CASE 4127: Application of CURTIS HANKAMER FOR AN EXCEPTION TO ORDER R-3221, AS AMENDED, LEA CO.

Case Number

4127

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 7, 1969

IN THE MATTER OF:

Application of Curtis Hackamer for an exception to Order No. R-3221, as amended, Eddy County, New Mexico,

Case No. 4126

and

Application of Curtis Hackamer for an exception to Order No. R-3221, as amended, Lea County, New Mexico.

Case No. 4127

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. HATCH: Case 4126, application of Curtis Hackamer for an exception to Order No. R-3221, as amended, Eddy County, New Mexico.

MR. KELLAHIN: If the Examiner please, we would request that this case be consolidated for the purposes of testimony with Case No. 4127.

MR. NUTTER: We will also call Case 4127.

MR. HATCH: Case 4127, application of Curtis Hackamer for an exception to Order No. R-3221, as amended, Lea County, New Mexico.

MR. NUTTER: Cases 4126 and 4127 will be consolidated for the purposes of testimony.

MR. KELLAHIN: If the Examiner please, Jason Kellahin, Kellahin and Fox, appearing for the applicant. We have one witness that I would like to have sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits Numbers 1 through 8, inclusive, were marked for identification.)

J. N. SIKES

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name?

A J. N. Sikes.

Q What business are you engaged in?

A I am a consulting engineer, petroleum engineer.

Q Where are you located?

A Midland, Texas.

Q In connection with your work as a consulting engineer, have you done any work for Curtis Hackamer?

A Yes, I have.

Q Have you done work in connection with Cases 4126 and 4127 that are presently before the Commission?

A Yes.

Q Have you ever testified before the Oil Conservation Commission, and made your qualifications a matter of record?

A Yes, I have.

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

MR. NUTTER: Yes, they are.

Q Mr. Sikes, briefly, what is proposed by the applicant in Cases 4126 and 4127?

A Mr. Hackamer is seeking an exception to Order No. R-3221 which prohibits the disposal of water produced in conjunction with production of oil or gas, or both, on the surface of the

ground in Lea, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969.

Q Now, referring to what has been marked as Applicant's Exhibit Number 1, would you identify that exhibit?

A It is a plat of the area in southern Eddy County, Brushy Draw Field, where Mr. Hackamer has four leases -- I believe it is five leases, a total of five, and they are marked in red, Sections 12, 13, 14, and 24, 26 South, 29 East.

Q Is this the area involved in Case 4126?

A Yes, it is.

Q Referring to what has been marked as Exhibit Number 2, would you identify that exhibit?

A It is the plat of the area surrounding the field in Lea County. The Double X Field, in which Mr. Hackamer has one lease, the Gulf-Hanagan Lease, has two wells on it, and occurs in Section 11, 24 South, 32 East.

Q On Exhibits 1 and 2, you have marked some additional information on water wells?

A Yes, I have. Going into the area, and seeking the nearest fresh water that is being produced anywhere near the wells, these are the locations of the wells I have come up with, and which we took samples of and had analyses of the fresh water.

Q And they will be presented as a later exhibit?

A Yes, sir.

Q Are these water wells, wells that you personally have located within the area?

A Yes, sir.

Q To the best of your knowledge and in relation, are those the only wells close to the two areas involved in this application?

A Yes, to the best of my knowledge, they are the nearest wells.

Q Approximately, what is the distance from your disposal pit to the nearest fresh water production in each case?

A In Eddy County, in the Brushy Draw area, the nearest water well to Mr. Hackamer's production occurs on the Ross Ranch, where they have an irrigation well, and I believe the location is in the northeast of the northeast of Section 16.

Q Would that make it approximately two miles from the Hackamer operation?

A It is approximately two miles, yes. At least, that is the location, the only one I could find that concurred fairly well with the position as I could tell from being on the ground.

Q Now, in your Lea County operation, what is the closest fresh water you found there?

A On the James Ranch, they have a windmill at their old ranch house about a mile and a half, a mile and a quarter to a mile and a half west, it appears to be now. When we were on the ground, we thought it was southwest, and in the Groundwater Report of Lea County, I notice that the windmill is supposedly due west.

Q Did you check these locations against the official report of the Groundwater Report in Lea County and Eddy County?

A Yes, I did the best I could.

Q How close is that well to the Hackamer operation?

A About a mile and a quarter away.

Q And, as far as you know, that is the closest fresh water production in that area?

A Yes, sir.

Q Referring to what has been marked as Exhibit Number 2, would you identify that exhibit?

A We are introducing a log of a well, a typical well in the field, just to show the Commission the depth of the surface beds, and I thought it might be interesting to them for some purposes. It indicates the top of the anhydrite at 250 feet in the Gulf Federal Beaty No. 1, which is in Eddy County, in the Brushy Draw Field.

Q Exhibit Number 4, would you identify that exhibit?

A Exhibit Number 4 is a log, drilling log of the Gulf-Hanagan Well in Lea County, Gulf-Hanagan No. 1, which indicates the depth of the surface formations and beds, 328 feet.

Q Is that 328 feet to the anhydrite?

A Yes, sir.

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

A We drew some plats of the water disposal pits, and to show the Commission where they were located in relation to the well, itself, and the tank battery, and to indicate approximately the area extent of the water within the pit, and a small description of the facilities thereon.

Q The area colored in blue, is that the area within the surface pit that is covered by water?

A Approximately, yes. It looked like an outline of water in the pit.

Q You are not presently producing these wells, are you?

A No, they are shut in now.

Q They are shut in?

A Yes.

Q Does this depict the water in the pits as of a recent date?

A Yes, sir. As we were shutting the wells down, I was out there.

Q Then the next exhibit, which is Exhibit Number --

A I might add on these, that the oil production and water production for each well on each lease, is also indicated on each one of the plats on that last exhibit.

Q Now, is the maximum production of any of the wells there, what is it?

A The maximum oil production on any of these leases is 20 barrels per day.

Q And then the maximum water production?

A Maximum water is 50 gallons on the Gulf Federal.

Q Do the other wells approach that much water?

A No, sir. They range ten barrels, 22 barrels, eight barrels, and 50 barrels, and then in the Double X Field, 23 barrels per day.

Q And that is the amount of water you want to dispose of in your surface pits?

A Yes, sir.

Q Referring to the next series of exhibits, what does that show?

A That is water analysis of Mr. Hackamer's wells, of his production. The Beaty Gulf and Hanagan Federal, and then

on the next page the Gulf Federal and the Gulf Federal A are the wells in the Brushy Canyon Field. And then the Hanagan Federal is in the Double X Field, included on the first page of this exhibit.

Q And the second page of the exhibit?

A I have described that. It indicates that the chloride contents are rather high, and typical of Delaware Formation.

Q Do you have water analysis of the fresh water wells within the area?

A Yes, I do. We found a windmill approximately two and a half miles south of Mr. Hackamer's leases in the Brushy Draw Field, and just across the State line into Texas, and this first one says the Clark Windmill. That is an analysis of the water from that well.

Q That is across the State line?

A Yes. It is barely.

Q Is there oil production in there?

A Yes, sir, scattered oil production.

Q Do you know what they are doing with their water over there?

A They are doing about the same as everybody else does in New Mexico, in Texas. They are, in some cases, they are allowing water to be put into open pits. In some cases, they

are not.

Q Do you know whether they are permitting open pit disposal in Texas offsetting the Hackamer operation?

A No, sir, I do not.

Q Do you have the analysis on some more wells?

A Yes. Going to the pumper, Mr. Norton Harper was with me and called in. He said the El Paso water well is about two and a half miles west -- east, northeast from Mr. Hackamer's property, and I notice in the Groundwater publication that there is a well there. Also, on the Ross Ranch, approximately where we got the sample of the El Paso water, I don't know if it is the same or not, but we introduced this as one of the nearby sources of fresh water, at least, and the analysis of that.

And on Mr. Ross's ranch, about two miles due west of the Brushy Draw Field, he has an irrigation well, and we took a sample of water from this irrigation well, and that analysis is included, it is called Irrigation Well, George Ross Ranch.

Q Do you have other analyses there?

A Yes, sir.

Q Would you identify those?

A Just as a matter of interest, we also took a sample of water from the Pecos River, which is about another mile west

of Mr. Ross's irrigation well, and it shows just a little salty, 7,420 parts per million chlorides.

Q Is that potable water at that point?

A No, sir.

Q Was that water taken from the Pecos River at a point close to the State line?

A Yes, sir, it is in New Mexico, about two and a half or three miles north of the State line.

Q That is a point which would be downstream from Malagar, would it not?

A Yes, sir. Then on to the Lea County property in the Double X Field, on the James Ranch, which is about a mile and a quarter west of Hackamer's Gulf-Hanagan Lease, we took a sample from a windmill, which shows to be real good fresh water, and that shows -- I'm sorry, I'm skipping one. The first one, I believe, is from a water station, and I couldn't locate, get the exact location, but it is about two miles east of the Gulf-Hanagan Lease towards Jal, it is on the other side of the Jal Highway. I would guess it would be about Section 18.

