

CASE 3898: Application of TENNECO  
OIL CO. FOR SALT WATER DISPOSAL,  
LEA COUNTY, NEW MEXICO.

Case Number

3898

Application

Transcripts.

Small Exhibits

ETC.

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
October 23, 1968

EXAMINER HEARING

IN THE MATTER OF:

Application of Tenneco Oil Company  
for salt water disposal, Lea County,  
New Mexico.

Case No. 3898

BEFORE: D. S. Nutter

Transcript of Hearing

MR. NUTTER: Call Case 3898.

MR. HATCH: Application of Tenneco Oil Company for salt water disposal, Lea County, New Mexico.

MR. WHITE: If the Examiner please, Charles White of White, Gilbert, Koch & Kelly, appearing on behalf of the Applicant. We have one witness to be sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1, 2 and 3 marked for identification.)

HENRY NICHOLAS KNIGHT, a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Knight, will you state your full name, by whom you are employed and in what capacity?

A Henry Nicholas Knight, employed by Tenneco Oil Company as a Production Engineer in the Midland, Texas, District.

Q Have you previously testified before the New Mexico Oil Conservation Commission, or one of its Examiners?

A No, sir, I have not.

Q Will you briefly state your educational and professional background?

A I received a B. S. Degree from the University of Oklahoma in January, 1960, immediately went to work for Humble Oil and Refining Company in Oklahoma, for about three and a half years as an Engineer. I then transferred to Illinois where I worked for Humble for approximately 13 months as a Reservoir Engineer. I then came back to Oklahoma with Tenneco Oil Company where I worked for four years as a Production Engineer, and for the past five months, I have been working for Tenneco in the Midland, Texas, District, as a Production Engineer.

Q Are you familiar with the subject application?

A Yes.

MR. WHITE: Is the witness qualified?

MR. NUTTER: Yes, he is, please proceed.

Q (By Mr. White) Would you briefly state what Tenneco seeks by the subject application?

A We're asking permission to convert the Ginsberg-Federal No. 6 well to salt water disposal.

Q Would you refer to Exhibit 1 and explain the plat, please?

A Exhibit 1 is a plat showing the Ginsberg-Federal No. 6 well, located in Unit E, approximately 1980 feet from the north line and 660 feet from the west line of

Section 31, Township 25 South, Range 38 East.

Q Does it show the location of other wells in the vicinity?

A Yes, it shows the location of other wells in the vicinity and the formations from which nearby wells produce.

MR. WHITE: If the Examiner please, we inadvertently failed to show all the wells within a radius of two miles of the subject well. If we may, we would like to further supplement this exhibit by extending it out within the two mile radius. That will be sent to you immediately.

MR. NUTTER: Fine.

Q (By Mr. White) Can you state at this time the formations from which the wells within a radius of two miles from the proposed well are producing?

A Yes, they're producing from the Langlie-Mattix, the Blineberry and the Fusselman zones.

Q What is the production history of the proposed well and what is its present status?

A It's currently classified as a single zone oil well, in the Langlie-Mattix pool, but it's incapable of production. This well has shown a history of steady decline and on the most recent pump test we took, we received zero oil and zero barrels of water.

Q Do you have a diagrammatic sketch of the subsurface installations?

A Yes, I do, and that's been stamped Exhibit 2, I believe.

Q Would you explain Exhibit 2?

A Exhibit 2 shows all casing strings in the well, their diameters and setting depths. We show 8 5/8ths inch casing set at 1190 feet cemented with 450 sacks, this cement was circulated to the surface. We show 5 1/2 J 55 casing set at 3257 feet, this was cemented with 150 sacks of cement. The top of that cement is calculated to be at 2300 feet. The sketch also shows the total depth of the well to be 3341 feet and the well was completed in the Langlie-Mattix zone in open hole from 3257 to 3341 feet. The sketch also shows our proposed packer setting at 3230 feet for injection purposes.

Q Will this be a plastic-coated packer?

A Yes, a plastic-coated packer, internal and external and set on plastic-coated tubing.

Q What type of packer is it, do you know?

A It will most likely be a Geiberson Shorty Tension Packer.

Q Have you had previous experience with this packer and has it proved successful?

A Yes.

Q Into what zone do you intend to inject the salt water?

A In the Langlie-Mattix zone, in the open hole portion of the well.

Q What are your anticipated volumes?

A We plan to dispose of only the water from the Ginsberg-Federal Lease, currently our production on that lease is approximately 175 barrels of water a day, however we requested, in this application, permission to dispose up to a maximum of 500 barrels a day.

Q What pressure?

A We anticipate that initially this water will be disposed of on a vacuum due to the depleted nature of the Langlie-Mattix zone; however, here again, we have requested permission to go to a maximum pressure of 1500 pounds, if necessary.

Q In your opinion, will the Langlie-Mattix be capable of taking this water?

A Yes, I have every expectation it will take this water, and most likely on a vacuum, initially. As the time goes on, perhaps we'll have to use pressure to dispose of it. One reason for this application is to gain information for



future evaluations for water injection into the Langlie-Mattix for waterflood purposes.

Q That is another reason why you want to dispose of this water into this particular formation?

A Yes, to gain information for the possibility of waterflooding the Langlie-Mattix zone.

Q Have you had this water analyzed?

A Yes, we have.

Q Is that shown on Exhibit 3?

A Yes, Exhibit 3 is a Halliburton Laboratory Report, this thing is an analysis of the Blinberry and on the report it says "Queen Waters", which Queen is a Langlie-Mattix completion, and this report shows the chloride contents to be so high as to make it unuseable for domestic purposes.

Q Do you have a log of this well?

A A log was submitted with the application.

MR. WHITE: Is that in the file there?

MR. NUTTER: Yes.

MR. WHITE: Could we have that marked, please,  
as Exhibit 4?

(Whereupon, Applicant's Exhibit  
4 marked for identification.)

Q (By Mr. White) What is significant of the log,  
what does it show?

A Well, this log shows the top of the red beds at 105 feet below which there is no fresh water. It also shows the Santa Rosa Zone developed between 300 and 530 feet, this zone containing brackish water. It shows the top of the Langlie-Mattix Zone at 3,094 feet and we set through this zone with our casing set at 3257 feet.

Q How do you plan to handle the water on the surface?

A We'll handle the water through a fiberglass line laid from the heater to the well head.

Q Do you plan to treat the water in any way?

A Treat the water we will dispose of? No, we don't anticipate it will need treatment.

Q Do you plan to load the casing tubing annulus with any inhibitor?

A Yes, the annulus will be loaded with inhibited water.

Q Do you plan to use a pressure gauge on the casing?

A Yes.

Q Was this new or old casing when it was installed?

A This casing was installed new in February, 1956.

Q In your opinion, will this downhole installation prevent this salt water from migrating into any other zone?

A Yes.

Q Will the granting of this application prevent premature abandonment of the field, in your opinion?

A Yes, it will.

MR. WHITE: At this time, we offer Exhibits 1 through 4.

MR. NUTTER: Tenneco's Exhibits 1 through 4 will be admitted in evidence.

(Whereupon, Tenneco's Exhibits 1 through 4 offered and admitted in evidence.)

Q (By Mr. White) Mr. Knight, the case record shows that there's a protest filed by the surface owner, Mr. Tom Linebery. Are you familiar with that protest?

A I was made aware of it at 3:30 yesterday afternoon.

Q Mr. Linebery protested and opposed it for these following reasons: 1, that Rice Engineering Company is in the process of putting in a salt water disposal line and that this line would serve all the operators adjacent to Tenneco's lease, that the line is available to Tenneco and could serve its needs. What do you have to say in response to that, if anything?

A I was unaware that Rice was installing this system until I heard of Mr. Linebery's protest. To my knowledge, Tenneco has not been invited to join this system. Last

evening, I called my supervisor in Midland, he also was not aware of the system and was not aware of our invitation, if we have one, to join the system, and I don't know if they have the capacity to handle the water or not.

Q He also said the fewer disposal wells we have, the less chance there is of contaminating our fresh water zones. In your opinion, will this installation adequately protect the water from being contaminated in the fresh water zone?

A Yes, our installation will protect it, and I feel that with this installation, there will be no contamination from this well.

Q He also states that he feels that Tenneco's application to inject salt water into an open hole from 3258 to 3341 should not be allowed due to the fact that Rice Engineering Company has a disposal well one and three-quarters of a mile southwest of Tenneco's proposed disposal well. What do you have to say in regard to that?

A Well, we would like to inject into this open hole zone in the Langlie-Mattix Pool to evaluate future waterflood prospects for this area and as to connecting to a system, one and three-quarters miles away, this would require a cost from nine to fifteen thousand dollars, depending on the size of the line we have to lay, plus we would most likely have a

monthly handling charge for this water. We can convert this well and effect the complete installation for \$4,000.00.

Q He also states "I note the application of Tenneco that salt water will be injected through the tubing set at 3246 feet into an open hole without a packer." There will be a packer in this instance, will there not?

A The application says that there will be a packer at 3230 feet.

MR. WHITE: That concludes our direct.

MR. NUTTER: Does anyone have any questions of Mr. Knight?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Knight, would you explain the coding of the wells on your Exhibit No. 1? I presume the "B" means Blineberry, and the "F", Fusselman and the "L M" would be a Langlie-Mattix?

