

CASE 4204: Application of MOBIL
FOR WATERFLOOD AND UNORTHODOX
INJECTION WELL LOCATIONS.

Case No.

4203

Unit Agreement
Active at time
of filming. See
Unit Agreement files.

Case Number.

4204

Application

Transcripts.

Small Exhibits

ETC.

dearnley-meier

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

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 27, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Mobil Oil Corporation
for a unit agreement, Lea County,
New Mexico.

Case No.

4203

Application of Mobil Oil Corporation
for a waterflood project and
unorthodox injection well locations,
Lea County, New Mexico.

Case No.

4204

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Cases 4203 and 4204 will be consolidated for the purposes of testimony and separate orders will be written.

MR. HATCH: Case 4203, application of Mobil Oil Corporation for a unit agreement, Lea County, New Mexico.

Case 4204, application of Mobil Oil Corporation for a waterflood project and unorthodox injection well locations, Lea County, New Mexico.

MR. SPERLING: James E. Sperling; Modrall, Seymour, Sperling, Roehl and Harris, Albuquerque, appearing for the applicant. We have one witness.

MR. UTZ: Are there any other appearances? Let the record show that the witness has been sworn in a previous case.

You may proceed.

PAT KELLY

the witness, called by Mr. Sperling, having been first duly sworn upon his oath, testified as follows:

DIRECT EXAMINATION

BY MR. SPERLING:

Q. Your name is Pat Kelly?

A. Yes.

Q. You have previously testified in this hearing in

Cases 4201 and 4202?

A. Yes, sir.

Q. And you are a representative of the applicant, Mobil Oil Corporation?

A. Yes, sir.

Q. Explain what is sought by the application in Case 4203, which relates to unit area?

A. An order is sought by Mobil Oil Corporation, approving the establishment of the Humphrey Queen Unit, which unit will cover the horizon identified in O. C. C. records as the Langlie-Mattix Pool, extending from one hundred feet above the top of the Queen formation, down to the base of the Queen formation.

Q. Mr. Kelly, would you refer to what has been marked as Exhibit One in Case 4203 of the unit agreement?

A. Yes, sir.

Q. And identify it, please?

A. It is the unit agreement, covering the proposed Humphrey Queen Unit.

Q. Now, is this unit agreement substantially in the same form as that which is proposed for the formation of the Langlie-Mattix Queen Unit in Lea County?

A. Yes, sir. There are some minor differences

necessary to accommodate only one operator. Mobil is the only working interest owner in the Humphrey Queen Unit. The royalty interest is the only interest that is diversified.

And the regular form unit agreement has some provisions in it, which relate to several working interest owners. In this case, there is only one working interest owner, and the agreement has been modified to the extent to accommodate that.

Q. Has this unit agreement, the form of it, been submitted to U. S. G. S., in view of the existence of the federal acreage within the area?

A. Yes, sir. The Frisco Lease, tract one, is a federal tract, and the U. S. G. S. has been tendered a draft of the unit agreement.

It is indicated that it would approve the unit agreement if certain changes were made in the draft.

The language of the Humphrey Queen Unit is or has been patterned after the language of the Langlie-Mattix Queen Unit. It is true that the final language that is contained in the Humphrey-Queen Unit and has not been before the U. S. G. S. -- under the cover of Humphrey-Queen Unit. It's been through the U. S. G. S., under the cover of Langlie-Mattix Queen Unit. Both agreements have been

circulated through the U. S., and we went through a second time with the Langlie Unit, and ran out of time with the Humphrey Unit. And so patterned the -- used identical language that the U. S. G. S. had approved for the Langlie agreement in the Humphrey agreement, and conclude that we will probably get it approved.

Q. It is your intention to submit the unit in the form as contained in Exhibit One, in 4203, to U. S. G. S. for approval?

A. Yes, sir.

Q. All right. Now, is there contained in the unit agreement, which is in the form of Exhibit One -- a map and a description of the unit area?

A. Yes, sir. There is attached and made a part of the unit agreement, Exhibit "A", which is a plat, showing the outline of the unit and the location, the locations of all the wells on the unit.

Q. Approximately what is the size of the unit in acreage?

A. The unit boundary encompasses approximately seven hundred and sixty-one and a quarter acres.

Q. Now, please refer to what has been marked as Exhibit Two, in Case 4203, and state what that is?

A. Exhibit Two is an area plat, drawn to a scale of one inch to four thousand feet. It covers the area of the Humphrey Queen Unit, which is in the north central part of the plat.

The Humphrey Unit is outlined with a dashed line.

All of the acreage within two miles of the boundary of the Humphrey Unit, is also shown. Immediately offsetting the Humphrey Unit to the north, is the Langlie-Mattix Woolworth Unit, operated by Amerada. On which waterflood operations are in progress in the Queen formation.

Offsetting the Humphrey Unit to the south, is the Stuart Langlie-Mattix Unit, operated by Gulf, on which waterflooding operations are already in progress, in the Queen formation.

Q. Now, refer to what has been marked as Exhibit Three, in Case 4203, and identify that?

A. Exhibit Three is a log of the well, which was used for purposes of identifying the unitized interval, in the unit agreement.

It is the same log that was used in identifying the unitized interval in the Langlie-Mattix Queen Unit, and also in Gulf Oil Corporation's Stuart Langlie-Mattix Queen Unit.

It is the Gulf Oil Corporation Stewart Well Number Nine -- I beg your pardon -- Stuart Number Nine, which is located three hundred and thirty feet from the north and east lines of Section 10, Township 25, Range 37.

MR. UTZ: These wells are marked "Arnott Ramsey" --

THE WITNESS: Yes, sir. I noticed that it is -- that it has the name on it -- evidently, that it was drilled under, but this is the log.

MR. UTZ: This is now the Stuart?

THE WITNESS: The Stuart -- S-t-u-a-r-t -- Number Nine. J. A. Stuart Number Nine.

MR. UTZ: Is the location the same? Nine-ninety from the northeast? Or nineteen eighty from the northeast?

THE WITNESS: I beg your pardon -- no, no -- I retrieved these logs from a printing company shortly before boarding a plane to come out here, and they brought the wrong logs to me. This is the Stuart Number Nine.

(WHEREUPON, a brief discussion was held off the record.)

THE WITNESS: It happens that this is the only copy of the Stuart Number Nine that I have at this point, and marked on this log are the tops of the various formations -- the Seven Rivers, the Queen formations and the Grayburg

formations -- the top of the unitized interval is one hundred feet above the top of the Queen, at a depth of thirty-one hundred and four feet in the Stuart Number Nine.

The base of the unitized formation is marked on that log to coincide with the top of the Grayburg, which is marked at thirty-five eighteen feet. If it's proper for there to be copies of this log in each of the files, I will be pleased to furnish additional copies at a later time.

MR. UTZ: Well, for the time being, why don't you mark that log Exhibit Number Three, in 4201 and 4203 --

MR. SPERLING: Does the record need to show the constitution of the log or --

MR. UTZ: I don't think so. This identification here should take care of it.

MR. SPERLING: All right, sir. Thank you.

Q. (By Mr. Sperling) All right. You have stated previously that Mobil is the only working interest owner in the proposed unit and that there was diverse royalty ownership. Can you give us an indication as to the present status of sign-up for the unit participation, so far as royalty interest, other than --

A. The unit is being formed with a one phase participation formula, which is based solely on accumulative

oil production, tract accumulative oil production, to January 1, 1969.

Based on that participation formula, twenty-nine percent of the royalty interests have already committed to the unit agreement. The unit agreement was first mailed to those interest owners on August 15.

Q. Do you anticipate any substantial difficulty in obtaining required signatures to the unit agreement?

A. No, sir.

Q. The proper percentages?

A. No, sir. I don't envision any difficulty in obtaining enough signatures to make the unit effective.

Q. Would you give us just a little bit of a background on the development and history of this area?

A. The Humphrey Queen Unit has been developed with a total of twenty-four wells up to the present time. The first well on the unit, completed in the Queen formation, was completed on August 12, 1937.

There were three additional completions made in 1937, ten in 1938, one in 1948, one in 1964, two in 1965, four in 1968 and two in 1969.

Accumulative oil production from the unit to the end of 1968 was a million five hundred and sixty-nine thousand

barrels.

MR. SPERLING: At this time, Mr. Examiner, I would like to offer Exhibits One through Three in Case 4203.

MR. UTZ: Without objection, Exhibits One through Three will be entered into the record of this case.

(Whereupon, Applicant's Exhibits One through Three were entered.)

- - - - -

Q. (By Mr. Sperling) Mr. Kelly, if you will please refer to what has been marked as Exhibit One in Case 4204, and identify that please?

A. Exhibit One is the area plat, drawn to a scale of one inch to four thousand feet.

It shows the area encompassed by the Humphrey Queen Unit boundary, near the north central portion of the plat. All of the acreage within two miles of the unit boundary is shown on that map.

Q. This is the same exhibit as was identified as Exhibit Number Two in 4203; is that right?

A. Yes, sir.

Q. And now refer to Exhibit Number Three in 4204.

A. Exhibit Number Three is a --

MR. HATCH: You mean two; don't you?

MR. SPERLING: Yes, I mean two, number two --

THE WITNESS: Exhibit Number Two is a waterflood pattern map of the proposed Humphrey Queen Unit. It shows the locations of all of the injection wells that we plan to use in flooding the Queen sand, beneath the unit, and shows, also, the location of all of the producing wells that we will use.

Unit Well Number Twelve, on the plat, is shown as a production well to be drilled. That well has already been drilled and in the process of recovering load at this time.

Down in the southwest corner of Well Number Twenty, is shown as an injection well to be drilled. That well has already been drilled and cement lined tubing has already been run into it and it's set on a packer.

Q. Now, Mr. Kelly, have any of the wells within the unit area been the previous subject of application for approval before the Commission?

A. Yes, sir.

Q. All right.

A. This is the acreage we had in this unit, we

purchased from George Buckles in May of this year, and at the time that we bought it, it was covered by a waterflood Order Number R-3426, which authorized the inauguration of a waterflood on the several leases, which are going to be in the Humphrey Queen Unit.

I might point out that the only injection wells that we plan to use on the unit, that were not authorized as injectors in that order are Unit Wells Number Two, Four and Thirteen.

There was a well authorized for injection use near the location of Well Number Thirteen, on the unit, and I would view Thirteen as a substitute for it.

Q. Would you refer then, to Exhibit Number Three, in 4204, and explain what that is?

A. Exhibit Number Three is a tabulation of the proposed injection wells. The upper part of the tabulation covers the current producers that will be converted; the lower part lists the wells that we will drill or either that we have already drilled for injection use.

The unit well number is listed, together with the current lease in Well Number -- along with the location of each of the existing wells, according to unit, section, township and range, and the wells drilled are to be drilled

according to the nearest distance to the two nearest section lines.

Q. Well, now on that exhibit, there is a reference by an asterisk, to the wells that have been completed and equipped as injectors, under authority granted under Order Number R-3426 --

A. Yes.

Q. Does that reflect what you previously testified to, concerning the authorization extended by that order?

A. Yes, sir. Those injection wells, which are -- they were in existence when we bought the property and are Number Six, Nineteen and Twenty-three -- those wells had already been drilled pursuant to initial -- the initial waterflood order -- and we intended to use them as injectors.

Q. Would you explain what is contemplated, as far as mechanical initiation of this flood is concerned?

A. The injection station has been designed to deliver an average of seven hundred and fifty barrels per well per day. This is the injection rate that we expect to start at.

I do expect that we will not inject any pressure higher than one thousand pounds at the surface until we have

achieved a measure of fill-up.

Thereafter, we will of course inject it at whatever pressure we think is necessary to efficiently flood the formation, within the capability of our equipment.

The injection station and the distribution lines are all designed to handle a maximum of eighteen hundred p.s.i.

All of the injection wells will be completed for injection through cement lined tubing, set on a tension packer, above the pay.

And the casing will be loaded, in every case, with treated water.

Q. Have you developed a source of water for the program?

A. Yes, sir. I say we have developed -- I think we have.

The well, the water supply well, is in the process of completion at this time. We had drilled a well, described as Humphrey A-10, near the center of Section 3 -- slightly west of the center of Section 3.

It has been drilled to a depth of approximately forty-eight hundred feet in the San Andres formation.

And we encountered drilling operations -- a good break, about four hundred foot drilling break. And I have confidence that we are going to be able to get all of the water out of that well that we need -- casing is being set now. The well was logged yesterday, and casing is being set today, and it will be completed within a few days and tested -- in the Grayburg-San Andres formation.

Q. Now, refer to what's been marked as Exhibit Four and explain that?

A. Exhibit Four is a tabulation of oil production from the unit area, beginning with 1959. It has listed the accumulative production at each -- for each time period. The average number of producing wells, during the period, and the average daily rate -- the producing rate, for the period.

It is on an angle basis, from 1959 through '68, and on a monthly basis through 1969, down through the month of June, when the unit produced one thousand and seventy barrels for an average of about two barrels of oil per day.

Q. What do you anticipate by way of secondary recovery?

A. I think that the secondary oil to be produced

from the Humphrey Unit will, at least, produce a secondary to primary ratio of point seven five, which will be at least one million one hundred and seventy-seven thousand barrels.

Q. Now, refer to Exhibit Number Five, which appears to be related to Exhibit Four --

A. Exhibit Five is a graphical representation of the daily oil production tabulated in Exhibit Four.

Q. Now, refer to Exhibit Four, which is a log of the injection well --

A. Exhibit Number Six is a log of the injection well, which we had recently drilled five feet from the west line and one hundred feet from the south line of Section 3.

It is Unit Well Number Twenty. Shown on that log is the top of the unitized interval, one hundred feet above the top of the Queen.

Also at the top of the Queen formation and the top of the Pinrose formation. The well did not penetrate the Grayburg formation. I believe also shown on that log is the overall interval, which has been perforated in it, which extends, I believe, from thirty-three thirty-seven to thirty-five eighty-eight feet. No, thirty-three seventy-four to thirty-five eighty-eight feet.

Q. When do you or would you anticipate, timewise, fill-up and response, as far as the producing wells are concerned?

A. Because some of the producing wells are going to be -- because they are situated in fairly close proximity to injection wells -- I think we will have some response noted by the middle of 1970. I expect that we will achieve approximately fifty percent of the fill-up within fourteen to sixteen months after we start injecting.

Q. Now, before we proceed to Exhibit Seven, do you have anything further to add with reference to your proposed program?

A. I might point out that in this case also bids have been received on the injection facilities, the injection stations and the distribution systems -- they were open until last Friday, and I am sure that an award has either been made in the last day or two or will be made in the next day or two, and that construction will begin on those facilities within the next ten or fifteen days.

Q. Is this area subject to the same commitments that you mentioned as being outstanding in connection with the Langlie-Mattix Queen Unit?

A. Yes, sir.

Q. As far as the properties are concerned?

A. Yes, sir. It's all part of the same package. We concluded the properties could be more additionally flooded by dividing them into two units in the matter that we have. But it's all part of the same purchase and subject to the same agreements.

Q. Now, refer to what has been marked as Exhibit Seven and identify that, please?

A. Exhibit Seven is a collection of diagrammatic sketches of the proposed completion arrangement on all of the proposed injection wells.

It shows that in the producing wells that will be converted to injection, which, for the most part, are open hole completions, that we will set a packer above the casing chute and inject through cement lined tubing.

In the case of the drilled wells, of which there are two, we have, in the first case, on Number Twenty -- circulate cement to the surface, behind the surface, and the producing strings, and perforated selectively the force intervals for injection.

The remaining well to be drilled will be completed the same way. And, of course, the casing annulus will be loaded with treated water.

Q. Now, Mr. Kelly, in your opinion, will the draining of the applications in these cases lead to the prevention of waste and protect the correlative rights?

