

CASE 4085: Application of TAMARACK
PETROLEUM CORPORATION FOR SALT
WATER DISPOSAL, LEA COUNTY.

Case Number.

4085

Application

Transcripts.

Small Exhibits

ETC.

dearnley-meier reporting 387-33-1000

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

March 26, 1969

EXAMINER HEARING

IN THE MATTER OF:)
)
)

Application of Tamarack)
Petroleum Corporation,)
Inc., for salt water)
disposal, Lea County,)
New Mexico.)

Case No. 4085

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 4085.

MR. HATCH: Case 4085, application of Tamarack Petroleum Corporation, Incorporated, for salt water disposal, Lea County, New Mexico.

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

MR. UTZ: Any other appearances? You may proceed.

(Witness sworn.)

(Whereupon, Applicant's Exhibits Numbers 1 through 7, inclusive, were marked for identification.)

MR. KELLAHIN: If the Examiner please, in the hearing held on February 5th, an application was submitted to this Commission for approval of a salt water disposal well, the Texaco Moran Well No. 2, located in Unit H of Section 22, Township 19 South, Range 35 East, on behalf of Tamarack Petroleum Company, the applicant in this case. There was an objection in the form of a written statement, I believe, to this application, which was submitted by Mr. John H. Hendrix, and as a result of that objection, the Commission entered its Order R-3674 approving the use of the well, the Texaco Moran No. 2, for salt water disposal, but in the order it was provided that the disposal of more than 350 barrels of salt water per

day into said well shall be limited to a maximum of 60 days.

At the time of the hearing on this case, there was some discussion presented, some testimony presented as to the prospect of a future waterflood project, in which the disposal well would fit as an injection well on pattern, and it was also indicated at that time that other wells would be applied for, for injection wells. As a result of the order of the Commission which limited the use of the Moran Well No. 2 to 60 days, Tamarack has filed its application in this case for approval of the use of the Cabot 23 State Well No. 2, located in Unit C of Section 23, Township 19 South, Range 35 East.

The reason for the application at this time and prior to the institution of the waterflood project as proposed by the Applicant, is because of the nature of the order entered by the Commission in the previous case, and the necessity for further capacity for disposal of the salt water at this time.

MR. UTZ: So it is all your fault, then?

MR. KELLAHIN: No, sir, I won't say that. I don't say the order was unreasonable; we agree with it, nothing wrong with the order, but that does explain the fact that we are here before we have been able to unitize the area

and form a waterflood project, as is contemplated.

With that preface, I would like to present the testimony in this case.

ROY C. WILLIAMSON

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A Roy C. Williamson, Senior.

Q What business are you engaged in, Mr. Williamson?

A I am in the petroleum consulting business.

Q Have you ever testified before the Oil Conservation Commission?

A No, I haven't.

Q For the benefit of the Examiner, would you give your education and experience as a petroleum engineer?

A Yes. I graduated from the University of Oklahoma in 1956 with a B.S. Degree in Petroleum Engineering, and in Geological Engineering. I was employed by Gulf Oil Corporation from approximately 1958 to 1967 as a petroleum engineer, at which time I left and joined the firm of consulting petroleum engineers. Therefore, I have been

working in the petroleum industry since about 1958.

Q Have you done any work in the State of New Mexico in connection with this work?

A Yes, I have.

Q In connection with your position as a consulting engineer, have you done any work for Tamarack Petroleum Corporation in connection with Case 4085?

A Yes, I have.

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

MR. UTZ: Yes.

Q Mr. Williamson, are you familiar with the application of Tamarack Petroleum Corporation in Case 4085?

A Yes, I am.

Q You heard the preliminary statement that I made in connection with this case. Does that correctly reflect the situation as regard to this application at the present time?

A Yes, it does.

Q Referring to what has been marked as Exhibit Number 1, would you identify that exhibit?

A It is an application to dispose of salt water by injection into a porous formation.

Q That is the regular Commission Form C-108 that is used in connection with such applications, is it not?

A That's correct.

Q And attached to that application are some additional exhibits. Do you know what those are?

A Yes, they are water analyses for several of the wells, water from which will be injected into our well, provided the application is approved.

Q Now, what volume of water do you anticipate will be injected into this well?

A Oh, approximately 350 barrels per day.

Q And that will be water that is presently being injected in the other well which has been approved for injection in this area?

A That's correct. It is anticipated that the volume now going into the Texaco Moran No. 2 will be divided, half into this well and half to the Texaco Moran No. 2.

Q Well, referring to what has been marked as Exhibit 2, can you identify that exhibit?

A Exhibit 2 is a map showing the outline of a proposed unit for the purpose of waterflooding this portion of the Pearl Queen Field. The unit outline is shown in yellow. The green wells are the wells that will be producers under the proposed

waterflood plan. The red marks show proposed injection wells. The arrow to the blue dot shows the well that we are currently applying to the Commission to inject into. The yellow dots show the current injection wells in the area.

Q Offsetting the proposed unit is a waterflood project, the East Pearl Unit operated by Shell, is that correct?

A That's correct.

Q Is that well presently under water injection?

A Yes, it is.

Q Now, you refer to this as a proposed unit outline. Have you been doing work for Tamarack Petroleum Corporation in connection with their proposed unitization of this area for the purposes of waterflooding?

A Yes, I have.

Q Could you state to what point you have progressed in connection with this proposed unitization?

A I have prepared a planimeter table, which has been approved by both Tamarack and the other working interest owner, which is Texaco Oil and Gas, and this planimeter table will be used as a basis for unitizing this area.

Q Do you anticipate that the unit will be completed in the near future?

A Yes, I do.

Q And in your opinion, is this area suitable as a waterflood project?

A Yes, it is. We have also performed an economic study for the project, and have determined it to be economic to waterflood this area.

Q Now, you know, of course, that Tamarack has received approval for the water injection in its Texaco Moran No. 2 Well?

A Right.

Q And at the present time they are proposing to inject in the Cabot 23 State Well No. 2 shown by the blue dot?

A Yes.

Q Would that be a logical pattern well for injection purposes in connection with the proposed waterflood, in your opinion?

