

Case Number  
4219

Application

Transcripts

Small Exhibits

ETC.



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
OIL CONSERVATION DIVISION

October 30, 1984

TONY ANAYA  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5800

Yates Petroleum Corporation  
207 South 4th Street  
Artesia, New Mexico 88210

Re: SWD Injection Permit  
Wilkinson AZ No. 2  
Unit M, Sec. 25,  
T-18-S, R-25-E  
Eddy County, N.M.

Gentlemen:

In an effort to update our files regarding Salt Water Disposal Permits, we are requesting some information on the above-mentioned well. Our records show that your company was issued a SWD Injection Permit No. R-3844 by us on September 24, 1969. Our records also show that since that time, this well has not been used for salt water disposal. Since a great deal of time has passed since your injection permit was granted, we assume that it is no longer your intention to use this well for water disposal purposes.

We are requesting information on the present status of this well, and whether or not your company intends to utilize this well for water disposal purposes at this time or in the near future. We would appreciate a response to this letter within thirty days. If we have not had a written response within that period of time, the injection permit granted by us will be rescinded.

Thank you for your cooperation in this matter.

Sincerely,

*David Catanach*

DAVID CATANACH  
Petroleum Engineer

DC/dr



IN THE MATTER OF:

Case No.  
4219

TRANSCRIPT OF HEARING

MR. NUTTER: Case 4219.

MR. HATCH: Case 4219. Application of Yates Petroleum Corporation for amendment of Order Number R-3609, Eddy County, New Mexico.

I think the record should show in this case that it was called by the Commission at this regular hearing we had earlier today on September 17, 1969, and was referred by the Commission to the Examiner, Dan S. Nutter, to be heard.

MR. LOSEE: Mr. Examiner, A. J. Losee, of Artesia, New Mexico, and on behalf of the Applicant, I have one witness, Mr. Eddie Mahfood.

MR. HATCH: Will you stand and be sworn, please?

MR. MAHFOOD: Yes, sir.

(Witness sworn.)

EDDIE MAHFOOD

the witness, called by Mr. Losee, having first been duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. LOSEE:

Q. Will you state your name please?

A. Eddie Mahfood.

Q. Where do you live, Mr. Mahfood?

A. Artesia, New Mexico.

Q. What is your occupation?

A. Consulting petroleum engineer.

Q. Have you previously testified before the Commission and had your qualifications as an expert in this field accepted as a matter of record?

A. Yes, I have.

MR. LOSEE: Mr. Examiner, are Mr. Mahfood's qualifications acceptable?

MR. NUTTER: Yes, sir, they are.

Q. (By Mr. Losee) Mr. Mahfood, will you give a brief statement of the purpose of this application for the Examiner?

A. We are requesting an amendment to this order, which authorized Yates Petroleum to duly complete this well -- that's a producing well in San Andres and an injection in the Yeso.

We seek now to eliminate -- to correct this -- we do not want to inject into the Yeso -- in fact, the Yeso is plugged off.

We want to inject in the San Andres, instead,

and the Gerard Number Two. We also want to inject water into the -- our disposal water in Wilkinson Number Two --

Q. In the San Andres?

A. The San Andres, yes.

Q. Please refer to what has been marked exhibit, Applicant's Exhibit Number One and explain what is portrayed by this plat?

A. This is a lease map showing the proposed disposal well, the offset producing wells and operators.

Q. Now, you have three diamond shapes in there; this application only covers two wells?

A. Right. We have, by Order 3609, permission to inject and -- the Nix and Curtis Number One, and we are planning for two more, the A. W. Number Two and the A. Z. Number Two -- and the Wilkinson Number Two.

Q. Now, actually this Nix and Curtis Number One is incapable of handling any substantial quantities of water; is that correct?

A. That's correct.

Q. What formations are producing in the area of these leases?

A. The San Andres, principally, and the Yeso, L. D. Y. and a few of the other wells.

Q. All right. Now, to the east of this area, are there some gas wells in the Pennsylvanian?

A. Yes, there are some -- about a mile away.

Q. In the Pennsylvanian?

A. Yes, sir.

Q. No other production than in the San Andres and the Yeso formation?

A. The Abo has been penetrated in one well here, but I don't think it's productive.

Q. Please refer to what has been marked as Exhibit Two, entitled the diagrammatic sketch of the Gerard Number Two, and explain what is shown by this sketch?

A. We seek two strings of pipe, cemented to the surface here, for protection of the fresh water zone, which is located at eight hundred and seventy to ten fifty in the Gerard Number Two.

The top of the San Andres formation is at seven thirty-four --

The surface casing is set at ten sixty-five, which is approximately fifteen feet below the base of the fresh water zone.

The string is cemented at a total depth of twenty-six thirty -- it was perforated in the L. D. Y.-Penasco,

Massey, the Glorietta and the Yeso sands.

On August 6th, the cast iron bridge plug was set at fifteen hundred, which plugged off all the zones below the San Andres for the slaughter -- the slaughter pay -- the San Andres slaughter pay.

We propose to run cement-lined tubing on a tension packer and to set this packer at approximately twelve sixty feet from the surface.

