STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

7 January 1987

EXAMINER HEARING

IN THE MATTER OF:

Application of Harvey E. Yates Company for exception to Division Order R-3221, as amended, Eddy County, New Mexico. CASE 9059

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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LARRY BROOKS

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MR. STOGNER: Call next Case Number 9059.

MR. TAYLOR: Application of Harvey E. Yates Company for exception to Division Order No. R-3221, as amended, Eddy County, New Mexico.

MR. PADILLA: Mr. Examiner, Ernest L. Padilla, Santa Fe, New Mexico, for the applicant in this case.

I have one witness to be sworn.

MR. STOGNER: Are there any other appearances in this matter?

Will the witness please stand and be sworn.

(Witness sworn.)

LARRY BROOKS,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. PADILLA:

Q Mr. Brooks, for the record would you state where you reside and what your connection with the ap-

plicant is?

A Larry Brooks. I reside in Artesia, New Mexico, and I'm a geologist for Harvey E. Yates Company.

Q Mr. Brooks, have you previously testified before the Oil Conservation Division and had your credentials accepted as a matter of record as a geologist?

A I have.

Q Can you briefly tell us what the purpose of the application is?

A Okay. Well, basically we seek to dispose or gain an exception to R-3221-A, utilizing seven unlined, shallow evaporation pits to be located on our leases in Section 1, 2, 3, 4, 11, 12, and 13 of Township 18 South, 31 East.

Q Mr. Brooks, have you made a study and are you familiar with the geology and hydrology of the area in question?

A I am.

MR. PADILLA: Mr. Examiner, we tender Mr. Brooks as an expert geologist.

MR. STOGNER: Mr. Brooks is so qualified.

Q Mr. Brooks, let's refer to what we have marked as Exhibit Number One and have you tell us what that is and what it contains.

A Okay. Exhibit Number One is a land plat. It shows the lease of 18 South, 31 East, showing Harvey E. Yates' lease boundaries and the water well locations and pit locations identified. The pit areas have been researched and a 2-mile radii from each site and a half mile radii are drawn on the land plat.

Q What are the brown dots on that exhibit?

A The brown dots with the arrows are our proposed pit locations.

Q And what are the circles on that around the brown dots?

A They are the half mile researched area from the pit, as required by the OCD.

Q What are the blue dots on the exhibit?

A The blue dots are where there has been attempt to make commercial fresh water or stock or domestic fresh water wells and all have been a failure.

Q Of those blue dots, Mr. Brooks, are there any that are actually producing water at this point?

A Only one in Section 7 of 18 South, 32, in the southeast of the southeast quarter. That is a Linum -- Virgil Linum's (sic) ranch. It's a stock well.

Q And is that used for domestic purposes?

A No, it's stock.

Q Stock, stock water. Waht is the depth of

those wells?

A The depths range, starting in Section 1, there's a windmill. It's 465 feet deep.

In Section 12, four wells by Maxwell will range from 600 -- 600 to 470 feet deep.

The well in Section 14 is, I believe, it did not have a depth reported at the State Engineer's Office.

Wells in Section 5, the one in the north, northeast of the northeast is 990 feet deep and the two wells in Section 7 are 83 feet deep. They're shallow ~~Ogal-lala~~ Quaternary alluvial wells.

What's the closest residence in this general area, Mr. Brooks?

A From Section 12 would be about a mile and a half southwest.

Q Southwest, and how -- do you know how that residence obtains its domestic water?

A Yes, that water obtains its domestic and stock water primarily from being piped in from the Caprock. They had a water well in Section 14 that ws abandoned because it was dry. It went dry within two or three years.

It's a private co-op water.

Q How, generally how is stock watered in this area?

A All stock is watered via pipelines running into troughs. There are no fresh water windmills. The only windmill in Section 1 has been abandoned and it's pumped dry. Every time they pump it for a day and it goes dry. So all stock tanks are hooked up to pipelines coming off an aqueduct that goes, oh, for the most part northeast/southwest across Township 18, 31; there's a main aqueduct.

Q Mr. Brooks, can you generally tell us what the sources of water were for these wells in Section 12 that are no longer in service?

A Okay. Essentially, in Section 12, where the majority of the water wells were located, Maxwell Oil Company on January 22nd of 1952 applied to the New Mexico Oil Conservation Commission for an order initializing a waterflood.