A Yes, it would.

Q Would it also, at the present time, make a suitable salt water disposal well to handle the water production that is being produced from this proposed unit area?

A Yes.

Q Referring to what has been marked as Exhibit Number 3, would you identify that exhibit?

A Exhibit 3 is a sonic log on the well in question, the State 23, No. 2 Well. On the log, we have marked the top

of the Queen Zone, and the various intervals that are found throughout this area. These are Zones 1 through 7. Also shown are the perforated intervals into Zone 5 and into Zone 7, which will be the interval into which the injected water will enter.

Q Will this also be the interval which will be subject to waterflood project, in the event it is approved?

A That's correct.

Q Now, the interval that is shown there, those are perforations that are presently open in this well?

A That's correct.

Q Is the well presently producing?

A Yes, it is.

Q Do you know to what extent it is a producing well? Is it a good one?

A I haven't seen a recent test, but the last information I had indicated it was producing two to three barrels of oil per day.

Q So it is at a stripper state?

A That's correct.

Q Referring to what has been marked as Exhibit Number 4, would you identify that exhibit?

A This is a schematic of the proposed mechanical

installation of injection tubing, packer, et cetera, to convert the Cabot State 23 No. 2 Well into an injection well.

Q Now, the injection will be through plastic-coated tubing, under a packer, is that correct?

A That's correct.

Q Will the casing tubing annulus be filled with an inert fluid?

A Yes.

Q Will a pressure gauge be placed at the surface?

A Yes.

Q Is this a type of completion that has been approved by the Commission in other cases in this area?

A That's correct.

Q In your opinion, will the approval of this well for water injection as proposed by your Exhibit Number 4, adequately protect all fresh water zones or producing horizons?

A Yes.

Q Mr. Williamson, you are familiar with the fact that there has been an objection stated in the previous case, and as we understand, the present case, by Mr. John H. Hendrix, to the application of Tamarack for water injection in this area. Are you familiar with that?

A Yes, I am.

Q Have you prepared some exhibits to show that the interest of Mr. Hendrix would be fully protected?

A Yes, I have.

Q Do you know what his interests are?

A I understand that he owns ten mineral acres under the 80-acre tract, designated Texaco Moran Lease in Section 22.

Q That is the tract on which there is a present injection well?

A That's correct.

Q Referring to what has been marked as Exhibits 5 and 6, would you discuss the significance of those exhibits?

A Yes. Exhibit 5 is an isopach, a net pay isopach of Zone 5, and Exhibit 6 is a net pay isopach of Zone 7. I have prepared these two exhibits for the purpose of showing the approximate reservoir volume that will be swept by injection wells in the event that no unitization effort is carried forth here.

We see in Zone 5 that the Texaco Moran No. 2 Well will push, or at least sweep a volume, a reservoir volume to the east toward the State I 23 Lease.

At the same time, the proposed injection into the 23 State Well No. 2 will push -- or will sweep a volume of oil

toward the Texaco Moran Lease. The purpose of these exhibits is to show the relative amounts of net reservoir volume that theoretically will be swept by these two injection wells.

Q Will the injection of water in the 23 No. 2 Well have any adverse effect on Mr. Hendrix' interest?

A It will have none. In fact, if these conditions were allowed to continue, it would be a beneficial effect to his lease.

Q Now, was the use of the Section 23 Well No. 1, located in the extreme northwest corner of the Section, considered?

A It was considered, but was not believed to be a proper well to put on injection, for several reasons, one of which is the final pattern upon which we are planning to flood this zone will result in better sweep, and more economical and additional recovery of oil, if the No. 2 Well is put on.

In addition, the No. 1 Well, the State 23 No. 1 Well is presently not deep enough to encounter the seven-zone. Therefore, injection into it would only be into the five-zone.

Q And that would result in a lessened recovery of oil as a result of the waterflood effect of your water injection, is that correct?

A That's correct.

Q Now, referring to what has been marked as Exhibit Number 7, would you identify that exhibit?

A Yes, Exhibit Number 7 is a calculation of the swept volumes that I had mentioned before. We can see there for Zone 5, we have an approximate swept area of 9.9 acres for the Texaco Moran Lease; a net pay thickness of seven feet, for a swept acre footage volume of approximately 69.3, and this is a volume that I have represented that would be swept toward the State I 23 Lease.

The column under the State I there shows a swept area of 24.7 acres, as opposed to the 9.9, a net pay thickness of 16 as opposed to the seven-foot thickness, for a total swept volume, acre footage volume of 395.2 acre feet. In other words, injection on the State I 23 into the Weil No. 2 will be swept 395 acre feet toward the Texaco Moran Lease, as opposed to the Texaco Moran returning 69.3 acre feet.

Q And the Texaco Moran would stand to benefit more than it would lose by the injection into the two wells?

A That's correct, if this condition were allowed to continue. Of course, there is a take-out point in the five-zone on the State I 23 Lease, which will recover some oil of this swept volume, but certainly not all of it.

Q And it would not recover it from the Zone 7?

A It would recover none from the Zone 7, because the I 23 No. 1 Well is not completed, is not deep enough to reach the seven-zone.

Referring back to Exhibit 7, I have also calculated the relative swept areas in Zone 7. The amount of volume, reservoir volume swept from the Texaco Moran Lease is 44.6 acre feet, and the volume swept from the State I 23 toward the Texaco Moran Lease is 55.8 acre feet, again showing an advantage that the Texaco Moran Lease would obtain if these conditions continued indefinitely.

Q And, of course, they will continue until the waterflood project is instituted and put into operation?

A That's correct.

Q Mr. Williamson, in your opinion, would the approval of use of the Cabot 23 State Well No. 2 adversely effect the correlative rights of any operator or any royalty owner in the area?

A No, it would not.

Q Were Exhibits 1 through 7 prepared by you or under your supervision?

A Yes.

MR. KELLAHIN: At this time, I would like to offer in evidence Exhibits 1 through 7, inclusive.

MR. UTZ: Without objection, Applicant's Exhibits 1 through 7 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits Numbers 1 through 7, inclusive, were admitted into evidence.)

