BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Examiner Hearing

September 1, 1971

IN THE MATTER OF:

Application of Tenneco Oil Company for gas injection, McKinley County, New Mexico.

Case No. 4584

BEFORE: ELVIS A. UTZ, EXAMINER

TRANSCRIPT OF HEARING

MR. UTZ: Case 4584.

MR. HATCH: Case 4584. Application of Tenneco Oil Company for gas injection, McKinley County, New Mexico.

MR. KELLY: Booker Kelly of White, Gilbert, Koch, Kelly and McCarthy, appearing on behalf of the applicant. We have one witness, and I would ask that he be sworn.

(Witness sworn)

MR. KELLY: Could I ask for other appearances?

MR. UTZ: Are there other appearances?

MR. STEVENS: Don Stevens, with McDermott, Connelly and Stevens, representing Alan Antweil and overriding royalty owners in the field. We have no witnesses.

MR. UTZ: Are there others?

(Whereupon, Tenneco's Exhibits A through G were marked for identification.)

WILLIAM MELNAR

having been first duly sworn, according to law, upon his oath testified as follows:

DIRECT EXAMINATION

BY MR. KELLY:

Q Would you state your name, by whom employed and position, please?

A My name is William Melnar. I am the District Petroleum Engineer for Tenneco Oil Company, located in Denver, Colorado.

Q And have you previously qualified as an expert witness in the field of petroleum engineering before this commission?

A Yes, I have.

Q Would you state what Tenneco seeks by this application?

A Tenneco seeks permission to temporarily restore casinghead gas produced from wells located in the Lone Pine-dakota "D" Pool, McKinley County, New Mexico, by injecting the gas into the Dakota "A" zone through perforations from 2547 to 2562 feet, and at Santa Fe Pacific Railroad Well No. 2.

This well is located in the NW/4 SW/4 of Section 13, Township 17 North, Range 9 West.

Q Now, referring to what has been marked Exhibit A, which is a structure map of the "D" Pool, would you go over that with the examiner?

A Okay. Exhibit A is a structure map on top of sixteen percent porosity of the Dakota "D" sand.

This particular pool is bounded on the north by faults, primary fault A, which has a throw of 165 to 175 feet, and to the west, south and east, by an all-water contact.

The operators in this pool are -- there are four operators, Tenneco, Tesoro, Gil Oil, and Beard Oil Company. Tenneco operates the Santa Fe Pacific Railroad leases. I

will start it with Township 17 North and Range 9 West. They operate Section 13, Section 24, and in Township 17 North, Range 8 West.

They operate the SE/4 of Section 7, the NW/4 NE/4 and SE/4 of Section 18.

Tesoro operates the SW/4 of Section 7, Santa Fe Pacific Railroad lease. Gil Oil operates the SW/4 of Section 18 which is a Baji lease and Beard Oil Company operates the SW/4 and NW/4. I'll take that back. Operates the SW/4 of Section 8 and the NW/4 of Section 17.

Q Now, as I understand it, the "D" zone is an oil pool, right?

A Yes, sir, it is.

Q And you are currently flaring this gas?

A Yes. The gas that is produced with the oil is being currently flared.

Q And the storing project is preliminary to the formation of a unit for pressure maintenance or secondary recovery project in the "D" zone?

A By reinjecting this produced gas back into the "D" zone.

Q I see. Now, referring to what has been marked Exhibit B, would you go through that for the examiner?

A Exhibit B is your estimated casinghead gas production from the Lone Pine-dakota "D" pool, and this gas production is shown by lease, by operator, and has been

calculated based on the gas oil ratios taken in July 1971.

We can see by looking at the second page, at the bottom, that the field total is approximately 3.4 million cubic feet per day of the casinghead gas.

Q Now, has that rate increased substantially over the life of this pool?

A It has increased from approximately two, two and a half million initially or since full development to the present 3.4 million a day. It has increased slightly.

Q Now, this figure, the 3.4, would be your -- assuming no more increase, would be your maximum, then, injection volume?

A Be the maximum injection volume now.

Q And actually, there would probably be some of the gas that is used for lease purposes; isn't that correct?

A Right. Some of this is being used for lease use, so actual gas flaring may be somewhat less in this.

Q How many wells will be participating in this injection program?

A There is a maximum of twenty-two wells.

Q Are you aware of any other wells that would be planned?