Q. What about the --

A. The casing annulus will be filled with inhibited fresh water.

Q. And you will have a gauge on that --

A. And we will have a pressure gauge at the surface -- on the casing valve -- on the casing at the casing valve.

Q. What kind of tubing are you going to use; what size and will it be coated --

A. This will be two-inch cement-lined tubing.

Q. So that your packer will actually be over two hundred feet below the base of the fresh water zone?

A. That is correct.

Q. Please refer to what has been marked as Applicant's Exhibit Number Three, entitled diagrammatic sketch of the



Wilkinson A. Z. Number Two and explain what is shown on this sketch?

A. This diagrammatic sketch shows that the Wilkinson A. Z. Number Two was drilled at a depth of fifteen twenty. That exposes the slaughter zone, which is the principal pay zone in this field. There are two strings of casing, both cemented to the surface.

The fresh water zone is at eight fifty-three to ten thirty-two, and the surface casing is set at ten forty-three, which is approximately eleven feet above the base of the fresh water zone.

We propose to run two-inch tubing, cement-lined tubing, on a tension packer, to set at the -- at about thirteen hundred twenty feet.

The slaughter zone is at thirteen seventy-eight through thirteen forty.

Q. And, again, you will load the annulus with inhibited fresh water?

A. Yes, that is correct.

Q. At the surface?

A. Yes, sir.

Q. Please refer to what has been marked Exhibit Number Four, being a log of the Gerard Number Two, and point out the

fresh water zones, if any, and the oil zones in this log?

A. This log started at approximately eleven forty -- this portion that I Xeroxed here -- I left off the fresh water zone, which is a little higher than this, approximately two hundred feet higher.

I have shown the perforations and I've also indicated the pay with a little red pencil.

This is a multiple pay -- all in the slaughter formation.

I have located a bridge plug at fifteen hundred -- I have shown the perforations below in the L. D. Y. and the Yeso, which are now plugged off.

Q. You have actually shown the locations of your packer as it's now set at fifteen hundred feet?

A. That's the bridge plug -- yes, sir.

Q. The bridge plug?

A. Yes, sir.

Q. Please refer to what has been marked as Exhibit Five --

A. This is a log of the Wilkinson A. Z. Number Two -- you will note that the fresh water zone is approximately eight fifty to ten thirty-two.

That casing is set at just below ten forty.

I've shown the different pay intervals here, with the perforations in the C Zone of the slaughter only.

Q. From what wells in this area do you propose to take the produced water and inject into these two injection wells?

A. All the wells in Section 25, one well in Section 24 and two wells in Section 36 are all comingled -- the waters are all comingled, and are presently being disposed of in the Nix Curtis Number One under pressure.

Q. Are those wells producing from the San Andres and the Yeso?

A. That's correct -- that is correct -- the majority of the water is coming from the Yeso.

Q. Is the water from the Yeso and the San Andres compatible?

A. It is compatible.

Q. And you propose to dispose of it in the San Andres and these two wells?

A. That is correct.

Q. Is this water corrosive?

A. Yes, sir.

Q. Do you propose to do any treatment on the water?

A. The wells have been treated and the lines -- we have a plastic line and these tubings will be cement lined, which should protect it from corrosion.

Q. What volumes of water do you initially anticipate injecting into these two wells and the Nix and Curtis?

A. At the present time, we are producing about two hundred and ten barrels of water per day, and the Nix-Curtis will probably not take more than a hundred.

The others are capable of taking up to one hundred and seventy barrels per day, at eight hundred pounds pressure.

Q. Are you going to gravity this water to the wells or are you going to pump it in?

A. We have a pump, set up very recently, to pump this water into the ground.

Q. And the pressure, I believe you stated, would be eight hundred pounds?

A. Eight hundred pounds, yes.

Q. What is the present oil production from the San Andres, which is the only open zone in the Gerard Number Two?

A. The Gerard Number Two is presently making about two barrels of oil per day.

Q. What is the present oil production from the

Wilkinson Number Two?

A. About six barrels per day.

Q. What is the permeability of this area in the San Andres?

A. It is very tight -- the average permeability is about two millidarcies.

Now it ranges from zero point two to forty-five -- anything below zero point two, we have neglected as improbable.

Q. How much is forty-five millidarcies? What percent of the section?

A. About two percent of the pay is forty-five millidarcies.

Q. Do you have an opinion as to whether the disposal of produced water, in the manner produced in this application, creates any danger to oil, gas or fresh water reservoirs in the area?

A. No, there is no danger as far as I can see, because all these wells have two strings of casing protecting that fresh water zone and both strings are cemented to the surface.

This, I believe, is a requirement of the U. S. G. S., and was witnessed by them.

Q. Do you have an opinion as to whether the approval of this application will prevent waste of oil that will otherwise not be recovered?

A. Yes, sir. This San Andres is so tight that I doubt if more than six percent of the oil in place will ever be produced by primary means.

It is obvious then that by injecting water in the San Andres, we can greatly enhance the production of oil from the San Andres.

Q. Are Yates presently in the process of attempting to unitize this area for waterflood?

A. Yes, sir, they are -- they are in the process of -- to unitize the area.

Q. Mr. Mahfood, were Exhibits One through Five prepared by you?

A. Yes, sir.

MR. LOSEE: Mr. Examiner, we move the introduction of Exhibits One through Five.

MR. NUTTER: Without objection, Exhibits One through Five will be admitted in evidence.

(WHEREUPON, Applicant's Exhibits One through Five, inclusive, were admitted into evidence.)