MR. KELLAHIN: If the Examiner please, at the time of the presentation of the previous case, it was testified we propose to inject approximately 700 barrels per day into the well. On account of the objection received, the Commission limited us to 60 days for this purpose. So, as I would read it, I believe the intent of the order is to permit us to inject 350 barrels per day after the 60 days expired, and we will put 350 barrels into the other well.

MR. UTZ: So you will continue to use this well, Texaco Moran well, as an injection well after this is approved?

MR. KELLAHIN: Yes. And then, upon formation of the waterflood project, it will be a pattern injection well.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Williamson, did I understand you to say that it was your intention to put 350 barrels a day into this well?

A Approximately, yes, that is the maximum.

Q And this water will be produced water from this area?

A That's correct.

Q Referring to your Exhibit Number 4, the eight and five-eighths, is that 250 sacks circulated?

A I don't know.

MR. KELLAHIN: Mr. Metcalf is here, and I believe he could testify on that, if you would like to have him do so.

MR. UTZ: Well, is he more familiar with that?

MR. KELLAHIN: Yes.

MR. UTZ: I think that is all the questions I have on that as to the casing program and as to the cement. Let me see if I have anything here for Mr. Williamson.

Does anyone else have a question of Mr. Williamson? If not, he may be excused. Call Mr. Metcalf.

ALBERT METCALF

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q State your name, please.

A Albert Metcalf.

Q By whom are you employed, and in what position?

A Vice President of Tamarack Petroleum Company.

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

A Yes, I have.

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

MR. UTZ: Yes, they are.

Q Mr. Metcalf, are you familiar with the completion of the Tamarack Petroleum Company's Cabot State 23 Well No. 2?

A Yes, I am.

Q Referring to what has been marked as Exhibit Number 4, would you outline for the Examiner the cementing and casing program on that well?

A Well, the well has eight and five-eighths-inch surface casing set at 318 feet, with 250 sacks of cement, which was circulated to the surface.

It has four and a half-inch production casing set at 5,045 feet, with 350 sacks of cement, which is calculated -- which the top of the cement behind the four and a half-inch casing is calculated to be at 2,770 feet.

The well presently is perforated in the No. 5 Queen Sand Zone from 4,948 to 4,972 feet, and it is producing from those perforations.

We propose before putting the well on injection, to

open additional perforations in the No. 7 Zone from 5,037 to 5,043 feet, and inject into both Queen Sand zones under a Baker Model AD packer set at approximately 4,900 feet.

MR. KELLAHIN: That is all I have on direct examination, Mr. Utz.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Metcalf, you do have an open zone from 318 feet to 2,770, which does not have cement behind the four and a half. What formations are behind that? Do you know if there is any water production or anything like that?

A No, sir, there is no fresh water in this area below 120 feet, and there is no production, oil production anywhere in the area from that interval.

Q It is your proposal to protect this area by filling the annulus with inert fluid, is that correct?

A Yes, sir.

MR. UTZ: That is all I have. Does anyone have any questions of Mr. Metcalf? You may be excused. The case will be taken under advisement, if there are no further statements.

MR. HATCH: The Commission has received a telegram from John H. Hendrix, by Michael L. Klein, Attorney, dated March 26. It is respectfully requested that the following

statements be made a part of the record in Case No. 4085, docketed for March 26, 1969. John H. Hendrix objects to the granting of the application of Tamarack Petroleum Company, Incorporated, for the use of its Cabot State Lease Well No. 2 as a salt water disposal well, inasmuch as the use of such well will permit the continuation of the inequity created by Commission Order R-3674, authorized the injection of water into the Tamarack Moran No. 2 Well in Unit H, Section 22, Township 19 South, Range 35 East, Lea County, New Mexico, resulting in the sweep of oil from lands under which protestant owns a mineral interest located in the east half, northeast quarter of Section 22, Township 19 South, Range 35 East, without the replacement of a like amount of oil by the injection into a well equidistant from the common lease line. Protestant was previously assured by applicant that the requirements of Mr. A. L. Porter's letter of February 18, 1969 to Mr. Jason Kellahin would be satisfied by injection into the Tamarack Cabot 23 State No. 1 Well in Unit D, Section 23, Township 19 South, Range 35 East, which would in essence push a volume of oil back into the Moran Lease equal to that which is being swept off, which was to protestant's satisfaction. However, the application now before the Commission is inconsistent with the foregoing representation, and the granting of this

application will result in the violation of protestant's correlative rights.

Michael L. Klein, Attorney for protestant, John H. Hendrix.

MR. UTZ: He didn't quite explain just how this was going to occur, did he? I presume he feels that this well is farther away than his well, and his oil will be pushed off first. Do you have any idea?

THE WITNESS: No, I haven't talked to Mr. Hendrix about this. I don't know how he reasons that.

MR. UTZ: Well, at any rate, this was a public hearing, and he had the opportunity to be here. The case will be taken under advisement.

I N D E X

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

I, SAMUEL MORTELETTE, 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.

Samuel Mortelette
 COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4085, heard by me on Mar. 24, 1969.
James L. [Signature], Examiner
 New Mexico Oil Conservation Commission

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WESTERN UNION TELEGRAM

W. P. MARSHALL
CHAIRMAN OF THE BOARD

R. W. MCFALL
PRESIDENT

SYMBOLS

DL = Day Letter
NL = Night Letter
LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

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NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE NMEX

1969 MAR 25 AM 10 14

ATTN MR D S NUTTER CHIEF ENGR: IT IS RESPECTFULLY
REQUESTED THAT THE FOLLOWING STATEMENTS BE MADE A PART
OF THE RECORD IN CASE NO. 4085 DOCKETED FOR MARCH
26-69 JOHN H HENDRIX OBJECTS TO THE GRANTING OF THE
APPLICATION OF TAMARACK PETROLEUM CO. INC. FOR THE USE
OF ITS CABOT 23 STATE WELL NO. 2 AS A SALT WATER
DISPOSAL WELL IN AS MUCH AS THE USE OF SUCH WELL WILL
PERMIT THE CONTINUATION OF THE INEQUITY CREATED BY
COMMISSION ORDER R-3674 AUTHORIZED THE INJECTION OF

WU1201 (R2-65)

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL
CHAIRMAN OF THE BOARD

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PRESIDENT

SYMBOLS

DL=Day Letter
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The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination.