Q Did you refer to that as a water station?

A It is a windmill, and they sell fresh water there. They have tanks.

Q There is a windmill there?

A And it shows fresh water, as does the James Ranch windmill, which is on the opposite side of our lease, about a mile and a quarter or a mile and a half.

Q Is that all the water analysis you have?

A That is all I have, yes. We just tried to get the nearest fresh water.

Q According to the analysis of the water that you have presented to the Examiner, all of the windmills and wells in the area produce fresh water, isn't that correct?

A Yes, except we saw fresh water in some cases such as the irrigation well. And some of the other water, it is only fit for stock. It is not fit for human consumption.

Q Would that be typical of the water in this area?

A Yes.

Q How long have wells been producing on the Hackamer property?

A Seven to eight years.

Q Have you been making surface disposal of water during that seven or eight-year period?

A Yes, we have.

Q Does that indicate that there has been any contamination of fresh water supplies as a result of the surface disposal of your surface waters?

A No, sir.

Q In your opinion, will any contamination of fresh water supplies occur if there is continued use of surface pits for water disposal?

A I don't think so, no.

Q What is the productive history of these wells?

A Oil production?

Q Yes. Since they have been producing seven or eight years, is the reservoir substantially depleted?

A Yes, sir, the wells are nearing economic limit. The Gulf Federal A Lease has two and a half barrels a day, the Beaty Gulf Lease makes 20 barrels of oil a day, the Hanson Federal Lease makes two barrels, and the Gulf Federal Lease makes 18 barrels a day. The Hanagan Federal Lease and the Double X Lease make 14 barrels a day from two wells.

Q Have you considered the possibility of drilling a disposal wells in this area?

A I think it has been discussed, but it wouldn't be economical.

Q Would the production you presently have pay for such a disposal system?

A No, sir, it would not.

Q Have you considered trucking the water to a disposal

point?

A We are in a very remote spot, and trucking water, we estimate, would run some fifty cents to fifty-five cents a barrel to truck it out.

Q Would that be economically feasible, with the production you have there?

A No, sir.

Q Then, in the event you are not permitted to continue surface disposal of the water, what would occur?

A There will have to be some wells to be plugged. Perhaps the best wells could be produced for a little while longer, but surely three or four of the wells would have to be plugged immediately.

Q There are other operators in the area here, are there not?

A No, sir, not in this field.

Q Are you the only operator?

A Yes.

Q You are the only one in this field that has a water problem?

A Yes, sir, in the Brushy Draw Field.

Q Are there not other pools producing within the vicinity of the Brushy Draw Field?

A Not that I am familiar with.

Q You don't know whether there are any other water problems in that area?

A Yes, I think everyone has a water problem. There have been several hearings, and I think the outcome was that the Commission approved an open pit disposal for, I think, Ralph Lowe, or someone up north, about six or seven, or eight miles, sometime back. I don't know more about it, but I did hear that.

Q In your opinion, as an engineer, will the continued disposal of water in surface pits cause any damage to anybody's rights, either oil or water?

A I think in certain cases, it could, yes. And I don't believe in this case that --

Q I am talking about this case.

A I don't think so.

Q You do not feel it would cause any damage. Is the fact that the water from the wells in the area is still fresh any indication that no damage has occurred?

A Yes, sir.

Q In your opinion?

A Yes, as fresh as they were originally.

Q Were Exhibits 1 through 8 prepared by you or under

your supervision?

A Yes, they were.

MR. KELLAHIN: I would like to offer in evidence Exhibits 1 through 8.

MR. NUTTER: Applicant's Exhibits 1 through 8 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Numbers 1 through 8, inclusive, were admitted in evidence.)

Q (By Mr. Kellahin) Mr. Sikes, in reference to the Double X Pool, do you know whether the other operators in that area are having any problem with water disposal?

A Yes, sir, they are. I talked to Mr. Carnes with Tenneco in Midland, and he informed me that they have been trucking water out of the field, but it is not economic, and they are joining with Charles B. Read, who also has wells in that area, and their plans are presently to put all those wells up for sale, all except one of Tenneco's wells that doesn't make enough water.

Q In other words, they are going to give their problem to someone else?

A Yes, sir.

MR. KELLAHIN: That is all I have.

MR. NUTTER: Are there any questions of this witness?

MR. STAMETS: Yes, I have some.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Sikes, in locating this Ross irrigation well, did you get an actual survey on that, or did you just eyeball it?

A I was just eyeballing it.

Q I have some information which indicates that that well is actually located in the southwest quarter, southwest quarter of Section 22, which would be on the south side of Brushy Draw, and I wonder if it is possible that that could be the actual location. Located in Section 16, the irrigation water would have to be piped across Brushy Draw in some method.

A Yes, sir, it sure could be. I found no location in looking through this Groundwater book. Evidently, they had a windmill there then, or something. I thought that was the location of their irrigation well, but on the ground it looked like it was about due west to me, but perhaps it is southwest. You know, winding around the hills, you get a little confused. We didn't survey it.

Q Did you actually drive to the well?

A Yes.

are these permeable or impermeable to the vertical passage of water?

A I would say the shale beds would be probably fairly impermeable. Ordinarily, they are more clay like, and have little permeability.

Q What is the surface drainage in this area?

A That is ordinarily toward the river. In this particular case, would be down the draw toward -- to the west.

Q This is the Brushy Draw which more or less cuts right through the pool?

A Yes, sir.

Q And enters the river somewhere in Section 21?

A Yes, sir.

Q How about the subsurface drainage in the shallow gravel beds, have you done any work on that?

A No, sir, I haven't.

Q And how long did you say these wells have been producing in this area?

A Seven or eight years.

MR. STAMETS: I believe that is all the questions I have at this time.

CROSS EXAMINATION

BY MR. NUTTER:

Q We were informed that there were three or four irrigation wells that Mr. Ross had in the southwest corner of Section 22, which would down in the vicinity of this Brushy Draw?

A Yes, sir.

Q Running on down toward the river.

A He could have more than one well there. I'm sorry, I don't know. I went with our pumper, and he said we will go over to the irrigation well, and we ended up, instead of going right to the well, to the pit where the irrigation water comes into the pit. There was a drilling rig at the time, a rig drilling at the time on the location over in Section 18, 26-30, and there was a truck loading with water over there out of this pit, fresh water. So that is why we ended up at the pit. We were trying to find our way over there, and saw the truck, and got to it that way. But he said it came right out of the irrigation well.

Q What do they have on this Ross Ranch, is that a cultivated field?

A I didn't see anything growing.

Q It is an irrigation well, but you don't know what they are irrigating?

A No, sir, I don't.

Q Now, you mentioned the productivity of oil on these various leases. Would you give us a rundown, please, on the amount of oil and water for each one of the various wells?

A Yes, sir. I have it by lease, if that will be sufficient. I don't have it broken down per well.

On the Gulf Federal A Lease, two and a half barrels of oil, ten barrels of water.

Q These are per day figures?

A Per day figures. On the Beaty Gulf Lease, 20 barrels of oil, 22 barrels of water.

On the Hanson Federal Lease, two barrels of oil, 20 barrels of water.

On the Gulf Federal Lease, 18 barrels of oil, 50 barrels of water.

Then in the Double X field in Lea County, two wells, 14 barrels of oil, 23 barrels of water.

Q He has a Gulf Federal B, also?

A I think they commingle those two leases there. The Gulf Federal and the Gulf Federal B are commingled, three wells altogether.

Q So that figure of 18 and 50 would include the

Gulf Federal, then?

A Yes, it would. There are two wells on the Gulf Beaty Lease, if you make a notation there, and just one on the rest of them, except the Hanagan Federal in the Double X field.

Q And that has two wells?

A Yes, sir.

Q In my calculations, then, indicate that in the Brushy Draw, Mr. Hackamer would be producing approximately forty-two and a half barrels of oil and about 90 barrels of water a day?

A Yes, sir.

Q And then 14 and 23 over in the other pool?

A Yes, sir.

Q Now, with respect to the water wells that you show, that you mentioned in the Double X area, the James Ranch well would be immediately west. Do you know the depth of that well?

A I think I tied it down, looking at your books earlier in the Groundwater manuals there, and it showed a depth of 60 feet on the James Ranch.

Q Do you know the depth of the well over at the water station?

A No, sir, I could find no record of that. But it is a windmill, and I have no report of it. But it is exactly the same water, apparently, from the analysis.

Q It is probably a shallow well, then, if the analysis is somewhere --

A Yes, I would say so.

Q There are other operators in the Double X Delaware Pool. What are those operators doing with the water that they produce?

A That is Tenneco and Charles B. Read. As I said, I talked to Mr. Carnes, Jim Carnes with Tenneco, and he said that Tenneco and Mr. Read are going to make a package deal out of all their production.

Q They haven't made any arrangement for salt water disposal?

A No, sir, they have hauled their water out, and it has proved uneconomical.

MR. NUTTER: Any other questions of this witness?

