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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
December 14, 1965

EXAMINER HEARING

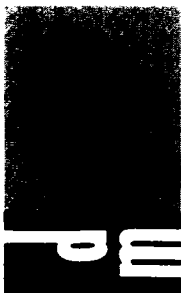
IN THE MATTER OF:)

Application of Tesoro Petroleum Corporation)
to amend Order No. R-2807, McKinley County,)
New Mexico. Applicant, in the above-)
styled cause, seeks an amendment to Order)
No. R-2807, which authorized a waterflood)
project in the Hospah Unit Area, to permit)
the production of oil from previously)
designated water injection wells, to)
approve unorthodox locations for additional)
producing wells, and to authorize additional)
injection wells, all in Section 36, Township)
18 North, Range 9 West, McKinley, New Mexico.)

Case No. 3353

BEFORE: Elvix A. Utz, Examiner.

TRANSCRIPT OF HEARING



MR. UTZ: The Hearing will come to order. The first case on the docket will be Case 3353: Application of Tesoro Petroleum Corporation to amend Order No. R-2807.

This Case was misadvertised in one of the newspapers and will be continued and be readvertised in the January 5th Hearing in 1966.

(Whereupon, Case Number 3353 was continued.)

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, DEAN A. ROBINSON, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 31st day of December, 1965.

Dean A. Robinson

NOTARY PUBLIC

My Commission Expires:

October 16, 1969.

I do hereby certify that the foregoing is
a true and correct record of the proceedings in
the hearing of Case No. 3353
dated December 19, 1965.
Thursli. R.
Oil Conservation Commission

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

January 5, 1966

EXAMINER HEARING

IN THE MATTER OF:

Application of Tesoro Petroleum Corpora-
tion to amend Order No. R-2807, McKinley
County, New Mexico.

Case No. 3353

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING



NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARINGSANTA FE, NEW MEXICOREGISTERHEARING DATE JANUARY 5, 1966 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
Richard D. Seba	Shell Oil Co.	Midland
N. DeBaume	R. W. Byrnes	SF
Harold G. Vest	Tidewater Oil Co.	Midland
PHILIP A. HOGAN	TIDEWATER OIL CO	DURNING, COLO.
C. C. KENNEDY	INDEPENDENT	FARMINGTON, N.M.
Joe O. Ramey	OCC	Hobbs
Richard S. Morris	Leith, Montgomery, Jenkins & Andrews	Santa Fe
James P. Boylan	Continental Oil Co.	Hobbs, N.M.
Jason Kellah	Kellah & Fox	Santa Fe
Thomas F. McKenna	Carter Foundation Prod. Co.	Santa Fe
Robert D. Fitting	Carter Foundation Prod. Co.	Midland Texas
James E. Vandiver	C.T.V. Oil & Gas Co.	Farmington, N.M.
HUGH J. MITCHELL	MITCHELL OIL CO.	FARMINGTON
R.M. ANDERSON	SINCLAIR OIL CO.	MIDLAND -
J. Losee	Losee & Stewart	Artesia
John J. Russell	Am. Amer. Oil Co.	Poswell
Robert B. Kennedy	Kennedy Oil Co.	Artesia

MR. NUTTER: We will call next Case 3353.

MR. DURRETT: Application of Tesoro Petroleum Corporation to amend Order No. R-2807, McKinley County, New Mexico.

MR. MORRIS: Richard Morris of Seth, Montgomery, Federici and Andrews, Santa Fe, New Mexico, appearing for Tesoro Petroleum Corporation in Case 3353. We will have one witness, Mr. G. M. Andreen. I ask that he stand and be sworn.

(Witness sworn.)

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

MR. NUTTER: Are there other appearances in Case 3353?

MR. VEST: Harold Vest with Tidewater.

MR. HOGAN: Phil Hogan with Tidewater.

G. M. ANDREEN

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

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Andreen, will you state your name, where you reside, by whom you are employed and in what capacity?

A My name is G. M. Andreen, I am employed by Tesoro

Petroleum Company. I live in San Antonio, Texas and I am a Vice President of that company.

Q Mr. Andreen, have you previously testified before the New Mexico Oil Conservation Commission or one of its examiners and had your qualifications made a matter of record?

A I have.

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

MR. NUTTER: They are.

Q (By Mr. Morris) Mr. Andreen, have you been familiar with the development by Tesoro Petroleum Corporation and its predecessor, Texas Star Petroleum Company, since the beginning of unitization in the Hospah field?