MR. LOSEE: That's all of the Applicant's case

at this time.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Mahfood, refer now to your Exhibit Number Five --

A. Yes, sir.

Q. -- that is the log on the Wilkinson?

A. Yes, sir.

Q. Now you have got the uppermost perforations there at thirteen seventy-eight --

A. That is correct.

Q. And the base of the water is up here in the neighborhood of ten thirty or ten forty --

A. Yes, sir.

Q. -- and you have got a section there of approximately three hundred feet between the uppermost perforations and the base of the water --

A. Yes, yes --

Q. -- now, this is tight, horizontally; now, how about the vertical permeability here?

A. I believe the core analysis did show very negligible perms on the horizontal tests.

Q. On the vertical?

A. Yes, the verticals -- they were very negligible.

Q. So, in your opinion, would this be -- the injection of salt water into this perforated interval down here in the lower section of the log would not have any adverse effect upon the fresh water up here at ten hundred and forty on up?

A. No, sir -- I don't believe it would. As far as I know there were no vertical fractures in this area.

MR. NUTTER: I see. Are there any other questions of the witness?

You may be excused. Do you have anything further, Mr. Losee, to offer in Case 4219?

MR. LOSEE: I have nothing further.

MR. NUTTER: The case will be taken under advisement and the hearing is adjourned.

(THEREUPON, the hearing stood in adjournment at 10:35 o'clock, P. M.)



I N D E XPage

The Witness - EDDIE MARFOOD

Direct Examination by Mr. Losee

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Cross Examination by Mr. Nutter

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E X H I B I T SAdmitted

Applicant's Exhibits One through Five


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STATE OF NEW MEXICO     )  
                                  ) ss  
COUNTY OF BERNALILLO    )

I, CA FENLEY, Court Reporter 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.

  
\_\_\_\_\_  
CA FENLEY - COURT REPORTER



## OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

LAND COMMISSIONER  
ALEX J. ARMIJO  
MEMBER

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

September 24, 1969

Mr. A. J. Losee  
Attorney at Law  
Post Office Box 239  
Artesia, New Mexico 88210

Re: Case No. 4219  
Order No. R-3844

Applicant:  
Yates Petroleum Corp.

Dear Sir:

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

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC X

Artesia OCC X

Aztec OCC           

Other State Engineer Office

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE No. 4219  
Order No. R-3844

APPLICATION OF YATES PETROLEUM CORPORATION  
FOR AMENDMENT OF ORDER NO. R-3609, EDDY  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 17, 1969, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission" and was referred to Examiner Daniel S. Nutter for hearing.

NOW, on this 24th day of September, 1969, the Commission, a quorum being present, having considered the testimony presented, 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 by Order No. R-3609, Yates Petroleum Corporation was authorized to dually complete its A. W. Gerard Well No. 2, located in Unit J of Section 25, Township 18 South, Range 25 East, NMPM, Penasco Draw S. Andres-Yeso Pool, Eddy County, New Mexico, among other wells, to permit the production of oil from the San Andres formation and to permit the disposal of produced salt water into the Yeso formation in a manner set forth therein.

(3) That the applicant, Yates Petroleum Corporation, now seeks amendment of said Order No. R-3609 to permit the conversion of the aforesaid A. W. Gerard Well No. 2 for the disposal of produced salt water into the San Andres formation in the perforated

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CASE No. 4219  
Order No. R-3844

interval from approximately 1316 feet to 1459 feet, instead of the dual completion as originally authorized.

(4) That the applicant further seeks authority to utilize its Wilkinson "AZ" Well No. 2, located in Unit M of said Section 25, to dispose of produced salt water into the San Andres formation, with injection into the perforated interval from approximately 1378 feet to 1440 feet.

(5) That the injection should be accomplished through:

2 3/8-inch cement lined tubing installed in a packer set at approximately 1260 feet in the A. W. Gerard Well No. 2;

2 3/8-inch cement lined tubing installed in a packer set at approximately 1320 feet in the Wilkinson "AZ" Well No. 2;

that the casing-tubing annulus of each of the subject wells should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus of each of the subject wells at the surface in order to determine leakage in the casing, tubing, or packer.

(6) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

(7) That the authorization in Order No. R-3609 for the dual completion of the aforesaid A. W. Gerard Well No. 2 should be superseded.

IT IS THEREFORE ORDERED:

(1) That the applicant, Yates Petroleum Corporation, is hereby authorized to utilize its following-described wells in Section 25, Township 18 South, Range 25 East, NMPM, Penasco Draw San Andres-Yaso Pool, Eddy County, New Mexico, to dispose of produced salt water into the San Andres formation:

A. W. Gerard Well No. 2, located in Unit J, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 1260 feet, with injection into the perforated interval from approximately 1316 feet to 1459 feet;

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CASE No. 4219  
Order No. R-3844

Wilkinson "AZ" Well No. 2, located in Unit M, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 1320 feet, with injection into the perforated interval from approximately 1378 feet to 1440 feet;

PROVIDED HOWEVER, that the tubing of each of the subject wells shall be cement-lined; that the casing-tubing annulus of each of the subject wells shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus of each of the subject wells at the surface in order to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

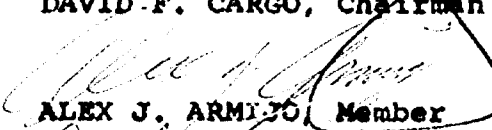
(3) That the authorization in Order No. R-3609 for the dual completion of the aforesaid A. W. Gerard Well No. 2 to produce oil from the San Andres formation and to dispose of produced salt water into the Yaso formation is hereby superseded, and said Order No. R-3609 in all other respects shall remain in full force and effect.