A. Yes, sir.

Q. In this area?

A. Yes, sir. I think it's essential that the properties be subjected to a secondary recovery program very soon if they are going to be produced properly. And I think the unit agreement is necessary for each owner -- an opportunity to recover in proportion to the value of his property.

Q. Would the approval of such a plan result in the recovery of otherwise unrecoverable oil?

A. Yes, sir.

MR. SPERLING: That's all I have, Mr. Examiner. I would like to offer Exhibits One through Seven in this Case 4204.

MR. UTZ: Without objection, Exhibits One through Seven will be entered into the record of this case.

(Whereupon, Applicant's Exhibits One through Seven, Inclusive, were admitted into evidence.)

CROSS EXAMINATION

BY MR. UTZ:

Q. Mr. Kelly, do you intend to put a valve on these? That is, at the annulus?

A. Yes, sir. There will be a valve on the surface casing, producing string annulus, of every well.

Q. And did I understand you to say that the Thirteen and Twenty injection wells are in the process of being completed at the present time?

A. No, sir. Well Number Twenty has already been completed. Well Number Thirteen has not been drilled.

Q. Which well was it?

A. Well Number -- there are three injection wells that were drilled at unorthodox locations by George Buckles.

One of those is in use for salt water disposal purposes right now, the Number Twenty-three well -- and six in nineteen are being completed at the present time. We have just gotten through cleaning out six, and we are ready to run cement lined tubing in it, and the rig is on nineteen at the present time.

Q. Which well is being used for salt water?

A. Twenty-three.

Q. Twenty-three?

A. Yes, sir.

Q. That's the one you mentioned awhile ago then that had been completed or rather, you were drilling on it?

A. No, sir. You may be thinking of the water supply well that is in the process of being completed.

Q. Well, you spoke of this before you spoke of the twenty -- I was busy with something else and I missed it -- that's why I was asking the question --

A. Well, I'm not sure what I said about that. I can set the record straight by saying that the three unorthodox locations, Number Six, Nineteen and Twenty-three were already completed -- already drilled and completed when we bought the property and they were drilled pursuant to the waterflood order that had been issued. That is, in response to Buckles' application.

We have drilled Well Number Twenty, under authority of that order, and it is completed as an injector now, although the water is not going into it. The only remaining well to be drilled as an injector on the lease, according to my present plans, is Well Number Thirteen, which is near the west boundary of the unit.

Other than that, all of the wells that we will

use for injectors will be converted producers -- unless we find it necessary to carry on further development to efficiently flood the property.

Q. Now, it's my understanding that all wells have been approved and -- in a previous order, which was 3426 --

A. 3426; yes, sir.

Q. Except three -- your Number Two and your Number Thirteen?

A. Yes, sir.

Q. And I understand that the locations were approved in a previous order?

A. Yes, sir.

Q. And none of these three are non-standard locations?

A. Number Thirteen is -- it's near the west line of the unit.

Q. So, you will need approval for that one?

A. Yes, sir. I expect that we will have entered into a cooperative agreement with Union Texas Petroleum, proposed operator of the Langlie-Jal Unit, which is being formed at the present time, offsetting the Humphrey Unit to the west -- before we drill that well.

I think we will have reached some agreement with them, perhaps some participation or something -- agreement

on the location and, perhaps, participation.

Q. What kind of water are you going to get out of the Grayburg? The same type?

A. The Grayburg-San Andres water is -- contains H_2S -- it is a corrosive water and our system has been designed to account for this.

The supply wells -- there will be one on the Humphrey Unit -- will be treated for corrosion. It may prove necessary to chemically treat the water some other way.

Gulf is using Grayburg-San Andres water in its Stuart Langlie-Mattix waterflood, and the Stuart Number Nine Well, which you have a log of in the file, is Gulf's water supply well from the San Andres. And the only treatment they are giving it at the present time is to prevent corrosion in the supply well.

MR. UTZ: Are there any other questions of the witness? You may be excused. Statements?

The case will be taken under advisement.

MR. SPERLING: Thank you, Mr. Examiner.

I N D E XPage

The Witness - PAT KELLY

Direct Examination by Mr. Sperling

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Cross Examination by Mr. Utz

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E X H I B I T SAdmittedApplicant's Exhibits 1 through 3 in Case
Number 4203

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Applicant's Exhibits 1 through 7 in Case
Number 4204

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

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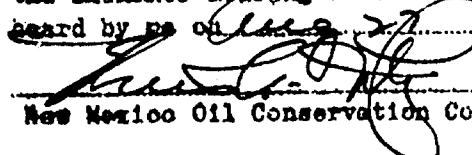
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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

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.



COURT REPORTER

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 4209
heard by me on Aug 27 1969.
 Examiner
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

September 8, 1969

Mr. James E. Sperling
Modrall, Seymour, Sperling, Roehl & Harris
Attorneys at Law
Public Service Building
Post Office Box 2168
Albuquerque, New Mexico 87106

Dear Sir:

Reference is made to Commission Order No. R-3824, recently entered in Case No. 4204, approving the Mobil Langlie Mattix Humphrey Water-flood Project.

Injection is to be through the 11 authorized water injection wells, each of which is to be equipped with cement-lined tubing set in a packer. The packers shall be set approximately 50 feet above the uppermost perforation, or in the case of the open-hole completions, approximately 50 feet above the casing shoe. An exception to this is Unit Well No. 7, which has a liner; the packer in this well is to be set approximately 370 feet above the perforations, at 3050 feet. The casing-tubing annulus in each well shall be loaded with a corrosion-inhibited fluid and equipped with a pressure gauge at the surface to facilitate the detection of leakage in the casing, tubing, or packer.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 882 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

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

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

-2-

Mr. James E. Sperling
Modrall, Seymour, Sperling, Roehl & Harris
Attorneys at Law
Post Office Box 2168
Albuquerque, New Mexico

September 8, 1969

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

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

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

Y ALP/DSN/ir

cc: Oil Conservation Commission
Hobbs, New Mexico

U. S. Geological Survey
P. O. Box 1838
Hobbs, New Mexico

Mr. D. E. Gray
State Engineer Office
Santa Fe, New Mexico

ROUGH DRAFT FOR WATERFLOOD LETTERS

Mr. James E. Sperling
Modrall, Seymour, Sperling, Roehl & Harris
Attorneys at Law
Public Service Building - Box 2168
Albuquerque, New Mexico 87106
Dear Sir:

Reference is made to Commission Order No. R-3824, ^{recently} entered in Case No. 4204, approving the Mobil Langlie Matty Humphrey Waterflood Project.

Injection is to be through the 11 authorized water injection wells, each of which is to be equipped with ~~packer~~ cement-lined tubing set in a packer. The packers shall be set ~~at~~ approximately 50 feet above the uppermost perforations, or in the case of the open-hole completions, approximately 50' above the casing shoe. An exception to this is ~~the~~ well no 7, which has a liner; ~~where~~ the packer ^{in this well} is to be set approximately 370 feet above the perforations, at 3050 feet. As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 882 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

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

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

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

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

cc: OCC: Hobbs X
Artesia
Aztec

USGS Hobbs

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

Mr. D. E. Gray

no H The casing-tubing annulus in each well shall be loaded with a corrosion-inhibited fluid and equipped with a pressure gauge at the surface to facilitate the detection of leakage in the casing, tubing, or packer.



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 4, 1969

Mr. James E. Sperling
Modrall, Seymour, Sperling, Roehl
& Harris
Attorneys at Law
Public Service Building - Box 2168
Albuquerque, New Mexico 87106

Re: Case No. 4204
Order No. R-3824
Applicant:
Mobil Oil Corporation

Dear Sir:

Enclosed herewith is a copy of the above-referenced Commission order recently entered in the subject case. Letter pertaining to conditions of approval and maximum allowable to follow.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC X
Artesia OCC _____
Aztec OCC _____
State Engineer X

Other _____

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. 4152
Order No. R-3628-A

APPLICATION OF ANADARKO PRODUCTION
COMPANY FOR AN AMENDMENT OF ORDER
NO. R-3628, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 25, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this _____ day of July, 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, Anadarko Production Company, is the
operator of the Anadarko Far West Loco Hills Waterflood Project,
Loco Hills Pool, Eddy County, New Mexico, approved by Commission
Order No. R-3628.

(3) That the applicant seeks the amendment of said Order
No. R-3628 to delete from the water injection wells authorized
for injection by said order the following three wells:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM

Tract 1 - Well No. 1 located 2310' FNL and 330' FEL of Section 4
Tract 8 - Well No. 1 located 2310' FSL and 1650' FWL of Section 4
Tract 8 - Well No. 9 to be drilled 1330' FSL and 2630' FEL of Sec-
tion 4

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CASE No. 4152

Order No. R-3628-A

(4) That the applicant seeks to substitute in lieu of the above-described three wells the following:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM

Tract 1 - Well No. 29 to be drilled 2460' FNL and 180' FEL of Section 4
Tract 8 - Well No. 34 to be drilled 1980' FSL and 1980' FWL of Section 4
Tract 8 - Well No. 35 to be drilled 10' FSL and 1650' FWL of Section 4

(5) That the applicant further seeks the amendment of said Order No. R-3628 to provide a procedure whereby the Secretary-Director of the Commission may authorize the substitution of other water injection wells at orthodox and unorthodox locations for those previously authorized in order to complete an efficient injection pattern.

(6) That approval of the aforesaid amendments will afford the applicant the opportunity to produce its just and equitable share of the oil and gas in the Loco Hills Pool, and will otherwise prevent waste and protect correlative rights, provided said injection wells are drilled no closer than 330 feet to the outer boundary of its Far West Loco Hills Sand Unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary.

IT IS THEREFORE ORDERED:

(1) That Order No. R-2628, dated December 16, 1968, is hereby amended by deleting from the water injection wells authorized for the Anadarko Far West Loco Hills Waterflood Project, Eddy County, New Mexico, the following three wells:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM

Tract 1 - Well No. 1 located 2310' FNL and 330' FEL of Section 4
Tract 8 - Well No. 1 located 2310' FSL and 1650' FWL of Section 4
Tract 8 - Well No. 9 to be drilled 1330' FSL and 2630' FEL of Section 4

(2) That said Order No. R-3628 is hereby further amended by substituting in lieu of the three wells described in Order (1) above

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CASE No. 4152

Order No. R-3628-A

the following three water injection wells:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM

Tract 1 - Well No. 29 to be drilled 2460' FNL and 180' FBL of
Section 4
Tract 8 - Well No. 34 to be drilled 1980' FSL and 1980' FWL of
Section 4
Tract 8 - Well No. 35 to be drilled 10' FSL and 1650' FWL of
Section 4

(3) That Order (2) of Order No. R-3628 is hereby amended to read in its entirety as follows:

"(2) That the Anadarko Far West Loco Hills Waterflood Project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve the substitution of other water injection wells at orthodox and unorthodox locations for those previously authorized in order to complete an efficient injection pattern; provided said wells are drilled no closer than 330 feet to the outer boundary of the Far West Loco Hills Sand Unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary, and provided that the application therefor has been filed in accordance with Rule 701 B of the Commission Rules and Regulations, and provided further, that a copy of the application has been sent to all offset operators, if any there be, and no such operator has objected within 15 days."

(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. ARMIJO, Member

S E A L

esr/

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

4704

Heard 8-27-69.

Rec. 8-28-69.

Grant and amendment to
R-3426 to grant 3 additional
injection wells. This order was
originally Fred Buckler & now
has been purchased & certified
by Mobil. The only three wells
that has not been approved by
R-3426 is #. 2, 4 & 13.

Grant a NSL for #13.

All wells shall be tubed w/
cement lined tubing. Injection
to be under a packer. The
cannules to be filled w/ ~~inert~~
inhibited water w/ a vent
the surface to atm. pressure.
The unit is to be known as the
Mobil Humphrey-Duerr unit
waterflood.

Thos G. W.

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. 3772
Order No. R-3426

APPLICATION OF GEORGE L. BUCKLES
COMPANY FOR THREE WATERFLOOD PROJ-
ECTS, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 8 a.m. on May 22, 1968,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 5th day of June, 1968, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, George L. Buckles, seeks authority
to institute three waterflood projects by the injection of water
into the Queen Sand of the Langlie-Mattix Pool in Township 25
South, Range 37 East, NMPM, Lea County, New Mexico, as follows:

A waterflood project comprising all of Section 3 and the
E/2 NE/4 and NE/4 SE/4 of Section 4, with injection to be
through eight wells located in Units A, F, J, L, M, O, & P
of Section 3, and Unit H of Section 4;

A waterflood project comprising the S/2 S/2 of Section 10,
the W/2 SW/4 of Section 11, the W/2 NW/4 of Section 14, and
the NE/4 and NE/4 NW/4 of Section 15, with injection to be
through ten wells located in Units M & O of Section 10, Unit
M of Section 11, Unit D of Section 14, and Units A, B, C, G,
and H of Section 15;

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CASE No. 3772
Order No. R-3426

A waterflood project comprising the NE/4 of Section 22, with injection to be through three wells located in Units B, G, and H of Section 22.

(3) That the applicant also requests authority to drill a number of said injection wells at unorthodox locations, often 5 to 15 feet from the corners and/or boundaries of their respective 40-acre tracts.

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

(5) That in order to complete an efficient injection pattern, the applicant should be authorized to drill a number of said injection wells at unorthodox locations as shown on Exhibits Nos. 2 and 3.

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

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

IT IS THEREFORE ORDERED:

(1) That the applicant, George L. Buckles, is hereby authorized to institute three waterflood projects in the Langlie-Mattix Pool by the injection of water into the Queen Sand of the Langlie-Mattix Pool in Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, as follows:

A waterflood project comprising all of Section 3 and the E/2 NE/4 and NE/4 SE/4 of Section 4, with injection to be through the eight wells to be located as follows:

1. 990 feet from the North line and 100 feet from the East line of Section 3. #6
2. 1750 feet from the North line and 2970 feet from the East line of Section 3. #9
3. 2970 feet from the North line and 1650 feet from the East line of Section 3. #17

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CASE No. 3772

Order No. R-3426

4. 1830 feet from the South line and 660 feet from the West line of Section 3. *#15*
5. 100 feet from the South line and 5 feet from the West line of Section 3. *#20*
6. 100 feet from the South line and 1980 feet from the East line of Section 3. *#23*
7. 1315 feet from the South line and 100 feet from the East line of Section 3. *#19*
8. 2310 feet from the North line and 990 feet from the East line of Section 4. *#27*

A waterflood project comprising the S/2 S/2 of Section 10, the W/2 SW/4 of Section 11, the W/2 NW/4 of Section 14, and the NE/4 and the NE/4 NW/4 of Section 15, with injection to be through the 10 wells to be located as follows:

1. 1220 feet from the South line and 1315 feet from the West line of Section 10.
2. 4290 feet from the North line and 2145 feet from the East line of Section 10.
3. 1315 feet from the South line and 1315 feet from the West line of Section 11.
4. 1315 feet from the North line and 1315 feet from the West line of Section 14.
5. 5 feet from the North line and 80 feet from the East line of Section 15.
6. 5 feet from the North line and 2635 feet from the East line of Section 15.
7. 1315 feet from the North line and 1325 feet from the West line of Section 15.
8. 2540 feet from the North line and 2635 feet from the East line of Section 15.
9. 1325 feet from the North line and 1325 feet from the East line of Section 15.

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CASE No. 3772
Order No. R-3426

10. 2540 feet from the North line and 100 feet from the East line of Section 15.

A waterflood project comprising the NE/4 of Section 22, with injection to be through the three wells to be located as follows:

1. 1315 feet from the North line and 1325 feet from the East line of Section 22.
2. 2635 feet from the North line and 2635 feet from the East line of Section 22.
3. 2635 feet from the North line and 80 feet from the East line of Section 22.