A I have.

Q Did you testify for the company in Case No. 3132, in which case the waterflood project in the Hospah Unit was approved?

A I did.

Q Are you familiar with recent developments in this area?

A I am.

Q Would you relate to the Examiner the development of the waterflood project in the Hospah field and unit, and with particular emphasis on the development in the north end

of the field?

A As a result of the unitization and secondary recovery hearing we were granted permission to drill injection wells around the periphery of the unitized area, which is now known as the Hospah Sand Unit. These wells are shown on the exhibit, they are wells 61, 60, 67, 66, 65, 64, 63 and 62 were the ones that were covered in the original application.

Q You are referring to what has been marked Exhibit No. 1 in this case?

A Right.

Q All right.

A When we started the development work we drilled wells 60 and 61 and found about what we expected and we moved up and drilled Well No. 64, which is up in the northeast corner of the unit area. We encountered a little more oil section in that well than we anticipated and we actually tried to see if it would make a commercial producer and it would not, so it was made into an injection well.

As a result of that our next well we drilled was well 63, which is straight west almost of 64. We, at the time, and from the geological information we had available at the time, we started all this development program, we expected 63 to encounter the sand, oh, about five or six feet above the oil and water contact. Instead we encountered considerably better

oil saturation section than we expected and we were able to make that well or to establish commercial production from that well, which was well 63.

As a result of the information that we had obtained from 64 and 63 we drilled well 68, which was not originally approved. We drilled it at our risk at that irregular location and it was drilled and completed as an injection well. It hit the sand about where we expected with the new formation. We knew from wells 64, 63 and 68 that the original location for well 62 as it was originally approved, now 62 is on the west side a little bit southwest of 63, the original location of 62 was farther east than it shows on this map. It was over, oh, about 660 feet, I think, east of that west line. You perhaps have the exact location.

We knew that that original location would not be correct to give us an injection well from this new data that we had acquired, so we moved it west so that we could get out as far as we wanted for periphery injection well and we had to make 62 an irregular location because the Shell pipeline that carries the oil from this field runs 330 along that line, so we brought it in a little bit to miss that pipeline.

So well 62 where it is now positioned is an irregular location and we drilled it originally intending for it to be an injection well. We again encountered good saturation and

were able to establish commercial production in that well. We had, and it is shown on our exhibit, we had a tentative location, we made two additional locations, Well No. 69 as an injection well, which is north of 62, really kind of as a replacement well for 63 which we wanted to make a producer, and we made a tentative location for Well 70 which has not been drilled and we have cancelled that location as of right now.

So our injection wells as they exist now are the originally approved locations on 61, 60, 67, 66, 65, and 64. The two new wells are 69 and 68 for injection wells. Two wells that were originally scheduled to be injection wells are 63 and 62 and these we have established commercial producing rates out of those and would like to make those producers.

Q Mr. Andreen, what control did you have in this northwest part of the unit upon which your original opinions and projections were based?

A Primarily the old records that were obtained from the dry hole recorded as Well No. 31 of the Wilson State on the west side of the field.

Incidentally, this field was developed, oh, originally in 1927 is when it started with additional majority, or the majority of the development occurring in the early '40's,

apparently the information on Well 31 is in error or there is another fault in that position that we have no control of, but it was the thing that controlled the extent or what we thought was the extent of the sand in this northwest quadrant.

Q The picture as you now see it is depicted on Exhibit No. 1?

A Yes.

Q That is the structure --

A That's the structure on top of the Hospah sand incorporating the new information that we obtained from the drilling and coring of these new wells.

Q Were the additional wells drilled as injection wells here and the non-standard wells that have been drilled, drilled in consultation with the New Mexico Oil Conservation Commission District Office?

A Yes. We filed the normal applications to drill and drilled these subject to the rules of this hearing.

Q I think there is one well we have not talked about here and that is Well No. 71 which is shown on the map as being right on the quarter quarter section line. What is the actual location of that well?

A It's about ten feet off of that section line just south of it, I believe.

Q What is the status of that well?

A The story of that well, Well No. 18, which lies just north and east of Well 71, was drilled, oh, in the middle '40's, '45 or '46, and had a split joint in the casing on the original completion records. They set a liner in that well at that time in attempting to cure this. We have had some funny water performance on Wells 35, 34, 28, 17, and around Well No. 18, historically and in the process of doing the work that they were doing out there we tried No. 18 and we found out that this casing was leaking and it's probably been letting some water on a sort of a dump flood part of the Hospah sand.