The plan was to equip wells where they had penetrated water with cable tool drilling rigs in the Santa Rosa, utilize this water for secondary recovery; however the volumes of water they, -- they were real tight aquifers, so they produced real high ~~chlorides~~ rates initially.

But upon equipping the wells and conditioning for producing water, they went dry and they've never been used since they were equipped.

Q So those limited water supplies --

A Right, conversely, conversely Maxwell Oil

sold the properties to Worth and Worth began getting their water~~flood~~ from the Caprock, the waterflood water.

Q Mr. Brooks, can you tell us now generally what the geology is underlying the --

A Okay.

Q -- area?

A Okay. Basically the surface of the aforementioned sections consists of dense sand and caliche underlain by 10 to 20 foot of hard caliche. This caliche cap overlies the Triassic Redbeds. In these sections the Triassic Redbeds extend downward 400 to 850 feet, where it is apparently conformably underlain by the Permian-age Rustler formation.

The Triassic Redbeds are comprised of the Chinley member, Santa Rosa member, and the Doakum. Comparatively, all three members are siltstone, clay, silty clay, silty shale depositional environments.

There are some anhydritic shales and clays with a very slight trace of interbedded red to brown, very, very, fine-grained sub-round to round quartxose and terrigenous sand, meaning it is comprised primarily of quartz and evolving from the shelf. A sand carrying in from the shelf to the basn is terrigenous.

The ratios of siltstone to shale to clay to anhydrite to sand are in the order of 35 to 34 to 20 to

10 to 1 in the project area.

Q Mr. Brooks, what does this mean?

A We have a tremendous amount of shales, impermeable barriers and very small grain-sized rocks, which would considerably inhibit downward percolation of fluids to be disposed of in the pits.

The amount of sand found in this specific area, as opposed to the Loco Hills site, is considerably smaller and there are very lenticular sands but they just do not seem to be ~~deposited~~ (Porous) because of the amount of clays and anhydrites with those sands, so they would not make a good host aquifer.

Q For water?

A For water.

Q Let's refer now to what we have marked as Exhibit Two and have you tell the examiner what that is.

A Okay. Exhibit Two-A and Two-B are USGS 15-minute topo maps, one of the Clayton Basin and one of the Maljamar Quad, and they show the previous exemptions as outlined in R-3221-B and also any exemptions that came after that order.

I neglected to put Laguna Plata on those because I was running out of space on that.

Q Where is Laguna Plata?

A It would be due east of the orange boun-

dary in R-3221-B.

Q For the record, Mr. Brooks, where is that Laguna Plat in relation to this Exhibit Number Two-A?

A Laguna Plat is on the immediate eastern-most portion of the -- of the quandrangle map. It parallels R-3221-B downward.

Q Do you have anything further concerning Exhibit No. 2, Mr. Brooks?

A No.

Q Let's have you tell us a little bit about the hydrology of the area, if you would please.

A Well, basically, it will be shown more by cross section, I have found no evidence of beneficially used groundwater or groundwater to be beneficially used, and this statement is supported by all the cable tool logs in the area, well logs, and State Engineer water well data, including quality and field tests.

A typical -- let me see here -- a typical section in this area is composed of 10 to 30 foot of caliche, 20 foot of sandy siltstone, 40 foot of red shale very finely silty to silty, 60 foot of red/brown siltstone, very finely silty, argillaceous in part, 75 foot of red-brown mottled finely silty shale, 5 foot of white to tan mottled anhydrite, 52 feet of red shale from siltstones, 6 feet of tan and white mottled anhydrite, 17 feet of red

shale, very finely silty, argillaceous, 29 foot of a red, very, very, fine grained sub-round to round sand, very silty, 16 foot of red shale, red and brown mottled siltstone, slightly anhydritic, 75 feet, 51 feet of red sandy shale, 45 feet of red, very finely silty shale, 40 foot of red shale, very finely silty to argillaceous, and 100 foot of siltstone that becomes very anhydritic and now you're on top of the Rustler anyhydrite.

That is a typical redbed section.

There are two cross sections --

Q Go ahead.

A There are two cross sections I prepared through the project area that show the Triassic cycles below the surface to the top of the Rustler formation.