A That is correct.

Q So this disposal well or this injection well, is the No. 6, is offset to the north, south and southeast by Langlie-Mattix producers, then, is that correct?

A That's true.

Q So you are not only disposing of the water, but you are evaluating the possibility of secondary recovery on these three offsetting Langlie-Mattix wells?

A Yes, sir.

Q Are secondary recovery operations being conducted in the Langlie-Mattix Pool at the present time?

A Not to my knowledge.

Q What has been the production to date from the subject well?

A I do not have that information available at this time, sir.

Q You said that the well had undergone a steady decline and the latest test was zero barrels of oil?

A That's true.

Q It has produced in the past, however?

A Yes, it has.

Q From the Langlie-Mattix?

A Yes, it was completed an economical producer in the Langlie-Mattix Zone.

Q Do you know the date of the completion of the well?

A February, 1956.

Q So it's about 12 years old, plus?

A Yes, sir.

Q And you stated that the annulus would be loaded with inhibited fluid and equipped with a gauge?

A Yes, sir.

MR. NUTTER: Does anyone have any other questions of Mr. Knight? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. White?

MR. WHITE: No, sir, that's all, thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case 3898?

MR. HOUSTON: We do, Mr. Nutter.

MR. NUTTER: State your name, please.

MR. HOUSTON: Glen Houston, Attorney, representing Mr. Tom Linebery. I would like to have Mr. Linebery sworn, please.

(Witness sworn.)

\* \* \* \* \*

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

DIRECT EXAMINATION

BY MR. HOUSTON:

Q Your name is Tom Linebery?

A It is.

Q You are the same person who filed with the Commission a written protest dated October 21, 1968?

A I am.

Q And you are the surface owner of the property which is sought to be used as a, one of the wells that is sought to be used as a salt water disposal well?

A I am.

Q Now, Mr. Linebery, you have just heard the testimony of Mr. Knight, the Production Engineer for Tenneco?

A Yes.

Q You heard him testify that he was not aware of any protest on your part until 3:30 yesterday afternoon?

A Yes, sir.

Q Did you have occasion to write a letter to Tenneco asking for information on this application?

A I did.

Q Do you recall when you wrote that letter? Was it on October 14th, 1968?

A I don't recall the date. Yes, it was, this is a copy of the letter.

(Whereupon, Linebery's Exhibit No. 1 marked for identification.)

Q Now, in that connection, Mr. Linebery, were you trying to get information so that you could evaluate your position on this, as well as secure Tenneco's cooperation in efficiently disposing of this water?

A I was.



Q Did you receive any reply to your inquiry?

A My wife is in Midland and I called last night and I had received a reply yesterday.

Q You were not able to go back to Midland?

A No.

Q And you haven't seen what reply they furnished?

A She did tell me the contents of it.

Q Would you just state briefly what you understood is in that reply?

A As I recall, the reply stated that it was now a producing oil well and I believe they even recited about how much oil and some few barrels of water per day the well is now making. I wish I had a copy of the letter, but I don't have.

MR. HOUSTON: Mr. White, does Mr. Knight have a copy of the letter which was furnished to Mr. Linebery's Midland office yesterday?

MR. KNIGHT: No, I didn't bring a copy of that letter dated October the 16th.

Q (By Mr. Houston) Now, Mr. Linebery, in your protest, you've stated that Rice Engineering Company is in the process of putting in a salt water disposal system adjacent to this property?

A They are.

(Whereupon, Linebery's Exhibit No. 2 marked for identification.)

MR. HOUSTON: I apologize to the Commission for not having copies of these exhibits. I didn't realize that Tenneco wouldn't have knowledge of this material.

MR. NUTTER: What has been identified as Linebery's Exhibit No. 2 in Case 3898 is identified as a Rice Engineering and Operating Company Map labeled "Justice S. W. D. System Line Map."

Q (By Mr. Houston) Now, Mr. Linebery, I hand you what has been marked Linebery's Exhibit No. 2 which is identified on the key as the Justice Salt Water Disposal System Line Map of Rice Engineering and Operating, Incorporated, and ask you if this is a true and correct map of the Rice Engineering Salt Water Disposal System you refer to in your letter of October 21?

A I'm sure it is. It was represented as a map of their planned system that Rice was going to install in this area when they approached me for a right of way.

Q Now then, referring to that map, it covers an area which runs from Section 16, Township 24 South, Range 37 East down to the southern extremity which is the proposed salt water disposal well, H-2, which is located in Section 2,

Township 26 South, Range 37 East, is that not true?

A Yes.

Q And it also shows all of the various and sundry operators who have joined in this salt water disposal system?

A It does.

Q Now then, referring to the notice which you received from Tenneco, as the surface owner, and the form which is identified as form C-108, of the New Mexico Oil Conservation Commission which lists the names and addresses of all operators within one-half mile of the injection well, being Ralph Lowe, Tidewater Oil Company, Gulf Oil Corporation, West States Petroleum Company and Pan American Petroleum Corporation, is it not true that all of those operators, without exception, are members of the Rice Engineer Salt Water Disposal System which you have presented to the Commission this morning?

A They are.

Q Now then, Mr. Linebery, you heard Mr. Knight testify that he had been employed by Tenneco or in the Midland Office for approximately five months. Do you know off-hand how long you have known about this proposed salt water system of Rice, has it been within five months or has it been longer than that?

A At least four or five months.

Q It has been in the planning stages, then, for a

considerable period of time?

A Yes.

Q You own other lands in this area, do you not?

A Yes.

Q Are you also a member of any Association which would give you information and knowledge of salt water disposal programs being carried on in this area?

A I am.

Q What Associations?

A Southeast Lea County Fee Land Owners Association and Lea County Farm Bureau.

Q Are you here today in your capacity as the surface owner of Section 31 only, or are you also authorized to represent either one of these Associations?

A I represent myself and the two Associations.

Q You ask that the Commission recognize you today in the individual capacity and as a representative of those two Associations?

A Yes, I do.

Q Referring to Section 6, which is the Section line immediately south of Section 31, that's the subject matter of this hearing today, is Section 6 included in the Rice Engineer Salt Water Disposal System?

A It is.

Q The operator there is Ralph Löwe?

A Ralph Lowe.

Q Are you acquainted with the surface owner of that property?

A I am.

Q Who is the surface owner of that property?

A I am.

Q You heard Mr. Knight testify according to my notes, and if I am incorrect, Mr. White, I would appreciate Mr. Knight correcting me, that logs of this well show that there are no fresh water zones below, I understood 105 feet.

MR. KNIGHT: Show the top of the red beds at the 105 feet which I'm told there is no water below that.

Q (By Mr. Houston) Mr. Linebery, you own the surface and you graze cattle on this property, do you not?

A I do.

Q Is that true, to your personal knowledge?

A That is not true.

Q Can you give us an illustration of what facts are within your personal knowledge as a rancher, and how you come to know that information?

A I have drilled a water well in the northwest quarter

of Section 31, just about right there. I got water at about 420 feet. It's quite a bit of water, it will run a drilling rig and it's at least 30 to 40 gallons a minute. That's good potable water. I also drilled a well in the northwest quarter of Section 6, and it is about 450 feet deep. It's good, potable water and I do not know the capacity but it will make 30 to 40 gallons a minute because both wells have been used to furnish a drilling rig, so we do have quite a bit of potable water there below four hundred.

Q Do you have any knowledge of anything below that, have you ever had occasion to drill any wells deeper than that?

A I have never drilled one deeper than that.

Q But the two wells you have enumerated specifically are fresh water and are below the 105 feet testified to by Tenneco's Engineering Department?

A Yes, and those wells have been drilled in, oh, about the last ten or twelve years. I have drilled them myself. In fact, Tenneco has purchased water out of one of them for drilling purposes.

Q Would that be the well in Section 31?

A Yes.

Q Now then, Mr. Linebery, from your protest, it's

obvious that you were aware and you have testified that you have been aware of it for some four or five months, of the Rice Engineer Salt Water Disposal System that is presently being constructed, as I understand it, isn't that true? Haven't the rights of way been taken on that System and are being taken?

A Yes, and I think you will notice on that map Tenneco has a battery to the west or northwest there that will be tied into this system.

Q You heard Mr. Knight testify he was not aware that this system was going in adjacent to this Section 31, did you not?

A Yes, sir.

Q Would you assume that if Tenneco had found it advisable to join in adjacent sections that they would also find it advisable to join here if they had knowledge of the System?

MR. WHITE: I object to that, it's calling for an opinion of the witness.

MR. HOUSTON: We'll withdraw the question, Mr. Nutter.

Q (By Mr. Houston) Mr. Linebery, and this will call for hearsay evidence, this is an administrative hearing and in the light of Tenneco's admission of lack of complete

knowledge, I feel that hearsay evidence rather than no knowledge should be admitted and I will ask for his hearsay evidence; possibly the Commission will want to deny it.

Mr. Linebery, you do not have direct information that Tenneco put these wells into the system's original planning, do you, you do not have direct information?

A No, I do not have direct information.

Q Have you heard anything about whether or not Tenneco has contemplated putting these wells in, and if so, what have you heard?

MR. WHITE: I object to it as based on hearsay.

