exhibit Number Four. Would you take that before you now and tell the Commission, the Division, what it is?

A Over the last six months, I called the Artesia Office and asked them to furnish me the last six months diposal or through what they had available, and the UniChem is disposing an average of 1390 barrels per day or something over 40 gallons per minute, and B&E is disposing of an average of 4167 barrels per day, or 121.5 gallons per minute.

Q Does the total UniChem disposal figure include what's been tendered at that site by Permian?

A Yes, Permian is presently disposing of around 500 barrels per day at the B&E site.

Q Mr. Ramey, you have prepared a schematic layout of the equipment that you propose, Permian proposes to site at the disposal site or locate at the disposal site if this application is approved.

Would you now refer to Exhibit Number Two and tell the Division exactly what that shows?

A Yes. This is -- it's a series of three 500 barrel tanks and a 300 barrel tank and then also a 210 barrel skim oil tank and a 110 barrel solids tank.

ter the first tank, or the gunbarrel, which is the 500 barrel gunbarrel, and will enter that and when it reaches a
certain level, why, it -- the water will skim off into the
number two tank and then when that reaches a certain level
goes to the third tank and then to the fourth tank, and then
finally to the Lacos (sic) super separator for final solid
disposal.

Any oil will skim off in the first four tanks and the little Lacos super separator will by centrifugal action take out any remaining solids.

Q Mr. Ramey, was page two then of Exhibit
Two a written description of the operation of this equipment?

A Yes, it is. And as noted on this, the tanks one, two, three, and four will be checked, you know, on a regular basis for -- for any accumulated oil or solids. And as the solids build up, why the tanks will be cleaned of the solids and any oil that gets over into the second, third, and fourth tanks will be skimmed off and put into the 210-barrel skim oil tank.

I might add that any, any oil that is accumulated will be carried to a treating system of some kind or, you know, will go through an oil treating plant and any solids that are accumulated will be disposed of at a solid

I waste disposal site as approved by the Division.

Q Can you tell us, sir, whether you have an opinion as to whether the granting of this application would create an inflow of water that is in excess of the known capacity of the lakes?

A No, it will not.

Q Is the area sufficient to contain the additional water that would be disposed there?

A Yes, it is. It is sufficient area. In the wintertime these lakes get -- get large. They're much larger than is illustrated on page six of Exhibit Three.

For example, the lake that Permian will dispose into, when I -- when I visited the site, why, it was -- it was a part of Laguna Tres, and there are -- there are ditches between all of these lakes south of State Road 28. The Highway Department has gone in and has ditched, put ditches between the lakes so that -- to keep the road, keep the highway from being covered with water.

Q Do you have an opinion as to whether there is a sufficient margin of safety remaining to the evaporation rate in the area after the disposal of the Permian?

A Yes, I think the 22 percent safety factor is certainly -- certainly ample to insure that any water put in the lake will evaporate right in the area.

Q Do you have an opinion as to whether the

grant of this application and the discharge of the oilfield produced brine would be compatible with the best usage of the area?

A Yes. It certainly -- certainly won't,

Yes. It certainly -- certainly won't, you know, hurt the quality of the water in the lakes. Part of Exhibit Three is the analysis of lake water and analysis of the Bone Spring and Morrow waters which are the waters that Permian is Hauling, and they are reasonably compatible.

Q Would the granting of this application enhance the competitive situation in the area?

A Yes, this will -- this will give Permian at least, you know, a competitive -- not a competitive edge but where they will be competitive with other haulers in the area, and this is a reasonably inexpensive disposal method and should - should prolong the producing life of the wells that are producing the water in the area.

Q Would the grant of the application and subsequent disposal of the water, brine water, by Permian cause any deterioration of the quality of water that's being disposed of in that area?

A No.

MR. SNEAD: We have no further direct, Mr. Hearing Examiner.

We tender Exhibits One through

| Five.

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CATANCH: MR. The Exhibits One

through Five are hereby admitted into evidence.

MR. SNEAD: Oh, I'm sorry, Mr.

Hearing Examiner, I did neglect one area and that is notice ot the interested parties.

Exhibit Five is your letter -- can you 0 tell us -- your letter to the Commissioner of Public Lands and to the lessee of the surface interest. Can you tell the Division whether you have actually contacted the operator of the surface lease at that proposed site?