So we have now plugged 18 and we drilled 71 as a replacement well for 18 and we do not want to drill it as a twin well because we felt the sand right in the vicinity of 18 was already watered out due to the leak and Well 71 has been drilled and it was drilled at our risk, tests about ten barrels of oil and 40 some barrels of water on the last test that I have on it, and we just tested it and it has been shut-in waiting the outcome of this hearing.

Q So what Tesoro seeks by the application in this case is a modification or amendment of the order previously entered in this waterflood hearing to approve two new injection wells, to approve two unorthodox locations, and to permit Well No. 63 to be operated as a producing well rather than as an injection well?

A That's correct.

Q Is the substance of your request as set forth in the application that was filed in this case?

A Yes.

Q And the footage location for each of the wells involved here is as set forth in that application?

A Those were taken right from the surveyor's plat.

Q Yes. Now, with the conversion of Wells 62 and 63 from injection now to producing wells, and making Wells 68 and 69 injection wells, is it your opinion that you will have a successful and efficient waterflood pattern in the north end of the field?

A Yes. We will have an adequate injection pattern in that end of the field and we have also, in the course of this development, added about twenty percent to the floodable acre feet in the unit, and consequently more reserves and future potential for the area.

Q And the new injection wells are located within the boundaries of the Hospah Sand Unit?

A They are.

Q As to the wells for which unorthodox locations are being sought, do any of those unorthodox locations move toward acreage outside of the unit?

A No.

Q Do you have any further comments you would care to make with respect to your application?

A I have none that I can think of that we haven't covered.

Q Was Exhibit No. 1 prepared by you or under your direction?

A It was prepared by our Drafting Department.

MR. MORRIS: We offer Exhibit No. 1.

MR. NUTTER: Tesoro's Exhibit No. 1 will be entered in evidence.

(Whereupon, Tesoro's Exhibit No. 1 was offered and admitted in evidence.)

MR. MORRIS: That's all we have.

CROSS EXAMINATION

BY MR. NUTTER:

Q The waterflood order authorized Wells 61, 67, 66, 65 and 64 at their locations and where they are drilled?

A That's correct.

Q It also authorized No. 62 and 63 to be water injection wells?

A Right. Now it authorized the location where 63 now exists.

Q For an injection well?

A For an injection well.

Q It authorized Well 62 but at a slightly different location?

A Right.

Q 62 is a producing well, as is 71, and these two wells are on unorthodox producing well locations?

A Correct.

Q So you are seeking approval for those. You are also seeking approval of injection wells at 68 and 69 with the location as given, 2310 from the north and 940 from the west for 69 and 990 from the north and 2310 from the east for 68. There's one other thing in the application, Item 6 you seek the amendment of the order to rescind the authorization of a water injection 1650 from the south and 1640 from the west of 36, would that be the original location for No. 62?

MR. MORRIS: 63.

A I think it is the original location for 62.

MR. MORRIS: Pardon me, you are right. One other thing that we are covering here that was not mentioned, we are also requesting to use No. 63 as a producing well rather than an injection well.

MR. NUTTER: Right.

MR. MORRIS: But it's at a regular location.

A It's a regular location.

Q (By Mr. Nutter) The draftsman put No. 71 right on

the line but I believe it would actually be in the southeast of the southeast.

A I believe it would. I think it's just ten feet off the line.

MR. MORRIS: The description is given in the application, 1310 from the south line and 2,000 feet from the west line.

MR. NUTTER: We have to have a unit letter to designate the well so it would be in the unit?

MR. MORRIS: Right.

MR. NUTTER: Are there any other questions of Mr. Andreen?

MR. VEST: Harold Vest with Tidewater again. Let me ask you --

MR. DURRETT: Mr. Vest, are you an attorney?

MR. VEST: No.

MR. DURRETT: You can not ask a question of the witness. We have an Attorney General opinion that you can not practice before the Commission without having a law degree.

MR. NUTTER: Are there any questions of Mr. Andreen? He may be excused.

(Witness excused.)

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

MR. MORRIS: No, we have nothing further to offer.

MR. NUTTER: Does anyone have anything further to offer in Case 3353?

MR. VEST: Could I ask a question now?

MR. NUTTER: You may make a statement.