A There is a possibility that Beard Oil Company will drill a well, a replacement well in the NW/4 of Section 17, Township 17 North, Range 8 West.

Q But you are asking that any well in the Lone Pine-dakota

"D" pool would be able to participate in this injection program?

A Yes, I do.

Q Now, what is the status of getting this system together?

A The status of this gas storage project, we have all the working interest owners in the Dakota "D" pool, have approved this project, and in fact, have authorized the expenditure, $350,000 to implement the program.

Tenneco has begun the actual construction, gathering system constructions to implement this, and as of this morning, our ditching is about ten percent complete. Our installation of compressor facilities to compress gas is twenty-five percent complete.

We estimate that we will have a complete project, could be completed by November 1, 1971.

Q Now, referring to what has been marked Exhibit C, which is the plan of the gathering system itself, would you explain how it works?

A Exhibit C is a plan. It shows our plan of measuring and gathering the casinghead gas from the Dakota "D" zone prior to storage in the Dakota "A" zone. It shows that well, the gas from each lease independently. Take this gas to a central point, which will be on the Santa Fe lease in Section 13, Township 17 North, Range 9 West.

At this point we will compress it to sufficient pres-

sure to inject it into Santa Fe Pacific Railroad Well No. 2.

Prior to injection of this well we will meter the total volume of gas through a master meter, and our plan is to then use this master meter as an official gas volume allocated back to the lease based on the individual meter volumes on each lease.

Q Now, as far as the "D" zone is concerned, what is the royalty interest situation there?

A We have the fee tracts which are owned by Santa Fe Pacific Railroad. We have the Don Ne Pah, the Yazzie, the Baji, Kagoso, Toledo, and Dosh E Pi Henio leases that are Indian leases. Those are the only leases which now produce casinghead gas.

Q And you have been in contact with the U. S. G. S. as far as the Indian leases; is that correct?

A Yes, we have.

Q Have you got a basic agreement with them worked out?

A Yes. We have discussed this project with the U. S. G. S., and we have agreed to pay royalty on the gas, casinghead gas taken from the Indian leases at the time we begin storage of this gas.

Q And what sort of proposal would you have with Santa Fe?

A We have proposed to the other royalty owners that they be paid royalty on their gas at the time that the gas is sold from the Dakota "D" pool at blowdown.

Q After you got a purchaser?

A After we got a purchaser from the lease, yes.

Q All right. Now, let's go over to the "A" zone and the structure map shown on Exhibit D. Does the "A" zone basically overlie the "D" zone?

A The "A" zone overlies the "D" zone only on the western portion of the field, and as shown on Exhibit D, which is a structure map on top of the sixteen percent porosity of the Dakota "A" zone, this reservoir is bounded on the north by a fault. It is bounded on the northeast and southwest by a strand link or a boundary of no sand, and on the northeast and southeast by a gas water contact.

Q Now, are you convinced that the "A" zone is a separate isolated zone from the "D" zone?

A Yes, I am.

Q You have an exhibit showing the reservoir data of the "A" zone, don't you?

A Yes, I have. Exhibit E is the tabulation of reservoir data on the Dakota "A" zone, and I will just mention a few of them.

The original reservoir pressure, our current reservoir pressure, is 964 P. S. I. G. The gas, original gas in place is 3, 373 million standard cubic feet, and we now have two completions in the pool.

Q Now, let's go back to Exhibit D. Would you locate those

wells?

A The two completions in the Dakota "A" zone are the Santa Fe Pacific Railroad Well A-1 which is located in the NW/4 of the NE/4 of Section 23, Township 17 North, Range 9 West. The other well is the Santa Fe Pacific Railroad Well No. 2 located in the NW/4 of the SW/4 of Section 13, Township 17 North, Range 9 West, and they are indicated on the map by a red colored triangle.

Q And it is the No. 2 well that is a proposed injection well?

A Yes, it is.

Q What is the status of those wells now?

A Both wells are currently shut in.

Q And they are completed only in the "A" zone?

A Yes.

Q Now, you have previously testified you will be injecting at high or higher than in the 3406, I think, mcf per day. Do you have any alternate plans if that Well No. 2 won't take this gas in that volume?

A Yes. If we cannot inject this gas, all this gas in the Well No. 2, we would probably complete Well No. 8 which is located in the NW/4 of the NW/4 of Section 24 as a gas injection well or possibly drill other wells through that zone.