MR. PORTER: I have one. In this Brushy Draw Delaware, how far is that from the state line?

THE WITNESS: Brushy Draw Delaware, about two and a half miles, Mr. Porter.

MR. PORTER: I believe you testified that you

didn't know whether Mr. Hackamer had some production over there.

THE WITNESS: He may have. I am not familiar with it.

MR. PORTER: You don't know what disposition they are making of the water right now?

THE WITNESS: No, sir. Of course, they are having hearings in the State of Texas, the same as the State of New Mexico, in this area.

MR. PORTER: And you don't know yet what the results are?

THE WITNESS: In some cases, they are excepting to the rule in the same manner.

MR. PORTER: Handling it on the individual case basis?

THE WITNESS: Yes.

MR. NUTTER: Are there any further questions?

BY MR. RAMY:

Q Mr. Sikes, on your Double X plot, there are several more wells in the area, I don't know if you are familiar with them or not, which are considerably more distance from your properties. In your outline, our indication shows there is a well in Section 3, a windmill

in Section 3, which is a shallow water well. There is also -- we have this, I believe the water section is in Section 16 of 24-33, to correct the record on that. There are also windmills in 9 and 10 of 24-33, and also a windmill in Section 33 of 24-32.

Now, these all indicated fresh water in which maximum chlorides were 312, and the minimum down to 21. Also, do you have any idea of the surface drainage in this area?

A No, sir, I do not. It is fairly flat area.

Q Would you agree it is maybe a series of ridges and ditches which seem to drain into depressions?

A Right in the vicinity of his lease there, it is fairly flat, but I know there are potholes, or what-have-you, in the vicinity. In fact, there is a dry lake bed, I think not very far from this lease, to the east, I believe.

Q Our investigation indicates that your pit is probably on the edge of a ditch, more or less, which drains both to the southeast and also to the west into depressions. One depression is where the ranchhouse windmill is.

A Yes, it is low. The ranchhouse, itself, is in a low area.

Q There is a possibility that water draining from

the pit would drain into this ditch, and possibly down into the depression?

A That is a possibility, Mr. Rany, yes.

Q There is also an indication that there is probably fresh water, some of it tied to the depressions, and others not tied to the depressions, pretty well throughout the area.

A It might be. It appears to be fairly good water. I know the windmill you refer to in Section 3, our pumper said that he got a can of water over there for drinking water, and it was all right. They got away with it, it didn't hurt anybody. The water at that water station in Section 16 was apparently good water. At least they haven't contaminated anything as yet.

MR. RAMEY: That is all I have.

THE WITNESS: We are not producing much water, only 22 barrels a day. There is not much water.

MR. NUTTER: Any further questions of the witness? You may be excused. Do you have anything further?

MR. KELLAHIN: That is all.

MR. NUTTER: Does anyone have anything to offer in Cases 4126 and 4127? If not, we will take the cases under advisement.

I N D E X

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

I, SAMUEL R. MORTELETTE, do hereby certify that the proceedings in the foregoing transcript were taken by me and transcribed by me, and that such proceedings are a true and accurate reflection of the proceedings to the best of my knowledge, skill and belief.

IN WITNESS WHEREOF, my hand and seal of office this 16 day of May, 1969.

Samuel R. Mortelette
Court Reporter and Notary Public

My Commission Expires:

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4126-4127 heard by me on 5/7, 1969.

, Examiner
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

May 20, 1969

Re: Case No. 4126 4127
Order No. R-3761 & R-3762
Applicant:
Curtis Hankamer

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other State Engineer Office

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4127
Order No. R-3762

APPLICATION OF CURTIS HANKAMER
FOR AN EXCEPTION TO ORDER NO.
R-3221, AS AMENDED, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 7, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of May, 1969, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Curtis Hankamer, is the owner and operator of two wells located in Section 11, Township 24 South, Range 32 East, NMPM, Double X-Delaware Pool, Lea County, New Mexico.

(3) That effective January 1, 1969, Order (3) of Commission Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any

other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicant seeks an exception to the provisions of the aforesaid Order (3) to permit the continued disposal of salt water, produced by applicant's two wells located in said Section 11, in an unlined surface pit located in the SE/4 SE/4 of said Section 11.

(7) That the subject wells produce approximately 23 barrels of water per day.

(8) That fresh water supplies as designated by the State Engineer exist in the vicinity of the subject wells and in the vicinity of the unlined surface pit serving said wells.

(9) That the applicant has failed to establish that disposal of water produced in conjunction with the production of oil or gas, or both, by the subject wells in the subject unlined pit would not constitute a threat of contamination of fresh water supplies existing in the vicinity of said pit.

(10) That the subject application should be denied.

IT IS THEREFORE ORDERED:

(1) That the subject application is hereby denied.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

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

esr/

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

April 15, 1969

Case 4127

Mr. E. Ralph Daniel
Petroleum Engineer
714 Houston Bank & Trust Building
Houston, Texas 77002

DOCKET MAILED
Date 4-23-69

COPY

Re: Exception to Order No. R-3221
for Curtis Hankamer's leases in
the Double X-Delaware and Brushy
Draw-Delaware Pools

Dear Mr. Daniel:

The requested hearings will be heard before an examiner on May 7, 1969.

As Order No. R-3221 does not have a provision for the extension of time in which to comply, the allowable for the subject wells cannot be restored pending hearing.

Very truly yours,

GEORGE M. HATCH
Attorney

GMH/esr

Docket No. 13-69

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 7, 1969

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 4119: Application of Union Oil Company of California to directionally drill, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Owens Well No. 1 located 1980 feet from the North and East lines of Section 34, Township 14 South, Range 35 East, Lea County, New Mexico. Said well was drilled to a total depth of 11,199 feet and plugged back to approximately 9,000 feet. Applicant proposes to set a whipstock at approximately 9,000 feet and to directionally drill to a depth sufficient to bottom said well in the Lower Hueco formation at a point approximately 2298 feet from the North line and 1662 feet from the East line of said Section 34 (approximately 450 feet Southeast of the surface location.)

CASE 4120: Application of Sam Boren for the creation of a new gas pool, promulgation of special rules for the pool, a dual completion, and commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Wolfcamp gas pool for his Crowley State "A" Well No. 1 located in Unit L of Section 5, Township 12 South, Range 33 East, Lea County, New Mexico, and for the promulgation of special rules therefor, including a provision for 320-acre proration units. Applicant also seeks approval of the dual completion of said well to produce gas through the casing-tubing annulus from the aforesaid Wolfcamp pool and oil through tubing from the North Bagley-Lower Pennsylvanian Pool, commingling the liquid hydrocarbons from said pools on the lease. Applicant further seeks authority to commingle in the well-bore sufficient Wolfcamp gas to gas lift the Pennsylvanian oil.

CASE 4121: Application of Roger C. Hanks for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Bar U-Pennsylvanian Pool, Lea County, New Mexico, including a provision for 160-acre spacing and proration units and the assignment of 80-acre allowables.

CASE 4122: Application of Roger C. Hanks for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian

(Case 4122 continued)

formation in the interval from approximately 12,878 feet to 13,011 feet in his Atlantic Tebworth Well No. 1 located in the SW/4 SW/4 of Section 25, Township 8 South, Range 36 East, Allison Field, Roosevelt County, New Mexico.

CASE 4123: Application of Kersey and Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Premier and Lovington sands of the Grayburg formation through its Dublin Well No. 3 located in the NW/4 NE/4 of Section 3, Township 17 South, Range 29 East, Square Lake Pool, Eddy County, New Mexico.

CASE 3405: (Reopened) - TO BE CONTINUED TO MAY 21, 1969

In the matter of Case No. 3405 being reopened pursuant to the provisions of Order No. R-3081, which order established 640-acre spacing for the North Indian Hills-Morrow Gas Pool, Eddy County, New Mexico, for a period of one year after first pipeline connection in the pool. All interested parties may appear and show cause why said pool should or should not be developed on 320-acre spacing units.

CASE 4124: Application of Amerada Petroleum Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the State H "A" COM Unit Area comprising 1,281 acres, more or less, of State lands in Sections 18, 19, and 30 of Township 14 South, Range 35 East, Lea County, New Mexico.

CASE 4125: Application of Continental Oil Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the San Andres formation through ten wells in Sections 34 and 35, Township 16 South, Range 29 East, Forest-San Andres Pool, Eddy County, New Mexico.

CASE 4126: Application of Curtis Hankamer for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's wells located in Sections 12, 13, 14, and 24, Township 26 South, Range 29 East, Brushy-Draw Delaware Pool, Eddy County, New Mexico. Applicant seeks

(Case 4126 continued)
authority to continue to dispose of salt water produced by said wells in four unlined surface pits.

CASE 4127: Application of Curtis Hankamer for an exception to Order No. R-3221, as amended, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for applicant's two wells located in Section 11, Township 24 South, Range 32 East, Double X-Delaware Pool, Lea County, New Mexico. Applicant seeks authority to continue to dispose of salt water produced by said wells in two unlined surface pits.