One cross section has detailed correlations on shales, siltstones, et cetera. This is to exhibit that indeed shales and finer grain sized clastic rocks with some -- with the exception of some very finely crystalline, chemical precipitates are correlative; however, sand bodies are noncorrelative and scarce, as well as low porosity.

Away from the site groundwater is produced three to five miles west and three to four miles north in limited quantities. I've tabulated all the water well completion attempts and any oil well drilling that

might have encountered water.

It must be stressed that discharge from these wells is very minimal and all water for livestock and domestic use is piped in due to the non-availability of water. The source of the piped water is from private water co-ops on the Caprock, 8 to 15 miles away.

Q Mr. Brooks, why don't you refer to your Exhibit Three, Four, and Five, and have you tell the Examiner what that is?

A Okay. Three-A, Exhibit Three-A is a 7-1/2 minute series topographic map of the project area outline. It shows again the brown dots are the pit locations; the blue dots are water well -- are water wells in the area that have either been plugged and abandoned or covered; and they show your basic elevation gradient, which way surface drainage would probably go.

Q Which way would the surface drainage --

A Well, it's going to go down from the highest point to the lowest point, so --

Q In what direction?

A Primarily to the southwest.

Q And what sources of surface water are towards the southwest?

A The only -- only surface water you could eventually get to would be the Pecos River. There are some

dry arroyos and intermittent arroyos, but that's about all.

Q If you will now, what -- how will the pits be constructed, Mr. Brooks?

A They will be constructed, oh, pretty much near wells, real low, about 2-1/2 - 3 foot deep, 165 foot square; as close to one acre as possible.

Q What would be the capacity of one of those pits?

A The capacity would be approximately 2000 barrels a month evaporation build-up. Is that what you mean?

Q No, total capacity, total volume.

A Oh, it would probably be about 5000.

Q What are the chances of full capacity ever being reached for each of the --

A Never. We don't anticipate that much water.

Q In the event of some kind of natural flooding, do you think there would be any danger in the water escaping from the pits?

A We'll have a berm around the pits which would keep it from flooding and breaking the dikes and having the water ~~flood~~ flow into any arroyo or nearby water course.

Q To your knowledge has there been any

break from pits that have been exempted already in the area?

A It would be possible if they weren't maintained but we have field people in the field daily and we will -- we would be maintaining these.

Q How about pits operated by other operators?

A Not to my knowledge.

Q Continue with your explanation of Exhibit Three-A, if you will.

A Okay.

Q Do you have anything further on that?

A I have nothing further on Three-A.

Three-B is nothing more than a tabulation of all the windmills, the aquifer, any water quality, water levels and the State Engineer's Office location, and their status.

The well in Section 1 that was owned by George Williams was pumped dry.

All four Maxwell wells, one Maxwell well is an observation well; the rest are either plugged and abandoned, sealed, or covered, but not in use.

The well in Section 14 in the northeast quarter was a domestic well but it also pumped dry and was abandoned.

There is an unnamed well of which the

State Engineer does not have the owner. I assume it's going to be Anadarko or Exxon, but that well was drilled and it was dry.

Also in Section 5 Anadarko had a 990 foot well. It was also dry the last time the State Engineer went out to measure it.

Two wells in Section 7 on the Linam Ranch, he had one shallow ~~Ogallala~~ Alluvium well used for stock watering. This is in the southwest -- southeast quarter. It went dry and so he -- he re-permitted it with an A location on the State Engineer's locator, and drilled another one offsetting it and made a well.

Q Mr. Brooks, Did your investigation reveal that any of these potential aquifers were rechargeable or --

A Definitely not. Any water wells that could be pumped dry and go back again five years later and they're still dry, indicate that there is no transmissibility or hydraulic conductivity to the wellbore.

Q Okay. Would you refer now to your Exhibit Number Four and explain that?

A Okay. Four-A and Four-B are cross sections that are noted through the project area.

Four-A primarily runs across the northernmost six sections of Township 18, 31.

Four-B traverses the Township 18, 31 from

the northwest to the southeast. I'll just lay this out here but what I need to show is the shale cycles. I've correlated on five cycles of shales, A, B, C, D, and E members.

These shales can be correlated from Section 10 all the way into Section 24 and back into 13, over four miles of the area.

The only thing that seems to be nonexistent are any sands. There are no sands in this area.

Any of the waters that were reported as sands were probably siltstone, because I couldn't find any on logging. I logged, mudlogged this well here and I mudlogged from surface to 500 feet and did not see any, maybe two feet of sand.