MR. KELLY: Well, Mr. Examiner, we are requesting, then, that the application or the order granted have a provision

which would state administrative approval of the additional injection wells, if they should be necessary.

Q (Mr. Kelly continuing) Now, assuming your November 1 date, you are only going to be injecting for two months -- no. You are going to get it in by November 1. When do you think you will get your unit?

A The Dakota "D" unit approved?

Q Yes.

A It should be somewhere within I'll say four to six months from now or another -- say another four to five months after the 1st of November.

Q So you will be injecting possibly for as long as six months?

A I would say five is probably more of a maximum.

Q How do you stand on the unit? Do you anticipate any problems getting that formed?

A The Dakota "D" unit, we have presented engineering data to all the operators. The operators have agreed on a participation formula. We have discussed the unit with the U. S. G. S. in Roswell, and are in fair agreement. We should be submitting the unit agreement and asking for approval for this unit, mailing out this material this week, so we are, I think, progressing well, and it should be a matter of paperwork and various approvals now.

Q Well, assuming a five month injection period, what would

be the total gas roughly that would be injected into the "A" zone?

A If you assume 3.4 million a day as an average for five months it would be approximately five hundred million. If the gas should increase you may be looking at six, seven hundred.

Q Do you feel that the "A" zone will be capable of taking that much gas?

A Yes, I do. There shouldn't be any problem in injecting this quantity of gas in this reservoir.

Q What will be your injection pressure?

A We estimate that the pressure at the surface will be approximately 1500 pounds.

Q Now, you have a log of the proposed injection wells which is marked Exhibit F?

A Exhibit F is an induction electrical log on the proposed gas injection well, and if we will turn to the bottom of the log, approximately 2500 feet, we have marked the Dakota "A" section. You can see that the top of the "A" zone is at 2548 feet or at a sub-sea elevation of +4424.

The perforations in the well are 2549 to 54 and 2560 to 64. The well was completed through these perforations and tested a calculated absolute open flow of 4.35 million cubic feet per day.

Q Now, let's go to the diagrammatic sketch of your injection

well and explain the casing program to the examiner.

A The Exhibit G is a schematic diagram of the proposed injection well, the Santa Fe Pacific Railroad Well No. 2. It shows that we have set five and a half inch casing at 2805 and cemented this with 300 sacks of cement.

The estimated top of the cement is at approximately 1500 feet. We proposed to inject the gas into this well down to two and three-eighths inch tubing and under a packer set at approximately 2515 feet, and through the perforations at 2547 through 62.

We would have some sort of treated fluid in the casing tubing annulus, and, of course, we would also have a pressure gauge on the annulus to monitor the pressure on it.

Q Do you anticipate any corrosion problems with it?

A We do not anticipate any problems.

Q In your opinion, would the injection as shown on Exhibit G assure that the gas would be isolated to the "A" Zone?

A Yes, it would. We have taken pressures, of course, in the "A" Zone, and it is definitely less than it was in the "D" Zone, so we do have a good isolated completion in this well.

Q Now, what efforts has Tenneco made to find a buyer for this gas?

A Well, Tenneco has had some shut-in gas wells in this area

for several years now, and over the years we have made efforts to sell this gas, and we have contacted the various -- tried to find companies in the area, and the problem is that the lines are located -- the closest line is twenty miles away, and there is insufficient reserves to justify laying a line, and at the present time there is no market for this, for any gas in this Hospah unit.

Q So there is really the only feasible solution to store the gas so you can put it to beneficial use at a later time?

A Yes, it is.

Q Now, what is the ownership pattern as far as the "A" zone is concerned?

A The ownership of the "A" zone gas, based on acre feet is Tenneco owns 98 1/2 percent of the reservoir and Gil Oil 1.5 percent of the reservoir.

Q And how about royalty?

A The royalty in this reservoir is Santa Fe Pacific Railroad has 97.6 percent, Indian leases have 2.1 percent, and the other leases, which are federal, have .3 percent of the acre feet.

Q And I assume that no royalty would be paid until the volumes injected had been reduced? In other words, the "D" zone gas had been reduced?

A Reduced, that's correct.

Q Now, in your opinion, would the granting of this application

protect the correlative rights of all parties in these two pools, their zones and prevent waste?

A It certainly would.

Q Now, were Exhibits A through G prepared by you or someone under your supervision?

A Yes, they were.

MR. KELLY: At this time we move the introduction of Tenneco's Exhibits A through G.