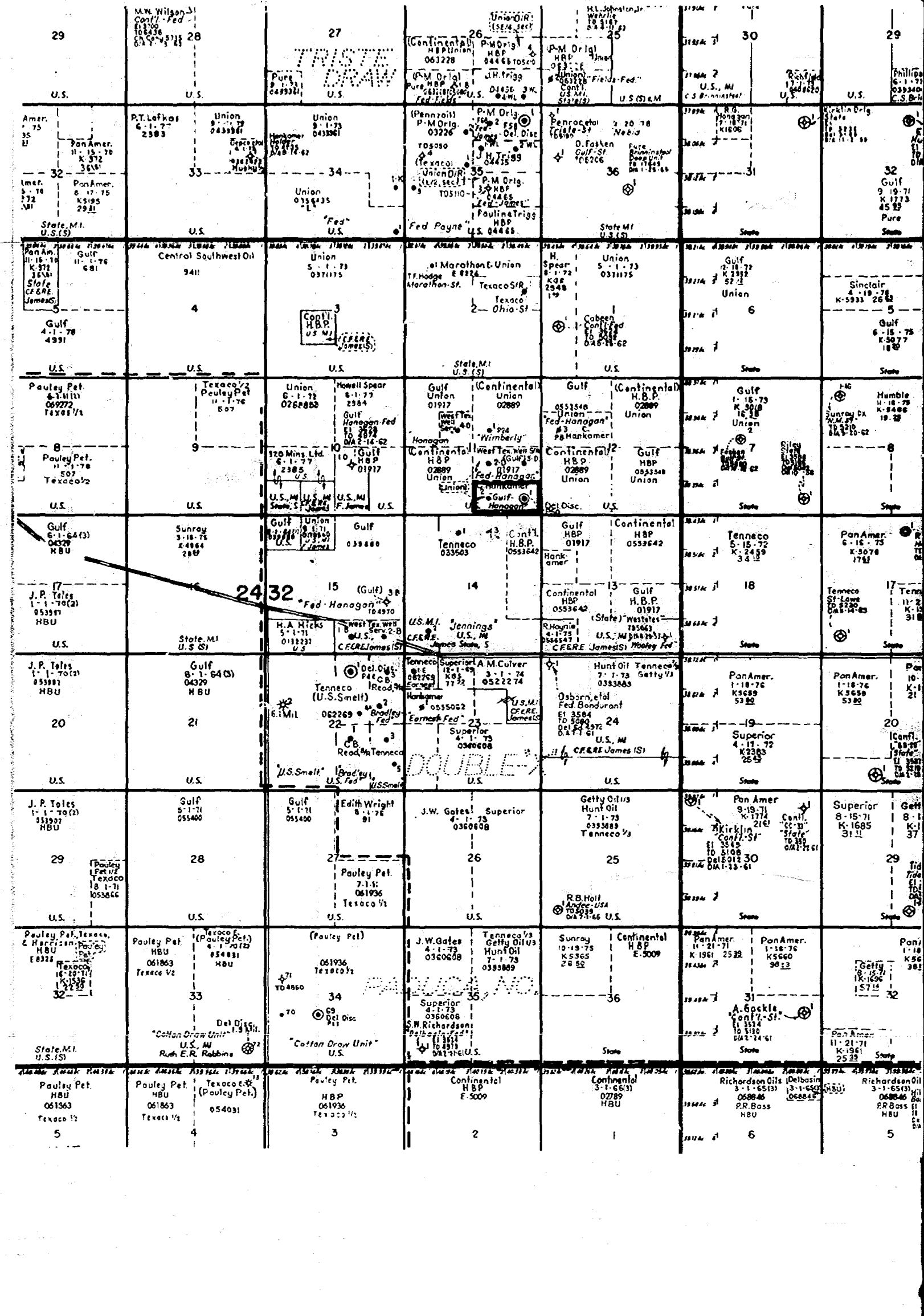
CASE 4128: Application of C. O. Fulton for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Premier and Lovington sands of the Grayburg formation through one well located in Unit D of Section 2, and two wells in Units D and P of Section 3, Township 17 South, Range 29 East, Square Lake Pool, Eddy County, New Mexico.

CASE 4117: (Continued from the April 23, 1969 Examiner Hearing)
Application of Eastern Petroleum Company for special pool rules, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special rules for the Rattlesnake-Dakota Pool, San Juan County, New Mexico, permitting the drilling of wells on 2½-acre spacing provided that no well be located nearer than 50 feet to the outer boundary of the quarter-quarter section and no nearer than 165 feet to another well producing from the same pool, and provided further, that a 40-acre proration unit would be subject to a 40-acre allowable regardless of the number of wells on the unit.

CASE 4118: (Continued from the April 23, 1969 Examiner Hearing)

Application of Dugan Production Corporation for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle gas production from undesignated Fruitland and Pictured Cliffs gas pools in the well-bore of its Federal "I" Well No. 4, located in the NE/4 NW/4 of Section 1, Township 29 North, Range 14 West, San Juan County, New Mexico.

CASE 4129: Application of Redfern Development Corporation for gas commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Devils Fork-Gallup gas and Basin-Dakota gas after separately metering the Dakota gas and determining the Gallup production by means of the subtraction method. Said production is from the dually completed Largo Spur Well No. 1 located in Unit J of Section 18, Township 24 North, Range 6 West, Rio Arriba County, New Mexico.


TRISTE DRAW
DOUBLE "J"
PANHANDLE
24
32
U.S.
State
Fed · Hanagan
"Fed · Hanagan"
"Fed Payne"
"Fed"
"Wimberly"
"Cotton Draw Unit"
"Fed-Hanagan"
"Fed-James"
"Fields-Fed."
"Wooley Fed"
"Jennings"
"Earnest Fed"
"Bradley Fed"
"U.S.Smelt"
"L"
"Hankamer"
"Gulf-Hanagan"
"Delbasin-Fed"
"Ruth E.R. Robbins"
"Cont'l.-St."
"Kirklin Cont'l.-St"
"A.Gockle Cont'l.-St."
"State" CC-13
Pan Am. 11-15-70 K-372 3650
Gulf 11-1-76 681
Gulf 4-1-78 4991
Central Southwest Oil 9411
Union 5-1-73 0371175
Cont'l. H.B.P. U.S. MJ C.F.&R.E. James(S)
Marathon E. Union T.F. Hodge Marathon-St. E 8824
Texaco St/R Texaco Ohio-St 2
H. Spear 8-1-72 K&E 2948
Cabeen Cont'l-Fed El 3658 TD 3658 D/A 5-15-62
Gulf 12-18-72 K 2932 5212
Sinclair 4-19-76 K-5933 2662
Gulf 6-15-75 K-5077 1850
Pauley Pet. 6-1-81(3) 069272 Texas 1/2
Texaco 1/2 Pauley Pet 11-1-76 507
Pauley Pet. 11-1-78 507 Texaco 1/2
Union 6-1-72 0262883
Howell Spear 6-1-77 2984
Gulf Hanagan Fed El 3858 TD 3872 D/A 2-14-62
320 Mins. Ltd. 6-1-77 2385
Gulf H.B.P. 01917
Gulf Union 01917
(Continental) Union 02889
West Tex. Util. Serv. 4-0
Continental H.B.P. 02889 Union
Gulf H.B.P. 0553548 Union
Gulf 1-15-73 K 3018 1650
Humble 11-18-75 K-8486 1922
Sunray DX N.M.-St. TD 3210 D/A 5-20-62
Gulf 6-1-64(3) 04329 HBU
Sunray 3-18-75 K-4964 2859
Gulf 039888
Tenneco 033503
Cont'l. H.B.P. 0553642
Gulf H.B.P. 01917
Continental H.B.P. 0553642
Tenneco 5-15-72 K-2459 3412
Pan Amer. 6-15-75 K-5078 1762
J.P. Tales 1-1-70(2) 053987 HBU
Gulf 8-1-64(3) 04329 HBU
Tenneco (U.S.Smelt) 062269
Superior 12-1-69 K 95 7732
A.M.Culver 3-1-74 0522274
Hunt Oil Tenneco 1/3 Getty 1/3 7-1-73 0383883
Osborn, et al Fed. Bondurant El 3584 TD 5080 Del 6-4-72 D/A 7-1-61
Pan Amer. 1-18-76 K 5659 5380
Superior 4-17-72 K 2363 2545
Conti. 8-15-71 K-1685 3111
Gulf 5-1-71 055400
Edith Wright 8-1-75 91
Pauley Pet. 7-1-51 061936 Texaco 1/2
J.W. Gates 4-1-73 0360608 Superior
Getty Oil 1/3 Hunt Oil 7-1-73 0393889 Tenneco 1/3
R.B. Hall Andee-USA TD 5039 D/A 7-1-66
Pan Amer 9-19-71 K-1774 2161
Superior 8-15-71 K-1685 3111
Pauley Pet. 6-1-81(3) 059272 Texas 1/2
Pauley Pet. HBU E 8328 Texaco 16-20-71 K-1536 2253
Pauley Pet. HBU 061863 Texaco 1/2
Texaco E. (Pauley Pet.) 4-1-70(2) 054031 HBU
(Pauley Pet.) 061936 Texaco 1/2
J.W. Gates 4-1-73 0360608 S.W. Richardsons Delbasin-Fed El 3514 TD 4918 D/A 2-21-61
Tenneco 1/3 Getty Oil 1/3 Hunt Oil 7-1-73 0393889
Sunray 10-13-75 K-5365 2650
Continental H.B.P. E-5009
Pan Amer. 11-21-71 K-1961 2532
Pan Amer. 1-18-76 K-5660 9853
Getty 8-15-71 K-1696 5714
Pauley Pet. HBU 061863
Texaco 1/2
5
Pauley Pet. HBU 061863 Texaco 1/2
Texaco E. (Pauley Pet.) 4-1-70(2) 054031
4
Pauley Pet. HBP 061936 Texaco 1/2
3
Continental H.B.P. E-5009
2
Continental 3-1-66(3) 02789 HBU
1
Richardson Oils 3-1-65(3) 068846 P.R. Bass HBU
Delbasin 3-1-65(3) 068845
6
Richardson Oil 3-1-65(3) 068846 P.R. Bass HBU
5

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 4126

Form 9-330

Budget Bureau No. 42-R355.6.
Approval expires 12-31-60.