MR. TAYLOR: Why don't you describe where this well is?

A That's the Siete Oil & Gas -- I mean it's the HEYCO South Taylor 13 Federal No. 1. That is our well in Section 13 and I did the mudlogging on it and I did not see any sand.

I saw real large cuttings, about the size of half dollars, or quarter-sized, and red clay, a lot of clay, and you can see by this you're getting clay stones in here that are thickening up and your shales are thinning, but the only weird well would be this ARCO well. One cycle

didn't correlate that they immediately picked up to go all the way across.

MR. STOGNER: You're referring to the ARCO Federal No. 1 24-18 -- 31

A Right, the C cycle in there that I have correlated, elsewhere ~~it~~ was not there but that's the only one that wasn't.

And essentially, I've outlined on this X-sect where this water zone would be and by looking at the log you're seeing artificially high porosities given due to the high amount of shales (readings.)

Q That's shown in yellow, Mr. --

A That's shown in yellow, and there is one dolomite stringer, right here.

MR. STOGNER: Where's right here?

Q In which well?

A At -- in the ARCO Federal No. 1, 470-80 feet, but that was the only break in there, so I'm assuming from looking at drillers' logs and well logs and analyzing these these logs, that these are siltstones and shales rather than sands, and --

Q How deep is that yellow zone, Mr. Brooks?

A From 395 to 450 is where the water had been reported in Section 12.

Q In the foreseeable future do you -- would anyone as a practical matter try to find water in that zone?

A No, it's been tried and primarily all the wells that have tried have are now on pipelines from the Caprock, so I doubt very seriously if anyone will ever drill a well out there again.

Q Let's go on now to your other cross section.

A Okay. Essentially it's the same top of shale correlations, just showing that -- that you have the same situations exist. I didn't have time to crrelate these but the same cycles are still appearing. Right here the top of the Rustler in Section 6 of 18, 31, is only 450 feet, whereas in Section 2 it's 840 feet.

You have the same cycles, shales and siltstones entering the basin and being correlated all the way across at that depth.

Q At what approximate depth?

A Approximately from 250 to -- the top would be from 250 to approximately 380 to 450 to about 560.

Q As you go from A to A'.

A A to A', right.

Q Do you have anything further concerning these exhibits?

A No, I do not.

Q Let's refer now to what you have marked as Exhibit Number Five, Mr. Brooks, and have you identify that for the examiner.

A Okay. Exhibit Number Five is an isolith map over the project area. It shows bands of equal lithology and also attached are data control points, all the points that I used in coming up with the type of lithology, varying lithologies underneath the sections.

The purpose is to show the extent of very fine grain sized rocks with relation to the coarser grain sized rocks; also the extreme anisotrophic nature and non-correlability of sand bodies.

And you can readily see that where we have our pit locations are very little sands deposits. The only ones would be in Section 12, again, and all those water wells are dry or abandoned.

Q Mr. Brooks, tell us about oil and gas conservation, and how the approval of this application would aid conservation of oil and gas.

A Okay, essentially our wells are starting to produce more water. All right, if we would be allowed to produce these wells and pit the water, we'd extend the life-times of our well, thus deleting premature abandonment of our oil wells.

Q Where is the production coming from in

these wells?

A Production in these wells is from the second Bone Springs sand also the Delaware sand.

In Section 13 the South Taylor Well is producing from the Delaware. All the rest of the wells out there are Bone Spring Second sand wells.

Q What are you currently doing with the water produced?

A We're trucking the water at the present and it ranges between 145 to 170,000 per year.

Q So that affects your economics?

A Yes, it would wipe out one to two locations per year, and we haven't begun to develop our leases in Section 1, 2, 11, or 12 yet, and --

Q Mr. Brooks, who are the surface owners of the lands under these applications?

A State of New Mexico and BLM.

Q Have the State of New Mexico and the BLM been notified?

A They have, by return receipt, certified mail.

Q Do you have those?

A I do. It is marked as Exhibit Seven and I'll have to get it. Seven-A and Seven-B.

Q Did we mark those?

A I did on that set.

Q Now, we missed Exhbiit Number B --

A Number Six.

Q Number Six. What is that?

A Exhibit Number Six is all the water production from our Hondo, Mesquite, CanCan, Tomano, and excuse me, South Taylor leases.