(2) That each of the above waterflood project areas is hereby designated an area wherein transfer of allowables between leases is permitted, provided the area has been unitized or otherwise consolidated, or provided all persons owning working interests and/or royalty interests within said area have so agreed and evidence of such unitization, consolidation, or agreement has been furnished the Santa Fe Office of the Commission, effective day that Commission receives said evidence.

(3) That the subject waterflood projects authorized by Order (1) and modified by Order (2) of this order shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations insofar as said Rules and Regulations are not inconsistent with this order.

(4) That monthly progress reports of the waterflood projects authorized by Order (1) and modified by Order (2) shall be submitted to the Commission in accordance with Rules 702 and 1120 of the Commission Rules and Regulations.

(5) 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

GUYTON B. HAYS, Member

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

S E A L

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. 4204
Order No. R-3824

APPLICATION OF MOBIL OIL CORPORATION
FOR A WATERFLOOD PROJECT AND UNORTHODOX
INJECTION WELL LOCATIONS, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 27, 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 4th day of September, 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, Mobil Oil Corporation, seeks permission to institute a waterflood project in the Humphrey Queen Unit Area, Langlie-Mattix Pool, by the injection of water into the Queen sand formation through 11 injection wells at orthodox and unorthodox locations in Sections 3 and 4, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant further seeks the establishment of an administrative procedure whereby the Secretary-Director of the Commission may authorize additional injection wells at orthodox and unorthodox locations within said waterflood project area as may be necessary to complete an efficient injection pattern without the necessity of showing well response.

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CASE No. 4204

Order No. R-3824

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

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

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection, and provided further, that said injection wells are drilled no closer than 330 feet to the outer boundary of the Humphrey Queen Unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary.

IT IS THEREFORE ORDERED:

(1) That the applicant, Mobil Oil Corporation, is hereby authorized to institute a waterflood project in the Humphrey Queen Unit Area, Langlie-Mattix Pool, by the injection of water into the Queen sand formation through the following-described wells at orthodox and unorthodox locations in Township 25 South, Range 37 East, NMPM, Lea County, New Mexico:

Unit Well		Previous Well Name and Number	Unit	Section
No.				
2		Mobil-Liberty Well No. 1	D	3
4		Mobil-Humphrey "A" Well No. 1	B	3
6		Mobil-Fristoe Well No. 6	A	3
9		Mobil-Humphrey "A" Well No. 4	F	3
15		Mobil-Liberty Well No. 5	L	3
17		Mobil-Humphrey "A" Well No. 5	J	3
19		Mobil-Fristoe Well No. 7	I	3
23		Mobil-Humphrey "A" Well No. 9	O	3
20		To be drilled 100' FSL & 5' FWL		3
7		Mobil-Smith Well No. 2	H	4
13		To be drilled - 2522' FSL & 1220' FEL		4

(2) That the subject waterflood project is hereby designated the Mobil Langlie Mattix Humphrey Waterflood Project and shall be

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CASE No. 4204
Order No. R-3824

governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

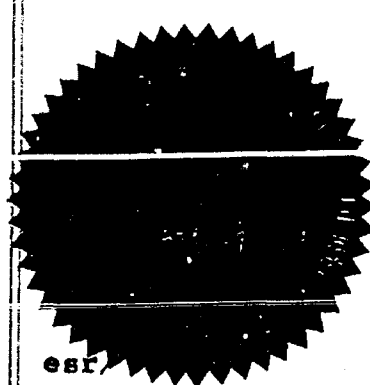
PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve such additional injection wells at orthodox and unorthodox locations within said waterflood project area as may be necessary to complete an efficient injection pattern; provided said wells are drilled no closer than 330 feet to the outer boundary of the Humphrey Queen Unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary, and provided further, that the application therefor has been filed in accordance with Rule 701 B of the Commission Rules and Regulations, and provided further, that a copy of the application has been sent to all offset operators, if any there be, and no such operator has objected within 15 days. The showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

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

(4) That that portion of Order No. R-3426, dated June 5, 1968, which approved certain of the above wells as water injection wells is hereby superseded.

(5) 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. Carco
DAVID F. CARCO, Chairman

Alex J. Armijo
ALEX J. ARMILLO, Member

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

DOCKET No. 24-69

DOCKET: EXAMINER HEARING -- WEDNESDAY -- AUGUST 27, 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 4191: Application of Gulf Oil Corporation for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from approximately 4408 feet to 4415 feet in its Roosevelt "AN" State Well No. 3 located in the NW/4 SE/4 of Section 32, Township 7 South, Range 36 East, adjacent to the Todd-Lower San Andres Pool, Roosevelt County, New Mexico.
- CASE 4192: Application of Southwest Production Corporation for an unorthodox gas well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Buffalo Valley "Com" Well No. 2 at an unorthodox location 1650 feet from the North line and 990 feet from the East line of Section 35, Township 14 South, Range 27 East, Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico, in exception to the provisions of Rule 2 of the special rules for said pool.
- CASE 4193: Application of Humble Oil & Refining Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Bowers "A" Federal Com 33 Well No. 33 located in Unit D of Section 29, Township 18 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Hobbs (Crayburg-San Andres) Pool and the Hobbs-Blinbry Pool through parallel strings of tubing.
- CASE 4194: Application of Phillips Petroleum Company for an amendment of Order No. R-3181 and dual completions, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3181, which order established special rules regulating the operation of the Phillips Petroleum Company Vacuum Abo Pressure Maintenance Project, Vacuum-Abo Reef Pool, Lea County, New Mexico. Applicant

CASE 4194 - Continued from Page 1 -

seeks authority to inject gas through two additional wells located in Unit L of Section 34, Township 17 South, Range 35 East and Unit B of Section 4, Township 18 South, Range 35 East and to expand said project area to include the SE/4 NE/4 of Section 33 and the NW/4, N/2 SE/4, and SW/4 SE/4 of Section 34 Township 17 South, Range 35 East. Applicant further seeks authority to dually complete all gas injection wells in the project in such a manner as to permit the production of oil from the lower section of the Abo Reef through tubing and the injection of gas into the upper section of the Abo Reef through the casing-tubing annulus.

CASE 4195: Application of Continental Oil Company for eight non-standard gas proration units and a non-standard gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the rededication of acreage to establish the eight following non-standard gas proration units in Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico:

A 120-acre non-standard unit comprising the SE/4 NE/4 and E/2 SE/4 of Section 14, to be dedicated to the "SEMU" Well No. 46, located in Unit E of said Section 14;

A 240-acre non-standard unit comprising the NE/4 and E/2 SE/4 of Section 26, to be dedicated to the "SEMU" Well No. 64, located in Unit G of said Section 26;

A 560-acre non-standard unit comprising the W/2 and W/2 SE/4 of Section 26 and the E/2 E/2 of Section 27, to be dedicated to the "SEMU" Well No. 65, located in Unit L of said Section 26;

A 640-acre non-standard unit comprising the W/2 and the W/2 E/2 of Section 14 and E/2 E/2 of Section 15, to be dedicated to the "SEMU" Well No. 66, located in Unit L of said Section 14;

CASE 4195 - Continued from Page 2 -

A 320-acre non-standard unit comprising the SE/4, S/2 NE/4, and E/2 SW/4 of Section 24, to be dedicated to the "SEMU" Well No. 67, located in Unit K of said Section 24;

A 640-acre non-standard unit comprising the E/2 and E/2 W/2 of Section 23 and W/2 W/2 of Section 24, to be dedicated to the "SEMU" Well No. 68, located in Unit J of said Section 23;

An 80-acre non-standard unit comprising the E/2 NW/4 of Section 24, to be dedicated to the "SEMU" Well No. 69, located in Unit F of said Section 24;

A 320-acre non-standard unit comprising the E/2 E/2 of Section 22 and the W/2 W/2 of Section 23, to be dedicated to the "SEMU" Well No. 90, to be completed at a non-standard location 660 feet from the South and East lines of said Section 22.

CASE 4196: Application of Continental Oil Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the consolidation of three existing non-standard gas proration units into one 360-acre non-standard unit comprising the W/2 and the NW/4 NE/4 of Section 18, Township 23 South, Range 37 East, Jalmat Gas Pool, Lea County, New Mexico, to be dedicated to its Stevens "B" Wells Nos. 15 and 16, located in Units F and K, respectively, of said Section 18. Applicant further seeks authority to produce the allowable assigned to said unit from either of the aforesaid wells in any proportion.

CASE 4197: Application of Continental Oil Company for an amendment to Order No. R-3755, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3755 which authorized, among other things, the drilling of a water injection well in the Forest Donahue Waterflood Project area at a location 1980 feet from the North line and 1350 feet from the West line of Section 35, Township 16 South, Range 29 East, Eddy County, New Mexico.

CASE 4197 - Continued from Page 3 -

Applicant now seeks authority to locate said well at an unorthodox location 1980 feet from the North line and 1450 feet from the West line of said Section 35 in the Forest (San Andres) Pool.

CASE 4198: Application of Continental Oil Company for amendment of Order No. R-3487, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3487 which authorized the applicant to utilize its Eaves "A" Well No. 10, located in Unit P of Section 19, Township 26 South, Range 37 East, Scarborough Yates-Seven Rivers Pool, to dispose of salt water into the Seven Rivers formation in the interval from 3208 feet to 3255 feet. Applicant now seeks authority to inject produced salt water into the Yates and Seven Rivers formations in the perforated and open-hole interval from approximately 3107 feet to 3410 feet in said well and the reclassification of said salt water disposal well to a pressure maintenance injection well.

CASE 4199: Application of Burleson & Huff for compulsory pooling and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the SE/4 of Section 28, Township 25 South, Range 37 East, Lea County, New Mexico. Said 160-acre non-standard gas proration unit to be dedicated to the Burleson & Huff "Cook" Well No. 2, a recompleted well, located 660 feet from the South and East lines of said Section 28. Also to be considered will be the costs of drilling and/or recompleting 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 4200: Application of Burleson & Huff for compulsory pooling and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the NE/4 of Section 29, Township 25 South, Range 37 East, Lea County, New Mexico. Said 160-acre non-standard gas proration unit to be dedicated to a well,

CASE 4200 - Continued from Page 4 -

to be recompleted, located 660 feet from the East line and 1980 feet from the North line of said Section 29. Also to be considered will be the costs of drilling and/or recompleting 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 4201: Application of Mobil Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Langlie-Mattix Queen Unit Area comprising 1120 acres, more or less, of federal and fee lands in Sections 10, 11, 14, 15, 22, and 23, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 4202: Application of Mobil Oil Corporation for a waterflood project and unorthodox injection well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Langlie-Mattix Queen Unit Area by the injection of water into the Queen sand through 17 wells at orthodox and unorthodox locations in Sections 10, 11, 14, 15, 22, and 23, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby additional injection wells at orthodox and unorthodox locations may be approved for said project administratively.

CASE 4203: Application of Mobil Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Humphrey Queen Unit Area comprising 751 acres, more or less, of federal and fee lands in Sections 3 and 4, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 4204: Application of Mobil Oil Corporation for a waterflood project and unorthodox injection well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Humphrey Queen Unit Area by the injection of water into the Queen sand through 11 wells at orthodox

CASE 4204 - Continued from Page 5 -

and unorthodox locations in Sections 3 and 4, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby additional injection wells at orthodox and unorthodox locations may be approved for said project administratively.

CASE 4205: Application of Tesoro Petroleum Corporation for four unorthodox injection well locations and amendment of Order No. R-2807, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject water into the Hospah Upper Sand Oil Pool in its Hospah Unit Waterflood Project Area through four additional injection wells at unorthodox locations in Section 36, Township 18 North, Range 9 West, McKinley County, New Mexico, said wells to be located as follows:

Well No. 62 located 1900 feet from the South line and 1140 feet from the West line;

Well No. 63 located 1980 feet from the North line and 2310 feet from the West line;

A well to be drilled 1430 feet from the South line and 2625 feet from the East line;

A well to be drilled 30 feet from the South line and 2350 feet from the East line.

Applicant further seeks the amendment of Order No. R-2807, which order authorized the aforesaid waterflood project, to establish a procedure whereby additional injection wells at unorthodox locations, as may be necessary to complete an efficient injection pattern, may be approved administratively.

CASE 4206: Application of Shell Oil Company for an unorthodox oil well location and amendment to Order No. R-2538, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing oil well at an unorthodox location 1315 feet from the North line and 2625 feet from the West line of Section 34, Township 19

CASE 4206 - Continued from Page 6 -

South, Range 35 East, as an infill well in its East Pearl-Queen Unit Waterflood Project area, East Pearl-Queen Pool, Lea County, New Mexico. Applicant further seeks the amendment of Order No. R-2538, which order authorized the aforesaid waterflood project, to establish a procedure whereby additional producing wells at unorthodox infill locations in the aforesaid project area, as may be necessary to complete an efficient producing pattern, may be approved administratively.

CASE 4207: Application of C. W. Trainer and DEL-LEA, Inc., for an unorthodox gas well location, Lea County, New Mexico. Applicants, in the above-styled cause, seek an exception to Rule 104 C II to permit the drilling of a well at an unorthodox gas well location 330 feet from the North line and 660 feet from the West line of Section 35, Township 12 South, Range 34 East, West Ranger Lake-Devonian Gas Pool, Lea County, New Mexico. The N/2 of said Section 35 to be dedicated to the well.

CASE 4186: (Readvertised)

Application of Tenneco Oil Company for compulsory pooling and an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Basin-Dakota Gas Pool underlying the North half of Section 11, Township 29 North, Range 13 West, San Juan County, New Mexico. Said acreage to be dedicated to a well to be drilled at an unorthodox gas well location 2250 feet from the North line and 600 feet from the East line of said Section 11. 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. In the absence of a valid objection an order will be issued upon the record entered in the subject case August 6, 1969.

CASE 4208: Application of John A. Yates of Artesia for several waterflood projects, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute

CASE 4208 - Continued from Page 7 -

several waterflood projects by the injection of water into the Seven Rivers formation through his Mary Lou Well No. 1 located in Unit H of Section 29 and his Caroline Well No. 4 located in Unit E of Section 28, both in Township 19 South, Range 28 East, East Millman-Seven Rivers Pool, Eddy County, New Mexico.

CASE 4209: Application of Harvey E. Yates Company of Artesia for several pressure maintenance projects, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute several pressure maintenance projects by the injection of water into the Seven Rivers and Queen formations, McMillan (Seven Rivers-Queen) Pool, Eddy County, New Mexico, through the following-described wells in Township 20 South, Range 27 East:

Page & Yates Well No. 8 - Unit M - Section 5
Page & Yates Well No. 6 - Unit I - Section 6
Page & Yates Well No. 7 - Unit J - Section 6
Lillie Yates Well No. 2 - Unit B - Section 7

DOCKET No. 24-69

DOCKET: EXAMINER HEARING -- WEDNESDAY -- AUGUST 27, 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 4191: Application of Gulf Oil Corporation for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from approximately 4408 feet to 4415 feet in its Roosevelt "AN" State Well No. 3 located in the NW/4 SE/4 of Section 32, Township 7 South, Range 36 East, adjacent to the Todd-Lower San Andres Pool, Roosevelt County, New Mexico.
- CASE 4192: Application of Southwest Production Corporation for an unorthodox gas well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Buffalo Valley "Com" Well No. 2 at an unorthodox location 1650 feet from the North line and 990 feet from the East line of Section 35, Township 14 South, Range 27 East, Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico, in exception to the provisions of Rule 2 of the special rules for said pool.
- CASE 4193: Application of Humble Oil & Refining Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Bowers "A" Federal Com 33 Well No. 33 located in Unit D of Section 29, Township 18 South, Range 36 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Hobbs (Grayburg-San Andres) Pool and the Hobbs-Blinbry Pool through parallel strings of tubing.
- CASE 4194: Application of Phillips Petroleum Company for an amendment of Order No. R-3181 and dual completions, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3181, which order established special rules regulating the operation of the Phillips Petroleum Company Vacuum Abo Pressure Maintenance Project, Vacuum-Abo Reef Pool, Lea County, New Mexico. Applicant

CASE 4194 - Continued from Page 1 -

seeks authority to inject gas through two additional wells located in Unit L of Section 34, Township 17 South, Range 35 East and Unit B of Section 4, Township 18 South, Range 35 East and to expand said project area to include the SE/4 NE/4 of Section 33 and the NW/4, N/2 SE/4, and SW/4 SE/4 of Section 34 Township 17 South, Range 35 East. Applicant further seeks authority to dually complete all gas injection wells in the project in such a manner as to permit the production of oil from the lower section of the Abo Reef through tubing and the injection of gas into the upper section of the Abo Reef through the casing-tubing annulus.