U. S. LAND OFFICE Artesia
SERIAL NUMBER LC-061581
LEASE OR PERMIT TO PROSPECT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
DEC 9 1960
U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Curtis Hankamer Address 1122 Bank of the Southwest Building Houston 2, Texas
Lessor or Tract Gulf-Federal-Beaty Field Brushy Draw (Del) State New Mexico
Well No. 2 Sec. 24 T. 26S R. 29E Meridian NMPM County Eddy
Location 660 ft. [N.] of N Line and 1980 ft. [W.] of E Line of Section 24 Elevation 2992
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed Phil C. Hankamer
Date 11/28/60 Title Engineer

The summary on this page is for the condition of the well at above date.

Commenced drilling 10/4, 1960 Finished drilling 11/13, 1960

OIL OR GAS SANDS OR ZONES
(Denote gas by G)

No. 1, from NONE to
No. 2, from to
No. 3, from to
No. 4, from to
No. 5, from to
No. 6, from to

IMPORTANT WATER SANDS

No. 1, from NONE to
No. 2, from to
No. 3, from to
No. 4, from to

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
This well was drilled with cable tools. Two drilling control strings were set and all pipe pulled from hole.									

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
Drilling control strings set on casing seats and then pulled.					

PLUGS AND ADAPTERS

Heaving plug—Material Length Depth set
Adapters—Material XXX Plugs listed in well history

SHOOTING RECORD

FOLD | MARK

Size	Shell used				Depth shot	Depth cleaned out
		NONE				

TOOLS USED

Rotary tools were used from ---- feet to ---- feet, and from ---- feet to ---- feet

Cable tools were used from Ground level feet to 3214 TD feet, and from ---- feet to ---- feet

DATES

11/10/60, 19--

Put to producing Dry hole, 19--

The production for the first 24 hours was ---- barrels of fluid of which ---% was oil; ---% emulsion; ---% water; and ---% sediment.

Gravity, °B6. ----

If gas well, cu. ft. per 24 hours ----

Gallons gasoline per 1,000 cu. ft. of gas ----

Rock pressure, lbs. per sq. in. ----

EMPLOYEES

E. W. Sutton, Driller

H. T. Marshal, Driller

W. L. Williams, Driller

---, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	30	30	Caliche Rock
30	190	160	Shale
190	250	60	Anhydrite
250	293	43	Goat Rock
293	345	52	Anhydrite
345	375	30	Anhydrite & Goat Rock
375	445	70	Goat Rock
445	450	5	Red Shale
450	475	25	Red Shale & Gypsum
475	500	25	Shells & Shale
500	575	75	Shale
575	600	25	Red Shale
600	610	10	Shale
610	625	15	Anhydrite
625	665	40	Anhydrite & Shale
665	695	30	Anhydrite & Gypsum
695	720	25	Salt, Anhydrite & Gypsum
720	725	5	Anhydrite
725	745	20	Anhydrite & Gypsum
745	780	35	Anhydrite & Gypsum & Salt
780	815	35	Salt
815	835	20	Anhydrite & Gypsum
835	890	55	Anhydrite
890	895	5	Salt & Shale

(OVER)

FORMATION RECORD—Continued

16—43064-4

FROM—	TO—	TOTAL FEET	FORMATION
0	30	30	Caliche rock
30	190	160	Shale
190	250	60	Anhydrite
250	293	43	Coat rock
293	315	22	Anhydrite
315	345	30	Anhydrite & Coat Rock
345	375	30	Sand, Dk
375	3202	12	Black lime
3202	3254	48	Anhydrite & Gypsum
3254	2968	186	Salt & Shale
2968	2725	243	Anhydrite
2725	2622	103	Salt
2622	2485	137	Anhydrite
2485	1000	1485	Shale
1000	1485	15	Anhydrite & Shale
1485	1670	185	Anhydrite & Gypsum
1670	1315	128	Shale & Gypsum
1315	1205	27	Anhydrite & Gypsum
1205	1150	110	Anhydrite & Shale
1150	1100	55	Anhydrite & Gypsum
1100	1080	50	Shale & Gypsum & Salt
1080	1020	20	Anhydrite
1020	930	90	Anhydrite & Sulphur
930	925	5	Red Shale
925	895	30	Anhydrite & Gypsum

FORMATION RECORD—Continued

(Reverse)

16—72034-4

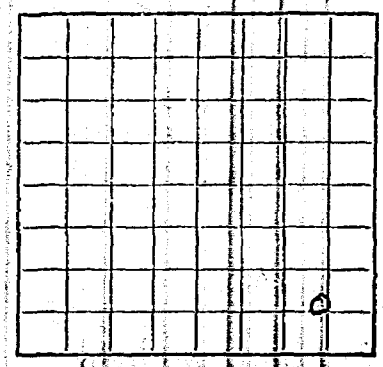
BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 2126, 2127

PH

Budget Bureau No. 42-R355.4.
Approval expires 12-31-60.

Form 9-330

U. S. LAND OFFICE Santa Fe
SERIAL NUMBER NM-01917
LEASE OR PERMIT TO PROSPECT



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Curtis Henderson Address 1422 Bank of the Southwest Bldg., Houston 2, Texas
Lessor or Tract Gulf-Hanagan Field Wildcat State New Mexico
Well No. 1 Sec. 11 T. 24S R. 32E Meridian NMPM County Lea
Location 660 ft. [N.] of S. Line and 660 ft. [E.] of E. Line of Sec. 11 Elevation 3635.8 (Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed [signature]

Date 4-4-62 Title Engineer

The summary on this page is for the condition of the well at above date.

Commenced drilling 2-23, 1962 Finished drilling 3-5, 1962

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 4970 to 5028 No. 4, from ____ to ____
No. 2, from ____ to ____ No. 5, from ____ to ____
No. 3, from ____ to ____ No. 6, from ____ to ____

IMPORTANT WATER SANDS

No. 1, from None to ____ No. 3, from ____ to ____
No. 2, from ____ to ____ No. 4, from ____ to ____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
8-5/8"	24			323					surface
4-1/2"	10.5			5058			4974	5028	oil string
2"	4.6			4500					tubing string

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8-5/8"	323	350 sx plus 2% gel	Plug	10.0	displacement
		50 sks Perma-K	"	"	

FOLD

PLUGS AND ADAPTERS

Heaving plug—Material ..... Length ..... Depth set .....

Adapters—Material ..... Size .....

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from ..... feet to ..... feet, and from ..... feet to ..... feet

Cable tools were used from 0 feet to 5065 feet, and from ..... feet to ..... feet

DATES

....., 10..... Put to producing ....., 10.....

The production for the first 24 hours was 62 barrels of fluid of which 4-2- % was oil; 62 % emulsion; ..... % water; and ..... % sediment. 85 Gravity, °Bé. 60 -

If gas well, cu. ft. per 24 hours 40 Gallons gasoline per 1,000 cu. ft. of gas .....

Rock pressure, lbs. per sq. in. .....

EMPLOYEES

....., Driller ....., Driller

....., Driller ....., Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	328	328	Surface formation and red bed
328	620	292	Anhydrite and shale
620	1330	710	Anhydrite
1330	2590	270	Salt and anhydrite
2590	3525	935	Anhydrite
3525	3840	315	Anhydrite
3840	4310	470	Salt and anhydrite
4310	4836	526	Anhydrite and lime
4836	4920	84	Anhydrite
4920	4951	31	Lime
4951	5065	114	Sand w/shale streaks
5065 TD			

AT THE END OF COMPLETE DRILLER'S LOG, ADD GEOLOGIC TOPS. STATE WHETHER FROM EL OR SAMPLES.