Q And those are in 18, 31?

A Yes.

Q Township --

A Township 18 South, 31 East.

Q And those are the leases --

A Those are the leases under which we're trying to put these pits on top of.

MR. STOGNER: Mr. Padilla, have you completed?

MR. PADILLA: One final question, Mr. Examiner.

Q Mr. Brooks, do you have any further testimony to add?

A Only that extrapolating between the evaporation rates that where used in Malaga Bend and the Loco Hills site, they ~~came~~ come up with 2200 barrels per acre per month. We're looking at puttig in 1714 barrels per month per acre total, so we feel we're well below the evaporation

potential in the area.

Q What you're saying, in other words, is that most of the water is going to evaporate?

A It should. There will be some percolation but minimal and I do not feel that it would ever reach any potable water because one, one reasoning is there is not very much potable water there.

You have terrific amounts of shales and clay stones and siltstones above you preventin that downward migration.

Q Of the water that is actually there, is it your testimony that it's not good, anyway?

A It's of low volume and you can't even run a stock windmill off of it without pumping the windmill dry, so the volumes of water are just not capable.

Q How about the quality of water?

A Quality, since it's connate water, probably at the time of deposition it ~~liquified,~~ Sed's lithified were was compacted, and since we're talking about ~~sand~~ shale -- I mean shales, siltstones, and clays, they have very high initial porosities before they compacted. After compaction they lose almost, virtually all their porosities; however, retain some of their initial waters. These waters are very slowly movable, so they retain the original characteristics of the water, so they're very low chlorides and very low total dis-

solved solids, but they're simply not available to us, very limited amount of water only.

MR. PADILLA: We tender Exhibits One through Seven, Mr. Examiner, and pass the witness.

MR. STOGNER: Exhibits One through Seven will be admitted into evidence.

CROSS EXAMINATION

BY MR. PADILLA:

Q Oka, Mr. Brooks, let's talk about some volumes.

A Okay.

Q Will each one of these pits just have one well hooked up to them or will they have several wells hooked up?

A They will have several wells. They were set up specifically, the well -- the pit in Section 4 would be to cover the Hondo Federal leases and the CanCan Fed 1 & 2.

Q The what?

A CanCan Federal leases in the northeast quarter of Section 4.

Q Okay, that's C-A-N-C-A-N.

A C-A-N-C-A-N.

Q Okay. How many wells are we talking about?

A We have a potential of sixteen but we'll probably drill about eleven, a total of eleven wells in that section.

Q Okay, now how many existing wells are out there?

A One, two, there are six right now. This map doesn't show our last two locations.

Q Okay, and you're proposing to drill some more wells?

A One more for sure in Section 4 this next year. Then we'll probably hold off until the next year to drill any more Hondo wells.

Q Okay. Of the existing wells that are out there, what kind of volumes are we talking about.

A We're talking about right there 40 barrels a day of water.

Q Per well or total?

A Total, combined.

Q Okay.

A They're not making all that much.

Q Okay, if you have top capacity wells, are all your wells, when you get them drilled, what kind of capacity are you going to have?

A Probably about 70 barrels a day per section because they're all -- we're talking about the second

sand as the main reservoir. It's almost a siltstone and it retains a lot of the water, and we --

Q Let me re-ask that question. How many wells are you planning to drill or have out there on these two leases?

A On these two leases?

Q Going into this one pit.

A Four more, total.

Q Okay, you said sixteen wells?

A A total, we have the capacity for sixteen wells.

Q Okay.

A But scheduled we only have two more for this -- four more for this year.

Q The possibility of sixteen wells producing into this one pit with a top of 70 barrels per day?

A Top of 70 barrels per day.

Q That will be 21 barrels a day, I figure out.

A 2100.

Q Yes, 2100, sorry.

A Okay.

Q And what was your pit limitation going to be?

A 165 feet by 165 feet and we estimated be-

tween 1700 to 2200. We'd estimated 1700 total.

Q Okay. Now, I believe your testimony you presented showed that in this particular area it averages about 2000 barrels of evaporation a month?

A Per acre per month.

Q Per acre. And is that averaged out the year or what's it in the wintertime?

A That's a yearly average. There will be a lower in the winter and higher in the summer.