MR. HOUSTON: We would ask that the Commission admit the evidence for the reason that Tenneco itself has admitted that it has knowledge of what is obvious to the Commission, is an elaborate and extensive system, and I respectfully submit that Tenneco is a member of the system and therefore must have had knowledge. So I would ask that we at least get Mr. Linebery's understanding of what applies to Section 31.

MR. WHITE: I believe the exhibit speaks for itself. The rest would be based on hearsay.

MR. NUTTER: Where is this lease of Tenneco's to the northwest, that's connected to the system?



MR. HOUSTON: It's marked in Section 35.

MR. NUTTER: It would be in the northeast quarter of Section 35?

MR. HOUSTON: Yes, sir.

MR. NUTTER: I believe the evidence will speak for itself in this case that Tenneco is aware of a salt water disposal system being installed --

MR. WHITE: We withdraw the objection.

MR. NUTTER: -- as to Section 31, the map doesn't show any lines going to Section 31, whether Tenneco is aware of it or not, we don't know, but obviously Rice isn't planning to run a line there, or they would have shown the line on the map, so I think the record speaks for itself.

MR. HOUSTON: For the purpose of a tender, then, I would like to tender the evidence as to what Mr. Linebery's information is for the purpose of the record.

MR. NUTTER: I thought you were going to withdraw your question.

MR. HOUSTON: No, he withdrew his objection.

MR. WHITE: I will withdraw it.

MR. NUTTER: Go ahead and answer the question, Mr. Linebery.

A After I got interested in this and didn't hear from

them, I called on the telephone, Mr. Goodheart, with Rice Engineering and asked him, I said, "How come that you have all the adjacent leases to Tenneco in this project and they're not in?" He said, "Well, at one time they did talk about putting it in and we thought we had it, and then they withdrew it and decided to go the other route of trying to put in their own disposal well".

Q Mr. Goodheart didn't know anything about their putting in a disposal well, did he?

A He knew only because I had told him why I was calling.

MR. WHITE: I object to it as hearsay.

A It is not hearsay because he said he had talked directly to the man about it.

Q At any rate, your understanding is that these wells were considered and it was the election of Tenneco not to go in on it?

A That's what Mr. Goodheart told me, yes.

Q Mr. Linebery, have you granted rights of way to Rice Engineering for a Salt Water Disposal System on the Lowe Section, in Section 6 and on other areas of your ranches?

A Yes, where they've asked for it.

Q Have you found their disposal system to be efficient?

A Well, I wouldn't, I'm not an expert on that, except I do know they are supposed to be experts in the disposal business and I would assume they could operate one as good or better than most operators.

Q You have heard Tenneco's testimony here this morning in complete detail, have you not?

A Yes.

Q Is it still your position and your request to the Oil Conservation Commission that their request be denied?

A It is.

Q Do you still feel that the Rice Engineering System provides a reasonable alternative to them?

MR. WHITE: I object to that, --

A I do.

MR. WHITE: -- as calling for an opinion of the witness, and he's not qualified.

Q Do you feel that the proposal of Tenneco will interfere with your use of the surface of this property for grazing purposes and uses of that type?

A I don't think it interferes with my use of the grazing, surface of the grazing as much as you take more of a chance for getting some fresh water polluted, the more of these wells we have. I certainly wouldn't think that Tenneco

would be the experts in it, Rice Engineering is.

MR. WHITE: I object to that as calling for an opinion of the witness as to evaluating Tenneco as to operation of a salt water disposal against Rice Engineering which one would be the better.

Q Would you be willing to grant rights of way across your property to permit Tenneco to tie into the Rice Engineering Salt Water Disposal System?

A Yes.

Q Mr. Linebery, do you have anything else you would like to add that I haven't inquired of?

A I don't believe I do, Mr. Houston.

MR. HOUSTON: That's all the questions I have.

MR. NUTTER: Does anyone have any questions of Mr. Linebery?

MR. WHITE: I would like to ask him a few.

CROSS EXAMINATION

BY MR. WHITE:

Q Mr. Linebery, referring to your Exhibit No. 1, your letter of October 14, 1968, addressed to Tenneco Oil Company, that apparently, the purpose of that was to disprove or try to diminish the testimony of Mr. Knight that he knew nothing of the Rice Engineering Company's Water Disposal facilities in

this particular area, is that the purpose of that letter?

MR. HOUSTON: If it please --

MR. WHITE: Let me ask my questions --

MR. HOUSTON: May I clarify the record? The question that I asked Mr. Linebery dealt with whether or not Tenneco had knowledge of Mr. Linebery's protest or inquiry prior to 3:30 yesterday afternoon.

MR. WHITE: All right, hand me the exhibit back, please.

Q (By Mr. White) All you stated here was that "I do not choose to sign the waiver of notice appearing on your application. In regard to this matter, I would like to have some more information". Now, you didn't say that you were protesting, did you?

A No, I didn't, but you knew I hadn't signed your waiver, too.

Q We admit you didn't sign the waiver, but you didn't protest in this letter, did you?

A No, you wouldn't call that a formal protest.

Q Now as to your Justice Salt Water Disposal System which you introduced, do any of the lines extend to the area in question?

A Well, I presume there in question, that you are talking about 31?

Q That's correct.

A They come awful close to it; no, they don't come on Section 31 at all.

Q Do they come on Section 31 at all?

A No, they are north of it, south of it and west of it, awfully close.

Q You spoke about this water that you were able to get in the northwest of Section 6, that was in the Santa Rosa Sand, was it not?

A I presume it is.

Q And the witness testified that the Santa Rosa Sand extended from 300 to 550 feet, did he not? I think the record will so show. Do you know what quantities of water this Rice Engineering Company will be able to take?

A No, I don't.

Q Do you know how much water they are permitted to take?

A I do not.

Q And do you know whether or not, of your own knowledge, that they will be able to take any water from this lease, do you know of your own knowledge?

A Yes.

MR. WHITE: That's all we have.

MR. HOUSTON: Mr. Nutter, for the purposes of the record, I think this Commission can take judicial notice of the fact that Tenneco is the operator in Section 31 and Rice Engineering could not enter Section 31 without Tenneco's permission. So whether or not Rice Engineers has lines into Section 31, it's obvious they don't because Tenneco specifically has not authorized them to enter. It's obvious from the record from the testimony of Tenneco, they haven't asked Rice Engineering to enter.

MR. WHITE: I object, I don't think that the Commission can take any judicial knowledge or administrative notice of any negative evidence. There's no evidence where they did or did not request to enter into Section 31. It's only a hypothetical request of the Commission.

MR. HOUSTON: It's peculiarly within the knowledge of your clients and if your clients come in here today and don't know, then we have to assume they do.

MR. NUTTER: I think we are losing sight of one thing here. The Applicant is proposing to inject salt water into the Langlie-Mattix Producing Formations, whether the first witness is aware of any secondary recovery efforts in the Langlie-Mattix or not, it happens there are some and I think it's admirable of the Applicant to attempt to enhance the

production by the disposal of water into this formation. I look at this more as a pilot waterflood project than a disposal well, frankly, and whether the lines enter Section 31 or not is immaterial, the map speaks for itself in that regard, I think.

MR. HOUSTON: May I have permission to ask Mr. Knight a couple of questions?

MR. NUTTER: Yes, sir. Mr. Knight, you are still under oath.

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Henry Nicholas Knight, having been previously duly sworn, was further examined and testified as follows:

CROSS EXAMINATION

BY MR. HOUSTON:

Q Mr. Knight, I believe you said that one of the reasons that Tenneco would want to have its own disposal well rather than join the Rice Engineering System was that it would be cheaper on Tenneco?

A It would be less expense, yes, it would eliminate laying one and three-quarter miles of line.

Q That assumes that you have to lay a line all the way to the disposal well?

A I'm using Mr. Linebery's figures, one and three-



quarter miles. I was unaware -- I just became aware of this yesterday afternoon and had no information available.

Q Are you the Engineer who handles Tenneco's matters in this area or was this just assigned to you as an isolated hearing?

A The way we're split, there, it's a little hard to say. I handle the Production Operations in this area. We also have a Geological Engineer in this area, and we have Reservoir Engineers in this area.

Q You are not a Reservoir Engineer, then?

A I am working in the capacity as a Production Engineer.

Q Is this set up as primarily a method of disposing of salt water, is this your primary proposal here?

A That is the primary proposal; however, it has secondary merits also, in secondary recovery in the Langlie-Mattix zone.

Q Any time you inject in a producing zone it would have secondary merits, wouldn't it?

A If the zone is capable of accepting the water and if there is communication between the injection well and the producing well, yes.

Q You testified on Direct Examination that you were

not aware of any secondary recovery in the Langlie-Mattix, did you not?

A That is true, but in my capacity of Production Engineer, I wouldn't necessarily be familiar with that unless we had waterfloods in the Langlie-Mattix Zone.

Q My understanding as a lawyer is that there is secondary recovery in the Langlie-Mattix, the same as Mr. Nutter, but my point is that you did not enter into this with the idea of secondary recovery, but rather you've entered into it with the object of saving some money on salt water disposal?

MR. WHITE: I'll object to that, he didn't say that, he gave the two reasons why.

MR. HOUSTON: I'll withdraw the question.