MR. UTZ: Without objection, Tenneco's Exhibits A through G will be entered into the record of this case.

MR. KELLY; That completes our direct examination.

MR. UTZ: Are there other questions?

MR. STEVENS: Mr. Examiner, could I direct some questions of the witness?

MR. UTZ: Yes.

MR. STEVENS: Don Stevens with McDermott, Connelly and Stevens, representing Alan Antweil and overriding royalty owners.

CROSS-EXAMINATION

BY MR. STEVENS:

Q You spoke of blowdown that no royalty would be paid to Santa Fe until a blowdown. When did you anticipate blowdown? Do you plan to put it back into the "D" zone reservoir?

A Yes, we would take this gas that we have injected in the

"A" zone, and as soon as we got our unit put together and started operations we would take this gas out first and put it in the "D", and then it would be used in the "D" zone pressure maintenance project, probably cycled for several years and blowdown would occur in approximately seven or eight years.

Now, this number is in the engineering report, which Mr. Antweil does have a copy of it.

Q In other words, the blowdown, wherein you will start selling this gas back out of the "D" zone reservoir?

A Right, to a purchaser.

Q Will be after basically the oil is depleted?

A Yes.

Q Or generally speaking --

A Yes. At that point we would pay royalty on this gas first and any other gas that would be left.

Q You are not asking for an increase in allowable based upon your beneficial use of this gas to the regular allowable of 200 barrels per day?

A No. We are not.

Q Could you give us your reasons for not so asking?

A We feel like that it will be four to five months before we have the unit approved and can start reinjection of this gas into the "D" zone, and we feel like that if we were to go to a double allowable we would, of course, lower

our pressure considerably more in the reservoir, and this could damage the overall performance of the reservoir.

Q Do you think possibly by the additional gas and oil coming out of the reservoir during this interim period, then, you might ultimately recover less oil?

A If this is possible, yes. It would also take a considerable more amount of gas to repressure the reservoir back to the original conditions which we propose to in secondary recovery projects.

Q Now, you do plan to take gas from all the well currently located in the field; is that correct?

A Yes.

Q In the event of mechanical problems or the possibility that the well can't take the full amount of gas being produced by the field, do you have any system for proration among the wells or --

A No. As I testified earlier, we probably recomplete the Santa Fe Pacific Well No. 8 or even drill additional wells to get it into the ground in the "A" zone.

Q But a short interim period, would you contemplate shutting down all the wells in the field if you couldn't take the gas for a temporary period?

A I haven't really considered this possibility because we really feel like that this well will take this amount of gas, and we do have the wells in the Dakota "A" reservoir,

and it could be -- either have them now or could be completed to take all this gas.

MR. STEVENS: I have no further questions, Mr. Examiner.

MR. TRAYWICK: I would like to ask a question, Mr. Examiner, if I may. I am Carl Traywick, Deputy Supervisor, U. S. G. S., Roswell.

CROSS-EXAMINATION

BY MR. TRAYWICK:

Q Mr. Melnar, on this allowable schedule, Exhibit B, Santa Fe Pacific Railroad No. 3 and No. 5 have allowables greater than a hundred barrels a day. Why is that? I am not familiar with the field rules.

A These two wells have a proration unit that is in excess of eighty acres.

Q I see.

A There is some out lots along the east side of the section, and this causes them to have a greater allowable.

Q And then the Don Ne Pah No. 1 has a smaller allowable?

A Yes. This well was penalized due to excessive ratio.

Q I see.

MR. TRAYWICK: Okay. Thank you.

MR. UTZ: Mr. Arnold?

CROSS-EXAMINATION

BY MR. ARNOLD:

Q If the allowable were reduced to, say, 50 barrels a day during a construction period, how much gas do you estimate would be saved or how much less gas produced on a -- do you think that it would be about --

A I would estimate over the next two months that you would be looking at saving approximately a hundred million cubic feet.

Q Do you think that if you reduce the oil allowable by half you would approximately reduce the gas about half?

A That is what I am estimating.

Q That actually calculates about a hundred eighty million, doesn't it, if you --

A Well, I am just saying 3.4 million a day times 30 is approximately a hundred million, and so --

Q No. That is a hundred eighty million, three million a day for --

A For sixty days. Yes. I am saying it is two hundred, approximately, instead of a hundred eighty, so taking half of that, it would be roughly a hundred million.