Yes. The day I visited the area, why, we met Mr. Greenwood over there and discussed the disposal site and what we plan to do with him and he indicated that would, you know, for money consideration would certainly sign a relinquishment of his grazing lease.

And the, you know, the Commissioner of Public Lands has contacted Mr. Lemay on this and, you know, suggested another method of doing it, but I had that suggested that perhaps the business lease should be the first step, the State business lease should be the first step prior to getting an OCD order, but that is in direct conflict to what he's been requiring and after discussion with his staff, why, they have informed me that they have no Permian obtaining the order objection to and then approaching the Commissioner of Public Lands the

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business lease.
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                                 MR.
                                               And once again I
                                      SNEAD:
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   have no further direct.
                        CROSS EXAMINATION
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   BY MR. CATANACH:
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            Q
                            Ramey, the source of the water
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                        Mr.
   Bone Spring and Morrow producing?
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                      Yes.
9
            Α
                      Are these fields in this general area?
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                              It's the fields back to the east
                        Yes.
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   primarily for the Bone Spring and then the Morrow production
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   around Carlsbad.
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                        Is it going to be limited to these
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   sources?
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                        That is -- that is our intent at this
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            Α
   time,
          Mr. Examiner. I have advised Permian and they have
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   told me that if they pick up any additional water they will
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   run compatibility tests on it and have it analyzed and so
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   notify the Division before they dispose of any -- any
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   additional water through this system.
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                        Okay, the volumes we're talking about
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            Q
   there are what, now?
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                       1000 barrels a day is what they're asking
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   for as a maximum.
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17 1 Q As a maximum. Yes. 2 Α 3 What are they currently disposing of? Around 500 barrels per day. Α But as you know, there's a lot of gas production shut-in at this and so they're -- the volume they're hauling is down what they have hauled. 0 On Exhibit Number Three, is that volume 8 that you have plotted on that graph, is that the 1000 barrels per day volume? 10 11 Α Yes, but I think that figures out to about 29 gallons a minute. 12 1000 barrels a day? 13 Yes. Was I right? 14 Α Yes. 15 I might add, we're not going to 16 Good. 17 utilizie the entire northwest quarter of Section 2. 18 probably use five acres out of that. We'll have to survey it and such as that for the business lease; before we can 19 20 obtain a business lease we'll have to -- we'll have to go in 21 and survey out the area that we need, plus the roadway. Okay, will you provide us with that sur-22 0 vey and the exact location of all the tanks? 23 24 Α Yes, before -- before, you know, we ac-

tively start construction, why, we will, you know, obtain a

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business lease and a relinquishment from the surface lessee,
and thenwe will be happy. Why don't you make that a provision of the order, that we furnish you a plat of the actual
disposal area and a schematic of the disposal facilities?

Q Mr. Ramey, I assume you're read this report by GeoHydrology.

A I've read it several times. I read it prior to approving the UniChem order when I was Division Director and I've read it several times since then in preparation of this.

Q What are the major conclusions of this report, the major highlights? Do they say that this won't be harmful to any fresh waters in the area?

A They -- well, there's essentially no fresh water in the area.

Q There is not?

A No. There is -- there is some ground-water in the area that comes off the slope, off the edges of Nash Draw down into the draw but this is, you know, highly, highly gyp water and it is certainly not in communication. Nash Draw is considerably lower than -- that this water and it seeps into the draw and there's certainly no reversal out of the draw into that groundwater.

There was, at one time there was a fresh water well in -- if you'll refer to page 6, labeled Nash

Well in Laguna Cuatro, but that -- but the lake has completely covered that well and the, you know, the windmill tower has collapsed and is laying out there in the lake bed. And that was the last known, and there's another well up Laguna Uno to the north there, which is the J Bar F Well, which is also, you know, completely contaminated with -- with the discharge from IMC.

So there is no -- there is no -- in the draw itself there is no fresh water. What fresh water was there has been contaminated by the discharge from the potash operations.

And it was concluded that the water to be disposed of was of a slightly better quality than the water in the lakes and that there would be no, no harm from -- to the water, to the lake area, by the discharge of this, you know, these small amounts of oilfield brine.

Q You said -- did you say that there was an analysis of the water from that particular lake?

A I thought one of these was. Well, let me check back here in the report.

There doesn't seem to be. I thought there was one but if you'll look on page 9 under, you know, chemical quality of proposed discharge, it says, "The surface water in Laguna Tres and adjoining ponds is similar to the sample presented in the appendix. Mixing of the brines

with the existing lake water would not produce a notable effect on the water quality."