Q (By Mr. Houston) How do you know it would be cheaper for Tenneco to convert this well rather than join the unit's salt water disposal system?

A It's just a matter of mathematics and the cost of labor and equipment. It's cheaper to plastic coat 3200 feet of tubing and 1200 feet of line than it is to lay one and three-quarter miles of line.

Q Referring to Linebery's Exhibit No. 2, you looked at it a moment ago, did you not?

A I am not sure what you are calling No. 2 -- the map, yes.

Q Can you now see that it would not be necessary to lay your independent line necessarily all the way from your production to the disposal well? Wouldn't it be true you could probably lay as little as a quarter of a mile?

A No, I don't believe a quarter of a mile. Our tank battery is located in the south portion of the northwest quarter of 31, it would be about a quarter of a mile over to the line and another quarter of a mile, it would probably be 4,000 feet just from looking at this map. However, that's not really the key to the question here, as to how many feet. If you enter Rice Engineering System, they charge you proportionately, per completion. We have seven wells on this lease, eleven completions, and assuming they would charge between a thousand and \$1200.00 for a completion to connect us, it would be more expensive to go that way, plus they would charge us a monthly handling charge.

Q That's on a cost plus basis, isn't it?

A I am not that familiar with it. I am familiar with the installation above, the Moseley and the Federal 35 leases which are connected to the Justice Salt Water Disposal System. I wasn't aware the system came that far south. I

believe the cost there was \$1100.00 per completion for us to join the system. I'm not sure of that number, I speak it from memory.

Q Do you know within your organization who would have made the decision not to put these wells in the system?

A The Justice Salt Water Disposal System has been knocking around for over a year and I imagine that decision was probably made the early part of this year, maybe late in '67, by our Reservoir Engineers who wanted secondary recovery information on this lease.

Q That's a supposition on your part?

A That's a supposition on my part if we were even contacted about it at the beginning.

Q You have no knowledge of even being contacted?

A No, I don't, and I also called my superior last night who also did not know. I called him at his home and he didn't have access to his files to look up.

Q Who is your superior?

A Mr. Jim Carnes.

Q And you are a Production Engineer and not a Reservoir Engineer?

A I am currently employed as a Production Engineer; I have been employed for nearly four years by Humble as a

Reservoir Engineer.

Q You stated that the Well No. 6 was incapable of producing and Mr. Linebery has been told that the letter received in his Midland Office yesterday said that the well was producing. Would you give us the production of Well No. 6 for the month of August?

A I wrote that letter to Mr. Linebery myself and it was mailed the 16th. The production for the Linebery No. 6 for the month of August was zero due to the fact it was tested around the middle of July and made no fluid and was temporarily shut down.

Q What was the production for the month of June?

A I don't have that information available at this time.

Q You have no production information whatsoever, then, other than that you got a zero test?

A Not with me. The information is available in my Midland office. Had I known this opposition would be here, I could have supplied that information.

Q Well, you were asked by the Examiner as to the cumulative production and you don't have that either, do you?

A No, sir.

MR. HOUSTON: I have no further questions.

MR. WHITE: I have just one question.

MR. NUTTER: Of which witness?

MR. WHITE: Of my witness.

REDIRECT EXAMINATION

BY MR. WHITE:

Q Referring to Exhibit 2 --

MR. HOUSTON: Linebery's Exhibit 2?

Q -- Linebery's Exhibit 2 shows that Tenneco is hooked up with this Justice Water System in Section 35. Are you familiar with that set-up?

A Yes, I am.

Q But you are not familiar with this system being extended over to the area in question?

A No, I was not aware. I don't know as I have seen this map before. Our participation in the Federal Justice Salt Water System with our Federal 35 Lease was determined before I came to the Midland District.

MR. WHITE: That's all.

MR. NUTTER: Does anyone have any questions of the Tenneco Witness?

MR. HOUSTON: I don't have a question, but I would like to point out to the Commission that there are other leases within the Justice Salt Water Disposal System belonging

to Tenneco which are tied into this system, to-wit: The Tenneco Lease in Section 34, 24 South, 37 East, that I see off-hand.

MR. KNIGHT: I'm not familiar with that lease at all. It has no lease name on it, only designates Tenneco as operator; there's the name Moseley. I previously said the Moseley and Federal 35 were tied to this system, yes.

MR. NUTTER: If there are no further questions of Mr. Knight, he may be excused. Are there any questions of Mr. Linebery? He may be excused.

(Witnesses excused.)

MR. NUTTER: Do you have anything further, Mr. Houston?

MR. HOUSTON: Only one thing, Mr. Nutter, and I am neither a Production Engineer nor a Reservoir Engineer, as it's quite obvious from my stumbling and bumbling. However, it is Mr. Linebery's position and the Grazers Association's position that we should have a uniform and orderly development of salt water disposal. In that connection we wholly support the activities of the New Mexico Oil and Gas Conservation Commission and of the oil operators in trying to properly dispose of salt water. I do not feel that this particular Tenneco lease should be segregated out of what is obviously a uniform plan of

disposal in the whole area merely because of the possible saving of a relatively small amount of money, the possible gleaning of some information which may complement a waterflood, nor any of the other secondary reasons. Now, I am confident that Mr. Linebery's information is correct, that Tenneco was aware of this opportunity and that for reasons of economy, frankly, they chose not to join the system. They did join the system where they didn't have too many wells, but we respectfully request the Commission to keep a tight rein on the salt water disposal activities in this area and where there is a cooperative system between dozens of companies, including the company that's the subject here today, we respectfully request that the application be denied because it can join the Rice System. We appreciate your indulgence and your time.

MR. NUTTER: Thank you, Mr. Houston. Do you have anything, Mr. White?

MR. WHITE: Just one brief statement. The Commission has a right to force pool production of oil, but I seriously doubt if the Commission could force an oil operator to dispose of his salt water as they suggest, in the alternative of what the operator presents here today. I don't think the Commission has the authority to force him to tie into that.



line. Thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case 3898? We will take the case under advisement.

STATE OF NEW MEXICO     )  
                              ) ss  
COUNTY OF BERNALILLO    )

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

Witness my hand and seal this 29th day of October, 1968.

\_\_\_\_\_  
Ada Dearnley

I do hereby certify that the foregoing is  
a complete record of the  
the further hearing of Case 3898  
heard by me on \_\_\_\_\_, 1968.

\_\_\_\_\_  
New Mexico Oil Conservation Commission

I N D E X

## WITNESS

## PAGE

HENRY NICHOLAS KNIGHT

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 Cross Examination by Mr. Nutter  
 Cross Examination by Mr. Houston  
 Redirect Examination by Mr. White

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TOM LINEBERY

Direct Examination by Mr. Houston  
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E X H I B I T S

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 Tenneco's 4

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Admitted  
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Linebery's 1  
 Linebery's 2

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OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

November 4, 1963

Mr. Charles White  
White, Gilbert, Koch & Kelly  
Attorneys at Law  
Post Office Box 787  
Santa Fe, New Mexico

Dear Sir:

Enclosed herewith is Commission Order No. R-3549, entered in Case No. 3898, approving the Tenneco Langlie Mattix Ginsberg Pilot Waterflood Project.

Initial injection is to be through the one authorized water injection well, which is to be equipped with plastic-coated tubing set in a packer at approximately 3230 feet.

The casing-tubing annulus shall be loaded with corrosion-inhibited fluid and equipped with a pressure gauge to facilitate detection of leakage in the casing, tubing, or packer.

As to allowable, our calculations indicate that when the authorized injection well has been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 168 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

-2-

Mr. Charles White  
White, Gilbert, Koch & Kelly  
Attorneys at Law  
Post Office Box 787  
Santa Fe, New Mexico

C of wells in the project area, i. e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

O Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

P cc: Oil Conservation Commission  
Y Hobbs, New Mexico

Mr. D. E. Gray, State Engineer Office, Santa Fe, New Mexico  
Mr. Glen Houston - Tom Linebery, Hobbs, New Mexico

ROUGH DRAFT FOR WATERFLOOD LETTERS

Mr. Charles White  
White, Gilbert, Koch & Kelly  
Attorneys at Law  
Post Office Box 787  
Santa Fe, New Mexico

Dear Sirs:

Enclosed herewith is Commission Order No. R-3549, entered in Case No. 3898, approving the Tenneco Langie Mattie Grisham Pilot Waterflood Project.

*Initial injection is to be through the one authorized water injection well, which is to be equipped with plastic-coated tubing set in a packer at approximately 3230 feet.*

*The casing-tubing annulus shall be loaded with corrosion-inhibited fluid and equipped with a <sup>pressure</sup> gauge to facilitate detection of leakage in the casing, tubing, or packer.*

As to allowable, our calculations indicate that when ~~all~~ of the authorized injection wells ~~have~~ been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 168 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

cc: OCC: Hobbs x  
Artesia         
Aztec       

USGS       

~~Mr. Frank Isby~~, State Engineer Office, Santa Fe, New Mexico

Mr. D. E. Gray

Mr. Glen Houston for Tom Lineberry - Hobbs, N. M.