MR. VEST: I would just like to find out, I know that well 64 is 330 feet south of that northeast of the northeast quarter there. Was that an application put in for that unorthodox location for that well? That doesn't match the original approved location of the 1964 hearing. I just wondered if there had been something subsequent to that.

MR. NUTTER: Do you know the location that was authorized for that well?

MR. VEST: Yes, sir. This one says it's 1990 from the north and 640 from the east line of Section 36, if that's the same one. I notice that that spot is No. 64, just about 300 feet or so north of that location.

MR. NUTTER: Mr. Andreen, is No. 64 330 feet from that line?

MR. ANDREEN: It's in Unit H, is that correct?

MR. NUTTER: That's correct.

MR. ANDREEN: I have 660 from the east and 1650 from the north line.

MR. NUTTER: Which would be 330 from the line. Do

you have a copy of the order which authorized the location of No. 64 as an injection well?

MR. ANDREEN: 1990 from the north and 640 from the east. That 1990, at one time we had contemplated -- this is off the record.

(Whereupon, a discussion was held off the record.)

MR. MORRIS: Mr. Examiner, our information is that this Well No. 64 is 660 feet from the east line and 1650 from the north line of Section 36, which would put it at the place as shown on the plat here. The well was drilled and completed as a water injection well and forms have been filed with the Commission in connection with the well; Form C-101 was filed July 1, 1965 and approved July 19, 1965, C-103 was filed August 9, 1965, approved August 12, 1965. That form covered a change of casing program and completion method Form C-105, the well record, has also been filed.

If there is a discrepancy, and there appears to be, as between the Order No. R-2807 and where the well actually was drilled, it has not come to our attention until this time in connection with any of the forms that have been filed with the Commission. However, at this time we would move to amend our application to the effect that Order No. R-2807 be amended so that the present location of Well No. 64 be approved.

MR. NUTTER: Do you have the C-101's for the

additional, the other water injection wells?

MR. ANDREEN: I do not have them with me.

MR. MORRIS: I can give you the dates they were filed and when approved.

MR. NUTTER: I think it would be well to check the location of these other wells and determine whether they were drilled at the location that was authorized by the waterflood order. They're a matter of record in our files.

We will take a fifteen-minute recess and check those out.

MR. VEST: There is a second location there, I believe it's 1950 from the north and 1960 from the east, which is one of the locations that was initially authorized, and I don't show a well to be there either. Evidently that was moved over to another location, is that correct?

MR. NUTTER: We will take a fifteen-minute recess and you can check out all those locations.

(Whereupon, a recess was taken.)

MR. NUTTER: The hearing will come to order, please.

MR. MORRIS: Mr. Examiner, during the recess we have obtained from the Commission's files the well files on Tesoro's Wells No. 60, 61, 62, 63, 64, 65, 66, 67, 68 and 69, and have compared the C-124 well location plats contained in those files with the authorization of Order No. R-2807, and with the locations as shown on our application in the present

case.

That comparison revealed the following information: It shows that Well No. 60 is 2310 from the south line and 1060 feet from the west line. It shows Well No. 61 to be 3650 from the south line and 1,000 feet from the west line of Section 1. It shows Well No. 62 not to have been drilled. It shows Well No. 63 not to have been drilled at the approved location, but the C-124 in the file now shows it to have been drilled at the location as shown on this plat. It was drilled 1980 from the north line and 2310 from the west line of Section 36.

MR. NUTTER: 62 is not 1980 from the north.

MR. MORRIS: Excuse me, I was talking about 63.

62 was not drilled. 63, the C-124 shows it to be drilled 1980 from the north line, 2310 from the west line of 36 as a producer rather than as an injection well at that point. In other words, the first well as authorized by R-2807 was just not drilled at that location.

MR. NUTTER: Right.

MR. MORRIS: Well No. 64 is 1650 from the north line and 660 from the east line of Section 36. Well No. 65 is 990 from the south line and 250 from the east line of Section 36. Well No. 66 is 330 from the north line and 330 from the east line of Section 1. No. 67 is 2,070 feet

from the north line and 1590 feet from the east line of Section 1; and Well No. 68 is 990 from the north line, 2310 from the east line of Section 36.

Well No. 69 is shown to be 2310 from the north line, 940 feet from the west line of Section 36.