Q I see. So this study was done for the whole area right here, is that correct?

A Yes, it was. I think that GeoHydrology Associates did the analysis for all three applications, all three previous applications.

Q Okay. Would Permian Corporation be willing to submit a water analysis from the proposed discharge site?

A Yes.

Q Mr. Ramey, where are the -- do you know where the solids are going to be disposed of at this time?

A I would -- I would assume that either at Pollution Control or at the one that was -- I think it's been authorized by the Division for Mr. Abbott, Petro-Thermo.

I would assume that we would, you know, Permian would have these solids analyzed to determine what they are and then they will take care of them, but they're, you know, if they turn out to be a hazardous waste, why, they will have to dispose of them in an approved hazardous waste site.

I think primarily they're going to be iron sulfides, I understand. That's the solids problem that

the others are experiencing.

Q Mr. Ramey, the chemical that's initially added to the disposal water, do you know what that is or --

A No, I do not. I did not.

Q Is that -- do you know if that's designed to aid in the separate of the oil and water?

A Yes, and I'm sure that will be used only if it is necessary. The flow description says that we will have chemically treated water in there but if they put water in and it adequately separates without any chemicals, why, they would be foolish to use chemicals.

Q Mr. Ramey, do you think the proposed facilities are adequate to keep any oil from ever reaching -- getting into the lake?

A Yes, I certainly do. You get about 2300 barrels as a -- or 1800, 1800 barrels, so you're going to have, you know. almost 36 hours of retention time in the tanks before, and if not, why, you know, if there's any indication that there's any -- any oil going to reach the lake, why, I think they would probably have to put a pit out there of some kind for further retention time.

But they're aware that you're not going to allow any oil to get in the lakes and if it does, they're going to clean it up.

Q Okay, how will the site be monitored?

Will somebody be there daily or --

This will be monitored out of Permian's 3 Carlsbad office; only their -- this will be strictly a Permian operation, and only their drivers will be authorized to dump the oil, so every -- or dump the -- dispose of 6 water, and so it will be physically monitored every time there's a load brought in. 7

But as far as actually monitoring the Q discharge into the lake, that won't be monitored at all, will it?

Oh, yes, yes, it will. There will be --I have discussed this and they -- they plan on somebody out of Carlsbad visiting the site every day.

> Okay, that's what I mean. 0

Α But the truck driver, as I understand, will be monitoring the tanks for solid accumulation and oil accumulation in addition, you know, as they -- as they bring in a load, why, they will -- they will look at these things.

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CROSS EXAMINATION

BY MR. TAYLOR: 22

> Ramey, I think on the Petro-Thermo Mr. we required them to post a bond with us for surface cleanup but as I understand it, any business lease you get

from the Land Office would probably also require that, so is 1 it satisfactory if we require that you post a clean up 2 with someone, either us or the Land Office? Yes. And that way if they require it absolute-5 ly in their lease you won't be required to post one with us. 6 7 If they don't require it you'll have to post one with us. Α That will be fine. I'm reasonably cer-8 tain that the Land Office will require a bond. Okay. 10 0 11 Α Which will be in conjunction with business lease. 12 This is what I --13 Α But if they -- if we get that waived, 14 why, we'll be glad to post one with you. Yes. 15 MR. CATANACH: 16 That will have to be determined before we write an order. 17 18 MR. TAYLOR: No, we can put language in that that says they'll post bond with someone. 19 20 MR. CATANACH: Okay. Α That would be best for our position to 21 put a provision in the order for that, if you will. 22 23 MR. CATANACH: I have no further questions of the witness. 24 25 Are there any other questions

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   of this witness?
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                                  If not, he may be excused.
2
                                  I guess we'll hold the record
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   open on this case until I receive the analysis, Mr.
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                                                           Ramey,
    that I asked for --
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             Α
                      Of the lake water.
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                                 MR. CATANACH: -- of the lake
   water, and let's see, I think that's it.
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             Α
                       Okay.
                                 MR. CATANACH: And then we'll
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    take it under advisement.
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                       Okay. Thank you.
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                        (Hearing concluded.)
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C E R T I F I C A T E

HEREBY CERTIFY the foregoing Transcript of Hearing before the Oil Conseration Division (Commission) was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSP

I, SALLY W. BOYD, C.S.R., DO

· Catanal

Oil Conservation Division