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. 3898  
Order No. R-3549

APPLICATION OF TENNECO OIL COMPANY  
FOR SALT WATER DISPOSAL, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 23, 1968,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 4th day of November, 1968, 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, Tenneco Oil Company, is the owner  
and operator of the Ginsberg-Federal Well No. 6, located in Unit  
E of Section 31, Township 25 South, Range 38 East, NMPM, Langlie-  
Mattix Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to  
dispose of produced salt water into the Queen formation, with  
injection into the open-hole interval from approximately 3258  
feet to 3341 feet.

(4) That, in the alternative, applicant seeks permission  
to institute a pilot waterflood project in the Langlie-Mattix  
Pool by the injection of water into the Queen formation as  
described above.

-2-

CASE No. 3898  
Order No. R-3549

(5) That the subject well should be classified as a pilot waterflood project injection well.

(6) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(7) That the proposed pilot waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(8) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

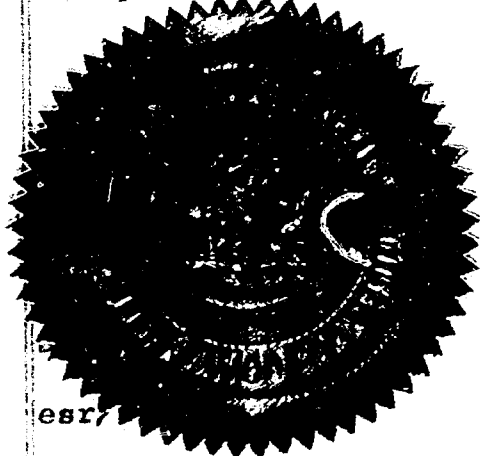
(1) That the applicant, Tenneco Oil Company, is hereby authorized to institute a pilot waterflood project in the Langlie-Mattix Pool by the injection of water into the Queen formation through its Ginsberg-Federal Well No. 6, located in Unit E of Section 31, Township 25 South, Range 38 East, NMPM, Lea County, New Mexico.

(2) That the subject pilot waterflood project is hereby designated the Tenneco Langlie Mattix Ginsberg Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the pilot waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) 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

GLYTON B. HAYS, Member

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

TOM LINEBERRY  
Registered & Commercial Herdsfords

RANCH - KERMIT, TEXAS

BOX 1536 - MIDLAND, TEXAS

October 21, 1968

Case 3898

*John*  
*YMA*  
State of New Mexico Oil  
Conservation Commission  
Santa Fe, New Mexico

Att: Mr. A. L. Porter, Jr.  
Secretary-Director

Dear Mr. Porter:

As owner of the surface, I wish to oppose the application of Tenneco Oil Company to make a salt water disposal well out of Ginsberg-Federal Well No. 6, Unit E, Section 31, T-25-S, R-38-E, Lea County, New Mexico.

I oppose their application for the following reasons:

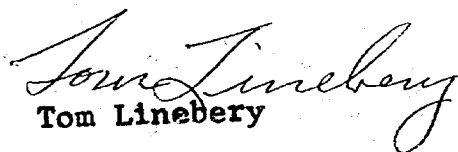
1. Rice Engineering Company is in the process of putting in a salt water disposal line at the present time and this line will serve all the operators adjacent to Tenneco's lease and this line is available to Tenneco and could well serve its needs without an additional disposal well in the area. Rice Engineering Company will be picking up salt water from leases in all directions from and adjacent to the Tenneco lease, except to the east where there is no production. The fewer disposal wells we have the less chance there is of contaminating our fresh water zones.
2. I feel that Tenneco's application to inject salt water into an open hole from 3258 feet to 3341 feet should not be allowed due to the fact that Rice Engineering Company has a disposal well in the SE $\frac{1}{4}$  of NE $\frac{1}{4}$ , Section 2, T-26-S, R-37-E, Lea County, which is approximately one and three-fourths miles southwest of Tenneco's proposed disposal well, and they are required to inject the water below 3500 feet to protect any oil bearing formations above 3500 feet.



3. I note in the application by Tenneco that salt water will be injected through tubing set at 3246 feet into an open hole without a packer. Without the use of a packer the water would have a chance to go into any zone if there were a leak in any of the casing.

For the above reasons I request that the application for salt water disposal well by Tenneco Oil Company be denied.

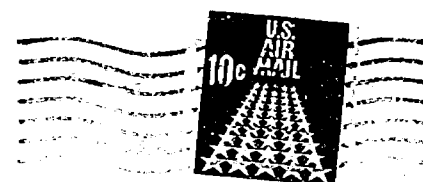
Respectfully,

  
Tom Linebery

FRYING PAN RANCH



P. O. BOX 1536  
MIDLAND, TEXAS



State of New Mexico  
Oil Conservation Commission  
Santa Fe, New Mexico

Docket No. 31-68

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 23, 1968

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 3894: Application of Signal Oil and Gas Company for a non-standard oil proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a non-standard oil proration unit comprising the W/2 NE/4 and the N/2 SE/4 of Section 17, Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico, said unit to be dedicated to its State AP Well No. 1 located 1980 feet from the South line and 660 feet from the East line of said Section 17.

CASE 3895: Application of Sun Oil Company for a pressure maintenance project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project in its New Mexico State "H" Lease by the injection of water into the San Andres formation through its New Mexico State "H" Well No. 13 located in the SE/4 SE/4 of Section 16, Township 8 South, Range 30 East, Cato-San Andres Pool, Chaves County, New Mexico. Applicant further seeks the promulgation of special rules to govern operation of said pressure maintenance project.

CASE 3887: (Continued from the October 9, 1968, Examiner Hearing)

Application of Kersey & 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 sand of Grayburg formation through two wells to be located in Units E and K of Section 12, Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico. Applicant further proposes to produce oil from the Upper Grayburg through parallel strings of tubing, if said zones are productive in the subject wells.

CASE 3896: Application of Kersey & Hanson, Yates Drilling Company, and John H. Trigg for several waterflood projects, Eddy County, New Mexico. Applicants, in the above-styled cause, seek authority to institute several cooperative waterflood projects by the injection of water into the Queen and Grayburg formations through four injection wells located in Sections 21

CASE 3896 continued

and 28, Township 18 South, Range 29 East, Turkey  
Track Queen-Grayburg Pool, Eddy County, New Mexico.

CASE 3897:

Application of Kersey-Wittkopp and E. A. Hanson for two  
waterflood projects, Eddy County, New Mexico. Applicants,  
in the above-styled cause, seek authority to institute two  
cooperative waterflood projects by the injection of water  
into the Queen formation through two injection wells loca-  
ted in the NW/4 SE/4 and the SW/4 SE/4 of Section 6. Town-  
ship 19 South, Range 31 East, Shugart Pool, Eddy County,  
New Mexico.

CASE 3898:

Application of Tenneco Oil Company for salt water disposal,  
Lea County, New Mexico. Applicant, in the above-styled  
cause, seeks authority to dispose of produced salt water  
into the Queen formation in the open-hole interval from  
approximately 3258 feet to 3341 feet in its Ginsberg-Federal  
Well No. 6 located in Unit E of Section 31, Township 25  
South, Range 38 East. Langlie-Mattix Field, Lea County, New  
Mexico.

CASE 3899:

Application of Cities Service Oil Company for salt water  
disposal, Lea County, New Mexico. Applicant, in the above-  
styled cause, seeks authority to dispose of produced salt  
water into the San Andres formation in the interval from  
approximately 4087 feet to 4176 feet in its State AD Well  
No. 8 located in Unit J of Section 22, Township 10 South,  
Range 32 East, Mescalero-San Andres Pool, Lea County, New  
Mexico.

CASE 3900:

Application of Continental Oil Company for downhole commin-  
gling, Lea County, New Mexico. Applicant, in the above-  
styled cause, seeks authority to commingle production from  
the Vacuum Wolfcamp Pool and the North Vacuum Abo Pool in  
the well-bore of its State H-35 Well No. 7 located 660 feet  
from the North line and 1780 feet from the East line of  
Section 35, Township 17 South, Range 34 East, Lea County,  
New Mexico.

CASE 3901:

Application of Continental Oil Company for salt water dis-  
posal, Lea County, New Mexico. Applicant, in the above-  
styled cause, seeks authority to dispose of produced salt  
water into the Yates-Seven Rivers formations in the perforated  
interval from approximately 3330 feet to 3552 feet in its  
Lynn A-28 Well No. 6 located in Unit H of Section 28, Township

(CASE 3901 continued)

23 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.

CASE 3902: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project by the injection of water into the Queen formation through its Stevens "B" Well No. 8 located in Unit A of Section 12, Township 23 South, Range 36 East, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 3903: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Delaware formation in the perforated intervals from approximately 4675 feet to 4765 feet in its Payne Well No. 11 and from 4666 feet to 4740 feet in its Payne Well No. 12 located 660 feet from the South line and 1650 feet from the West line of Section 30, 1935 feet from the North line and 2090 feet from the West line of Section 31, respectively, Township 26 South, Range 33 East, El Mar-Delaware Pool, Lea County, New Mexico.

CASE 3904: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project by the injection of water into the Delaware formation through its Thompson Federal 19 Well No. 2 located in Unit F of Section 19, Township 26 South, Range 32 East, North Mason-Delaware Pool, Lea County, New Mexico.

CASE 3905: Application of Texas Pacific Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from approximately 12,269 feet to 12,541 feet in its State "O" Well No. 1 located in Unit J of Section 15, Township 10 South, Range 36 East, South Crossroads-Devonian Pool, Lea County, New Mexico.