In view of the information shown directly from the well files we would at this time request that our application be supplemented, all the well locations as shown in our application itself, the locations are correct, however, we would at this time move to supplement our application to correct and to provide authorization for the Wells 60 through 69 as those wells are shown to be located by the C-124's and as I have just read them into the record.

MR. NUTTER: Is there objection to the supplementing of the application to include the location of the previously authorized injection wells at the locations as read by counsel?

MR. VEST: I'm afraid we will probably have to oppose the location of Well No. 64 as being 330 feet south of our 40-acre tract in the northeast of the northeast of Section 36 as an injection well.

MR. MORRIS: Before the Examiner rules on the point could we refer the Examiner to the data as shown in its well file on Well No. 64 referring to Form C-103, filed by Tesoro Petroleum with the Commission on August 12, 1965? Without

reading all of the information shown on this Form C-103, the last part of the test shown to have been run on July 31, 1965, ran McCullough GRN collar log to 1,814 feet, plug back depth, perforated 1798 feet to 1800 feet and 1774 feet to 1788 feet by McCullough four holes per foot. Swabbed hole with fluid level and had a show of oil after swabbing down. Oil increased to approximately two percent by 10:00 A.M., August 2, 1965, will run rods on tubing and test on pump.

I think this, coupled with what Mr. Andreen testified to on direct examination, showed that the well was tested and it was attempted to place this well on production as a commercial producer, but commercial production was not obtained and the well was converted to injection.

MR. NUTTER: I believe the last item you read there was that they planned to test it on the pump?

MR. MORRIS: Yes, will run rods and tubing and test on pump.

MR. NUTTER: Mr. Andreen, was a string of tubing and rods and a pump installed on the well?

MR. ANDREEN: Yes, it was, and the well was tested for approximately a week.

MR. NUTTER: What was the result of the test?

MR. ANDREEN: We were never able to establish more than half a barrel of oil a day and about 20 barrels of water

as I recall the test. I don't have the figures with me but it was non-commercial insofar as we were concerned and we converted it to injection.

MR. NUTTER: And you tested it for approximately a week?

MR. ANDREEN: Approximately a week.

MR. NUTTER: And the maximum production was half a barrel of oil per day?

MR. ANDREEN: Right.

MR. NUTTER: And the location, as authorized by the first order for a well in Unit H, was 1990 from the north and 660 from the east?

MR. MORRIS: 640 from the east. The present location is 1650 from the north and 660 from the east line.

MR. NUTTER: And at this time, in effect what you are seeking to do is abandon the previously-authorized location and drill a substitute well 1650 from the north and 660 from the east?

MR. MORRIS: That is correct.

MR. NUTTER: For water injection purposes?

MR. MORRIS: Right.

MR. NUTTER: On the other wells that you mentioned and you gave the descriptions for them, are they and each one of them different from the location that had previously

been authorized?

MR. MORRIS: In some cases there are variations, usually of ten feet on some of the wells. I might state here that the section appears to be, looking at some of the 124's, that the section appears to be irregular and apparently the surveyor seems to have had some difficulty in making these locations. I just don't have any further facts to offer at this point on that, but some of the locations are off ten feet. I might go through these and point out where the discrepancies are.

MR. NUTTER: If you would read the approved locations. We have the actual location, you read those.

MR. MORRIS: Yes.

MR. NUTTER: 61, what was the approved location?

MR. MORRIS: 61 the approved location is 3640 from the south line, 1,000 from the west line.

MR. NUTTER: So that's 10 feet off?

MR. MORRIS: Right.

MR. NUTTER: 60?

MR. MORRIS: 2310 from the south line, 1060, the authorization is 1050 from the west line.

MR. NUTTER: So that's 10 feet off?

MR. MORRIS: Yes.

MR. NUTTER: 67?

MR. MORRIS: 2,070 feet from the north line, excuse me, I am sorry, the authorization is 3190 from the south line and 1590 feet from the east line.

MR. NUTTER: So that's a couple of hundred feet difference?

MR. MORRIS: Well, no, the authorization is from the south line, the footage description I gave you was from the north line.

MR. NUTTER: 66?

MR. MORRIS: 66 seems to be all right. It's 330 from the north line and 330 from the east line of Section 1.

MR. NUTTER: 65?

MR. MORRIS: It's also all right, 990 from the south line, 250 from the east line of 36.

MR. NUTTER: And the others are already covered as far as the locations are concerned?

MR. MORRIS: Yes.

MR. NUTTER: The application will be amended to include substitution of certain new locations. Do you have anything further, Mr. Morris?