CASE 4195: Application of Continental Oil Company for eight non-standard gas proration units and a non-standard gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the rededication of acreage to establish the eight following non-standard gas proration units in Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico:

A 120-acre non-standard unit comprising the SE/4 NE/4 and E/2 SE/4 of Section 14, to be dedicated to the "SEMU" Well No. 46, located in Unit E of said Section 14;

A 240-acre non-standard unit comprising the NE/4 and E/2 SE/4 of Section 26, to be dedicated to the "SEMU" Well No. 64, located in Unit G of said Section 26;

A 560-acre non-standard unit comprising the W/2 and W/2 SE/4 of Section 26 and the E/2 E/2 of Section 27, to be dedicated to the "SEMU" Well No. 65, located in Unit L of said Section 26;

A 640-acre non-standard unit comprising the W/2 and the W/2 E/2 of Section 14 and E/2 E/2 of Section 15, to be dedicated to the "SEMU" Well No. 66, located in Unit L of said Section 14;

CASE 4195 - Continued from Page 2 -

A 320-acre non-standard unit comprising the SE/4, S/2 NE/4, and E/2 SW/4 of Section 24, to be dedicated to the "SEMU" Well No. 67, located in Unit K of said Section 24;

A 640-acre non-standard unit comprising the E/2 and E/2 W/2 of Section 23 and W/2 W/2 of Section 24, to be dedicated to the "SEMU" Well No. 68, located in Unit J of said Section 23;

An 80-acre non-standard unit comprising the E/2 NW/4 of Section 24, to be dedicated to the "SEMU" Well No. 69, located in Unit F of said Section 24;

A 320-acre non-standard unit comprising the E/2 E/2 of Section 22 and the W/2 W/2 of Section 23, to be dedicated to the "SEMU" Well No. 90, to be completed at a non-standard location 660 feet from the South and East lines of said Section 22.

CASE 4196: Application of Continental Oil Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the consolidation of three existing non-standard gas proration units into one 360-acre non-standard unit comprising the W/2 and the NW/4 NE/4 of Section 18, Township 23 South, Range 37 East, Jalmat Gas Pool, Lea County, New Mexico, to be dedicated to its Stevens "B" Wells Nos. 15 and 16, located in Units F and K, respectively, of said Section 18. Applicant further seeks authority to produce the allowable assigned to said unit from either of the aforesaid wells in any proportion.

CASE 4197: Application of Continental Oil Company for an amendment to Order No. R-3755, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3755 which authorized, among other things, the drilling of a water injection well in the Forest Donahue Waterflood Project area at a location 1980 feet from the North line and 1850 feet from the West line of Section 35, Township 16 South, Range 29 East, Eddy County, New Mexico.

CASE 4197 - Continued from Page 3 -

Applicant now seeks authority to locate said well at an unorthodox location 1980 feet from the North line and 1450 feet from the West line of said Section 35 in the Forest (San Andres) Pool.

CASE 4198: Application of Continental Oil Company for amendment of Order No. R-3487, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3487 which authorized the applicant to utilize its Eaves "A" Well No. 10, located in Unit P of Section 19, Township 26 South, Range 37 East, Scarborough Yates-Seven Rivers Pool, to dispose of salt water into the Seven Rivers formation in the interval from 3208 feet to 3255 feet. Applicant now seeks authority to inject produced salt water into the Yates and Seven Rivers formations in the perforated and open-hole interval from approximately 3107 feet to 3410 feet in said well and the reclassification of said salt water disposal well to a pressure maintenance injection well.

CASE 4199: Application of Burleson & Huff for compulsory pooling and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the SE/4 of Section 28, Township 25 South, Range 37 East, Lea County, New Mexico. Said 160-acre non-standard gas proration unit to be dedicated to the Burleson & Huff "Cook" Well No. 2, a recompleted well, located 660 feet from the South and East lines of said Section 28. Also to be considered will be the costs of drilling and/or recompleting 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 4200: Application of Burleson & Huff for compulsory pooling and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the NE/4 of Section 29, Township 25 South, Range 37 East, Lea County, New Mexico. Said 160-acre non-standard gas proration unit to be dedicated to a well,

MEMORANDUM

TO: [illegible]

[illegible text]

CASE 4204:

[illegible text]

CASE 4204:

Application of Mobil Oil Corporation for a waterflood project and unorthodox injection well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its lands in the Queen Unit Area by the injection of water into the Queen sand through 11 wells at orthodox and unorthodox locations in Sections 12, 14, 15, 16, 17, and 18, Township 23 South, Range 37 East, Langite Matrix Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby additional unorthodox wells at orthodox and unorthodox locations may be approved for said project administratively.

CASE 4204:

Application of Mobil Oil Corporation for a waterflood project and unorthodox injection well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Humfrey Queen Unit Area comprising 14 acres, more or less, of federal and fee lands in Sections 3 and 4, Township 23 South, Range 37 East, Langite Matrix Pool, Lea County, New Mexico.

CASE 4204:

Application of Mobil Oil Corporation for a waterflood project and unorthodox injection well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Humfrey Queen Unit Area by the injection of water into the Queen sand through 11 wells at orthodox

CASE 4204 - Continued from Page 5 -

and unorthodox locations in Sections 3 and 4, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico. Applicant further seeks a procedure whereby additional injection wells at orthodox and unorthodox locations may be approved for said project administratively.

CASE 4205: Application of Tesoro Petroleum Corporation for four unorthodox injection well locations and amendment of Order No. R-2807, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject water into the Hospah Upper Sand Oil Pool in its Hospah Unit Waterflood Project Area through four additional injection wells at unorthodox locations in Section 36, Township 18 North, Range 9 West, McKinley County, New Mexico, said wells to be located as follows:

Well No. 62 located 1900 feet from the South line and 1140 feet from the West line;

Well No. 63 located 1980 feet from the North line and 2310 feet from the West line;

A well to be drilled 1430 feet from the South line and 2625 feet from the East line;

A well to be drilled 30 feet from the South line and 2350 feet from the East line.

Applicant further seeks the amendment of Order No. R-2807, which order authorized the aforesaid waterflood project, to establish a procedure whereby additional injection wells at unorthodox locations, as may be necessary to complete an efficient injection pattern, may be approved administratively.

CASE 4206: Application of Shell Oil Company for an unorthodox oil well location and amendment to Order No. R-2538, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing oil well at an unorthodox location 1315 feet from the North line and 2625 feet from the West line of Section 34, Township 19

CASE 4206 - Continued from Page 6 -

South, Range 35 East, as an infill well in its East Pearl-Queen Unit Waterflood Project area, East Pearl-Queen Pool, Lea County, New Mexico. Applicant further seeks the amendment of Order No. R-2538, which order authorized the aforesaid waterflood project, to establish a procedure whereby additional producing wells at unorthodox infill locations in the aforesaid project area, as may be necessary to complete an efficient producing pattern, may be approved administratively.

CASE 4207: Application of C. W. Trainer and DEL-LEA, Inc., for an unorthodox gas well location, Lea County, New Mexico. Applicants, in the above-styled cause, seek an exception to Rule 104 C II to permit the drilling of a well at an unorthodox gas well location 330 feet from the North line and 660 feet from the West line of Section 35, Township 12 South, Range 34 East, West Ranger Lake-Devonian Gas Pool, Lea County, New Mexico. The N/2 of said Section 35 to be dedicated to the well.

CASE 4186: (Readvertised)

Application of Tenneco Oil Company for compulsory pooling and an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Basin-Dakota Gas Pool underlying the North half of Section 11, Township 29 North, Range 13 West, San Juan County, New Mexico. Said acreage to be dedicated to a well to be drilled at an unorthodox gas well location 2250 feet from the North line and 600 feet from the East line of said Section 11. 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. In the absence of a valid objection an order will be issued upon the record entered in the subject case August 6, 1969.

CASE 4208: Application of John A. Yates of Artesia for several waterflood projects, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute

-8-

EXAMINER HEARING - August 27, 1969

DOCKET No. 24-69

CASE 4208 - Continued from Page 7 -

several waterflood projects by the injection of water into the Seven Rivers formation through his Mary Lou Well No. 1 located in Unit H of Section 29 and his Caroline Well No. 4 located in Unit E of Section 28, both in Township 19 South, Range 28 East, East Millman-Seven Rivers Pool, Eddy County, New Mexico.

CASE 4209: Application of Harvey E. Yates Company of Artesia for several pressure maintenance projects, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute several pressure maintenance projects by the injection of water into the Seven Rivers and Queen formations, McMillan (Seven Rivers-Queen) Pool, Eddy County, New Mexico, through the following-described wells in Township 20 South, Range 27 East:

Page & Yates Well No. 8 - Unit M - Section 5
Page & Yates Well No. 6 - Unit I - Section 6
Page & Yates Well No. 7 - Unit J - Section 6
Lillie Yates Well No. 2 - Unit B - Section 7

TABULATION OF PROPOSED
WATER INJECTION WELLS
MOBIL OIL CORPORATION'S
HUMPHREY QUEEN UNIT
LANGLIE-MATTIX POOL
LEA COUNTY, NEW MEXICO

CONVERSIONS

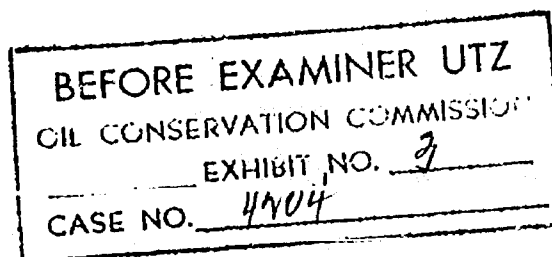
UNIT WELL NO.	PREVIOUS WELL NAME & NO.	LOCATION			
		UNIT	SEC.	TOWNSHIP	RANGE
2	Mobil's Liberty 1	D	3 -	25-S	37-E
4	Mobil's Humphrey "A" 1	B	3 -	25-S	37-E
5*	Mobil's Fristoe 6	A	3 -	25-S	37-E
7	Mobil's Smith 2	H	4	25-S	37-E
9	Mobil's Humphrey "A" 4	F	3 -	25-S	37-E
15	Mobil's Liberty 5	L	3 -	25-S	37-E
17	Mobil's Humphrey "A" 5	J	3 -	25-S	37-E
19*	Mobil's Fristoe 7	I	3 -	25-S	37-E
23*	Mobil's Humphrey "A" 9	O	3 -	25-S	37-E

INJECTION WELLS TO BE DRILLED

UNIT WELL NO.	LOCATION				
	UNIT	SEC. LINE TIES	SEC.	TOWNSHIP	RANGE
13	I	2522' FSL & 1220' FEL	4	25-S	37-E
20*	M	100' FSL & 5' FWL	3 -	25-S	37-E

* Wells have been completed and equipped as injectors under authority granted in Order No. R-3426.

CRKreuz/dw
8-20-69



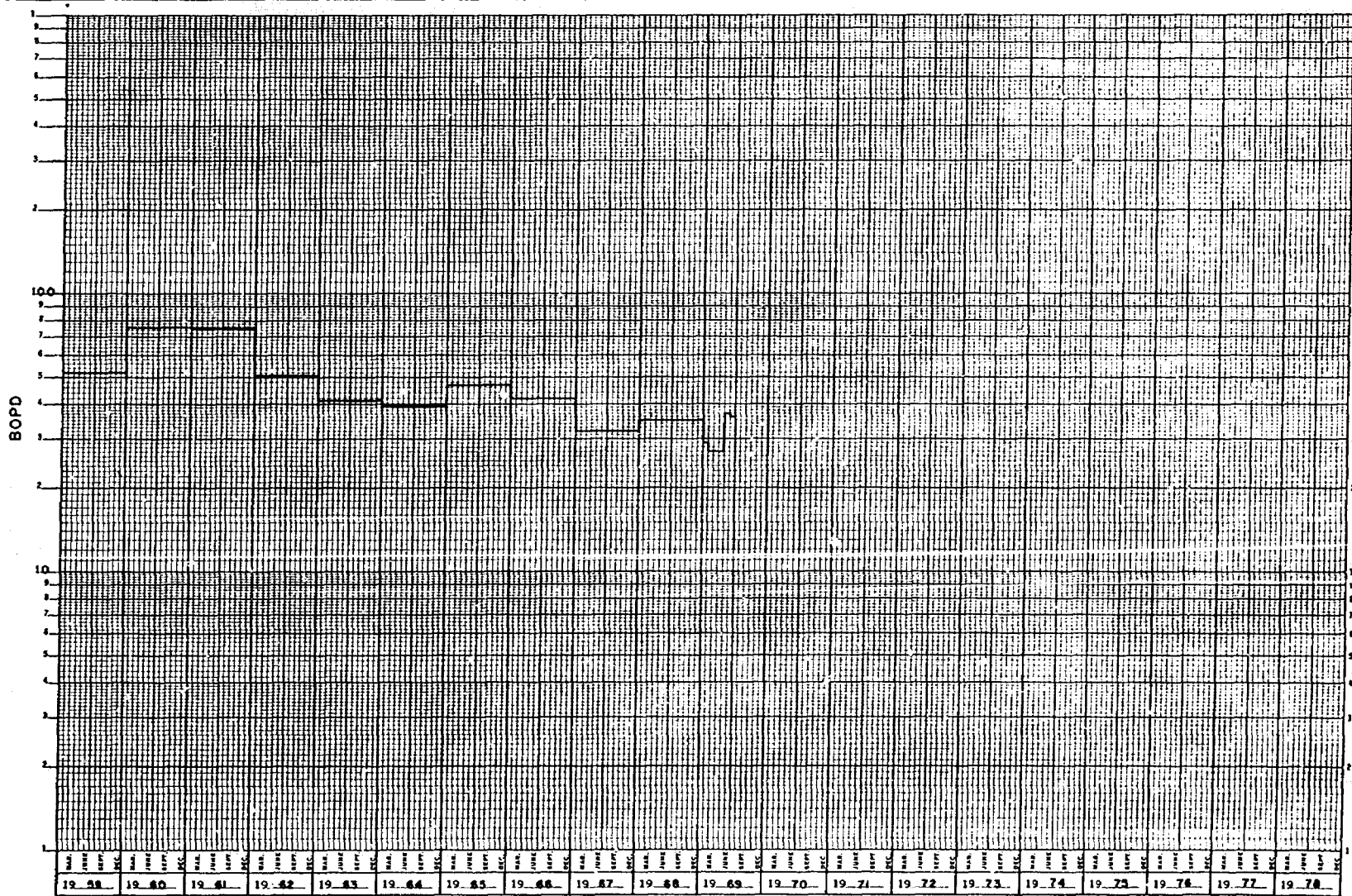
MOBIL OIL CORPORATION

TABULATION OF OIL PRODUCTION
PROPOSED HUMPHREY QUEEN UNIT
LEA COUNTY, NEW MEXICO

<u>YEAR</u>	<u>OIL PRODUCTION, BBLs.</u>	<u>CUMULATIVE OIL, BBLs.</u>	<u>NUMBER OF PRODUCING WELLS</u>	<u>BOPD</u>
1959	19015	1,409,130	14	52
1960	27687	1,436,817	14	76
1961	27337	1,464,154	15	75
1962	18538	1,482,692	15	51
1963	15013	1,497,705	12	41
1964	14160	1,511,865	14	39
1965	17290	1,529,155	15	47
1966	15398	1,544,553	15	42
1967	11721	1,556,274	17	32
1968	12891	1,569,165	19	35
1969				
Jan.	895	1,507,060	19	29
Feb.	743	1,570,803	19	27
Mar.	822	1,571,625	19	27
Apr.	810	1,572,435	19	27
May	1147	1,573,582	19	37
Jun.	1070	1,574,652	19	36