October 23, 1968 - Examiner Hearing  
Page 4

Docket No. 31-68

**CASE 3906:** Application of Skelly Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Queen formation through its Mattix "A" Well No. 4 located in Unit K of Section 2, Township 24 South, Range 37 East, Langlie-Mattix Oil Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of well response.

**CASE 3907:** Application of Skelly Oil Company for a waterflood project, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project by the injection of water into the San Andres formation through its Hobbs "W" Well No. 9 located in Unit F of Section 29, Township 7 South, Range 34 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of well response.

**CASE 3908:** Application of Pan American Petroleum Corporation for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from approximately 3932 feet to 4027 feet in its Miller Federal Well No. 4 located in Unit L of Section 35, Township 7 South, Range 31 East, Tom-Tom San Andres Pool, Chaves County, New Mexico.

**CASE 3909:** Application of Champlin Petroleum Company for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into San Andres formation, Chaveroo-San Andres Pool, Roosevelt County, New Mexico, through the following two wells located in Township 7 South, Range 33 East:

Champlin Lauck-Federal Well No. 12,  
Unit J of Section 29; Disposal Interval -  
4202 feet to 4404 feet;

Champlin State 32-7-33 Well No. 5, Unit J  
of Section 32; Disposal Interval - 4303  
feet to 4425 feet.

- CASE 3910: Application of Atlantic Richfield Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Bough "C" zone of the Pennsylvanian formation underlying the SW/4 of Section 17, Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico. Said acreage to be dedicated to a well located in the NE/4 SW/4 of said Section 17.
- CASE 3911: Application of Atlantic Richfield Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Bough "C" zone of the Pennsylvanian formation underlying the SE/4 of Section 8, Township 10 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico. Said acreage to be dedicated to a well located in the NW/4 SE/4 of said Section 8. In the alternative applicant seeks approval of a non-standard oil proration unit comprising the E/2 SE/4 of said Section 8 and the W/2 SW/4 of Section 9, said Township and Range, said unit to be dedicated to a well to be drilled in the NE/4 SE/4 of said Section 8.
- CASE 3882: (Continued from the October 9, 1968, Examiner Hearing)  
Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Teague Blinbry Pool, Lea County, New Mexico.
- CASE 3883: (Continued from the October 9, 1968, Examiner Hearing)  
Application of Solar Oil Company for a special gas-oil ratio limitation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 506 of the Commission Rules and Regulations to provide for a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil in the Imperial Tubb-Drinkard Pool, Lea County, New Mexico.



TENNECO OIL COMPANY • P. O. BOX 1031 • 1800 WILCO BUILDING • MIDLAND, TEXAS 79701

October 25, 1968

Mr. Daniel S. Nutter  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

RE: Ginsberg Federal No. 6  
Justis Field  
Lea County, New Mexico

Dear Mr. Nutter:

Attached are three copies of the revised Exhibit 1 pertaining to CASE No. 3898, Tenneco Oil Company's application for Salt Water Disposal in the Ginsberg Federal No.6 well. Thank you for your consideration in allowing us to submit this revision after the hearing.

Very truly yours,

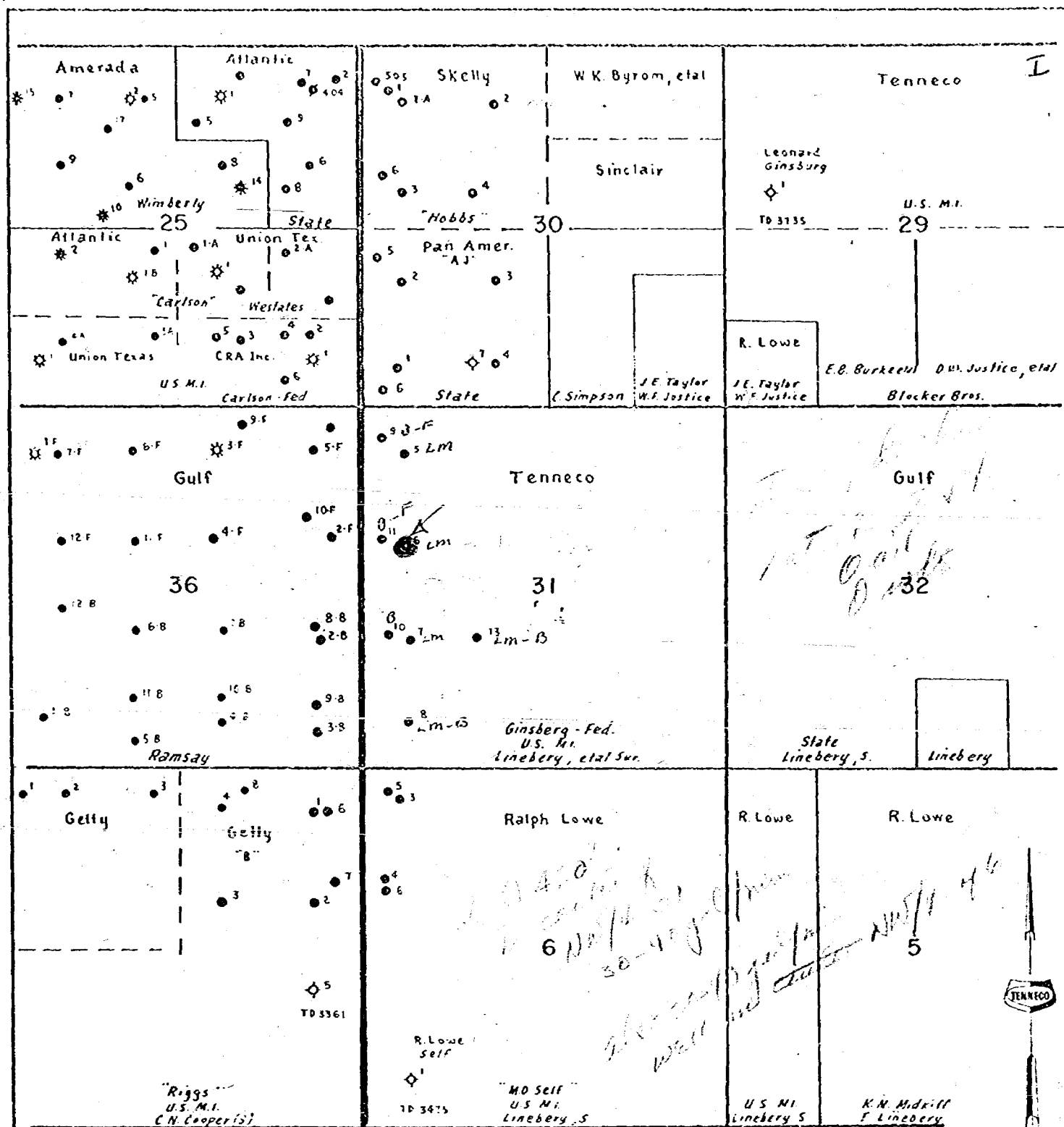
TENNECO OIL COMPANY

*F. J. McDonald*  
F. J. McDonald  
District Superintendent

HNK:cw

Attachments





1 in 40  
 3 prod 40's  
 4 total 40's  
 42  
 4  
 168

TENNECO OIL COMPANY SUBSIDIARY OF TENNECO CORPORATION	
GINSBURG-FEDERAL LEASE LEA CO., NEW MEXICO	
BEFORE EXAMINER MUTTER	
Tenn	1
3898	

Datum Point For All Measurements is 10' Above Tubing Hanger.

2-3/8" Tubing

8-5/8" - 24# - J-55 @ 1190'.  
Cmtd. w/450 sx. Cmt circ. to surface.

Top of Cmt calculation @ 2300'.

Packer at 3230'

5-1/2" - 15.50# - J-55 @ 3257'.  
Cmtd. w/150 sx.

Langlie Mattix  
Open Hole 3257'  
3341'

T.D.: 3341'

BEFORE EXAMINATION  
EXHIBIT 2  
CASE NO. 3898

TENNECO OIL COMPANY  
SUBSIDIARY OF TENNECO CORPORATION

PROPOSED  
Ginsberg Federal No. 6

Lea County, New Mexico

Diagrammatic Sketch of Mechanical  
Installation of SWD Completion.

SCALE IN FEET  
4000 2000 0 4000 8000  
MIDLAND, TEXAS

HALLIBURTON DIVISION LABORATORY  
HALLIBURTON COMPANY  
LOVINGTON, NEW MEXICO

No. 12-651-65

LABORATORY REPORT

Date July 22, 1965

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Date Received 7-22-65

To Tenneco Oil Corporation  
1800 Wilco Building  
Midland, Texas

Well & Lease As Marked Depth Formation

Location Field Source

Ginsberg #8

Ginsberg #10

Specific gravity 60/60 °F 1.101

1.087

Color, filtrate Clear

Clear

pH 5.9

6.0

Resistivity ND

ND

°F ppm (mpt)

Chlorides, Cl 90,400

75,200

Sulfates, SO<sub>4</sub> 2,500

2,700

Alkalinity, HCO<sub>3</sub> 490

580

Calcium, Ca 7,120

8,640

Magnesium, Mg 1,020

440

Iron, Fe Nil

Nil

Sodium, Na\* 49,865

39,815

Sulfides, H<sub>2</sub>S Nil

Nil

Remarks API Gr. @ 60°F = Ginsberg #8 Blinbry = 38.1; Ginsberg #8 Queens = 37.9;

Ginsberg #7 (?) = 37.4; Ginsberg #10 (?) = 37.6; Ginsberg #11 Blinbry = 38.4

ppm equals Parts per million uncorrected or milligrams per liter  
\* includes Potassium as Na.