(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

  
ALEX J. ARMILLO, Member

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

  
ear/

Docket No. 26-69

DOCKET: REGULAR HEARING - WEDNESDAY - SEPTEMBER 17, 1969

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

ALLOWABLE: (1) Consideration of the oil allowable for October, 1969;

(2) Consideration of the allowable production of gas for October, 1969, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for October, 1969.

CASE 4218: Southeastern nomenclature case calling for an order for the creation and extension of certain pools in Lea, Eddy and Chaves Counties, New Mexico.

(a) Create a new pool in Lea County, New Mexico, classified as an oil pool for San Andres production and designated as the Spencer-San Andres Pool comprising the following:

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM  
Section 24: SE/4 SW/4

Further, for the assignment of approximately 24,940 barrels of oil discovery allowable to the discovery well Aztec Oil & Gas Company's State "DS" Well No. 1 located in Unit N of said Section 24.

(b) Create a new pool in Eddy County, New Mexico, classified as an oil pool for Delaware production and designated as the Esperanza-Delaware Pool comprising the following:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM  
Section 10: NE/4 NW/4

Further, for the assignment of approximately 17,085 barrels of oil discovery allowable to the discovery well Union Oil Company of California's Tracy Well No. 1 located in Unit C of said Section 10.

(c) Create a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Bagley-Wolfcamp Pool. The discovery well is the Sam Boren Andover Federal No. 1 located in Unit M of Section 19, Township 11 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM  
Section 19: SW/4

(d) Create a new pool in Lea County, New Mexico, classified as an oil pool for San Andres production and designated as the South Bronco-San Andres Pool. The discovery well is the Signal Oil & Gas Company Lowe Land No. 1 located in Unit L of Section 35, Township 13 South, Range 38 East, NMPM. Said pool would comprise:

TOWNSHIP 13 SOUTH, RANGE 38 EAST, NMPM  
Section 35: SW/4

September 17, 1969 - Regular Hearing  
-2-

(Case 4218 continued)

(e) Extend the Double L-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 29 EAST, NMPM  
SECTION 36: SW/4 NE/4 and N/2 SE/4

(f) Extend the Hardy-Blinebry Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM  
SECTION 2: NE/4

(g) Extend the Quail-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM  
SECTION 11: NW/4

(h) Extend the Scarborough Yates-Seven Rivers Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NMPM  
SECTION 25: NE/4

(i) Extend the Shugart Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM  
SECTION 23: SW/4 NW/4

(j) Extend the Weir-Blinebry Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM  
SECTION 10: NE/4

CASE 4219:

Application of Yates Petroleum Corporation for amendment of Order No. R-3609, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3609, to permit the disposal of produced salt water into the San Andres formation in two wells located in Section 25, Township 18 South, Range 25 East, Penasco Draw San Andres-Yeso Pool, Eddy County, New Mexico, as follows:



Docket No. 26-69

September 17, 1969 - Regular Hearing  
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(Case 4219 continued)

A. W. Gerard Well No. 2, Unit J of Section 25;  
disposal interval 1316 feet to 1459 feet;

Wilkinson Well No. 2, Unit M of Section 25;  
disposal interval 1378 feet to 1440 feet.

Docket No. 26-69

DOCKET: REGULAR HEARING - WEDNESDAY - SEPTEMBER 17, 1969

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

ALLOWABLE: (1) Consideration of the oil allowable for October, 1969;

(2) Consideration of the allowable production of gas for October, 1969, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for October, 1969.

CASE 4218: Southeastern nomenclature case calling for an order for the creation and extension of certain pools in Lea, Eddy and Chaves Counties, New Mexico.

(a) Create a new pool in Lea County, New Mexico, classified as an oil pool for San Andres production and designated as the Spencer-San Andres Pool comprising the following:

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM  
Section 24: SE/4 SW/4

Further, for the assignment of approximately 24,940 barrels of oil discovery allowable to the discovery well Aztec Oil & Gas Company's State "DS" Well No. 1 located in Unit N of said Section 24.

(b) Create a new pool in Eddy County, New Mexico, classified as an oil pool for Delaware production and designated as the Esperanza-Delaware Pool comprising the following:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM  
Section 10: NE/4 NW/4

Further, for the assignment of approximately 17,085 barrels of oil discovery allowable to the discovery well Union Oil Company of California's Tracy Well No. 1 located in Unit C of said Section 10.