WATER INTO THE TAMARACK MORAN #2 WELL IN UNIT H, SEC 22 T-19-S R-35-E LEA COUNTY NEW MEXICO RESULTING IN THE SWEEP OF OIL FROM LANDS UNDER WHICH PROTESTANT OWNS A MINERAL INTEREST LOCATED IN THE E/2 NE/4 OF SEC 22 T-19-S OR 35-E WITHOUT THE REPLACEMENT OF A LIKE AMOUNT OF OIL BY THE INJECTION INTO A WELL EQUIDISTANT FROM THE COMMON LEASELINE PROTESTANT WAS PREVIOUSLY ASSURED BY APPLICANT AT THE REQUIREMENTS OF MR. A L PORTER'S LETTER OF FEB. 18, 1969 TO MR. JASON KELLAHIN WOULD BE SATISFIED BY INJECTION INTO THE TAMARACK CABOT 23 STATE NO. 1 WELL IN UNIT D. SEC. 23 T-19-S R-35-E WHICH WOULD IN ESSENCE PUSH A VOLUME OF OIL BACK ONTO

WU1201 (R2-65)

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE



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

April 1, 1969

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

Re: Case No. 4085
Order No. R-3718
Applicant:
Tamarack 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

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. 4085
Order No. R-3718

APPLICATION OF TAMARACK PETROLEUM
CORPORATION, INC., FOR SALT WATER
DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 26, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 1st day of April, 1969, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Tamarack Petroleum Corporation, Inc.,
is the owner and operator of the Cabot 23 State Well No. 2, located
in Unit C of Section 23, Township 19 South, Range 35 East, NMPM,
Pearl-Queen Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Queen formation, with
injection into the perforated interval from approximately
4948 feet to 5043 feet.

(4) That the injection should be accomplished through
2 3/8-inch plastic-lined tubing installed in a packer set at
approximately 4900 feet; that the casing-tubing annulus should
be filled with an inert fluid; and that a pressure gauge should

-2-

CASE No. 4085
Order No. R-3718

be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

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

IT IS THEREFORE ORDERED:

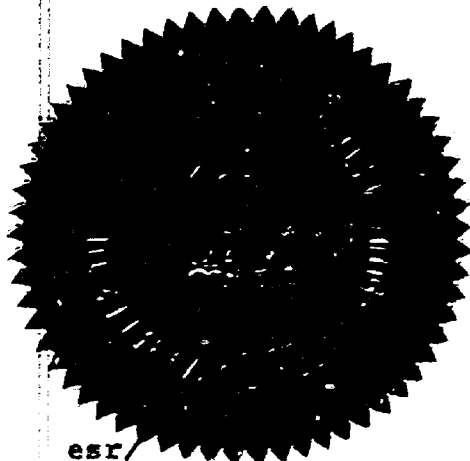
(1) That the applicant, Tamarack Petroleum Corporation, Inc., is hereby authorized to utilize its Cabot 23 State Well No. 2, located in Unit C of Section 23, Township 19 South, Range 35 East, NMPM, Pearl-Queen Pool, Lea County, New Mexico, to dispose of produced salt water into the Queen formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 4900 feet, with injection into the perforated interval from approximately 4948 feet to 5043 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus 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 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
DAVID F. CARGO, Chairman

Alex J. Armljo
ALEX J. ARMLJO, Member

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

esr/

Case 4085

Heard 3-26-69

Rec. 3-27-69

Grant Icamerack Pet Corp.
permission to convert Cabot #23
#2 C-23-195-35 E. Pearl
- Luren Pool to an injection well.
Injection shall be made thru
2 3/8" tubing under a packer set
at approx 9900. + into the Luren
fract. thru pipe, 9948-72.
Well will be an injection well
for proposed waterflood
unit.

Trust

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 26, 1969

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

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

- CASE 4078: Application of J. Gregory Merriam for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Devils Fork-Gallup Pool and an undesignated Mesaverde oil pool in the well-bore of his NCRA State Well No. 3 located in Unit L of Section 16, Township 24 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 4079: Application of Robert B. Holt for the creation of a new pool, assignment of a discovery allowable, and the promulgation of special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Middle Pennsylvanian oil pool for his Aztec State Well No. 2 located in Unit A of Section 26, Township 13 South, Range 32 East, Lea County, New Mexico, and for the assignment of an oil discovery allowable in the amount of approximately 48,715 barrels to said well. Applicant further seeks the promulgation of special pool rules for said pool, including a provision for 160-acre proration units and the assignment of 80-acre allowables.
- CASE 3975: (Reopened)
In the matter of Case No. 3975 being reopened pursuant to the provisions of Order No. R-3618, which order established 80-acre spacing units for the East Bluitt-San Andres Pool, Roosevelt County, New Mexico, for a period of approximately two months. All interested parties may appear and present evidence as to whether the subject area is indeed a separate common source of supply or an extension of the Bluitt-San Andres Gas Pool. Further, in the event said East Bluitt-San Andres Pool is found to be an extension of said Bluitt-San Andres Gas Pool, the Commission will consider the amendment of the Special Rules and Regulations governing the Bluitt-San Andres Gas Pool to provide for the classification of oil and gas wells, spacing and well location requirements for oil and gas wells, and an allocation formula for withdrawals from the gas cap and oil rim.
- CASE 4080: Application of Monsanto Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Black River Unit Area comprising 14,961.23 acres, more or less, of State, Federal and Fee lands

CASE 4080 - Continued

in Townships 25 and 26 South, Ranges 23 and 24 East,
Eddy County, New Mexico.

CASE 4081: Application of Curtis Hankamer for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Brushy Draw Deep Unit Area comprising 9,672.53 acres, more or less, of State and Federal lands in Township 26 South, Ranges 29 and 30 East, Eddy County, New Mexico.