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 4704

PWKelly/kim
8/25/69



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 4704

Mobil Oil Corporation

EXPLORATION AND PRODUCING DEPARTMENT
MIDLAND DIVISION

GRAPH OF DAILY OIL PRODUCTION
BEGINNING 1959
PROPOSED HUMPHREY QUEEN UNIT
LANGLIE-MATTIX FIELD
Lea County, New Mexico

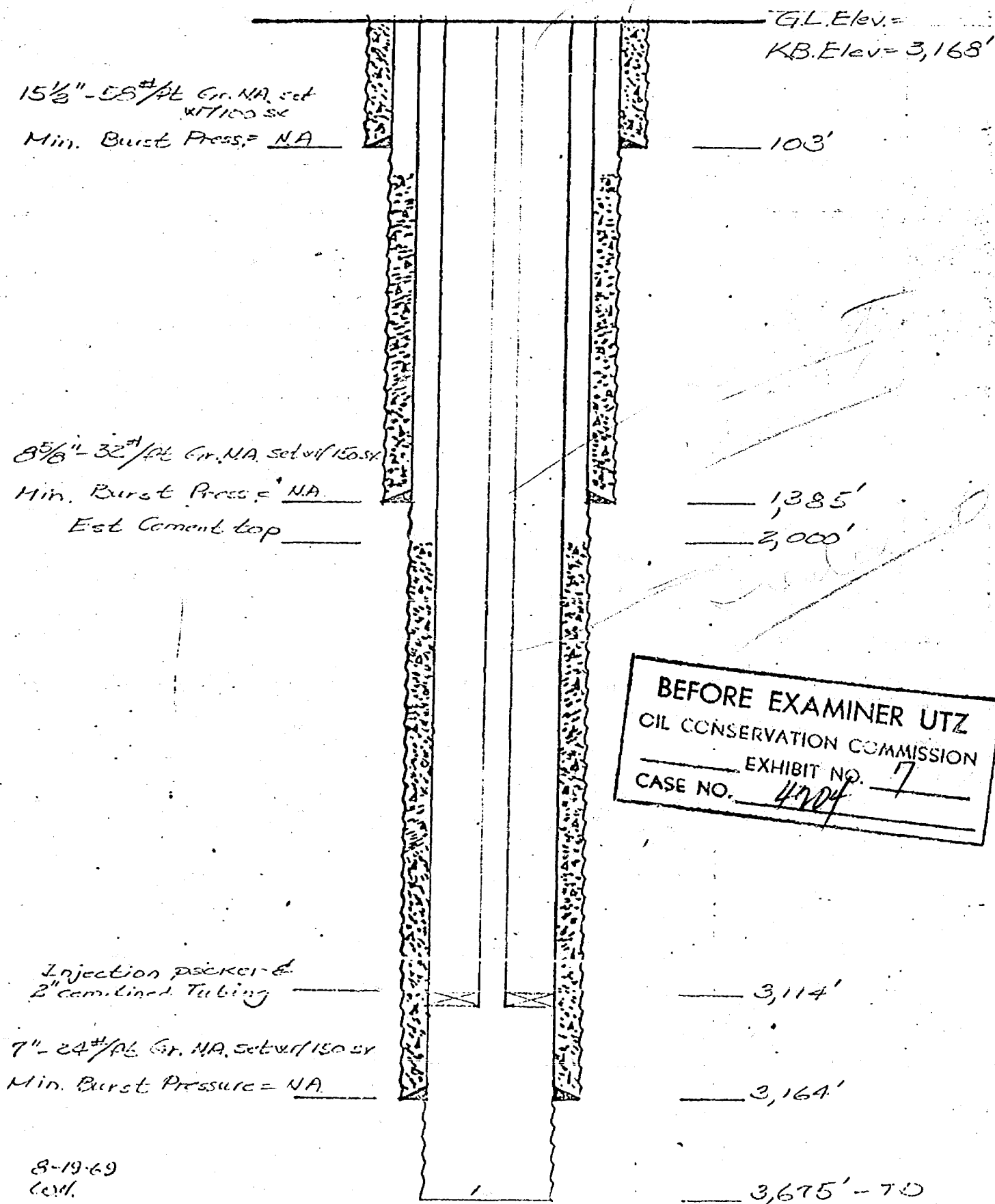
SCALE
DATE 8-21-69
CHECKED Pux
APPROVED
REVISED

Diagrammatic Well Sketch

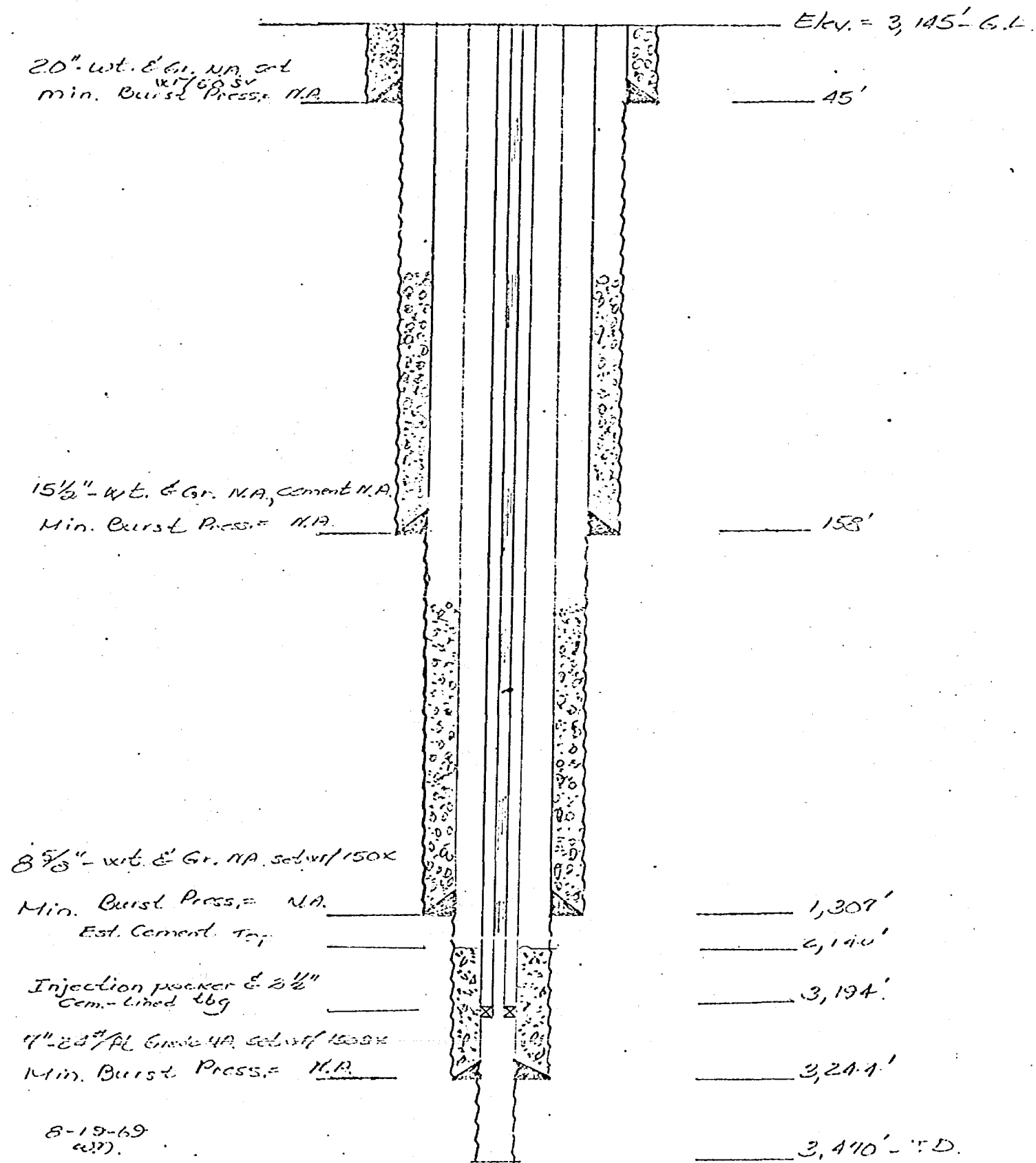
Humphrey Queen Unit Well No 2 WVV

Langlie-Mattie (Queen) Field

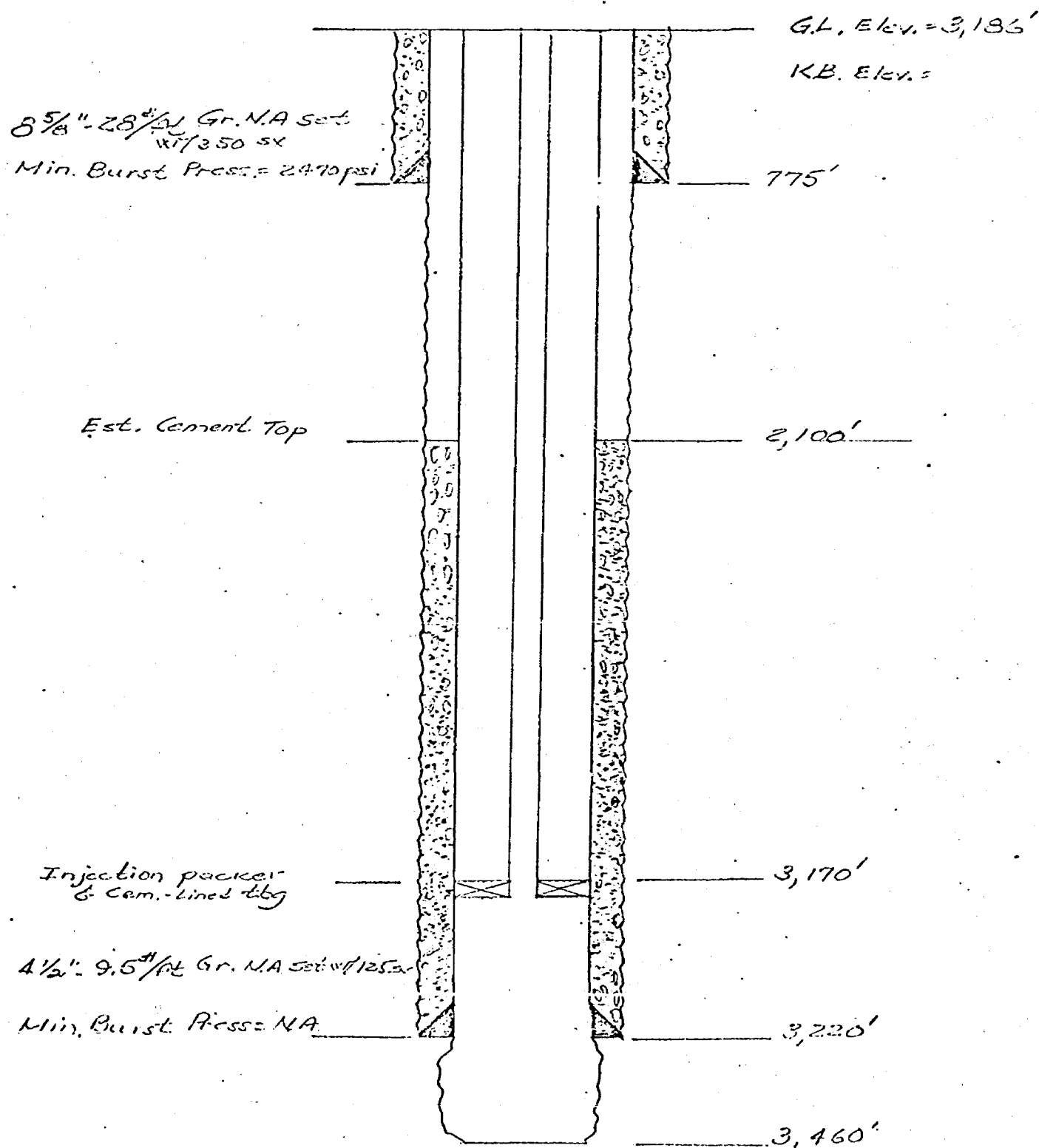
Lee County, New Mexico



Diagrammatic Well Sketch
 Humphrey Queen Unit Well No. 4 W.N.V.
 Langlie-Mattie (Queen) Field
 Lea County, New Mexico

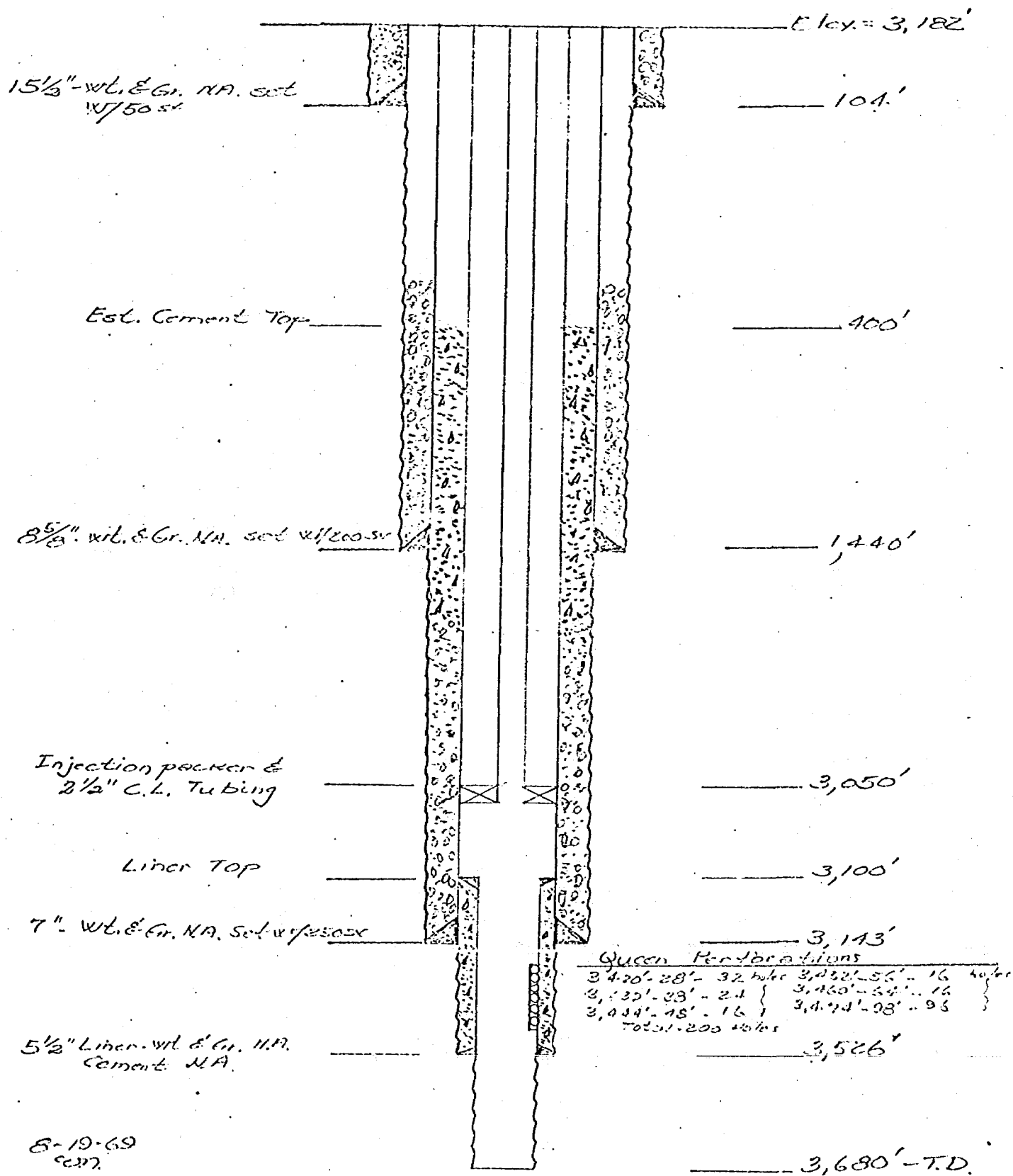


Diagrammatic Well Sketch
 Humphrey Queen Unit Well No. 6 W.W.
 Langlie Matlix (Queen) Field
 Lea County, New Mexico