(c) Create a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Bagley-Wolfcamp Pool. The discovery well is the Sam Boren Andover Federal No. 1 located in Unit M of Section 19, Township 11 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM  
Section 19: SW/4

(d) Create a new pool in Lea County, New Mexico, classified as an oil pool for San Andres production and designated as the South Bronco-San Andres Pool. The discovery well is the Signal Oil & Gas Company Lowe Land No. 1 located in Unit L of Section 35, Township 13 South, Range 38 East, NMPM. Said pool would comprise:

TOWNSHIP 13 SOUTH, RANGE 38 EAST, NMPM  
Section 35: SW/4

September 17, 1969 - Regular Hearing

-2-

(Case 4218 continued)

(e) Extend the Double L-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 29 EAST, NMPM  
SECTION 36: SW/4 NE/4 and N/2 SE/4

(f) Extend the Hardy-Blinebry Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM  
SECTION 2: NE/4

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SECTION 11: NW/4

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SECTION 25: NE/4

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SECTION 23: SW/4 NW/4

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CASE 4219:

Application of Yates Petroleum Corporation for amendment of Order No. R-3609, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3609, to permit the disposal of produced salt water into the San Andres formation in two wells located in Section 25, Township 18 South, Range 25 East, Penasco Draw San Andres-Yeso Pool, Eddy County, New Mexico, as follows:

*James Lovel  
Eddy, Mahaf  
Coas PE  
Artisan*

*Case called at Commission hearing  
and referred to Examiner for hearing  
Hearing called in Morgan Hall  
at 10:10 am 9/17/69.*

September 17, 1969 - Regular Hearing  
-3-

(Case 4219 continued)

A. W. Gerard Well No. 2, Unit J of Section 25;  
disposal interval 1316 feet to 1459 feet;

Wilkinson Well No. 2, Unit M of Section 25;  
disposal interval 1378 feet to 1440 feet.

R- 3609 authorized dual completions  
of Gerard # 2 to produce  
from S.A. from 1316 to 1696 feet  
and dispose of salt water into  
Y240 from 1424 to 2572 feet.  
also authorized similar dual  
completions of Johnston BE No 1 in  
A 8-19-25 and New Century No 1  
in I 25-18-25.

DIAGRAMMATIC SKETCH OF DISPOSAL WELL

YATES PETROLEUM CORPORATION

GERARD AW-2

2310/S 1650/E - Unit J - Sec 25-18-25

Elevation: 3455' GL  
 Completed: December 20, '66  
 Perforated: S.A. & Yeso,  
 1316-2572  
 Treated: 283000# 20/40 in  
 12000 BW  
 IPP: 56 BOPD, 40 BWPD  
 WO Aug 69: Shut off Yeso  
 w/ BP @ 1500'

Top of San Andres Fm @ 734

Fresh water zone @ 870-1050

Slaughter Oil Pays: Dolo,  
 br-lt gr w/scat cherty or  
 anhy nodules, selenite

LDY Zone @

Penasco Massive

Glorietta and Yeso-1

**BEFORE THE**  
**OIL CONSERVATION COMMISSION**  
 Santa Fe, New Mexico

Exhibit No. 2

Case No. 4219

Wellhead Fittings

Casing Valve and Pressure Gauge

Surface Casing and Oil String cemented  
 to surface, witnessed by USGS.

Propose to fill casing annulus with  
 inhibited fresh water.

8 5/8" 24# J-55 Casing @ 1065' w/ 450sx

Propose to run 2 3/8" cement-lined tubing  
 on tension packer set at about 1260'.

Perfs: 1316-26, 1346-56, 1384-94, 1412-32;  
 Treated w/2000g. NEA, SWF 21000#; Pf 1446-59,  
 Tr. all pfs 5000g. NEA, SWF 92500# 20/40sd

CIBP @ 1500' (8/6/69)

Perfs @ 1696-1634'; 2000g. NEA, SWF 41500#

Perfs @ 1824-1970'; 4000g. NEA, SWF 41500#

Perfs 2158-70, 2212-76; 2000g. NEA, SWF 41500#

Perfs 2340-2572; 2000g. NEA, SWF 41500#

Total Depth Drilled \* 2630'

PBTD- 2626'

5 1/2" 15.5# J-55 @ 2628' w/ 450sx, 3yds  
 ready-mix cement to surface.

DIAGRAMMATIC SKETCH OF DISPOSAL WELL

YATES PETROLEUM CORPORATION  
WILKINSON AZ-2

990/S 990/W - Unit M - Sec 25-18-25

Elevation: 3467'GL  
Completed: May 2, 1968  
Perforated: 1378-1440'  
Treated: 3000g. 15% NEA,  
SWF 35000# 20/40, 120000g.  
IPP- 60 BOPD, 40°API

Top of San Andres Formation  
@ 704'

Fresh water zone @ 853-1032'

Slaughter Zone (Oil Pays)  
Dolo, br-lt gr w/ scat cherty  
or anhy nodules, interstitial  
selenite.

⊗ Wellhead Fittings

⊙ Casing Valve and Pressure Gauge

Surface Casing and Oil String cemented  
to surface, witnessed by

Propose to fill casing annulus with  
inhibited fresh water.

8 5/8" 28# J-55 Casing @ 1043' w/  
500sx cement and 5 yds ready-mix.

Propose to run 2 3/8" cement-lined  
tubing, set on tension packer @  
about 1320'.

Perfs: 1378-88, 1410-21, 1426-32,  
1436-40; Treated w/ 3000g. 15% NEA,  
SWF 35000# 20/40 in 120,000g. MOD 500

Total Depth Drilled - 1530'

PBTD- 1520'

5 1/2" 14# J-55 @ 1527' w/ 180sx cement  
and 5 yds ready-mix.