CASE 4082: Application of Sam D. Ares for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject produced salt water into the Yates-Seven Rivers formation in the open-hole interval from approximately 3358 to 3495 feet in his Arnott Ramsey "A" Well No. 3, located 660 feet from the North and West lines of Section 2, Township 25 South, Range 36 East, Jalmat Yates Seven Rivers Pool, Lea County, New Mexico.

CASE 4083: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Penrose Skelly Pool and the Paddock Pool in the well-bore of its Eunice King Well No. 7 located in Unit G of Section 28, Township 21 South, Range 37 East, Lea County, New Mexico, with the provision that no more than one allowable will be produced from said well.

CASE 4084: Application of Olen F. Featherstone for the creation of a new pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Wolfcamp oil pool for his Cabot State Well No. 1 located in the NE/4 NW/4 of Section 29, Township 15 South, Range 32 East, Lea County, New Mexico, and for the promulgation of special rules therefor including a provision for 160-acre spacing and proration units and the assignment of 80-acre allowables.

CASE 4085: Application of Tamarack Petroleum Corporation, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Queen formation in the perforated interval from approximately 4948 feet to 5043 feet in its Cabot 23 State Well No. 2 located in Unit C of Section 23, Township 19 South, Range 35 East, Pearl-Queen Pool, Lea County, New Mexico.

CASE 4086: Application of Hansen Oil Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its CSA Federal Well No. 1 located in Unit 2 of Section 29, Township 26 South, Range 37 East, Scarborough Yates-Seven Rivers Pool, Lea County, New Mexico, in such a manner as to permit production of oil from the Yates formation and the disposal of produced salt water into the Seven Rivers formation through parallel strings of tubing.

CASE 4087: Application of Solar Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its McCallister Well No. 1 located in Unit 3 of Section 7, Township 22 South, Range 38 East, Lea County, New Mexico, to produce oil from undesignated Drinkard and Abo oil pools through parallel strings of tubing.

CASE 4071: (Continued from the March 19, 1969, Regular Hearing)
Application of T. J. Sivley for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete his Federal Silver Well No. 4 located in the SW/4 SE/4 of Section 28, Township 20 South, Range 34 East, Lynch Yates-Seven Rivers Pool, in such a manner as to permit production of oil from the Yates-Seven Rivers formations and the disposal of produced salt water into the Lower Seven Rivers formation.

CASE 4088: Application of Paul M. Mershon, Jr., for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Upper Pennsylvanian formation underlying Section 21, Township 22 South, Range 23 East, Eddy County, New Mexico. Said acreage to be dedicated to a well to be drilled at an unorthodox gas well location 990 feet from the North and East lines of said Section 21, and within one mile of the Indian Basin-Upper Pennsylvanian Gas Pool. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

CASE 4089: Application of Paul M. Mershon, Jr., for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the special rules and regulations governing the Indian Basin-Upper Pennsylvanian Gas Pool to permit the drilling of a well at an unorthodox gas well location 990 feet from the North and East lines of Section

21, Township 22 South, Range 23 East, Indian Basin-
Upper Pennsylvanian Gas Pool, Eddy County, New Mexico.

CASE 4090: Application of Getty Oil Company for an exception to Commission Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the potash-oil area casing and cementing rules as set forth in Commission Order No. R-111-A. Applicant proposes to re-enter and deepen approximately 3500 feet in the Yates formation four wells located in Sections 19 and 30 of Township 20 South, Range 34 East, Lea County, New Mexico, in such a manner as to eliminate the necessity of running the salt protection string provided the production string would be cemented to the surface.

CASE 4091: Application of Union Oil Company of California for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Elliott Federal Well No. 1 located in Unit O of Section 27, Township 11 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Field Ranch-Wolfcamp Pool and the disposal of produced salt water into the San Andres, Glorieta, Blinberry, Tubb and Abo formations in the open-hole interval from approximately 4458 feet to 8050 feet.

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

OPERATOR Tamarack Petroleum Company, Inc.		ADDRESS 910 Bldg. of the Southwest, Midland, Texas	
LEASE NAME Cabot "23" State	WELL NO. 2	FIELD Pearl Queen	COUNTY Lea
LOCATION UNIT LETTER C ; WELL IS LOCATED 1650 FEET FROM THE West LINE AND 330 FEET FROM THE North LINE, SECTION 23 TOWNSHIP 19S RANGE 35E NMPM. Lea County			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	8-5/8	318	250
INTERMEDIATE	None		
LONG STRING	4-1/2	5045	350
TUBING	2-3/8	4900	Baker Model AD @ 4900'
NAME OF PROPOSED INJECTION FORMATION Queen Sand		TOP OF FORMATION 4542	BOTTOM OF FORMATION 5046
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES Perforations	PROPOSED INTERVAL(S) OF INJECTION 4948-72 and 5037-43
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Production		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH ---			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 120'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA None
ANTICIPATED DAILY INJECTION VOLUME (BBLS.) 250	MINIMUM 350	MAXIMUM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Yes		WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Larry Squires 2723 N. Acres Drive, Hobbs, New Mexico		LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Shall Oil Company, Box 1509, Midland, Texas 79701	
<div style="border: 2px solid black; padding: 5px; transform: rotate(-2deg); display: inline-block;"> BEFORE EXAMINER USE OIL CONSERVATION COMMISSION EXHIBIT NO. 1 CASE NO. 4085 </div>			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER Yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	THE NEW MEXICO STATE ENGINEER No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA Yes	ELECTRICAL LOG Yes	DIAGRAMMATIC SKETCH OF WELL Yes