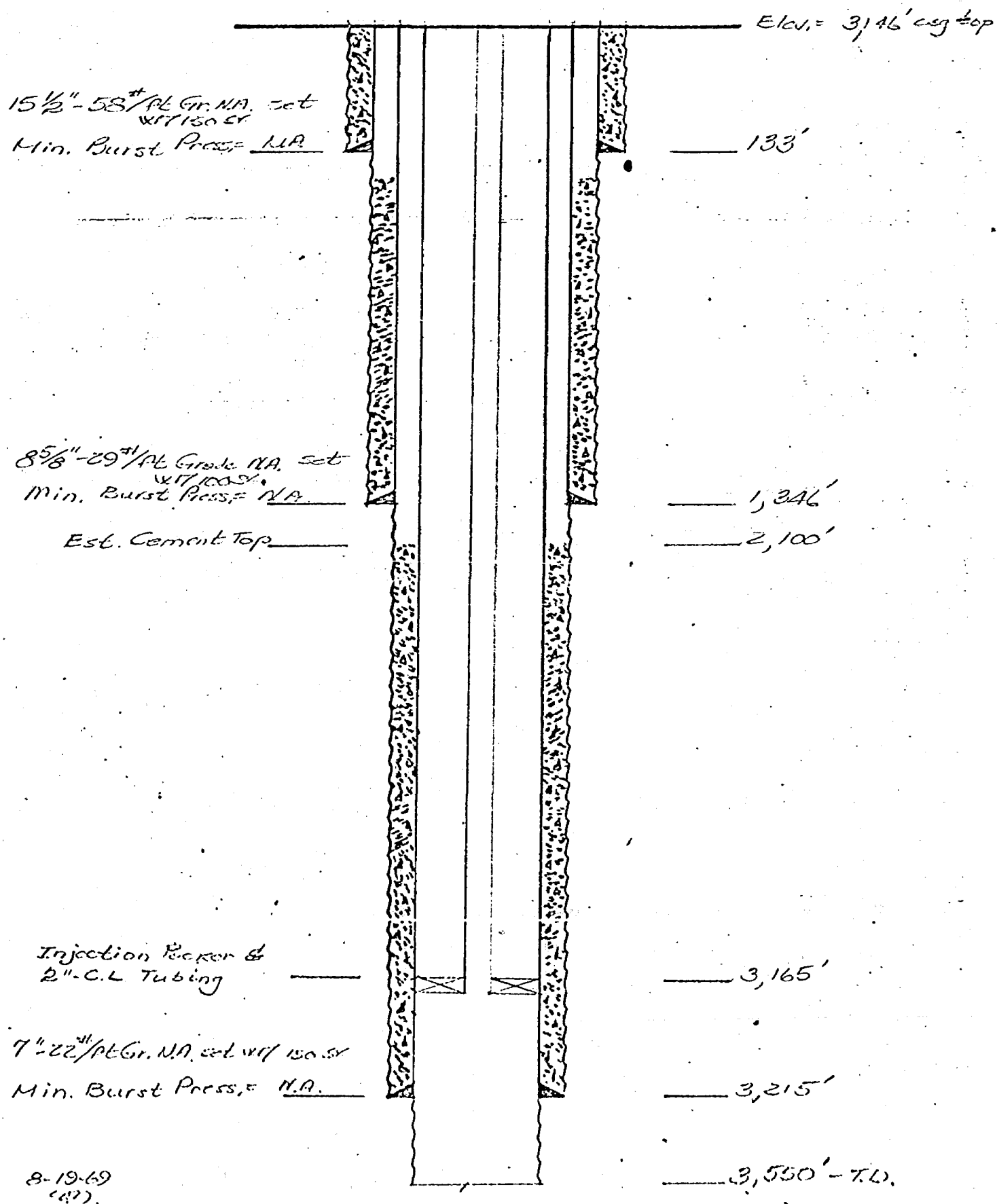


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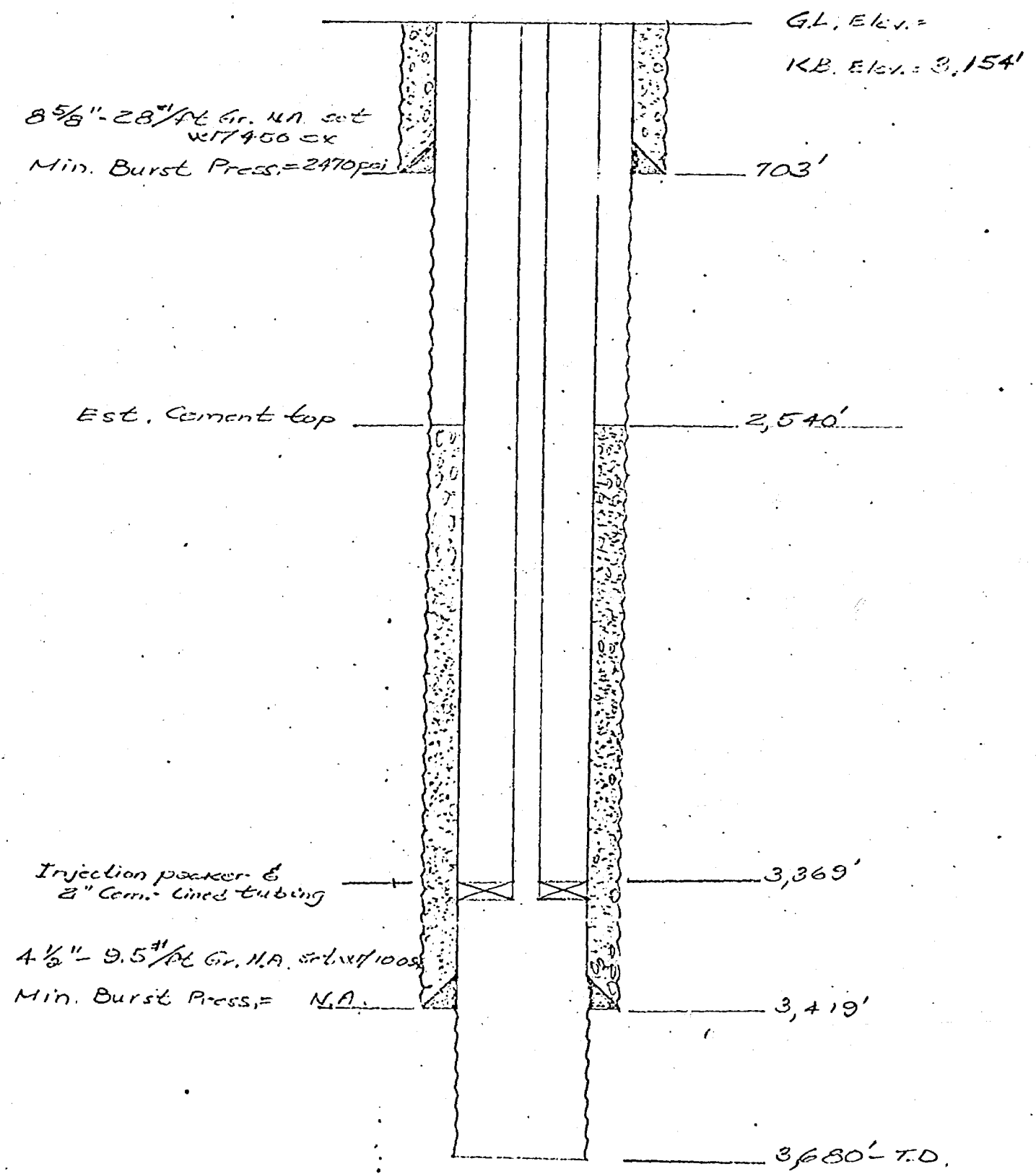
Diagrammatic Well Sketch
 Humphrey Queen Unit Well #7 W.M.X.
 Longlie-Mattix (Queen) Field
 Lea County, New Mexico



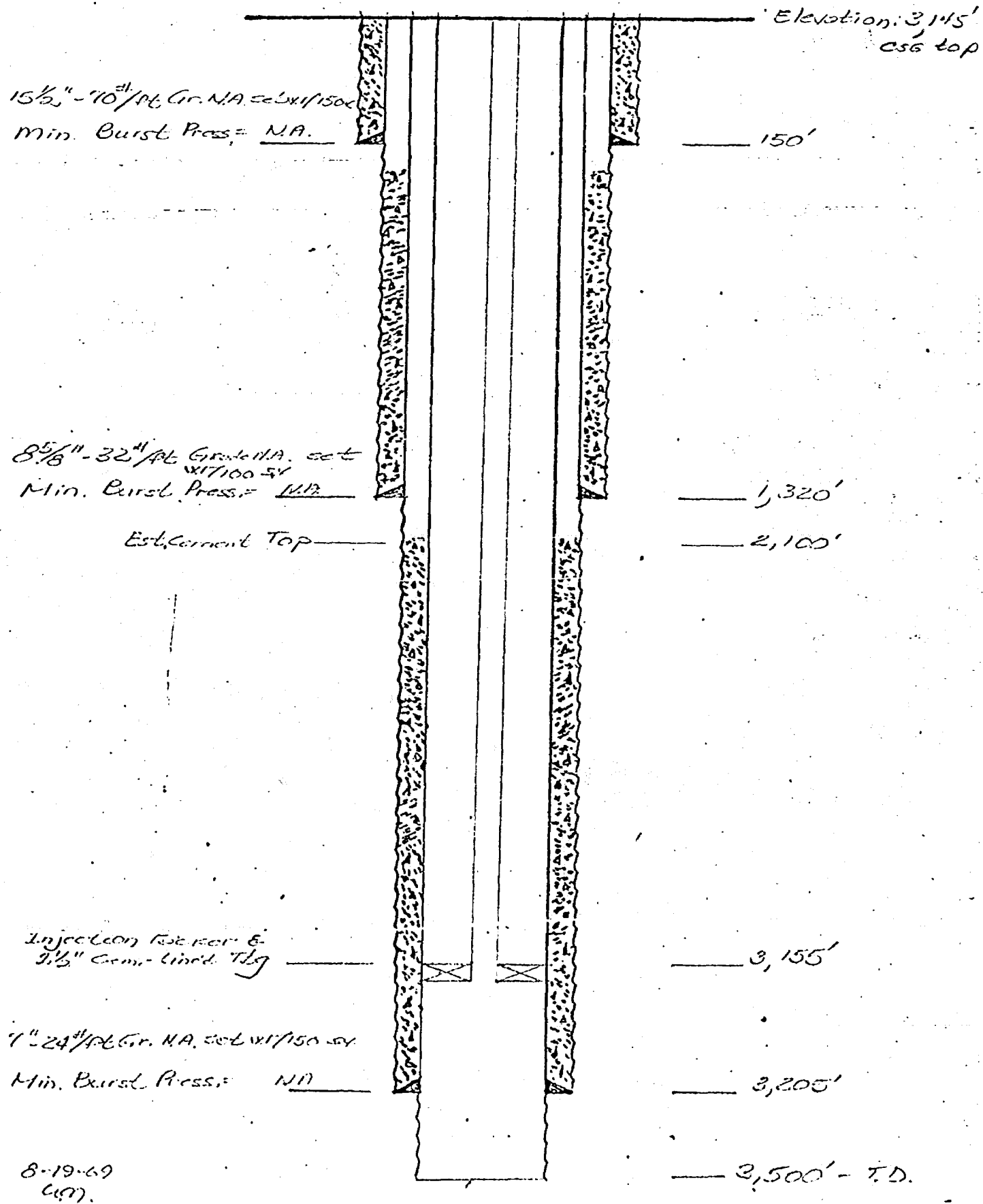
Diagrammatic Well Sketch
Humphrey Queen Unit Well #9 WIW
Longlie-Mattie (Queen) Field
Lea County, New Mexico



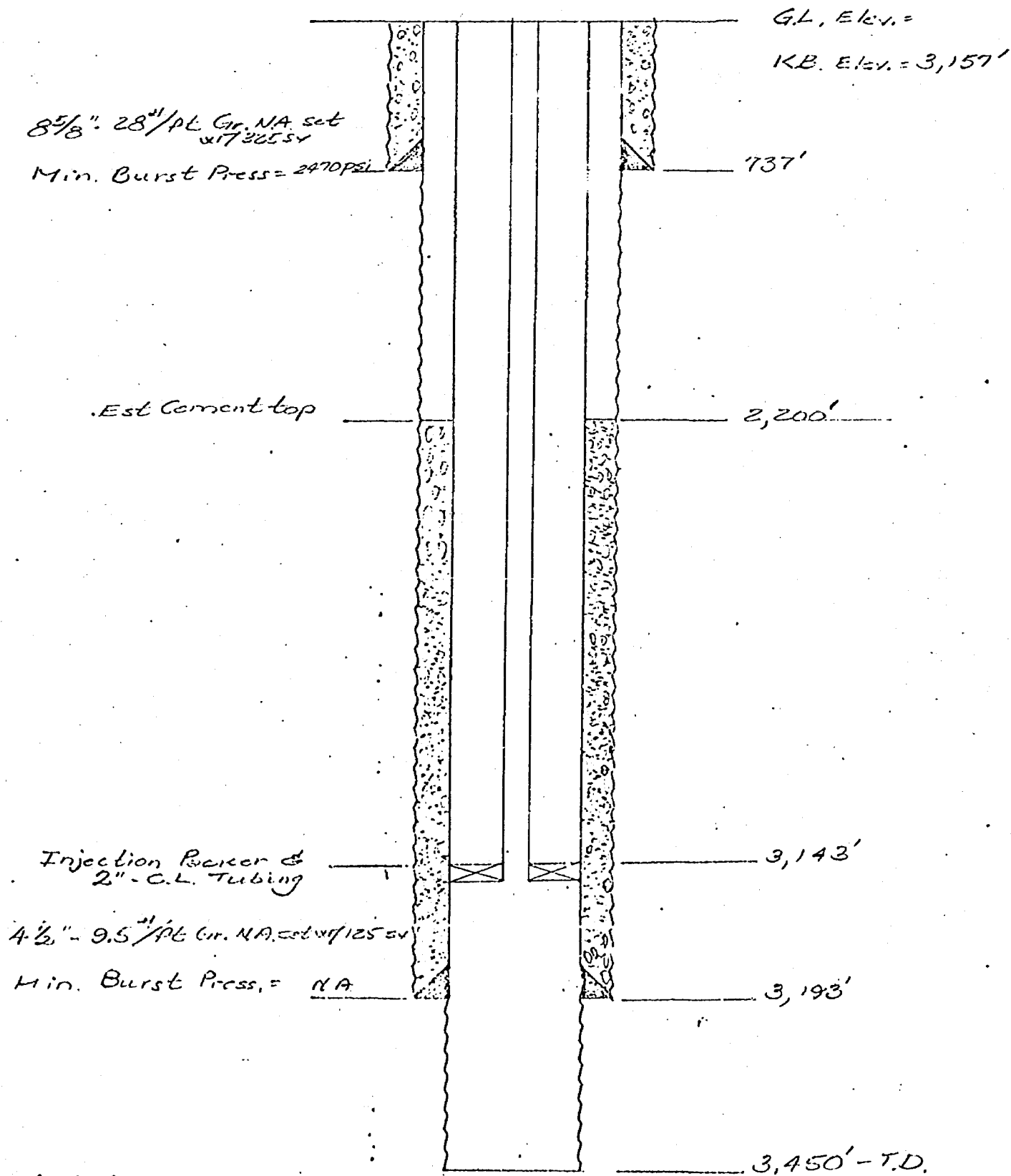
Diagrammatic Well Sketch
 Humphrey Queen Unit Well No. 15 N.W.N.
 Langlie-Mottlie (Queen) Field
 Lea County, New Mexico