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

Exhibit No. 3

Case No. 4219



YATES BUILDING - 207 SOUTH 4TH ST.  
ARTESIA, NEW MEXICO - 88210

August 29, 1969

Mr. A. L. Porter, Jr., Secretary-Director  
New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 85701

Re: Amendment to Order R-3609, Salt  
Water Disposal Wells in Penasco  
Draw SA-Yeso Pool

Dear Mr. Porter:

Application is hereby submitted for an amendment to Oil Conservation Commission Order R-3609, which authorized Yates Petroleum Corporation to dually complete Gerard "AW" No. 2 in the Penasco Draw San Andres-Yeso Pool, Eddy County, New Mexico, for disposal of produced salt water into the Yeso formation and production of oil from the San Andres formation. Until now the Gerard AW #2 has not been dually completed. Recent tests have indicated that the Yeso completion of this well had contributed perhaps more harm than benefit toward oil recovery on this lease. Consequently, on August 6, 1969, the Yeso formation was plugged off by setting a BP at a depth of 1500'. Also at this time disposal well Nix-Curtis BH #1 has pressured up and is incapable of handling any substantial amount of disposal water. Permission is therefore requested to proceed with conversion of the Gerard AW #2 for disposal, not in the Yeso formation, but in the San Andres formation through perforations at 1316' - 1457'. Authority is also requested for conversion of Wilkinson AZ #2 for disposal of produced salt water into the San Andres formation through perforations at 1378' - 1440'.

In keeping with good conservation practices and the protection of correlative rights, proceedings are presently underway for the unitization of all properties in this pool and subsequent waterflooding. At the present time, however, the pool is far from the stripper stage, less than 50% depleted. Because of the very low permeability of the San Andres formation, negligible drainage, if any, is anticipated to occur across lease lines before unitization is completed.

DOCKET MAILED

Date 9-5-69

12  
G. P. YATES  
PRESIDENT  
HARVEY E. YATES  
VICE PRESIDENT  
MARTIN YATES, III  
VICE PRESIDENT  
JOHN A. YATES  
VICE PRESIDENT  
RUGH W. PARRY  
SEC. - TREAS.

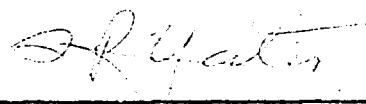
*Long*  
*file - Call*  
*4219*

New Mexico Oil Conservation Commission  
August 29, 1969  
Page two

The pool is presently producing approximately 200 BWPB from Yeso completions and only about 10 BWPB from San Andres. It is anticipated that each of the San Andres completions will take approximately 100 BWPB at pressures up to 800 psi.

Lease map, diagrammatic sketches and electric logs of the proposed disposal wells are attached.

Respectfully submitted,

  
\_\_\_\_\_

YPC/cp  
Encl.