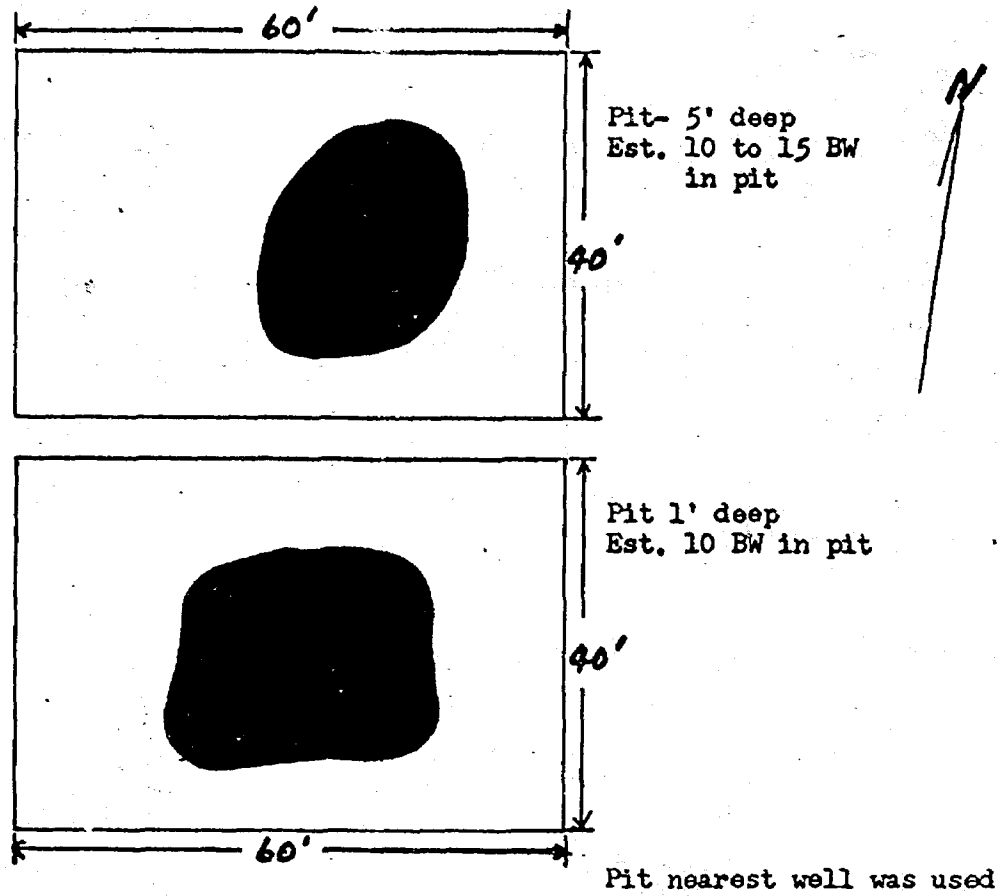
Base Lower Salt - 4634'
Top Delaware Lime - 4920'
Top Delaware Sand - 4951'

FORMATION RECORD—Continued

(OVER)

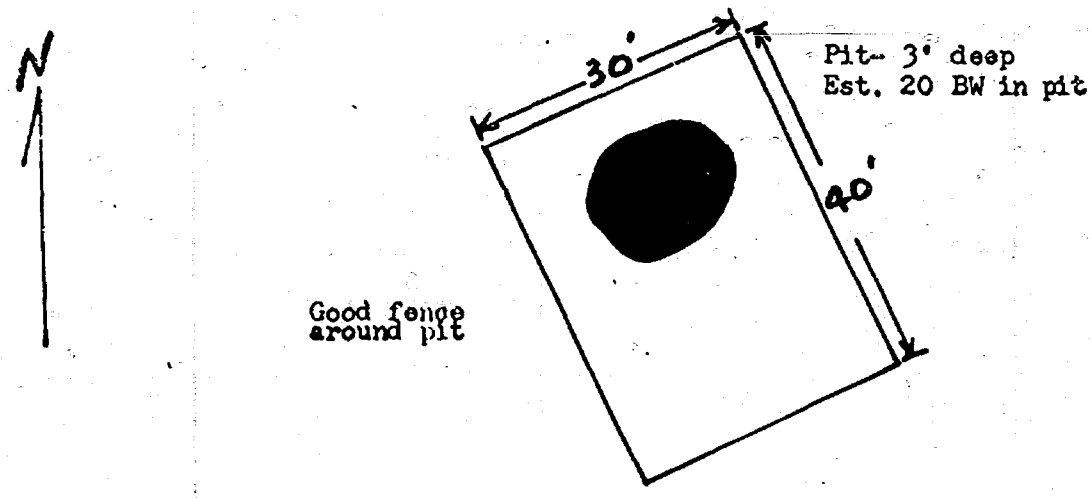
BEATY-GULF LEASE
BRUSHY DRAW-DELAWARE FIELD, EDDY CO., N.M.

Production
Oil- 20 bbls/day
Water- 22 bbls/day



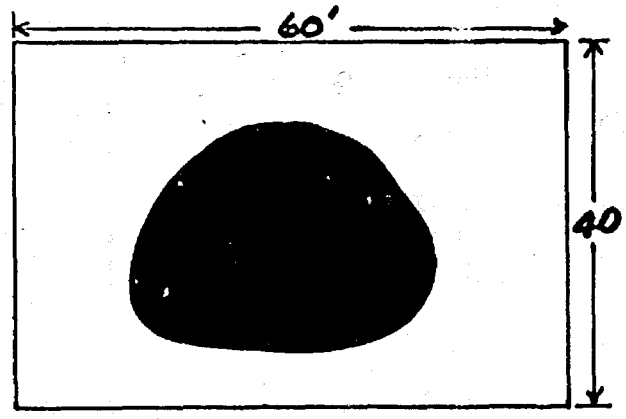
HANSON-FEDERAL LEASE
BRUSHY DRAW-DELAWARE FIELD, EDDY CO.

Production
Oil- 2 bbls./day
Water- 8 bbls/day



Gulf-Federal Lease
Brushy Draw-Delaware Field, Eddy Co., N. M.

Production
Oil- 18 bbls/day
Water- 50 bbls/day



Pit- 5' deep
Est. 15 BW in pit

N

This pit not in use

12'

Both pits originally used in drilling well - large pit has been re-worked and is in excellent condition with good fence.

WELL No. 1

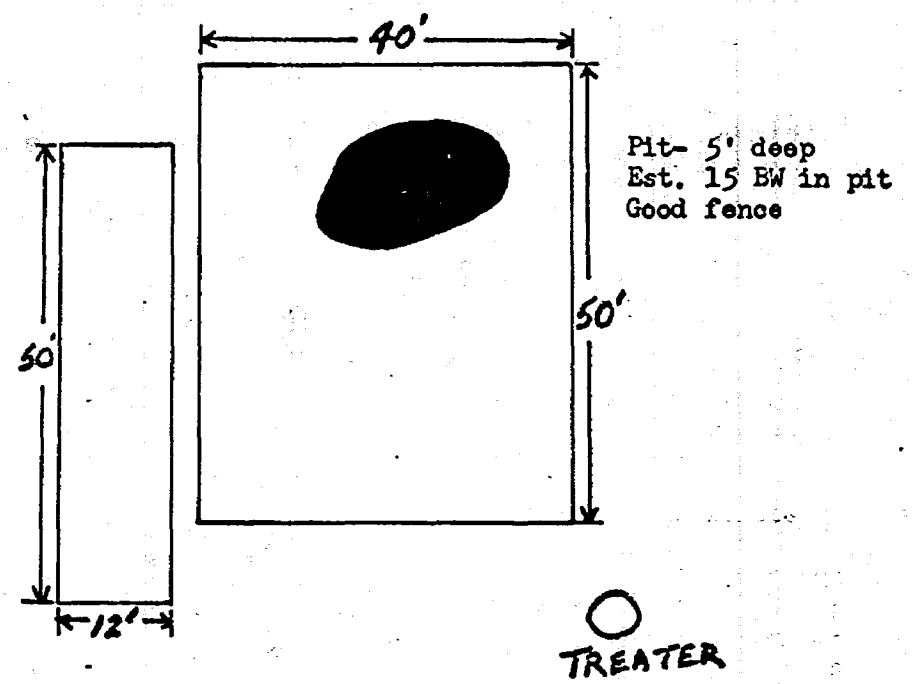
Scale: Approximate

TANK BATTERY

TREATER

GULF-FEDERAL "A" LEASE
BRUSHY DRAW-DELAWARE FIELD, EDDY CO., N.M.