Diagrammatic Well Sketch
 Humphrey Queen Unit Well No. 17 W.W.
 Langlie-Mattew (Queen) Field
 Lea County, New Mexico



Diagrammatic Well Sketch
 Humphrey Queen Unit Well No. 19 W.I.W.
 Langlie-MoZlix (Queen) Field
 Lea County, New Mexico



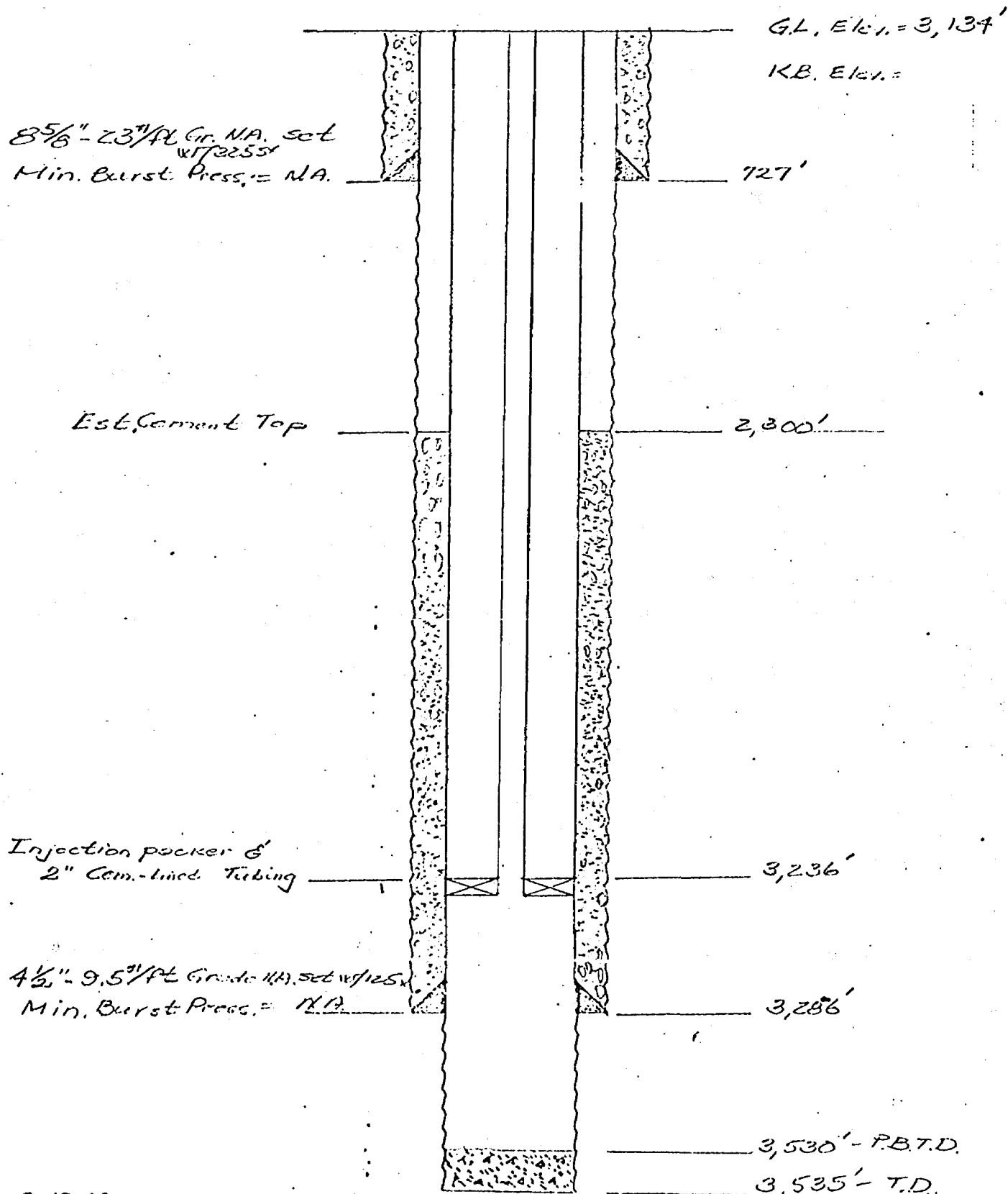
8-19-69
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Diagrammatic Well Sketch

Humphrey Queen Unit Well No. 23 W.W.

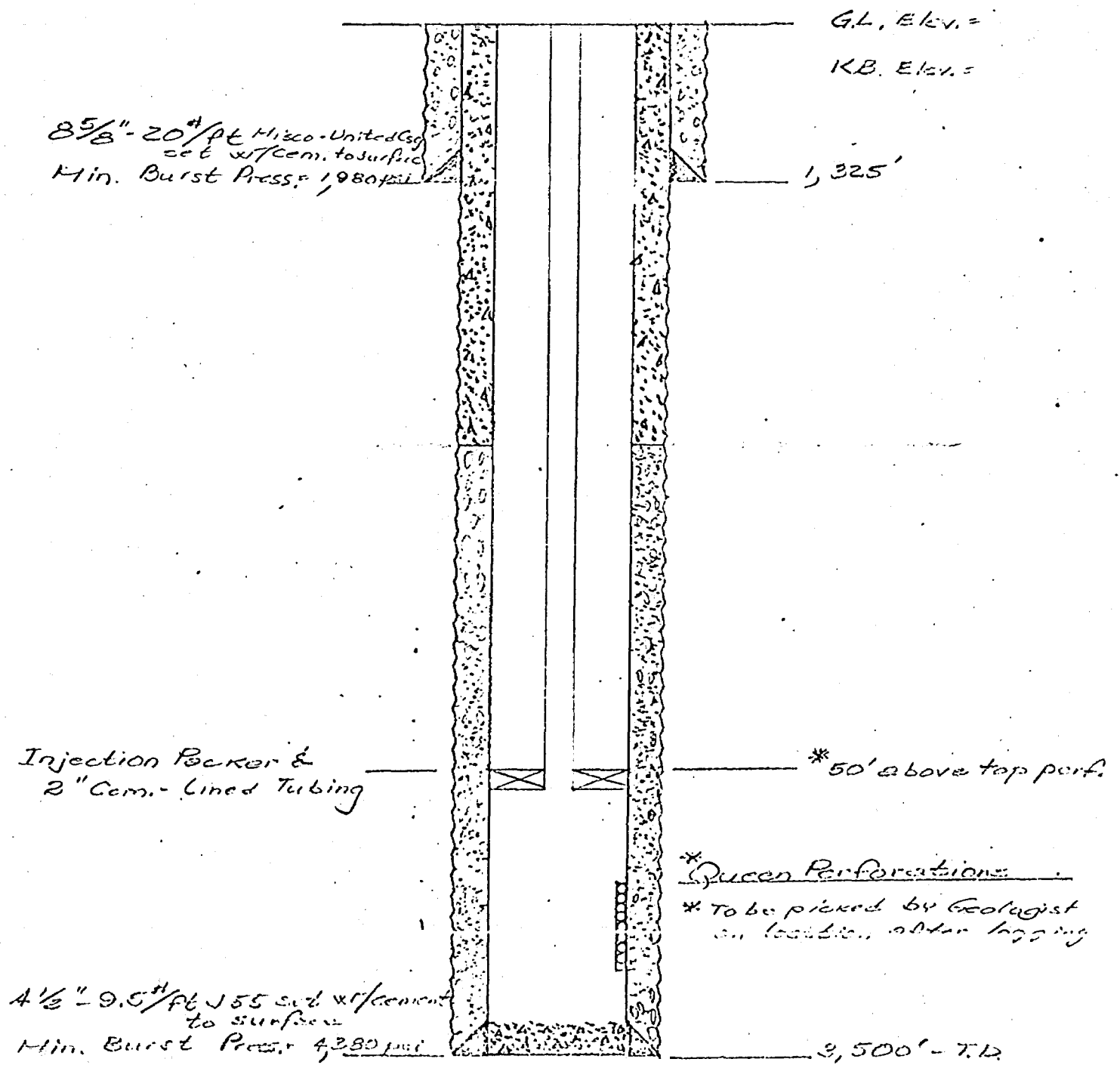
Longlie-Mattix (Queen) Field

Lea County, New Mexico



8-19-69
W.M.

Diagrammatic Well Sketch
 Humphrey Queen Unit Well No. 13 WLV
 Langlie-Mattix (Queen) Field
 Lea County, New Mexico



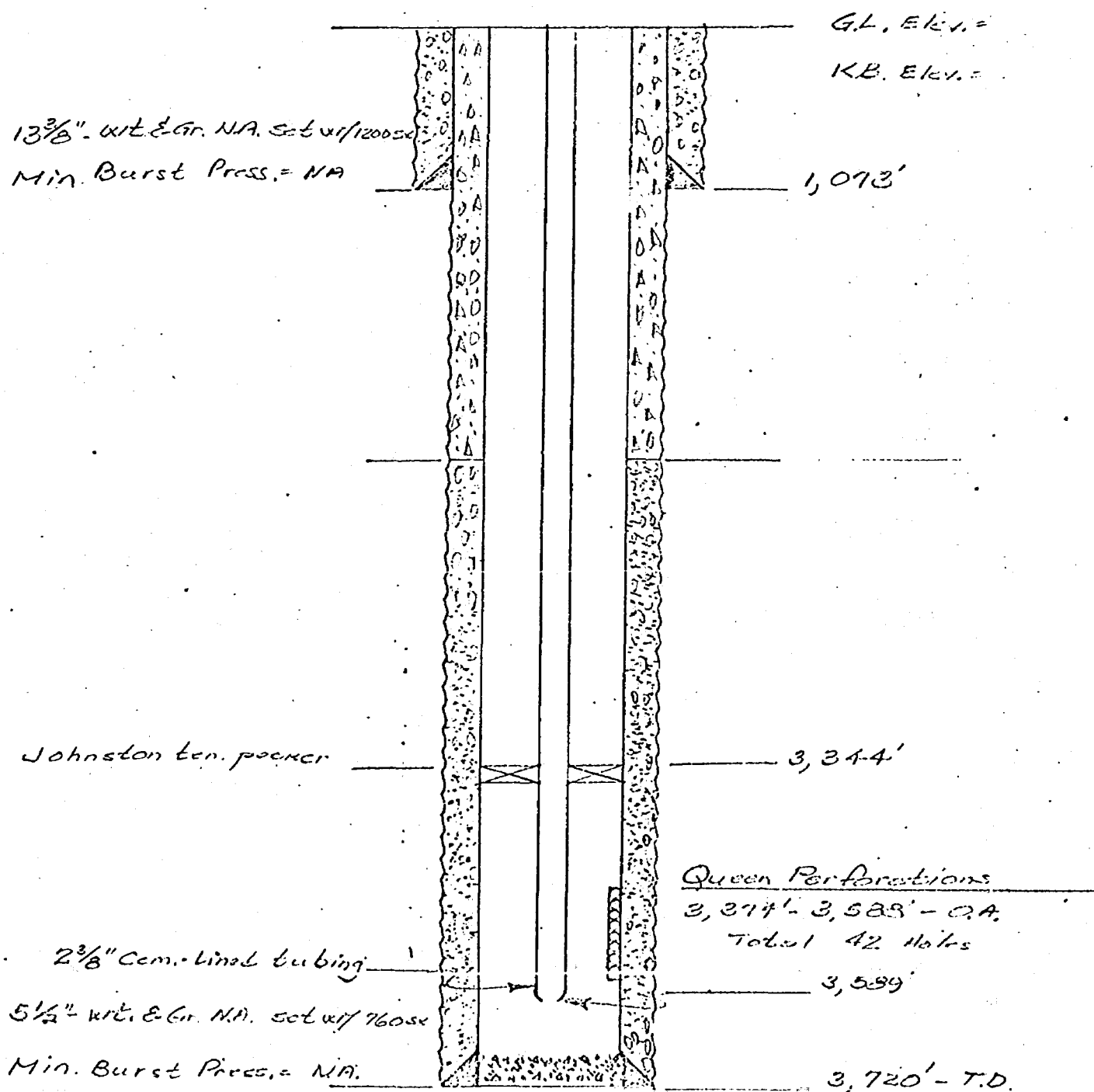
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Diegrammatic Well Sketch

Humphrey Queen Unit Well No 20 W.W.

Langlie-Mattix (Queen) Field

Lea County, New Mexico



Mobil Oil Corporation

P.O. BOX 633
MIDLAND, TEXAS 79701

August 7, 1969

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Att: Mr. A. L. Porter

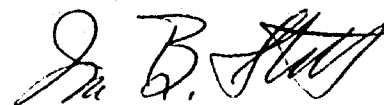
APPLICATIONS OF MOBIL OIL
CORPORATION FOR A UNIT AGREEMENT
AND WATERFLOOD PROJECT - HUMPHREY
QUEEN UNIT, LANGLIE-MATTIX POOL
LEA COUNTY, NEW MEXICO

Dear Mr. Porter:

Enclosed herewith please find above-referenced applications which we would appreciate your filing and docketing for the August 27, 1969 Examiner's Hearing.

This matter was discussed by Messrs. George Hatch and C. R. Kreuz by telephone on August 7, 1969.

Very truly yours,



Ira B. Stitt
Division Operations Engineer

CRKreuz/bje
Enclosures

DOCKET MAILED

Date 8-15-69

Aug 11 PM 5 25

Case 4203

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF MOBIL OIL CORPORATION FOR
AUTHORITY TO INSTITUTE A WATERFLOOD
PROJECT IN THE LANGLIE-MATTIX POOL,
LEA COUNTY, NEW MEXICO

Case No. 4204

A P P L I C A T I O N

Applicant, Mobil Oil Corporation, whose address is Post Office Box 633, Midland, Texas 79701, hereby requests the Commission to authorize the institution of a waterflood project by the injection of water into the Queen Sand in the Langlie-Mattix Pool, Lea County, New Mexico, and in support of its request states:

1. Injection will be into the Queen Sand through 11 wells located in Sections 3 and 4, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico.
2. Five of the eleven (11) wells will be located at unorthodox locations.

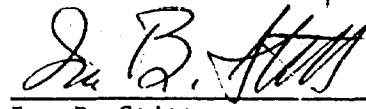
Applicant further seeks an administrative procedure whereby said project could be expanded to include additional lands and injection wells in the area of the said project as may be necessary in order to complete an efficient injection pattern; that said administrative procedure should provide for administrative approval for conversion to water injection in exception to the well response requirements of Rule 701E-5 of the Commission Rules and Regulations.

WHEREFORE, applicant requests that this matter be set for hearing as provided by law and that following hearing the Commission issue its order granting authority to institute said waterflood project.

Respectfully submitted,

MOBIL OIL CORPORATION

By



Ira B. Stitt
Division Operations Engineer
Midland Division
Mobil Oil Corporation

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF MOBIL OIL CORPORATION FOR
APPROVAL OF THE HUMPHREY QUEEN
UNIT AGREEMENT IN THE LANGLEIE-
MATTIX POOL, LEA COUNTY, NEW MEXICO

Case No. 4203

A P P L I C A T I O N

Applicant, Mobil Oil Corporation, whose address is Post Office Box 633, Midland, Texas 79701, hereby requests Commission approval of the Humphrey Queen Unit Agreement in the Langlie-Mattix Pool, Lea County, New Mexico, and in support of its request states:

The proposed Humphrey Queen Unit is comprised of 761.25 acres, more or less, of Federal and Fee lands described as follows:

Lea County, New Mexico

Township 25 South, Range 37 East, NMPM

Section 3: All

Section 4: E/2 NE/4 and NE/4 SE/4

WHEREFORE, applicant requests that this matter be set for hearing as provided by law and that following hearing the Commission issue its order approving said Unit Agreement.