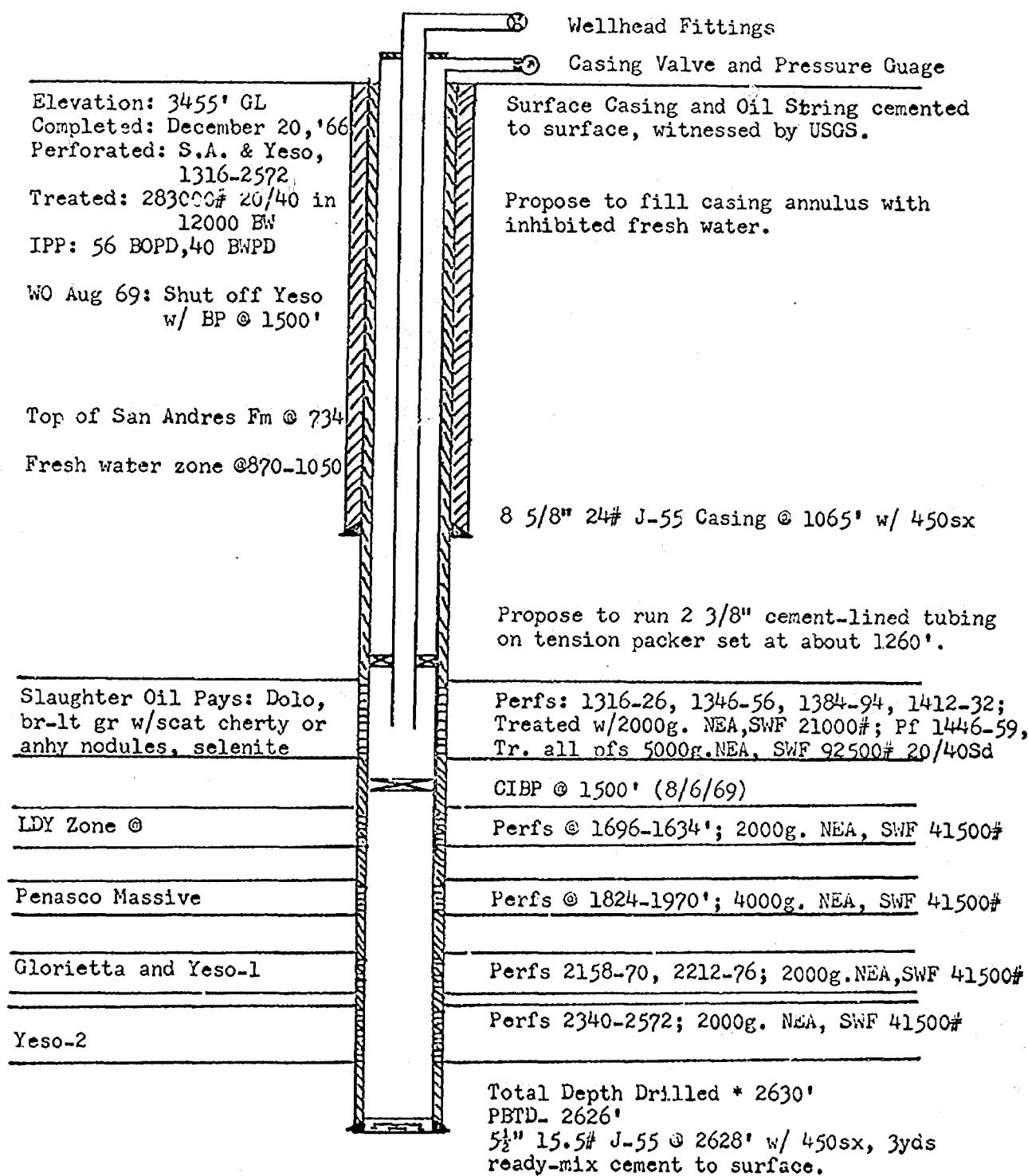


DIAGRAMMATIC SKETCH OF DISPOSAL WELL

YATES PETROLEUM CORPORATION

GERARD AW-2

2310/S 1650/E - Unit J - Sec 25-18-25

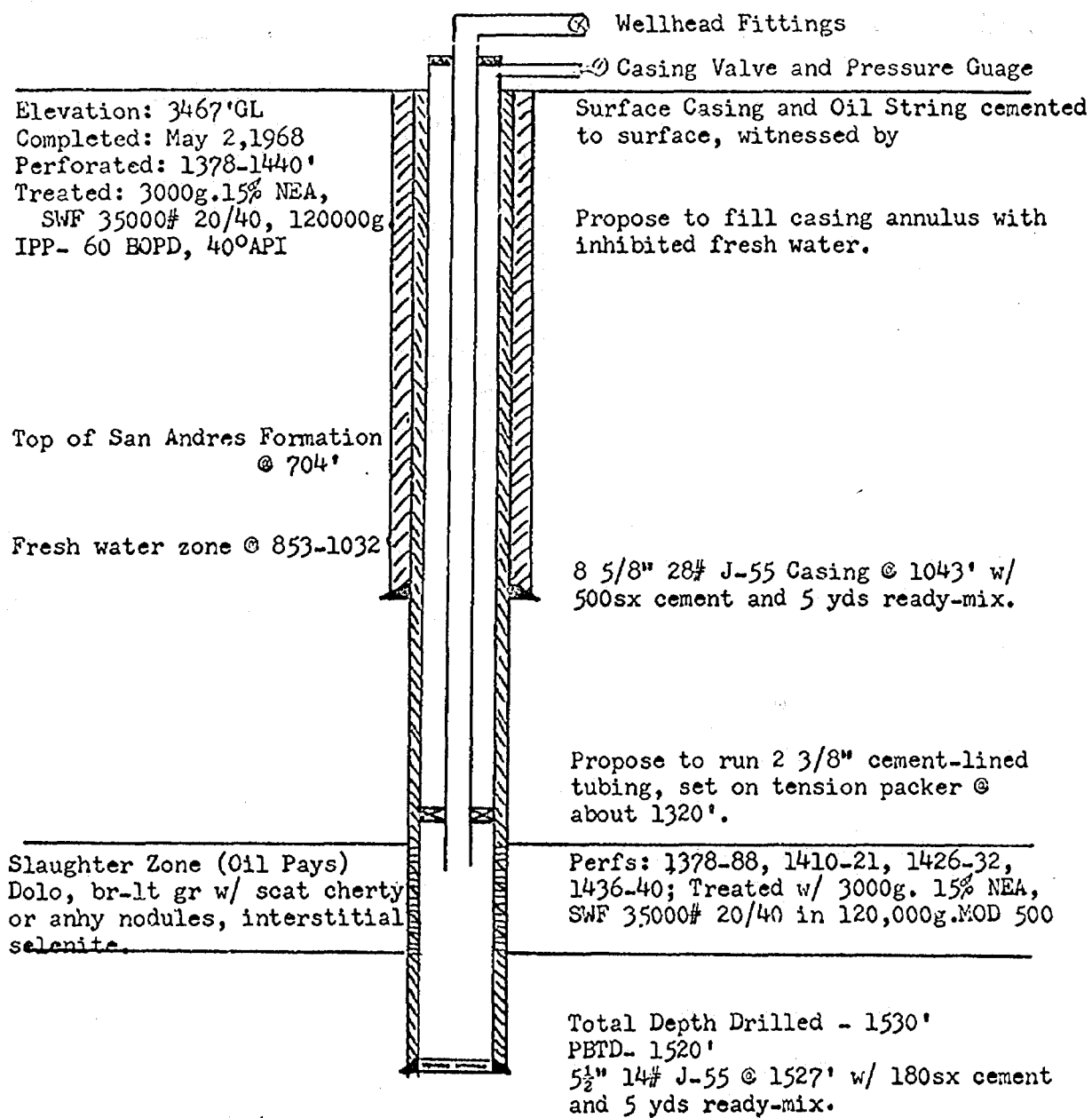


DIAGRAMMATIC SKETCH OF DISPOSAL WELL

YATES PETROLEUM CORPORATION

WILKINSON AZ-2

990/S 990/W - Unit M - Sec 25-18-25



Dan,

It may be  
better to write this  
as a new order  
and forget about  
amending, just  
supersede part of the  
old order.