Q Well, would that be in the order of $12, $13,000 dollars worth of gas or --

A Yes. Total gross volume.

Q Well, I was just wondering if possibly it wouldn't be a good idea to try to save that $15,000 on it.

A Well, I think Tenneco would protest reducing the

allowable to 50 barrels a day, and for the reason that we have tried over the years to get a market for the gas there is no market.

Once the Field A, the Lan Padeco pool was developed, we immediately started to try to unitize the field and reinject the gas, and then in the interim now we are proposing a method to store this gas, and I don't feel like we should be penalized for these next two months.

Q Are you being penalized if you lose $15,000 worth of gas, though? I mean what is the --

A We would be penalized as far as revenue from the field, oil revenue.

Q Well, you won't eventually -- you mean current income --

A Current income, present worth income, I think we would be definitely penalized if you were to discount this.

MR. ARNOLD: That's all, I believe.

CROSS-EXAMINATION

BY MR. HATCH:

Q Mr. Melnar, all of the wells shown on Exhibit A have penetrated the "A" zone?

A Yes.

Q Have they been only completed in a manner that would prevent the loss of this gas from the "A" zone?

A I would say yes because as far as my knowledge is concerned, they have all been completed approximately in

the same manner, essentially the same size casing, the same volume of cement, and I feel like that there should be isolation between zones, and there is several -- there is a couple of hundred feet between the two zones vertically.

Q I don't think you have testified as to what percent of the injected gas you would recover.

A Well, we are proposing, I believe, to recover a hundred percent of the gas.

MR. KELLY: You will treat it that way as far as royalty?

THE WITNESS: Yes. We would pay royalty on this gas as measured and we would recover the single amount of gas.

Q (Mr. Hatch continuing) There was a little confusion earlier. I think this gas will be metered before it leaves each "A" lease?

A Yes.

MR. KENDRICK: Well, I think according to this map, not necessarily before it leaves the lease but before it is commingled with any of the other gas from other leases.

MR. KELLY: Some of these are on this lease, but they are all separate,so there would be no commingling.

THE WITNESS: Each lease's gas production will be metered.

Q (Mr. Hatch continuing) But not necessarily on the lease?

A Not necessarily physically on that lease, for the matter of convenience, and some of these meters will be grouped together in one area as shown on the map.

Q Okay.

MR. KENDRICK: That is on Section C it shows you meter the location?

THE WITNESS: Yes. We have in some occasions already.

We have off-lease separation facility, and so this meter would be next to those facilities. In other cases we are proposing that the metering devices be off-lease for again convenience in reading and changing charts and so forth.

MR. UTZ: Are these your meters or the operators' meters?

THE WITNESS: These would be owned by all the operators. Each operator will have a share in the system with Tenneco operating system.

MR. KELLY: You will have a written agreement covering the storage system and preliminary to your unit agreement; is that correct?

THE WITNESS: That's correct.

MR. UTZ: I think what Mr. Stevens was getting at, I don't believe you got a direct answer. If he did, I didn't understand it. If some portion of this system was to malfunction, break down, or whatever you want to call it, say a

meter or even the well or the operator itself, how would you propose to handle that situation where you couldn't take this casinghead gas?

THE WITNESS: If we could not take all of the casinghead gas?

MR. UTZ: Yes.

THE WITNESS: Or none of it?

MR. UTZ: All or any part of it.

THE WITNESS: As I have mentioned, we haven't really considered this, but I would assume we would have to prorate this in some manner, either this or have the authority to flare this gas until the system is back in operation.

MR. UTZ: Well, now, this might be just for a few hours or --

THE WITNESS: That's correct.

MR. UTZ: -- or a day or two?

THE WITNESS: That would probably be the best solution.

MR. UTZ: Now, after your system is in operation, well, I would assume that our order will read that it will be legal to flare any gas whatsoever. On an instance like this you would propose to get verbal approval to flare from a district office or something of that nature?

THE WITNESS: I think that would be probably a good way to handle it.

MR. UTZ: In other words, this operator of this unit on the effective day of this no-flare, you as operator of the unit will not flare any gas. Is that my understanding, unless you have authority?

THE WITNESS: Well, now, of course, Tenneco will not be an operator of a unit.

MR. UTZ: I mean operator of the system.

THE WITNESS: Of the system? Okay. Well, I may point out one other thing is that if the system had to be shut down for a few hours or a day or so, I think that the wells are capable of making up this gas, so you could shut the field in and still be making up your production.