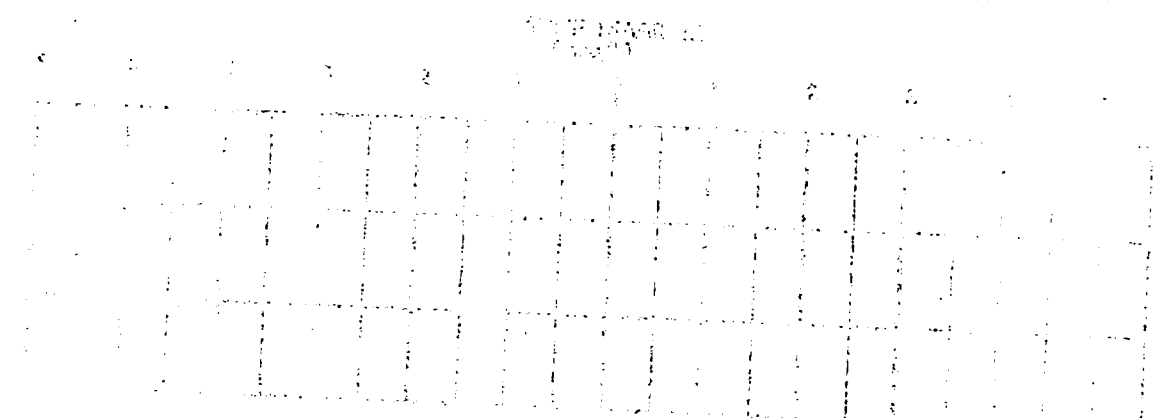
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

W. J. L. L. L. **Vice-President** **March 25, 1969**

(Signature) (Title) (Date)

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

✓ **Mr. Robert H. Johnson** **Director, Johns**
Harvard
Cambridge, Mass.
U.S. Office #1
6.3
1,300
15
12,800 **3,100** **400** **1,300** **15**
14,000 **700** **1,300** **15**
6,570 **540** **1,300** **15**
Not Determined



Calculated Reactivity - .048 at 600g.

George H. Green, Jr.
at: Laboratory - Robb Station

10/10/50
10/10/50
10/10/50

Well Head

McClure, Texas

Reed

Reed-Donner #1

0.3

1.115

63

57,500

2,328

Reed

12,100

3,490

11,400

570

Reed

98

2

5,100

420

Reed

1,250

106

Not Determined

Reed

Reed

Calculated Resistivity - .051 at 68°F.

George W. Frear, Jr.

at: Laboratory - Public Station

John H. S.

John H. S.

John H. S.

Labot State # 2

6.3.

2000

2000

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

2010

Not Determined

1990-1991

Associated Reactivity - 0.42 at 68°

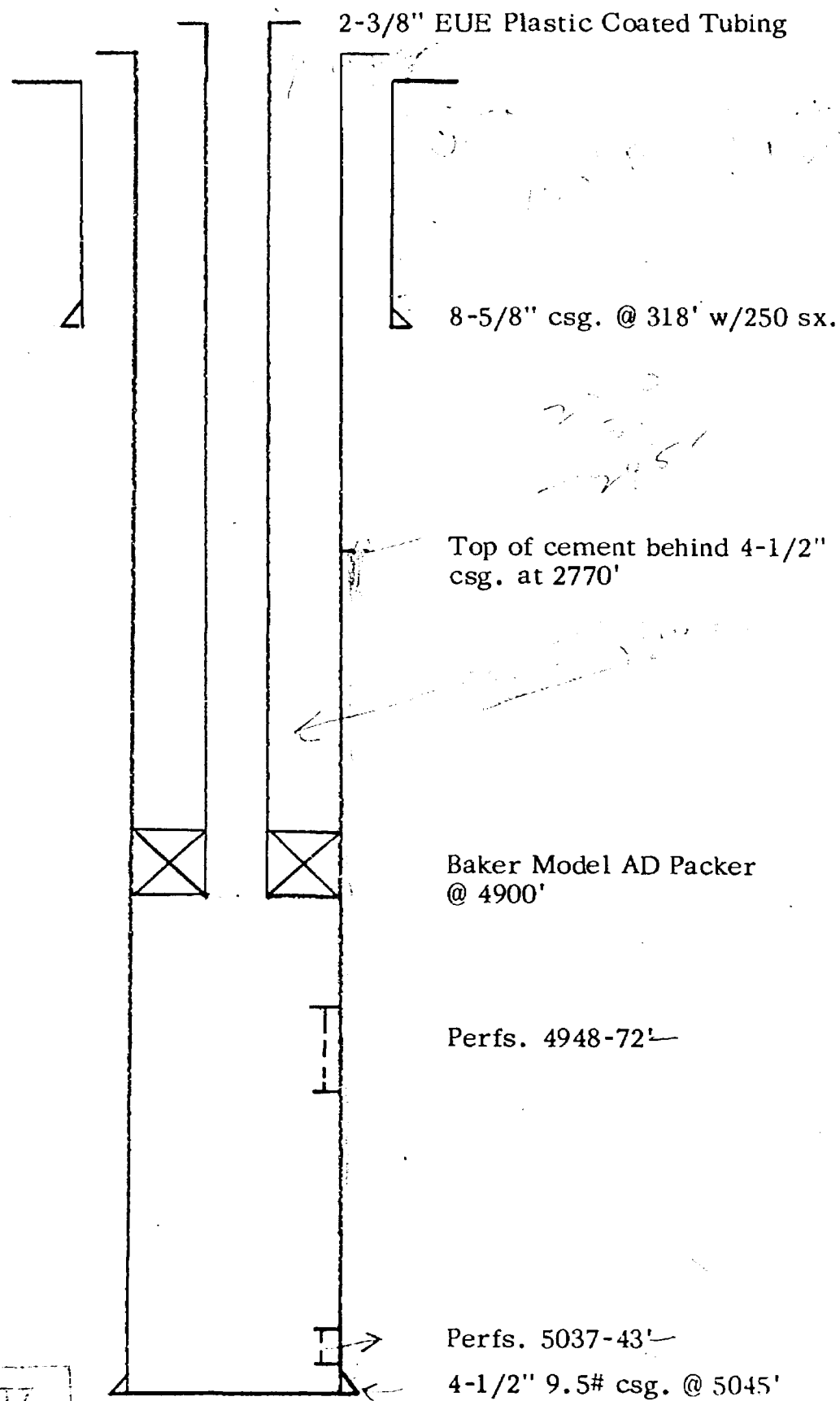
James H. Groves, Jr.

Re: [REDACTED] - 2008 Election

[illegible]

TAMARACK PETROLEUM COMPANY, INC.