Laboratory Analyst  
Brewer

Respectfully submitted

HALLIBURTON COMPANY

By Rex L. Hammack, Jr., Division Chemist

NOTICE

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

BEFORE EXAMINER NUT  
CIL CONSERVATION COMMISSION  
EXHIBIT NO. 3  
CASE NO. 3898

October 14, 1968

Tenneco Oil Company  
P. O. Box 1031  
Midland, Texas

Att: Mr. F. J. McDonald  
District Superintendant

Dear Mr. McDonald:

This refers to your letter of September 24th which has just recently come to my attention due to the fact that I have been away from home for some time.

I do not chose to sign the waiver of notice of hearing on your "Application to Dispose of Salt Water" before the New Mexico Oil Conservation Commission. Relative to this matter I would like some more information before your hearing; if all the wells which this disposal well will serve are your well's, if it will serve more than one lease, etc.

Thank you a reply.

Yours truly,

Tom Linebery

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COM.	
EXHIBIT NO.	1
CASE NO.	3898



TENNECO OIL COMPANY • P. O. BOX 1031 • 1800 WILCO BUILDING • MIDLAND, TEXAS 79701

September 24, 1968

*Set for hearing*

*Case 3898*

Mr. A. L. Porter, Jr., Section - Director  
Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico 87501

RE: Salt Water Disposal Application  
Ginsberg-Federal No. 6 Well  
Langlie-Mattix Field, Lea  
County, New Mexico.

Dear Sir:

Attached is a New Mexico Oil Conservation Commission Form C-108 "Application to Dispose of Salt Water By Injection Into A Porous Formation." This form is completed for Tenneco Oil Company's Ginsberg-Federal No. 6 Well, Langlie-Mattix Field, Lea County, New Mexico. Our proposal is to convert this well to salt water disposal, in the Queen formation, to receive water produced from the Justis Blinbry Pool, Justis Fusselman Pool, and Langlie Mattix Pool. Tenneco's current water production from these three pools is approximately 150 barrels per day. We anticipate that this water will initially be disposed of at a vacuum, but have listed maximum expected rate at 500 barrels per day and the maximum expected pressure at 1,500 psig on the form. Current production from the Ginsberg-Federal No. 6 Well is zero barrels of oil and zero barrels of water per day by pump test.

Tenneco Oil Company requests that this application for salt water disposal be granted and approved inasmuch as there are no objections by offset operators; fresh water sands are protected by cemented surface casing, production casing and tubing set on a packer; disposal of water into the Queen formation will result in no loss of commercial oil; and such disposal will permit greater recovery of commercial oil from the Justis Blinbry, Justis Fusselman, and Langlie Mattix Pools.

Very truly yours,

TENNECO OIL COMPANY

*J. McDonald*  
J. McDonald  
District Superintendent

HNK:cw

Attachments

DOCKET MAILED

Date 10-11-68



NEW MEXICO OIL CONSERVATION COMMISSION  
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

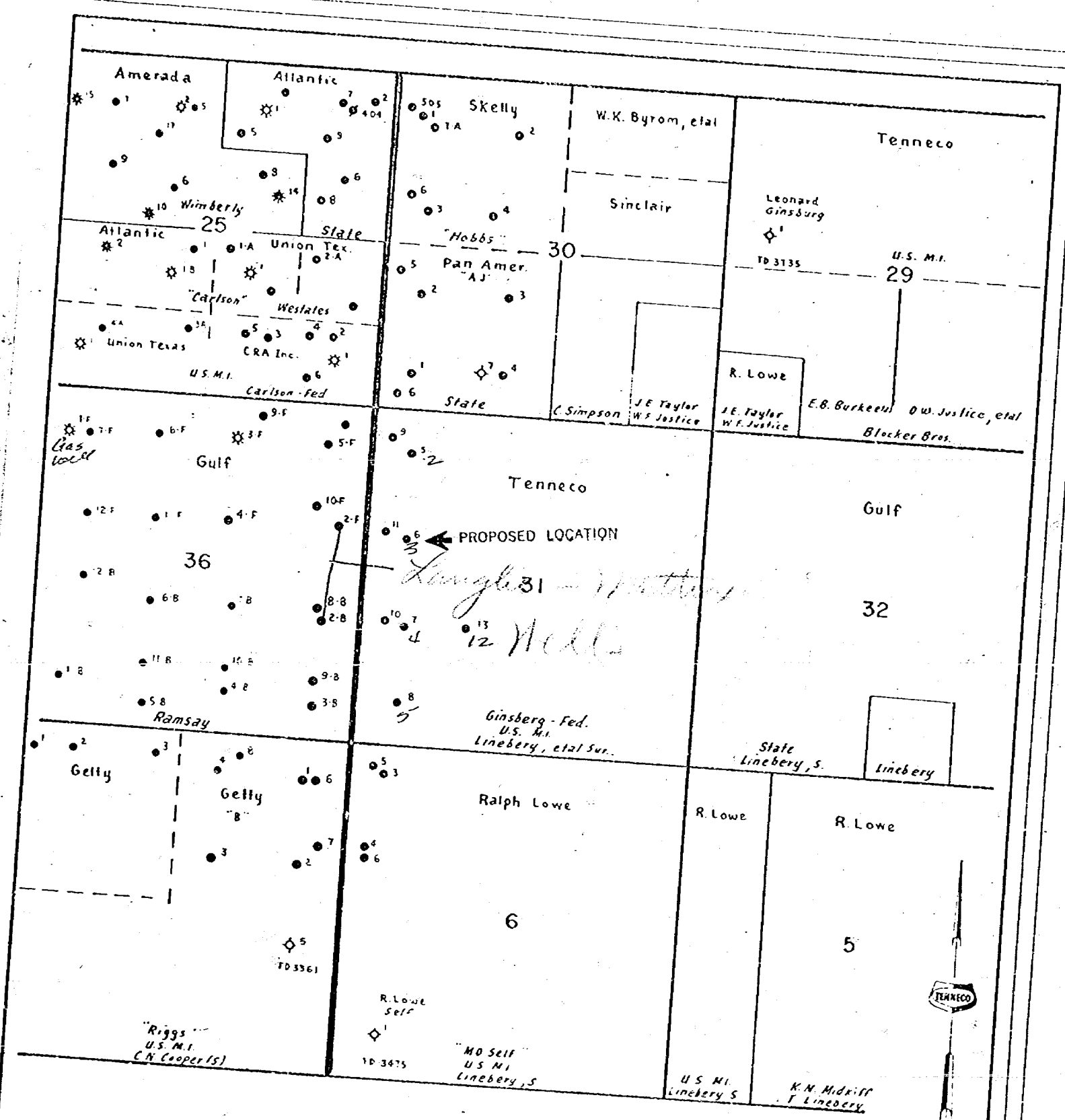
OPERATOR <b>Tenneco Oil Company</b>		ADDRESS <b>P. O. Box 1031, Midland, Texas 79701</b>	
LEASE NAME <b>Ginsberg-Federal</b>	WELL NO. <b>6</b>	FIELD <b>Langlie Mattix</b>	COUNTY <b>Lea</b>
LOCATION UNIT LETTER <b>E</b> ; WELL IS LOCATED <b>1980</b> FEET FROM THE <b>N</b> LINE AND <b>660</b> FEET FROM THE <b>W</b> LINE, SECTION <b>31</b> TOWNSHIP <b>25-S</b> RANGE <b>38-E</b> NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	<b>8-5/8"</b>	<b>1190'</b>	<b>450</b>
INTERMEDIATE			
LONG STRING	<b>5-1/2"</b>	<b>3257'</b>	<b>150</b>
TUBING	<b>2-3/8"</b>	<b>3246'</b>	NAME, MODEL AND DEPTH OF TUBING PACKER <b>None</b>
NAME OF PROPOSED INJECTION FORMATION <b>Queen</b>		TOP OF FORMATION <b>3258'</b>	BOTTOM OF FORMATION <b>3341'</b>
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <b>Tubing</b>		PERFORATIONS OR OPEN HOLE? <b>Open Hole</b>	PROPOSED INTERVAL(S) OF INJECTION <b>3258' to 3341'</b>
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil Production</b>		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>No</b>
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>850'</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>None</b>	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>None</b>
ANTICIPATED DAILY INJECTION VOLUME (BBL'S.) <b>175</b>	MINIMUM <b>175</b>	MAXIMUM <b>500</b>	OPEN OR CLOSED TYPE SYSTEM <b>Closed</b>
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -		WATER TO BE DISPOSED OF <b>Yes</b>	IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>Gravity if Possible</b>
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Mr. Tom Linebery - 802 South Main - Midland, Texas 79701</b>		NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>	APPROX. PRESSURE (PSI) <b>Max. 1500 psig</b>
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL			
<b>Ralph Lowe - Box 832 - Midland, Texas 79701</b>			
<b>Tidewater Oil Co. - Box 547 - Hobbs, New Mexico 88240</b>			
<b>Gulf Oil Corp. - Box 670 - Hobbs, New Mexico 88240</b>			
<b>Westates Pet. Co. - Box 55 - Jal, New Mexico 88252</b>			
<b>Pan American Pet. Corp. - Box 68 - Hobbs, New Mexico 88240</b>			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER <b>Yes</b>	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>	THE NEW MEXICO STATE ENGINEER <b>Yes</b>
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA <b>Yes</b>	ELECTRICAL LOG <b>Yes</b>	DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