MR. MORRIS: No, we have nothing further to add.

MR. NUTTER: Any questions of Mr. Andreen? Does anyone have anything they wish to offer in Case 3353?

MR. HOGAN: I would like to make a statement. I am

Phil Hogan with Tidewater Oil and I would like to point out that the No. 64 well as shown is actually 330 feet from where it was supposed to be and, therefore, 330 feet from our 40-acre tract. I am wondering if there is any indication of an oil-water contact having been established in this field to show that the No. 64 well is actually water-productive insofar as one week of production does not seem adequate in the light of their production history on wells in the area. Oftentimes water has been made originally and has gone to oil and, secondly, the core analysis on No. 64 well indicates that the sand is oil-productive and our 40-acre tract in the northeast northeast appears to be structurally as high or higher, a portion of it, as the No. 64 well.

The No. 30 well, which is to the south of the No. 64, had trouble. I don't know whether it was casing trouble or what, the records are not too clear, but that may have had some indication of the water having been made due to casing leak as was presented in the previous well. I believe it was the No. 18, the 71 was drilled in lieu of the 18.

I just do not think it has been established the No. 64 well is a water-productive well in the Hospah sand. The well was drilled deeper than the Hospah sand into a known water-bearing sand in the Gallup formation and was plugged back, but I don't see any proof that the water may not be coming from

that lower sand and the quality of water that was produced during that week, I don't know what it is, whether it is salt water or free water. I think there's some doubt as to the use of the 64 well as an injection well.

MR. NUTTER: Thank you, Mr. Hogan.

MR. MORRIS: I would like to make a statement, if I may. The only evidence before the Examiner concerning the No. 64 well is that as testified to by Mr. Andreen concerning the efforts made by Tesoro to convert this well to a commercial well and that failing the conversion or the use of it as a water injection well. Tesoro's evidence has shown here that where it has been possible to convert the intended injection well to a producing well, that that has been done. It has been done in several instances. They felt it could not be done with respect to No. 64. Unfortunately we do not have the actual tests on the well here with us today. We would be glad to furnish those to the Examiner and to Tidewater if that procedure would be in order.

MR. NUTTER: We would be happy to receive a tabulation of the daily tests on the well. I am sure Tidewater would appreciate receiving the same.

MR. MORRIS: Would that be satisfactory?

MR. HOGAN: That would be fine if it would show the type of the water, for one thing.

MR. NUTTER: Can you furnish that information to us within ten days?

MR. ANDREEN: Yes, actually I'm going from here to the field and I will pick them up in the field tomorrow.

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

MR. MORRIS: No, we have nothing further.

MR. VEST: If this well, as well as Well No. 68, is allowed to be an injection well or wells, I would like to know what rates are intended to be put in those wells, if I may.

MR. NUTTER: Mr. Andreen, what is the rate of injection that's contemplated for your waterflood project here?

MR. ANDREEN: We plan to put roughly a thousand barrels a day per well. Now some wells will take more than others, depending on feet of sand in the individual wells, but it will average roughly a thousand.

MR. NUTTER: Have you actually started water injection in any of the wells?

MR. ANDREEN: Yes, we have in some of them.

MR. NUTTER: What is the rate that you are using?

MR. ANDREEN: We are not up to a maximum weight. We are putting about, oh, somewhere between two to five hundred barrels a day in the wells now, they are varying right

now.

MR. NUTTER: How many water supply wells do you have?

MR. ANDREEN: One.

MR. NUTTER: What's the productivity of that well?

MR. ANDREEN: That well was originally tested at 4800 barrels a day. It has a BJ submersible pump in it, the water is coming from the Dakota.

MR. MORRIS: Mr. Andreen, your No. 68 well is intended to be a replacement for the No. 63 well, I believe you said?

MR. ANDREEN: In effect, yes.

MR. MORRIS: It's a step-out?

MR. ANDREEN: It's a step-out.

MR. MORRIS: To make sure we flooded all -- And the No. 69 is intended to be a step-out from the No. 62 which became a producer?

MR. ANDREEN: Right.

MR. MORRIS: As I understand you, the 68 and 69 will be operated in the same fashion as Wells Nos. 63 and 62 which previously had been authorized as injection wells?

MR. ANDREEN: Injection wells, right.

MR. MORRIS: To this end, or to show this we would ask the Examiner to incorporate into the record of this case

the record and exhibits in Case No. 3132 which was the original hearing on this waterflood project.