MR. UTZ: Will make up the gas as well as the oil?

THE WITNESS: Yes. And oil, yes.

MR. UTZ: Now, if you need two injection wells, you have proposed a No. 8 in Section 24? You are not sure you are going to need that well?

THE WITNESS: No. We are not. Really, we can't -- won't know for sure till we start injecting in the No. 2. I feel like the well will take the present amount of gas with the pressure we propose.

However, I feel that we do have a well No. 8 cased and temporarily abandoned. It is at the present time completed in the "D" zone, but it could be squeezed in the "D" zone and recompleted in the "A" zone in just a couple of days or so.

It is available for that purpose, if need be, and it also can be at some future date -- it would be a withdrawal point from that reservoir.

MR. UTZ: Would there be anything the matter with approving this well at this time and this order? And you wouldn't have to use it, I suppose --

THE WITNESS: That would be all right.

MR. UTZ: In other words, the maximum injection wells will be the two? Is that correct? You don't anticipate any more than that?

THE WITNESS: Well, I wouldn't say that. I would think that the two would be sufficient, but we did say earlier that we felt like if we needed others for any reason that we could take steps to get additional wells drilled into the "A" zone.

MR. KELLY: Perhaps we could specify in the order if the application is approved, specifically allow those two injection wells and then have a paragraph of some administrative procedure for any additional wells.

MR. UTZ: In regard to an answer you gave Mr. Arnold, relative to current income, any time you flare a cubic foot of gas you are being deprived of current income, aren't you?

THE WITNESS: Well, at the present time you are not, because there is no sales for this gas.

MR. UTZ: Well, there is a potential sale for it,

isn't there?

THE WITNESS: Later on, yes, could be.

MR. UTZ: You don't, by any stretch of your imagination, presume that you never will be able to sell this, do you?

THE WITNESS: Well, no, sir. We definitely think that --

MR. UTZ: So what you have saved is income?

THE WITNESS: Yes. Future income, deferred income.

MR. UTZ: Could be?

THE WITNESS: Yes.

MR. UTZ: Are there any other questions?

MR. PORTER: I have a question. A. L. Porter with the Commission, Mr. Examiner.

CROSS-EXAMINATION

BY MR. PORTER:

Q Mr. Melnar, you indicated -- I believe that your word was that Tenneco would protest a reduction to fifty barrels a day. Approximately what is the cost of a well in this pool?

A $50,000.

Q That would be what, close to a year's payout at fifty barrels a day?

A I would imagine that you could pay out a well in a year at fifty barrels a day.

Q And you estimate that it would take you a couple of months to have your system ready for the injection of this gas into this other zone where you proposed storage?

A Yes, sir.

Q Well, at fifty barrels a day will be just a heap better than none at all, wouldn't it?

A Sure would.

Q If the Commission decided to shut the fields in.

A No doubt about it.

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

MR. UTZ: Other questions? No further questions, the witness may be excused.

(Witness excused)

MR. UTZ: Statements in the case?

MR. KENDRICK: Mr. Examiner, I would like to present a photograph of the compressor, compression foundation being constructed, which I took in the field last Friday and testify or state that I have witnessed that ditching is under way and that construction is under way.

MR. UTZ: Okay.

MR. TRAYWICK: I would like to make a short statement, Mr. Examiner. Carl Traywick, U. S. G. S. I would just like to admit responsibility for part of this four to six month delay in the unitization that Mr. Melnar testified to. A lot of it is going to be due to our procedural steps to get a unit

approved which includes both Indian and federal lands and involves sending to Washington for approval of the director, preliminary approval and acceptance of the language, and at such time it has to also be approved by the Bureau of Indian Affairs as to the language and any addition they want to include, and then when it comes back to us at Washington it has to be executed by all -- or all hopefully, of basic royalty owners, ending a lot of it with the Santa Fe Railroad, and I don't know how many Indian lot fees are involved, but I would guess quite a few, which is going to be time-consuming, and after it is completed and the final unit filed, then we will have to send it to the area director at Window Rock for final approval as to the Indian land, land committed the Indian interest and then it is approved by our office, so these procedural steps are time-consuming and we are responsible for a major part of the four to six months interim period that Mr. Melnar stated.

Now, the major part of the unitization by the working interest owners has been completed, as for work has been done and equities established and accepted by the working interest owners, who, the rest of trader work is mostly procedural work in which there is certain delays which are involved in our system for which the unit operators working interest owners have no control other than securing execution of the final agreement formed by the necessary parties.