Cabot State "23" No. 2
Proposed Injection Well

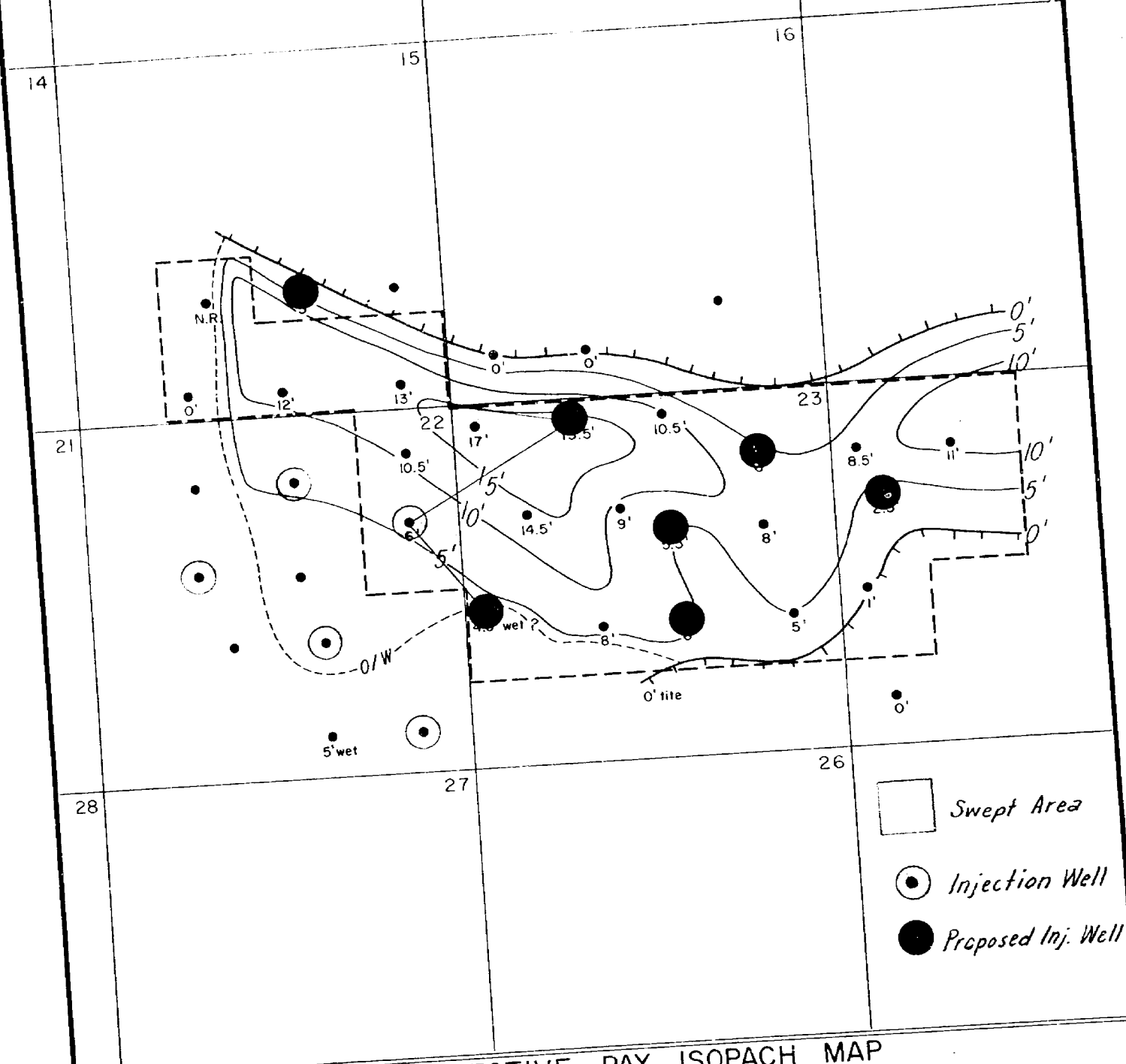


RECEIVED EXAMINER UTZ
OIL COMMISSION COMMISSION
EXHIBIT NO. 7
4045

BEFORE EXAMINER USE
OIL CONSERVATION COMMISSION

EXHIBIT NO. 5

CASE NO. 1/685

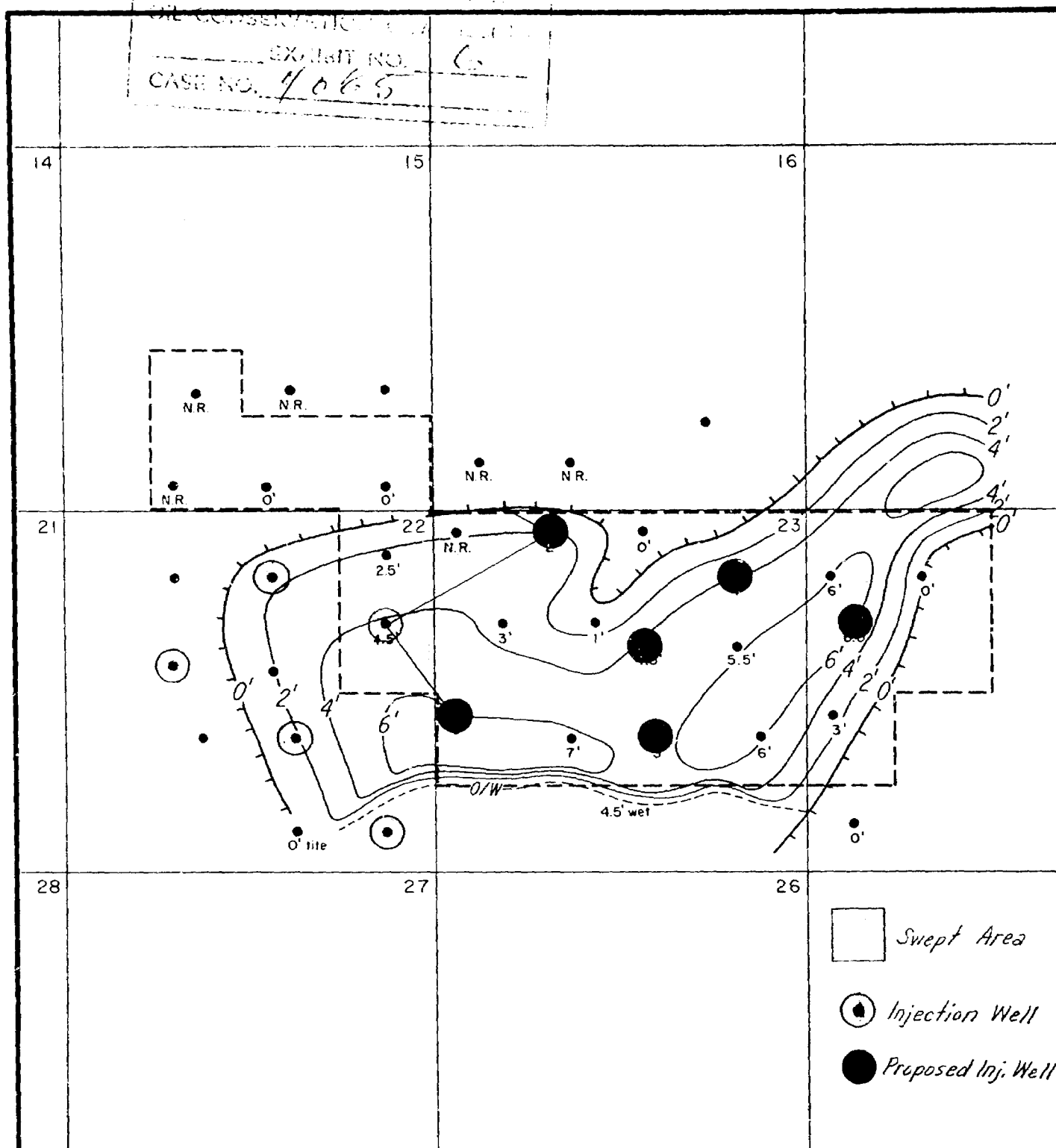


NET EFFECTIVE PAY ISOPACH MAP
ZONE V

PROPOSED N. E. PEARL QUEEN UNIT

FIELD N. E. PEARL QUEEN		COUNTY LEA	STATE NEW MEXICO
Engineer R. C. W.	Date 3-18-69	Drwn. By Del	File PEARL QUEEN, N. E.
BAILEY, SIPES & WILLIAMSON, INC. CONSULTING ENGINEERS 1100 V & J Tower Midland, Texas			FIGURE NO. 3

WFORE EXAMINER
OIL CONSERVATION
EXHIBIT NO. 6
CASE NO. 4065



NET EFFECTIVE PAY ISOPACH MAP

ZONE VII

PROPOSED N. E. PEARL QUEEN UNIT

FIELD	N. E. PEARL QUEEN	COUNTY	LEA	STATE	NEW MEXICO
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Engineer	R. C. W.	Date	3-18-69	Drwn. By	Del	File	PEARL QUEEN, N.E.
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BAILEY, SIPES & WILLIAMSON, INC.

FIGURE NO. 4

CONSULTING ENGINEERS

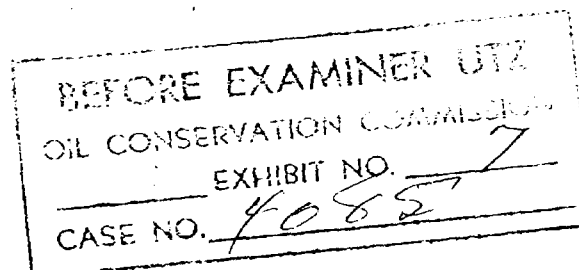
1100 V & J Tower Midland, Texas

SWEPT AREAS BETWEEN TEXACO-MORAN AND STATE I LEASES

PEARL QUEEN FIELD - LEA CO., NEW MEXICO

	<u>TEXACO-MORAN</u>	<u>STATE I</u>
<u>ZONE V</u>		
Swept Area, Ac.	9.9	24.7
Net Pay Thickness, Ft.	7.0	16.0
Swept Vol., AF	69.3	395.2
 <u>ZONE VII</u>		
Swept Area, Ac.	9.9	27.9
Net Pay Thickness, Ft.	4.5	2.0
Swept Vol., AF	44.6	55.8

BAILEY, SIPES & WILLIAMSON, INC.
CONSULTING ENGINEERS
MIDLAND, TEXAS 79701
ROY C. WILLIAMSON, JR. P.E./pw



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. 4085

Order No. R-3718

APPLICATION OF TAMARACK PETROLEUM
CORPORATION, INC., FOR SALT WATER
DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 26, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