MR. NUTTER: That was the hearing in which the casing and cementing programs as well as water injection rates and so forth were gone into?

MR. MORRIS: Yes, sir.

MR. NUTTER: What was the number of the case?

MR. MORRIS: 3132, Order No. R-2807.

MR. VEST: I have one other --

MR. NUTTER: The record in the previous case will be incorporated. This is very inconvenient, Mr. Vest. What was the additional question you had?

MR. VEST: Well, it appeared to us that the producing limits of the field hadn't actually been determined and we were anticipating possibly drilling a well up in our 40-acre tract, and in the event that these offsetting wells have injection rates of a thousand barrels a day, what type of allowables would our well be given in that 40-acre tract?

MR. NUTTER: It's been the normal procedure of Commission operation that the operator of a water injection project receives a project allowable and he can produce his project allowable from the well or wells that he sees fit. A well offsetting an active water injection project is normally held to a basic top unit allowable for that pool.

I think in the past there have been some minor exceptions for a limited period of time.

MR. VEST: What happens in the case where you have a well, say we had a well and the capacity of the well exceeded the allowable, would there be any chance of us requesting an increase in allowable?

MR. NUTTER: I say in some cases there have been exceptions to that rule made for a limited period of time. There's also been some applications for the same thing that were turned down. In that event they just slowed their pumps down.

MR. VEST: What type of footage locations are we allowed in this 40-acre tract?

MR. NUTTER: You are allowed to drill a well in that 40-acre tract not closer than 330 feet to the outer boundary of the 40.

MR. VANDIVER: James C. Vandiver, and I work in Section 12. I wonder if I might at this time ask Mr. Andreen a question. We weren't going to make an appearance but this thing skipped around a little bit and we now have a question or two.

MR. NUTTER: I don't know if we excused Mr. Andreen or not, but he's still on the stand. Are you representing yourself?

MR. VANDIVER: Yes, I am and we are also a working

interest owners in Section 2 which offsets two of their injection wells, I think 60 and 61 and one which is not drilled.

MR. VANDIVER: I would like to ask Mr. Andreen, if I may, if they ran any tests as to the commercial possibilities of two injection wells, 61 and 60?

MR. ANDREEN: Yes.

MR. VANDIVER: What were the results?

MR. ANDREEN: I don't recall specifically. I don't have those records with me. We decided that they were non-commercial.

Just as a little background, we had originally planned to set 2-7/8ths fiberglass pipe in all of these injection wells and as a result of the cores it looked like some of them might have commercial possibilities, so we had to amend our original intentions and we set 4-1/2 inch pipe in all but two of the wells, those being 68 and 69; and we tested them, each one was tested with a pump jack similar to what we did on 64, and out of all of the tests that we ran the only two commercial completions we were unable to make were 62 and 63.

MR. VANDIVER: Did you test wells 60 or 61 with a pump jack?

MR. ANDREEN: Yes.

MR. VANDIVER: Could we have your information,

access to your tests and all?

MR. ANDREEN: Yes. I'll have to pick them up in the field.

MR. VANDIVER: That's all right, we will talk to you.

MR. NUTTER: In other words, all these various wells that were drilled as water wells were tested with a pump jack. Will you furnish us with a tabulation of the daily production tests on those wells within ten days?

MR. ANDREEN: Yes.

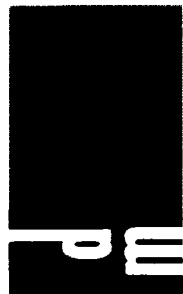
MR. NUTTER: Do you have any further questions, Mr. Vandiver?

MR. VANDIVER: No.

MR. NUTTER: Does anyone have any further questions of Mr. Andreen? He may be excused. Does anyone have anything further to offer in Case 3353?

MR. DURRETT: I would like to state that the Commission has received a letter from Mr. Frank Irby stating that they offer no objection to the granting of the application providing that the well construction and equipment specifications for injection wells are equal to or better than those in the original plan.

MR. NUTTER: Thank you. If there's nothing further in Case 3353 we'll take the case under advisement.



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STATE OF NEW MEXICO)
) SS
COUNTY OF BERNALILLO)

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

Witness my Hand and Seal this 21st day of January, 1966.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1967.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 3353,
heard by me on 1/5, 1966.

[Signature], Examiner
New Mexico Oil Conservation Commission