Production
Oil-2½ bbls/day
Water- 10 bbls/day

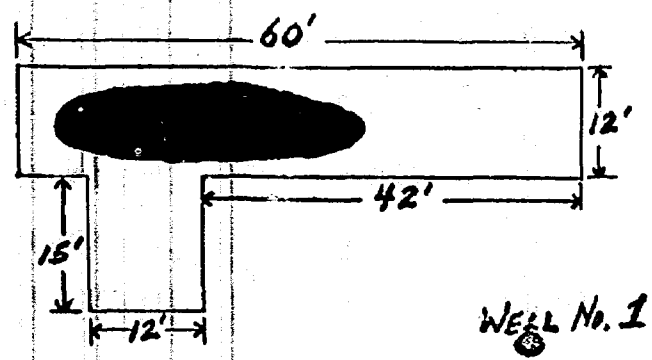


Scale: Approximate

All equipment was set on well pad, 12' X 50' pit was cable tool pit for drilling well. This pit was used for a while, then new pit was dug.

HANAGAN-FEDERAL LEASE
DOUBLE "X" DELAWARE FIELD, LEA CO., N.M.

Production
Oil- 14 bbls/day
Water- 23 bbls/day



N

Pit varies in depth from about 3½' where water stands to 1' on south and east ends. Est. 20 BW in pit.

Scale: Approximate

TANK BATTERY

SAMPLE NO. _____

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

Sample #5

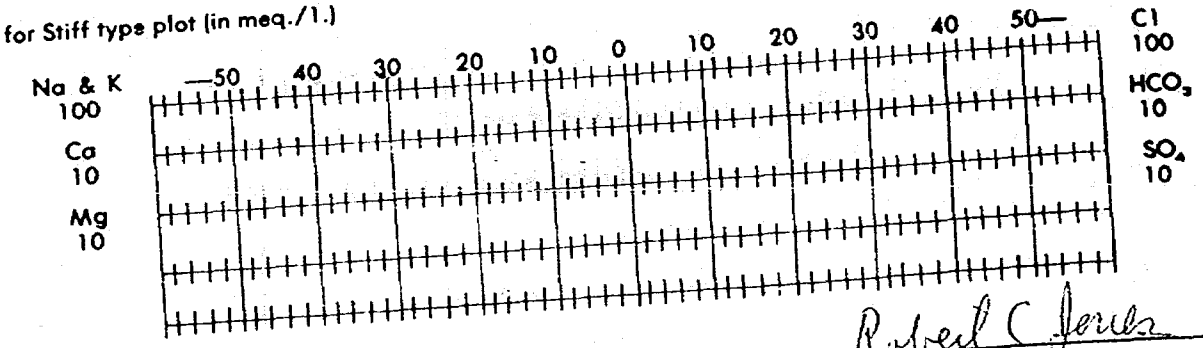
Operator	Water Station	Date Sampled	
Well	Windmill	Date Received	5-2-69
Field	2 miles east on Jal highway	Submitted by	Mr. Noel Sikes
Formation		Worked by	Jones
Depth		Other Description	
County			

CHEMICAL DETERMINATIONS

Density	1.000 @ 76°F	pH	8.5
Iron	No Trace	Hydrogen Sulfide	None
Sodium and Potassium	259 ppm	Bicarbonate	462 ppm
Calcium	29 ppm	Sulfate	200 ppm
Magnesium	31 ppm	Phosphate	ppm
Chloride	124 ppm	as Sodium Chloride	ppm

Remarks:

for Stiff type plot (in meq./1.)



Per Robert C Jones

SAMPLE NO._____

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

Sample #1

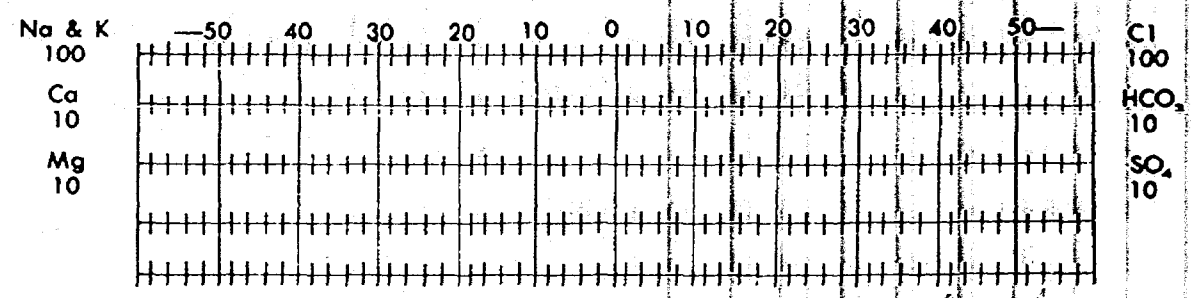
Operator		Date Sampled	
Well	Irrigation Well	Date Received	5-2-69
Field	George Ross	Submitted by	Mr. Noel Sikes
Formation	2 miles west	Worked by	Jones
Depth		Other Description	
County			

CHEMICAL DETERMINATIONS

Density	1.000 @ 75°F		pH	8.1	
Iron	No Trace		Hydrogen Sulfide	None	
Sodium and Potassium	13,610	ppm	Bicarbonate	330	ppm
Calcium	600	ppm	Sulfate	1,980	ppm
Magnesium	150	ppm	Phosphate		ppm
Chloride	1,944	ppm	as Sodium Chloride		ppm

Remarks:

for Stiff type plot (in meq./l.)



Per Robert Jones

SAMPLE NO._____

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

Sample #2

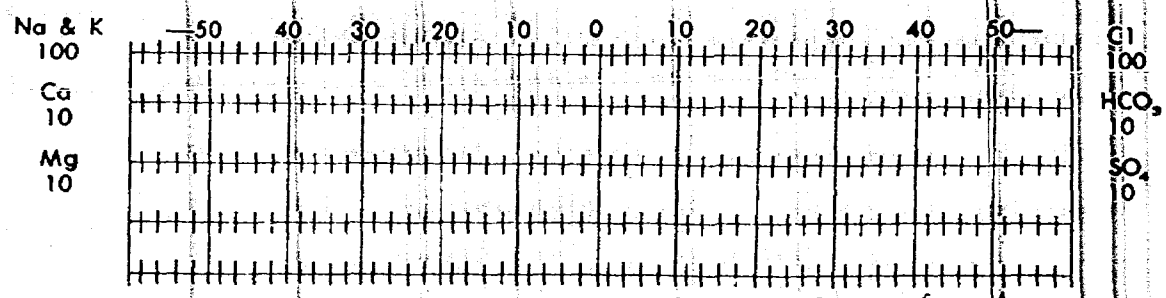
Operator	ElPaso Water	Date Sampled	
Well	Wells 2 miles	Date Received	5-2-69
Field	Northeast	Submitted by	Mr. Noel Sikes
Formation		Worked by	Jones
Depth		Other Description	
County			

CHEMICAL DETERMINATIONS

Density	1.000 @ 75°F		pH	8.2	
Iron	No Trace		Hydrogen Sulfide	None	
Sodium and Potassium	408	ppm	Bicarbonate	244	ppm
Calcium	136	ppm	Sulfate	450	ppm
Magnesium	29	ppm	Phosphate		ppm
Chloride	480	ppm	as Sodium Chloride		ppm

Remarks:

for Stiff type plot (in meq./l.)



Per Robert C Jones

SAMPLE NO._____

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

Sample #3

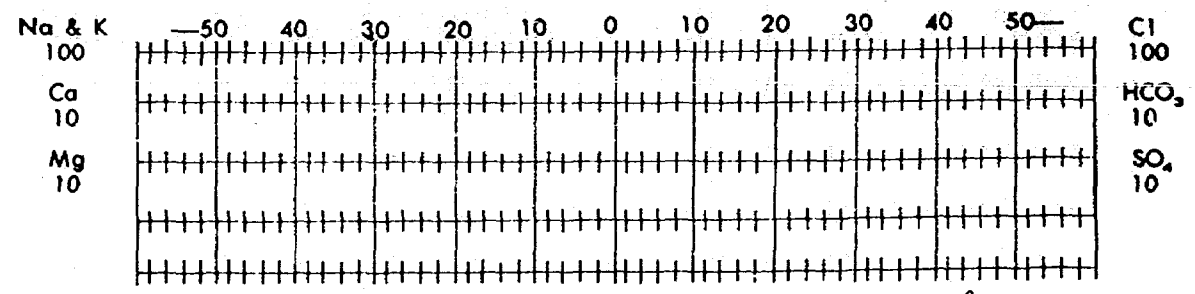
Operator	Clark Windmill	Date Sampled	
Well	Texas	Date Received	5-2-69
Field	2½ - 3 miles south	Submitted by	Mr. Noel Sikes
Formation		Worked by	Jones
Depth		Other Description	
County			

CHEMICAL DETERMINATIONS

Density	1.000 @ 77°F	pH	8.1
Iron	Very Faint Trace	Hydrogen Sulfide	None
Sodium and Potassium	293 ppm	Bicarbonate	330 ppm
Calcium	735 ppm	Sulfate	2,160 ppm
Magnesium	189 ppm	Phosphate	ppm
Chloride	520 ppm	as Sodium Chloride	ppm

Remarks:

for Stiff type plot (in meq./l.)