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

FINDS:

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

(2) That the applicant, Tamarack Petroleum Corporation, Inc.,
is the owner and operator of the Cabot 23 State Well No. 2,
located in Unit C of Section 23, Township 19 South, Range
35 East, NMPM, Pearl-Queen Pool, Lea
County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Queen
formation, with injection into the perforated interval
from approximately 4948 feet to 5043 feet.

(4) That the injection should be accomplished through
2 3/8-inch plastic-lined tubing installed in a packer set at

approximately 4900 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus ~~or the annulus left open~~ at the surface in order to determine leakage in the casing, tubing, or packer.

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

IT IS THEREFORE ORDERED:

(1) That the applicant, Tamarack Petroleum Corporation, Inc., is hereby authorized to utilize its Cabot 23 State Well No. 2, located in Unit C of Section 23, Township 19 South, Range 35 East, NMPM, Pearl-Queen Pool, Lea County, New Mexico, to dispose of produced salt water into the Queen formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 4900 feet, with injection into the perforated interval from approximately 4948 feet to 5043 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus ~~or the annulus left open~~ 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 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.

Tamersack Petr Camp Duc
salt water disposal

Queen form

perfs 4948 to 4972 5003 to 5007
5037 to 5043

Cabot 23 State Well No 2

located 1650 FWL 330' FNL

23-¹⁴18 35 E Pearl Queen Pool
Rear Country