Q Okay. let's look at the pit in Section 3. Which one, which lease does that handle and how many wells are on it?

A Okay, at present there are only two wells out there and it handles the Mesquite, Mesquite leases, and total water there would be, with those two wells, is 30 -- 24 barrels a month. I mean, excuse me, a day.

Q Same pit configuration?

A Same pit configuration.

Q All right, let's go to Section 2, then, and look at that pit.

A Okay. Here we have four wells existing, producing about 35 barrels a day total, and we -- these wells here are not the greatest wells. We don't -- they're noneconomic; they're marginal, very marginal wells, so it -- we probably will not have over 10 wells in this whole sec-

tion.

Q So far all these wells that we've talked about is all operated by HEYCO, is that correct?

A They're all -- everything is HEYCO operated. We have operating interest in all these seven sections.

Q And what lease is the one in Section 2 going to be handling?

A It would be the Mesquite leases, Mesquite 2 State.

Q Let's look at the pit in Section 1.

A There are no wells yet in Section 1. No water, for that matter -- yeah, Section 1 -- becaue we haven't drilled any wells yet. We have the leases; we've just acquired those. We are not making any water in that section.

That was just proposed in case we do start drilling in that section.

Q How long has HEYCO had these leases?

A 1 yr ~~so~~ on We just renewed, 10-year leases.

Q Okay. Let's look at the one in Section 12.

A Okay, the one in Section 12, we have also not drilled a well in Section 12, either, same situation as Section 1. We just acquired these leases. One of them ex-

pires in '90. The one that expired in '80 we've renewed the lease on it, also.

Q Okay, let's look at Section 11.

A Section 11, we had one well there that was plugged and that well is dry and abandoned in 1-19-1970.

We were going to put the pit at this location similar to Sections 1 and 12, so when we start moving into the area and actively exploring, it is there, We have no wells there yet to date.

Q Okay, and when you talk about actively exploring --

A We're planning on drilling 26 wells this year, total.

A In this --

A No.

Q -- in these three sections?

A No. It will be in Lea County and all over.

In this section we've planning on drilling at least -- at least 8 wells this year in these sections.

Q 8 wells in Sections 11, 1, and 12?

A 2, yeah, and 12.

Q Has there been applications applied for?

A Not yet. We haven't really finalized our

budget.

Q Okay. Let's go to the one in Section 13 now.

A Okay, this is the Delaware completion and this one puts out current about 68 barrels a day of water.

Q Okay.

A We're not really planning to drill another Delaware well in this section. It's proving a little bit wet.

We do plan to drill a deep Bone Spring test in the northeast quarter and that will be a second sand well, which should produce similar amounts of water as the other wells.

Q Are you proposing that this particular well feed into this pit, the Bone Springs well that you're proposing?

A No, we're probably going to be closer -- we'll probably get a 330-1980 location on that one off the section line, which will actually be just as close to the pit in Section 12.

Q Well, what lease will that proposed well --

A That's all -- this -- this lease, our lease here is all the South Taylor Unit, so it would be under a unit.

Q And that covers, looks like the south half of 12?

A Yeah, and we've recently acquired the rest of 13, too, so --

Q And that's all in that Taylor Unit.

A It's all in the Taylor Unit. We acquired the deep rights on all that.

Q Okay.

A And it's really split up royalties there. We have partial shallow rights, back-in, and all that good stuff, too. We've got the operating rights.

Q What do you think would be the daily maximum rate one of these pits would be able to handle a day?

A I would think to try to keep it within the evaporation limits and that's what we're looking at.

Q And what kind of a --

A 70 to 75 barrels a day to a pit.

Q Is there any oil scum on this water?

A Very little after it goes through the heater-treater.

Q It will be treated first before it goes--

A Yeah, it will be treated. It will be all treated and cleaned out.

Q Do you have a water analysis on this

water?

A No, I didn't. I can get that for you, however. I tried to find it. There might be -- it might be in that water production I gave you.

Bone Spring water is fairly --

MR. CLEMENTS: Here's one right here.

Q Why don't you go over that one with me.

A Okay. Basically the total dissolved solids, or I should say chlorides, will be about 114,000 parts per million.

Total dissolved solids ranges from about 120 to 183,000; not fully saturated; relatively low ph; no hydrogen sulfide.

Q Which particular well are you looking at, or analysis?

A This Hondo 4-1. That was the discovery well for the Hondo East.