George

OK

JD

DRAFT

GMH/esr

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE No. 4219

Order No. R- 3844

APPLICATION OF YATES PETROLEUM CORPORATION  
FOR AMENDMENT OF ORDER NO. R-3609, EDDY  
COUNTY, NEW MEXICO.

*give new order no.*  
*9-18-69*

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 17, 1969, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," *and was referred to Examiner Daniel S. Nutter for hearing.*

NOW, on this \_\_\_\_\_ day of September, 1969, the Commission, a quorum being present, having considered the testimony presented, *the record, and the recommendation of the Examiner,* and the exhibits received at said hearing, 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 by Order No. R-3609, Yates Petroleum Corporation was authorized to dually complete its A. W. Gerard Well No. 2, located in Unit J of Section 25, Township 18 South, Range 25 East, NMPM, Penasco Draw San Andres-Yeso Pool, Eddy County, New Mexico, among other wells, to permit the production of oil from the San Andres formation and to permit the disposal of produced salt water into the Yeso formation in a manner set forth therein.

(3) That the applicant, Yates Petroleum Corporation, now seeks amendment of said Order No. R-3609 to permit the conversion of the aforesaid A. W. Gerard Well No. 2 for the disposal of produced salt water into the San Andres formation in the *perforated*

interval from approximately 1316 feet to 1459 feet, instead of the dual completion as originally authorized.

(4) That the applicant further seeks authority to utilize ~~its~~ <sup>"AZ"</sup> ~~Wilkinson~~ Well No. 2, located in Unit M of said Section 25, to dispose of produced salt water into the San Andres formation, with injection into the perforated interval from approximately 1378 feet to 1440 feet.

(5)



(5)(a) That the injection should be accomplished through:

2 3/8-inch Cement-lined tubing installed in a packer set at approximately 1260 feet in the A. W. Gerard Well No. 2;

2 3/8-inch Cement-lined tubing installed in a packer set at approximately 1320 feet in the <sup>"AZ"</sup> ~~Wilkinson~~ Well No. 2;

that the casing-tubing annulus of each of the subject wells should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus of each of the subject wells at the surface in order to determine leakage in the casing, tubing, or packer.

(6)(a) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

(7)(a) That the authorization in Order No. R-3609 for the dual completion of the aforesaid A. W. Gerard Well No. 2 should be superseded.

IT IS THEREFORE ORDERED:

~~That Order No. R-3609 be hereby amended to also permit~~  
(1) ~~That~~ <sup>OK</sup> the applicant, Yates Petroleum Corporation, ~~is~~  
<sup>OK</sup> ~~hereby authorized~~ to utilize its following-described wells in  
Section 25, Township 18 South, Range 25 East, NMPM, Penasco Draw  
San Andres-Yeso Pool, Eddy County, New Mexico, to dispose of  
produced salt water into the San Andres formation:

A. W. Gerard Well No. 2, located in Unit J, injection  
to be accomplished through 2 3/8 -inch tubing installed  
in a packer set at approximately 1260 feet, with  
injection into the perforated interval from  
approximately 1316 feet to 1459 feet;

<sup>"AZ"</sup>  
Wilkinson <sup>1</sup> Well No. 2, located in Unit M, injection  
to be accomplished through 2 3/8 -inch tubing installed  
in a packer set at approximately 1320 feet, with  
injection into the perforated interval from  
approximately 1378 feet to 1440 feet;

PROVIDED HOWEVER, that the tubing of each of the subject  
wells shall be Cement -lined; that the casing-tubing annulus  
of each of the subject wells shall be filled with an inert fluid;  
and that a pressure gauge shall be attached to the annulus of each  
of the subject wells at the surface in order to determine leakage  
in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its  
disposal operations in accordance with Rules 704 and 1120 of the  
Commission Rules and Regulations.

(3) That the authorization in Order No. R-3609 for the dual  
completion of the aforesaid A. W. Gerard Well No. 2 to produce oil  
from the San Andres formation and to dispose of produced salt water  
into the Yeso formation is hereby superseded, and said Order No.  
R-3609 in all other respects shall remain ~~the same~~ *in full force*  
*and effect.*

-4-

CASE No. 4219

(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.

Reg. Hearing - Sept. 17, 1969

Newspaper

Case 4219

Application of Yates Petroleum Corporation  
for amendment of Order No. R-3609, Eddy  
County, New Mexico.

Applicant in the above styled case,  
seeks the amendment of Order No. R-3609,  
to permit the injection disposal of produced  
salt water into the San Andres formation  
~~therein~~ in the following two wells located in  
~~in~~ Section 25, Township 18 South,  
Range 25 East, Pecos Draw San Andres-  
Yates Pool, Eddy County, New Mexico, as  
follows:

A. W. Herard Well No. 2, Unit J of Section  
25; disposal interval - 1316 feet to 1459  
feet;

Wilkinson Well No. 2, Unit M of Section  
25; disposal interval - 1378 feet to  
1440 feet;



Reg.

Yates

R-3609

- A. W. Gerard -  
to inject W into San Andres  
perf. 1316 to 1459

---

Wilkinson # 2 Unit M, Sec 25, T18,  
R25

Penns.

inject San Andres perf.  
1378-1440