Thank you.

MR. UTZ: Name for it is government red tape.

MR. TRAYWICK: Yes, sir. If it was all federal unit, we would expedite, but being as it is federal and Indian, it is complicated.

MR. UTZ: Have another statement?

MR. PORTER: I would like to ask Mr. Traywick a question, please.

MR. UTZ: Okay.

MR. PORTER: Would the U. S. G. S. care to take a position, any further extension of flaring or any reduction in allowable, Mr. Traywick, or are you prepared to say at this time?

MR. TRAYWICK: Well, I didn't come prepared to take a position, because we didn't -- couldn't anticipate that this question would arise, but I agree with what Mr. Emory Arnold said, that gas is money, and during this interim period, till we get injection started in the "D" zone, we are going to be continuing to waste a valuable resource that is getting more valuable all the time, and which I would not care to take an official U. S. G. S. position.

My personal opinion is that anything we can do to reduce gas waste would be conservation, and then reduction in allowable would reduce gas waste.

MR. PORTER: The record will reflect, of course, that

this is just your personal opinion.

MR. TRAYWICK: Yes, sir, it is personal.

MR. PORTER: And not an official U. S. G. S. --

MR. TRAYWICK: Personal, and not official opinion, yes, sir.

MR. PORTER: That's all.

MR. UTZ: Do we have a statement from someone over here?

MR. STEVENS: Mr. Examiner, Don Stevens, representing Alan Antweil and overriding royalty in the field. Mr. Antweil joins Tenneco in urging the approval of this application, feeling that it will prevent waste and protect correlative rights. We also urge the Commission to retain the present 100 barrel per day per well allowable based on the premise that Tenneco and the other operators in the field have not been, in our opinion, dilatory. I think they should be commended for the speed in which they have tried to unitize this field and for their current effort to save a valuable natural resource by storing it in a rather unusual and fairly expensive procedure just to save this gas.

The contention that money will be lost by flaring this gas, I think, might on a proper economic analysis be argued with in that, by the time this gas will be sold some seven or eight years later, that might be saved by the lower allowable, by the time that money is discounted down to present

worth, though, I don't know. I think there is a possibility there would be a distinct economic loss to the owner and operator and royalty owners in the field, plus the fact the current income has been allocated on the basis of the current allowable to lower it even for an interim period, I think, would have a dilatorious effect upon the various operators and royalty owners in the field.

MR. UTZ: Mr. Stevens, it wouldn't make too much difference to the royalty owners, would it, since they don't have money invested?

MR. STEVENS: No. However, they had money invested in lease-hold costs. Of course, well, I am speaking of overriding royalty owners in my particular case, my client, and,of course, the turn has been projected for the man. I am sure balances have been made for the current income as it accrues.

MR. UTZ: Are there other statements?

MR. PORTER: Mr. Examiner, I want to make it clear that my question certainly didn't imply any dilatory attitude on the part of Tenneco or any other operators in the pool. I just wanted to be sure that all aspects of conservation are considered and that this question will be put into the record.

MR. UTZ: I think that is well understood, Mr. Porter. If you hadn't brought it up, I would have.

MR. KELLY: I have no doubt of -- that all aspects

of controversy are going to be considered in this case.

MR. HATCH: Mr. Melnar, are there leases in this pool that have all wells -- were completed on that lease prior to January 1, 1971?

THE WITNESS: I don't know that all wells on a lease may have been completed prior to that date. There is some wells that have been, but I don't know the breakdown.

MR. HATCH: I wonder if Mr. Arnold could answer that question.

MR. ARNOLD: How was the question again.

MR. HATCH: Are there leases in this pool that have all the wells on the lease were completed prior to January 1, 1971?

MR. ARNOLD: Yes, there are.

THE WITNESS: Those leases are listed on Exhibit B, the one there in front of you there.

MR. ARNOLD: Well, these don't have the completion dates on them.

MR. HATCH: Do you have it?

MR. UTZ: Well, did you just want to know, Mr. Hatch, whether there was any, or do you know -- or do you want to know which wells?

MR. HATCH: I just wanted something in the record.

MR. ARNOLD: Actually, about -- I believe there are three leases which were completed prior to January 1, 1971.

MR. UTZ: Are there other questions?