Q Are all of them basically about the same?

A All water averages within 10 percent of each other.

Q Is there any of these -- is there any hydrogen sulfide in any of these --

A No.

Q -- water samples?

A No, that's one good thing about it. It doesn't have corrosion problems. We can get good life out of our tubulars.

Q How about the Delaware?

A Delaware in this well was real sweet. It didn't have -- it didn't have any hydrogen sulfide, either.

Q Okay.

A It's about a 39 gravity, real light oil.

Q I'm looking at a water analysis from the Mesquite 3 Federal Well No. 1.

A Uh-huh.

Q I show 500 milligrams per liter of H_2S.

A That might be the only one. That's the one in Section 3. I'm pretty sure the rest of them don't because we don't -- we just don't have a -- we never had any H_2S alarms while we were drilling the wells.

I'm pretty sure there's not too much H_2S out there. It's not classic for the area.

The Delaware well does not have any H_2S (inaudible).

The 3-2 Well does not have any H_2S, either, the southern offset.

We could treat that one for H_2S. And none of the others have H_2S. That would be the only well that did, and we could treat it.

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

Mr. Clements?

QUESTIONS BY MR. CLEMENTS:

Q I'm Les Clements from Artesia, the District Supervisor.

Have you gotten any communication at all back from the BLM and what their thoughts are on this?

A They told us to go ahead from our Land Department. Arlene (sic) deals with mailing out of notices and she talked to Armando Lopez and all the other people up there and they didn't know. They just said -- thanked us for notification and that's all they said.

Q The last time that we issued some orders are you aware that they came to my office and jumped all over me about us issuing orders on Federal lands?

A Nope.

Q Are you aware that they are -- these are dual purpose lands and there are such things as skinks and burrowing -- skink is a lizard, an endangered species, and they made quite a bit issue out of that to me --

A Well, we would --

Q -- about endangering the skinks out there.

A Well, we would put skink preventative measures on our pits. We could put a real fine mesh, you know, kind of angle it up this way to keep the skinks out.

Q But anyway, this is what I'm saying, is that I'm not real sure that if we issue an order on the Federal lands that they -- Mr. Dahlan indicated to me that he didn't want any (unclear) out there.

A Uh-huh.

Q So it might be that we might want a communication from them before we issue an order.

MR. STOGNER: On all these Federal proposals would you supply us a written recommendation from --

A Sure.

MR. STOGNER: -- the BLM?

A Sure.

MR. STOGNER: And have them be in communication with Mr. Clements.

Q Also do you know that the -- that we are requiring some kind of cover to keep flying birds --

A Yeah, as I mentioned, we would do that. We would put the chicken wire or the finer mesh, whatever is the finest or whatever is approved.

Q Okay. I just didn't want -- didn't want Mr. Dahlen coming back to my office and jumping on me.

A Okay.

RECROSS EXAMINATION

BY MR. STOGNER:

Q You're talking about some precautions being made to keep animals and birds out. Would you please explain what a pit would have as far as fencing and --

A Well, we would have your standard barbed wire fencing to keep cattle out; have a mesh of either chicken wire spread across the top of the pits, then buried underneath the wrap-around to keep any birds or type of critters out, and then if, you know, they had a skink, like you're talking about, a little lizard, we could put a finer mesh that he couldn't crawl through, I suppose, and angle it straight up to where he couldn't go over, but I mean, we could do that.

MR. CLEMENTS: I was so proud of myself, you know, explaining to Charlie about having the protection for some of the flying -- hoot owls and whatever, and then he said, well, what about the burrowing animals --

A Well.

MR. CLEMENTS: -- and so are you -- another question, are you -- you're not planning on hauling any water from any other leases to dispose.

A No, definitely not.

MR. CLEMENTS: Or not allowing anyone else to haul.

A No, no, definitely not.

MR. CLEMENTS: Okay, and you will kind of keep your eye out to keep other folks from just coming by --

A Right, sure.

MR. CLEMENTS: -- and doing a little unauthorized dumping occasionally.

A Uh-huh. We'd like to keep drilling out there.

MR. CLEMENTS: Okay.

MR. STOGNER: Are there any other questions of Mr. Brooks?

If not, this case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true, and correct record of this portion of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9059. heard by me on 7 January 1987.

Oil Conservation Division, Examiner