*J. F. Carnes* District Production Engineer AUG 30, 1968  
(Signature) J. F. Carnes (Title) (Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

*Case 3898*

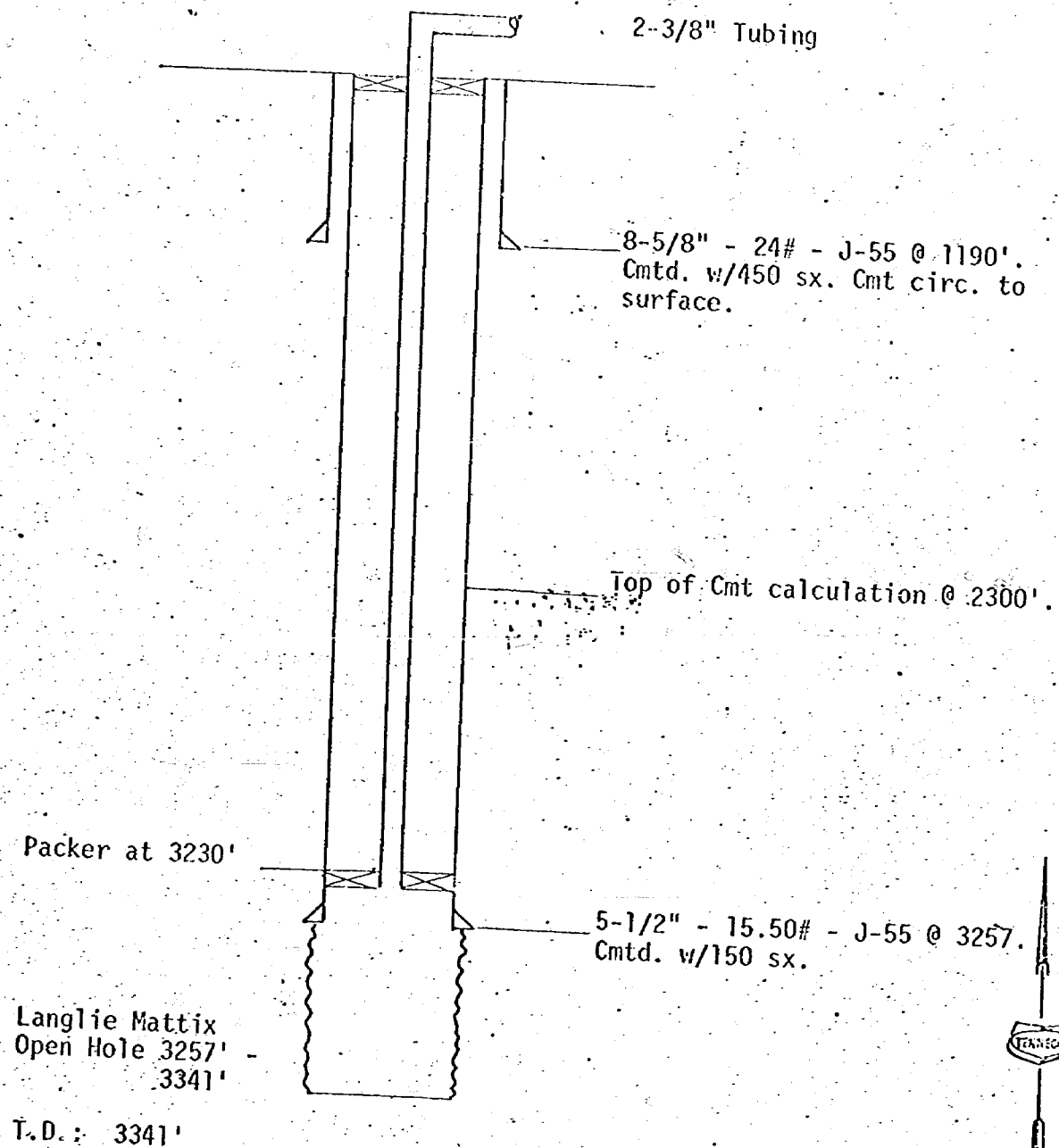


TENNECO OIL COMPANY  
SUBSIDIARY OF TENNECO CORPORATION  
GINSBURG FEDERAL LEASE  
LEA CO., NEW MEXICO

Case 3898



Datum Point For All Measurements is 10' Above Tubing Hanger.



TENNECO OIL COMPANY  
SUBSIDIARY OF TENNECO CORPORATION

PROPOSED  
Ginsberg Federal No. 6

Lea County, New Mexico

Diagrammatic Sketch of Mechanical  
Installation of SMD Completion.

4000 2000 0 SCALE IN FEET 4000 8000

MIDLAND, TEXAS

Case 3898

W A I V E R

To Whom It May Concern:

I, the undersigned, representing \_\_\_\_\_,  
an offset operator to Tenneco Oil Company's Ginsberg-Federal Lease, Langlie  
Mattix Field, Lea County, New Mexico, have no objections to Tenneco Oil  
Company's application to convert the Ginsberg-Federal No. 6 well to Salt  
Water Disposal in the Queen Formation between 3258' and 3341'. Said well  
is located 1980' FNL and 660' FWL of Section 31, T-25-S, R-38-E, Lea County,  
New Mexico.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Position

\_\_\_\_\_  
Company

\_\_\_\_\_  
Address

\_\_\_\_\_  
Date

Return to:  
Tenneco Oil Company  
P. O. Box 1031  
Midland, Texas 79701  
ATTENTION: Mr. F. J. McDonald

HNK:cw

*Case 3898*

HALLIBURTON DIVISION LABORATORY  
HALLIBURTON COMPANY  
LOVINGTON, NEW MEXICO

No. 11-551-65

LABORATORY REPORT

Date July 23, 1965

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Date Received 7-22-65

To Tenneco Oil Corporation  
1800 Wilco Building  
Midland, Texas

Well & Lease As Marked Depth Formation

Location Field Source

Ginsberg #8

Ginsberg #10

Specific gravity 60/60 °F 1.101

1.087

Color, filtrate Clear

Clear

pH 5.9

6.0

Resistivity ND  
°F ppm (mpt)

ND

Chlorides, Cl 90,400

75,200

Sulfates, SO<sub>4</sub> 2,500

2,700

Alkalinity, HCO<sub>3</sub> 490

580

Calcium, Ca 7,120

8,640

Magnesium, Mg 1,020

440

Iron, Fe Nil

Nil

Sodium, Na<sup>+</sup> 49,865

39,815

Sulfides, H<sub>2</sub>S Nil

Nil

Remarks API Gr. @ 60°F. = Ginsberg #8 Blinbry = 38.1; Ginsberg #8 Queens = 37.9;

Ginsberg #7 (1) = 37.4; Ginsberg #10 (?) = 37.6; Ginsberg #11 Blinbry = 38.4

ppm equals Parts per million uncorrected or milligrams per liter  
\* includes Potassium as Na.

Laboratory Analyst

Brewer

Respectfully submitted

HALLIBURTON COMPANY

By

Rex L. Hammack, Jr., Division Chem

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall be liable for any loss or damage, whether due to act or omission, resulting from such report or its use.

Case 3898

DRAFT

GMH/esr

10/31/68

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. 3898

Order No. R- 3549

APPLICATION OF TENNECO OIL COMPANY  
FOR SALT WATER DISPOSAL, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 23, 1968,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this \_\_\_\_\_ day of November, 1968, 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, Tenneco Oil Company, is the owner  
and operator of the Ginsberg-Federal Well No. 6, located in Unit  
E of Section 31, Township 25 South, Range 38 East, NMPM, Langlie-  
Mattix <sup>Pool</sup> Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to  
dispose of produced salt water into the Queen formation, with  
injection into the open-hole interval from approximately 3258  
feet to 3341 feet.

(4) That, in the alternative, applicant seeks permission  
to institute a <sup>pilot</sup> waterflood project in the Langlie-Mattix Pool  
by the injection of water into the Queen formation as  
described above.

(5) That the subject well should be classified as a <sup>pilot</sup> water-  
flood project injection well.

(6) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(7) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(8) That the subject application should be approved ~~for~~  
~~waterflood project injection well~~ and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Tenneco Oil Company, is hereby authorized to institute a <sup>pilot</sup> waterflood project in the Langlie-Mattix Pool by the injection of water into the Queen formation through its Ginsberg-Federal Well No. 6, located in Unit E of Section 31, Township 25 South, Range 38 East, NMPM, Lea County, New Mexico.

(2) That the subject <sup>pilot</sup> waterflood project is hereby designated the Tenneco Langlie Mattix Ginsberg Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the <sup>pilot</sup> waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) 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.