MR. PORTER: Mr. Melnar, if I might impose on you a little bit more, I wasn't in here at the start of the hearing. How much work has been done out there?

THE WITNESS: In the field itself?

MR. PORTER: Yes. As far as you know, laying pipe or digging the ditches or whatever is necessary.

THE WITNESS: Okay. We have ripped all the right-of-ways, are starting ditching operations today, and estimate that we have got about ten percent of this done, of the ditching and so forth. As far as compressor facilities, we have set the forms for the compressors.

We are pouring concrete today. The compressors are being dismantled now and are almost completely dismantled and should be on there within a few days to the field, and we would estimate that this compressor facility, as of today, is twenty-five percent complete, and we would say that our gathering facilities would be complete by the 20th of this month, the gathering facilities, but the compressor should be on location by the 15th of this month, so the time from this, from the 20th on to the first of November, we are allowing this time to set compressors or get them all hooked together and get them all running properly.

MR. PORTER: With good weather do you think there is a possibility that you might complete this earlier than

November 1?

THE WITNESS: I would say there is a very good possibility of completing this possibly two weeks earlier, or --

MR. PORTER: Or three?

THE WITNESS: But knowing that you are going to have problems like you always do with machinery, and we have set this November 1 deadline so that we would be sure we could meet it.

MR. PORTER: Thank you.

MR. UTZ: Other questions?

MR. KELLY: Mr. Examiner, I would just like to make one brief statement in closing that the proposed application here is a fairly novel way that Tenneco has come up with saving this gas, and it is not an inexpensive method, and, of course, the $350,000, substantially a portion of that can be used in the proposed secondary recovery or pressure maintenance project, but there will be costs that are allocated strictly to storage of the gas, and as far as balancing those costs against what would be lost from income of flaring a portion of this gas over the next two months, I think you will find that probably on that basis the operator and the other operators in the field are going to come out with an economic loss on the project, and I feel that consideration should be given to the operator here for coming up with a project which is going to save gas and put it to a beneficial use and allow the pool to be properly

developed during the time that it is going to take to form this unit.

I would also point out that Tenneco has been attempting to get this gathering system put together, as you are aware, for some time. This application was originally filed some time ago, and again, there are difficulties with royalty interests and getting other people together with the thing, so there was some delay that was not properly laid at Tenneco's feet in getting this thing off the ground.

MR. UTZ: Mr. Kelly, the gas has been flared for quite a period of time, though, has it not, like about a year?

MR. KELLY: Yes.

MR. UTZ: Other statements? Case will be taken under advisement. We will have a short recess.

(Whereupon, a recess was held.)

I N D E X

E X H I B I T S

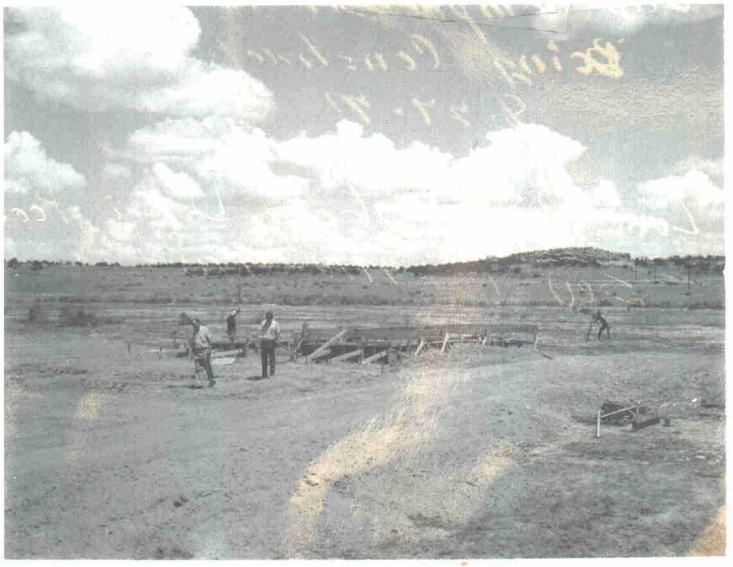
STATE OF NEW MEXICO)
)
COUNTY OF BERNALILLO)

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

Linda Malone
Court Reporter

I hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4584, heard by me on Sept. 1, 1971.

Examiner
New Mexico Oil Conservation Commission



Gas Compressor Foundation
Being Constructed
8-27-71

Lone Pine Dakota D Oil Pool
SW 13-17N-9W