Per Robert C Jones

SAMPLE NO. _____

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

Sample #4

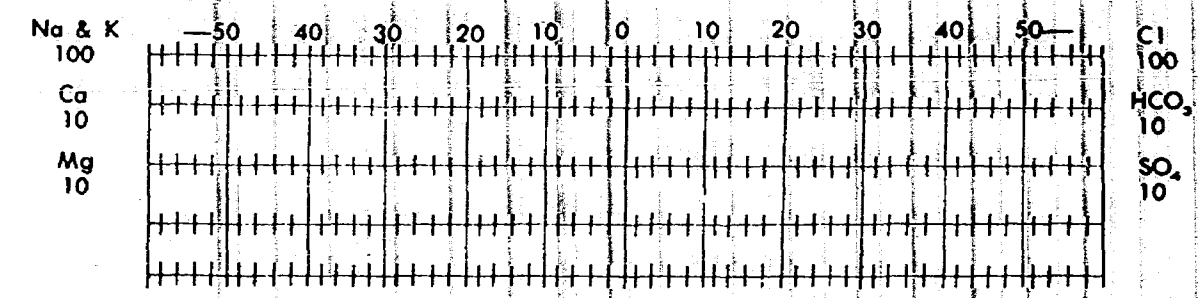
Operator	James Ranch House	Date Sampled	
Well	Windmill	Date Received	5-2-69
Field	1¼ - 1½ miles Southwest	Submitted by	Mr. Noel Sikes
Formation		Worked by	Jones
Depth		Other Description	
County			

CHEMICAL DETERMINATIONS

Density	1.000 @ 74°F	pH	9.0
Iron	No Trace	Hydrogen Sulfide	None
Sodium and Potassium	221 ppm	Bicarbonate	463 ppm
Calcium	27 ppm	Sulfate	160 ppm
Magnesium	35 ppm	Phosphate	ppm
Chloride	104 ppm	as Sodium Chloride	ppm

Remarks:

for Stiff type plot (in meq./l.)



Per Robert C Jones

SAMPLE NO. _____

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

Operator

Well — Pecos River West of Ross Farm

Field

Formation

Depth

County

Date Sampled

Date Received — 5-3-69

Submitted by

Worked by — Kermit District

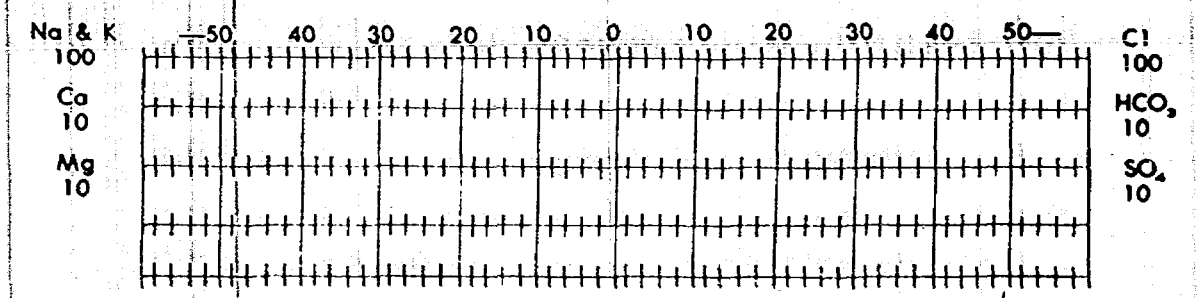
Other Description

CHEMICAL DETERMINATIONS

Density	1.008 @ 74°F	pH	8.1
Iron	No Trace	Hydrogen Sulfide	None
Sodium and Potassium	4,620 ppm	Bicarbonate	232 ppm
Calcium	600 ppm	Sulfate	2,270 ppm
Magnesium	301 ppm	Phosphate	ppm
Chloride	7,420 ppm	as Sodium Chloride	ppm

Remarks:

for Stiff type plot (in meq./l.)



Per Robert C Jones

HALLIBURTON DIVISION LABORATORY
HALLIBURTON COMPANY
MIDLAND DIVISION

LABORATORY WATER ANALYSIS

No. W69-271

To. CURTIS HANKAMER

Date 4-7-69

724 HOUSTON BANK & TRUST BLDG.

HOUSTON, TEXAS 77000

Submitted by

Date Rec. 4-6-69

Well No. AS MARKED Depth Formation

County Field Source DOUBLE X

	BEATY GULF	HANSON FEDERAL	HANAGAN FEDERAL	
Resistivity	0.073 @ 68° F.	0.070 @ 68° F.	0.049 @ 68° F.	
Specific Gravity	1.094	1.097	1.164	
pH	7.0	7.3	5.0	
Calcium (Ca)	10,900	10,300	24,900	*MPL
Magnesium (Mg)	1,740	2,820	3,350	
Chlorides (Cl)	85,000	91,000	154,000	
Sulfates (SO_4)	1,530	1,600	600	
Bicarbonates (HCO_3)	61	85	36	
Soluble Iron (Fe)	NIL	NIL	260	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: CARLILE - BREWER

cc: THORNTON HOOPER

HALLIBURTON COMPANY

By W. C. Carlile
DIVISION CHEMIST

NOTICE

HALLIBURTON DIVISION LABORATORY
HALLIBURTON COMPANY
MIDLAND DIVISION

LABORATORY WATER ANALYSIS

No. W69-272

To CURTIS HANKAMER
721 HOUSTON BANK & TRUST BLDG.
HOUSTON, TEXAS 77000

Date 4-7-69

Submitted by _____ Date Rec. 4-6-69

Well No. AS MARKED (LEASE) Depth _____ Formation _____

County _____ Field _____ Source _____

	GULF FEDERAL	GULF FEDERAL "A"	
Resistivity	0.061 @ 68° F.	0.061 @ 68° F.	
Specific Gravity	1.098	1.098	
pH	7.0	6.9	
Calcium (Ca)	10,700	11,300	*MPL
Magnesium (Mg)	2,400	2,970	
Chlorides (Cl)	89,000 ✓	88,000 ✓	
Sulfates (SO_4)	1,370	1,280	
Bicarbonates (HCO_3)	73	73	
Soluble Iron (Fe)	NIL	NIL	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: CARLILE - BREWER
cc: THORNTON HOOPER

HALLIBURTON COMPANY

By W. C. Carlile
DIVISION CHEMIST

NOTICE

This report is limited to the described sample tested. Any use of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

CURTIS HANKAMER
OIL PRODUCER
714 Houston Bank & Trust Building
Houston, Texas 77002
CA 4-6437

April 11, 1969

'69 APR 14 AM 8 11

Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Case 4127

Re: Curtis Hankamer's
Gulf Hanagan Federal Lease
Double X Delaware Pool
Lea County, New Mexico

Gentlemen:

On behalf of Mr. Curtis Hankamer, an exception to Commission Order No. R-3221 (No Pit Order) is respectfully requested for the subject lease. This lease has been producing since 1962 and water has been produced along with the oil since inception. During this time the water has been disposed of in open pits and to the best of our knowledge this operation has not created any contamination of fresh water supply wells in the area. Further, in view of the low oil production rate and the remoteness of the lease relative to water disposal facilities the cost of water disposal by means other than the use of open pits would be prohibitive.

Should this request require a formal hearing before the commission, it is further requested that such hearing be set at the earliest convenient date and that pending such hearing the producing allowables for subject well be restored so as to not interrupt production.

The attached tabulation shows the lease involved as well as the essential information for this lease.

Very truly yours,

E. Ralph Daniel
Petroleum Engineer

ERD/lb
Attd.

DOCKET MAILED
Date 4-23-69

	Daily Oil Prod. B/D	Daily Water Prod. B/D	Disposal Pit Size	Disposal Pit Vol. Bbls.
Gulf Hanagan Federal 10112432 20112432				
	14.0	23	12'x60'x3' 12'x15'x3'	480

Feb '69 ~~Oldaw~~ 448 BO Prod 275 BO Wtr 117

DRAFT

GMH/esr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 4127

Order No. R-3762

APPLICATION OF CURTIS HANKAMER
FOR AN EXCEPTION TO ORDER NO.
R-3221, AS AMENDED, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 7, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of May, 1969, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Curtis Hankamer, is the owner and operator of two wells located in Section 11, Township 24 South, Range 32 East, NMPM, Double X-Delaware Pool, Lea County, New Mexico.

(3) That effective January 1, 1969, Order (3) of Commission Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any

other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (13), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicant seeks an exception to the provisions of the aforesaid Order (3) to permit the continued disposal of salt water, produced by applicant's ~~two~~ wells located in said Section 11, in ~~two~~ an unlined surface pits located in the SE/4 SE/4 of said Section 11.

(7) That the subject wells produce approximately 23 barrels of water per day.

(8) That fresh water supplies as designated by the State Engineer exist in the vicinity of the subject wells and in the vicinity of the unlined surface pit serving said wells.

(9) That the applicant has failed to establish that disposal of water produced in conjunction with the production of oil or gas, or both, by the subject wells in the subject unlined pit would not constitute a threat of contamination of fresh water supplies existing in the vicinity of said pit.

(10) That the subject application should be denied.

It is Therefore Ordered:

(1) That the subject application is hereby denied.

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