Respectfully submitted,

MOBIL OIL CORPORATION

By



Ira B. Stitt
Division Operations Engineer
Midland Division
Mobil Oil Corporation

UNIT AGREEMENT
HUMPHREY QUEEN UNIT
LEA COUNTY, NEW MEXICO

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 1
CASE NO. 4203

UNIT AGREEMENT

HUMPHREY QUEEN UNIT

LEA COUNTY, NEW MEXICO

TABLE OF CONTENTS
INDEX
PREAMBLE
AGREEMENT PROPER

Map of Unit Area	Exhibit A
Schedule of Ownership	Exhibit B
Schedule of Tract Participation	Exhibit C

8/11/69

UNIT AGREEMENT
HUMPHREY QUEEN UNIT
LEA COUNTY, NEW MEXICO

I N D E X

<u>SECTION</u>		<u>PAGE</u>
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EXHIBIT A (Map of Unit Area)

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UNIT AGREEMENT
HUMPHREY QUEEN UNIT
LEA COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 1st day of August, 1969, by and between the parties subscribing, ratifying, or consenting hereto, and herein referred to as "Parties hereto";

W I T N E S S E T H:

WHEREAS, The parties hereto are the owners of working, royalty, or other oil or gas interests in the lands subject to this Agreement; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by law (Chap. 72, Laws of 1935, as amended by Chap. 193, Laws of 1937, Chap. 166, Laws of 1941, and Chap. 168, Laws of 1949) to approve this Agreement, and the conservation provisions hereof; and

WHEREAS, The Mineral Leasing Act of February 25, 1920 (41 Stat. 437, as amended, 30 U.S.C. Sections 181 et seq.) authorizes Federal Lessees and their representatives to unite with each other or jointly or separately with others in collectively adopting and operating a cooperative or unit plan of development or operation of any oil or gas pool, field or like area or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the parties hereto hold sufficient interests in the Humphrey Queen Unit Area, comprised of land hereinafter described, to give reasonably effective control of operation therein; and

WHEREAS, it is the purpose of the parties hereto to enable institution and consummation of secondary recovery operations, conserve natural resources, to prevent waste and secure the other benefits obtainable through development and operation of the area subject to this Agreement under the terms, conditions and limitations herein set forth:

NOW, THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this Agreement their respective interests in the Unitized Formation underlying the Unit Area (as those terms are defined hereinafter), and agree severally among themselves as follows:

8/11/69

SECTION 1. ENABLING ACT AND REGULATIONS: The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder and valid, pertinent and reasonable regulations hereafter issued thereunder are accepted and made a part of this Agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this Agreement; and as to non-Federal lands, the oil and gas operating regulations in effect as of the effective date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State in which the non-Federal land is located, are hereby accepted and made a part of this Agreement.

SECTION 2. UNIT AREA AND DEFINITIONS: The area described by tracts in Exhibit B and depicted on Exhibit A attached hereto is hereby designated and recognized as constituting the Unit Area, containing 761.25 acres, more or less, in Lea County, New Mexico. Said land is described as follows:

Township 25 South, Range 37 East, New Mexico Principal Meridian

Section 3: Lots 1, 2, 3, and 4, S/2 N/2, and S/2

Section 4: Lot 1, SE/4 NE/4, and NE/4 SE/4

For the purpose of this Agreement, the following terms and expressions as used herein shall mean:

- (a) "Commission" is defined as the Oil Conservation Commission of the State of New Mexico.
- (b) "Director" is defined as the Director of the United States Geological Survey.
- (c) "Secretary" is defined as the Secretary of the Interior of the United States of America or any other person duly authorized to exercise the powers vested in that office.
- (d) "Department" is defined as the Department of the Interior of the United States of America.
- (e) "Supervisor" is defined as the Oil and Gas Supervisor of the United States Geological Survey for the region in which the Unit Area is situated.
- (f) "Unitized Formation" is defined as that stratigraphic interval underlying the Unit Area extending from a point 100' above the base of

the Seven Rivers formation to the base of the Queen formation, said interval being more specifically the equivalent of the continuous interval occurring between the depths of 3,104' and 3,518', as shown on the Schlumberger Gamma-Ray Sonic log run on January 1, 1964, in the Gulf Oil Corporation J. A. Stuart No. 9 well, located 330' from the North and East lines of Sec. 10, T-25-S, R-37-E, Lea County, New Mexico. Said log was measured from a Kelly bushing elevation of 3,137' above sea level.

(g) "Unitized Substances" is defined as all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within the Unitized Formation underlying Unitized Land.

(h) "Royalty Interest" is defined as any interest in Unitized Substances, other than a working interest, the owner of which is not obligated to pay, either in cash, out of production or otherwise, any portion of the Unit Expense.

(i) "Royalty Owner" is defined as and shall mean the owner of a Royalty Interest.

(j) "Unit Expense" is defined as all cost, expense, or indebtedness incurred by Unit Operator pursuant to this Agreement for or on account of Unit Operations.

(k) "Unit Operations" is defined as all operations conducted pursuant to this Agreement.

(l) "Tract" is defined as each parcel of land described as such and given a Tract number in Exhibit B.

(m) "Tract Participation" is defined as the percentages of Unitized Substances allocated hereunder to a Tract.

(n) "Tract Cumulative" is defined as the cumulative total number of barrels of oil produced from the Unitized Formation under such Tract prior to January 1, 1969, as officially reported to the Commission.

(o) "Unit Area Cumulative" is defined as the total Tract Cumulative of all Tracts that are qualified under this Agreement in accordance with the provisions hereof.

(p) "Paying Quantities" is defined as production of Unitized Substances in quantities sufficient to pay for the cost of producing same.

SECTION 3. EXHIBITS. Exhibit A attached hereto is a map showing the Unit Area and, to the extent known to Unit Operator, the boundaries and identity of Tracts and leases in said Unit Area. Exhibit B, attached hereto, is a schedule showing, to the extent known to Unit Operator, the acreage comprising each Tract, land description and the percentage and kind of ownership of oil and gas interests in each Tract in the Unit Area. Exhibit C, attached hereto, is a schedule showing the Tract Participation assigned to each Tract. However, nothing herein or in said schedules or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown in said map or schedules as owned by such party. Exhibits A, B and C shall be revised by Unit Operator whenever changes render such revision necessary or when requested by the Supervisor, and not less than four copies thereof shall be filed with the Supervisor. If an Exhibit is revised pursuant to this Agreement, Unit Operator shall certify and file the revised Exhibit for record in Lea County, New Mexico.

SECTION 4. UNITIZED LAND AND UNITIZED SUBSTANCES. All land committed to this Agreement as to the Unitized Formation shall constitute land referred to herein as "Unitized Land" or "Land Subject to this Agreement". All oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within the Unitized Formation underlying Unitized Land are unitized under the terms of this Agreement and herein are called "Unitized Substances". Nothing herein shall be construed to unitize, pool or in any way affect the oil, gas and other minerals contained in or that may be produced from any formation other than the Unitized Formation as above defined.

SECTION 5. UNIT OPERATOR. Mobil Oil Corporation is hereby designated as the Unit Operator, and by signing this agreement as Unit Operator, it agrees and consents to accept the duties and responsibilities of Unit Operator for the operation, development, and production of Unitized Substances as herein provided.

SECTION 6. ACCOUNTING PROVISIONS AND UNIT OPERATIONS. Costs and expenses incurred in conducting Unit Operations hereunder shall be paid by Unit Operator.

SECTION 7. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR. Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the Unitized Substances are hereby delegated to and shall be exercised by the Unit Operator as herein provided. Upon request, acceptable evidence of title to said rights shall be deposited with said Unit Operator, and together with this Agreement, shall constitute and define the rights, privileges and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any interest in Unitized Substances, it being understood that under this Agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

SECTION 8. PLAN OF OPERATIONS. It is recognized and agreed by the parties hereto that all of the Land Subject to this Agreement is reasonably proved to be productive of Unitized Substances in paying quantities and that the object and purpose of this Agreement is to formulate and to put into effect a secondary recovery project in order to effect additional recovery of Unitized Substances, prevent waste and conserve natural resources. The parties hereto agree that Unit Operator may, subject to the consent and approval a plan of operation by the Supervisor and the Commission, inject into the Unitized Formation, through any well or wells completed therein, brine, water, air, gas, oil and any one or more other substances or combination of substances, whether produced from the Unitized Formation or not, and that the location of input wells and the rates of injection therein and the rate of production shall be governed by standards of good geologic and petroleum engineering practices and conservation methods. After commencement of secondary operations, Unit Operator shall furnish the Supervisor with monthly injection and production reports for each unit well. The Supervisor shall be furnished periodic reports on the progress of the plan of operation and any revisions or changes thereto necessary to meet changed conditions or to protect the interests of all parties to this Agreement, which revisions and changes shall be subject to approval by the Commission and the Supervisor prior to their being effected.

Subject to like approval the Plan of Operation may be revised as conditions may warrant.

The initial plan of operation shall be filed for approval with the Supervisor and the Commission concurrently with the filing of this Unit Agreement for final approval. Said initial plan of operation and all revisions thereof shall be as complete and adequate as the Supervisor and the Commission may determine to be necessary for timely operation consistent herewith. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of operation. Thereafter, from time to time before the expiration of any existing plan, Unit Operator shall submit for like approval a plan for an additional specified period of operation.

SECTION 9. EASEMENTS OR USE OF SURFACE. The parties hereto, to the extent of their rights and interest, hereby grant to Unit Operator the right to use as much of the surface of the land within the Unit Area as may reasonably be necessary for Unit Operations and for the removal of Unitized Substances from the Unit Area; provided that nothing herein shall be construed as leasing or otherwise conveying to the Working Interest Unit Operator a site for water, gas injection, processing or other plants, or a camp site. The parties hereto, to the extent they have the right to do so, hereby grant Unit Operator the right to use brine or water (or both) produced from any formation underlying the Unitized Land for injection into the Unitized Formation. The grant of this right shall not preclude the use of brine or water (or both) produced from any formation other than the Unitized Formation for injection into such other formations. Unit Operator shall not be entitled to take water from any well, lake, pond or irrigation ditch belonging to a Royalty Owner without negotiating with such party for the use of such water.

SECTION 10. TRACT PARTICIPATION. In Exhibit C attached hereto, there are listed and numbered the various Tracts within the Unit Area, and set forth opposite each Tract are figures which represent the Tract Participation percentages allocated to that Tract, calculated on the basis of all Tracts within the Unit Area being committed to this Agreement as of the effective date hereof. The Tract Participations of each Tract within the Unit Area as set forth in Exhibit C have been calculated and determined in accordance with the

factors and formula set out below, and such Tract Participation shall govern the allocation of Unitized Substances produced from the Unit Area from and after the effective date hereof, subject to any revision or revisions of the Unit Area or the Exhibits to this Agreement in accordance with the provisions hereof.

The percentage of Tract Participations set forth in Exhibit C for each Tract within the Unit Area have been calculated and determined in accordance with the following formula:

$$\text{Participation} = \frac{\text{Tract Cumulative}}{\text{Unit Area Cumulative}}$$

In the event less than all of the Tracts within the Unit Area are committed to this Agreement as of the effective date hereof, Unit Operator shall promptly prepare a revised Exhibit C setting forth opposite each of the qualified Tracts (as determined from Section 11 hereof, Tracts Qualified for Participation), the revised Tract Participations which shall be calculated and determined by using the factors and formula set forth in this Section, but applying the same only to the qualified Tracts. Unit Operator shall promptly file copies of such revised Exhibit C with the Commission and the Supervisor, and unless revised Exhibit C is disapproved by Supervisor within sixty (60) days after such filing, the revised Exhibit C shall be effective as of the effective date of this Agreement, and shall thereafter govern the allocation of all Unitized Substances subject to any further revisions of Exhibit C in accordance with the provisions (Sections 3, 25, and 26) hereof.

SECTION 11. TRACTS QUALIFIED FOR PARTICIPATION. On and after the effective date hereof the Tracts within the Unit Area that shall be entitled to participate in the production of Unitized Substances therefrom shall be those Tracts more particularly described in Exhibit B that corner or have a common boundary (Tracts separated only by a public highway or a railroad right-of-way shall be considered to have a common boundary), and that otherwise qualify as follows:

- (a) Each Tract as to which all of the Working Interest is committed and Royalty Owners owning seventy percent (70%) or more of the Royalty Interest therein have become parties to this Agreement.

As the objective of this Unit Agreement is to have lands in the Unit Area operated and entitled to participation under the terms hereof, it is agreed that, notwithstanding anything else herein, no joinder shall be considered a commitment to this Unit Agreement unless the Tract involved is qualified pursuant to this Section. The lessee of record shall supplant the Royalty Interest Owner with respect to Federal lands for qualification purposes under this Section.

If, on the effective date of this Agreement, there is any Tract or Tracts which have not been qualified as above provided, then such Tract or Tracts shall not be entitled to participate hereunder. Unit Operator shall, when submitting this Agreement for final approval by the Supervisor, file a schedule of those Tracts which are entitled to participate in the allocation of Unitized Substances. Said schedule shall set forth opposite each such qualified Tract the assigned Tract number, the lease number, the owner of record of the lease and the Tract Participation percentage which shall be computed according to the participation formula set out in Section 10, (Tract Participation).

SECTION 12. ALLOCATION OF UNITIZED SUBSTANCES. All Unitized Substances produced and saved (less, save and except any part of such Unitized Substances used in conformity with good operating practices on Unitized Land for drilling, operating, camp, other production or development purposes, and for pressure maintenance or unavoidably lost) shall be apportioned among and allocated to the qualified Tracts within the Unit Area in accordance with the respective Tract Participation percentages effective at the time such Unitized Substances are produced, as set forth in the then current Exhibit C. The amount of Unitized Substances so allocated to each Tract, and only that amount (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract) shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among or accounted for to the parties executing, consenting to or ratifying this Agreement entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions, as they would have partici-

pated and shared in the production from such Tract, or in the proceeds thereof, had this Agreement not been entered into, and with the same legal force and effect.

No Tract committed to this Agreement and qualified for participation as above provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances, and nothing herein contained except as provided in Section 35 hereof, shall be construed as requiring any retro-active adjustment for production obtained prior to the effective date of the joinder of any Tract.

If the Royalty Interest in any Tract, on or after the effective date hereof, is divided with respect to separate parcels or portions of such Tract and owned severally by different persons, the percentage Tract Participation assigned to such Tract shall, in the absence of a recordable instrument executed by all owners and furnished to Unit Operator fixing the divisions of ownership, be divided among such parcels or portions in proportion to the number of surface acres in each.

The Unitized Substances allocated to each Tract shall be delivered in kind to the parties entitled thereto by virtue of the ownership of oil and gas rights therein or by purchase from such owners. Each party entitled thereto shall have the continuing right to receive such production in kind at a common point within the Unit Area and to sell or dispose of the same as it sees fit. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose on Unitized Land, provided the same are so constructed, maintained and operated as not to interfere with operations carried on pursuant hereto. Subject to Section 13, (Royalty Settlement), hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party responsible for the payment of such expense.

If any party fails to take in kind or separately dispose of its share of Unitized Substances, Unit Operator shall have the right but not the obligation, for the time being and subject to revocation at will by the party owning the share, to purchase for its own account or sell to others such share; provided that, all contracts of sale by Unit Operator of any other party's share of Unitized Substances shall be only for such reasonable periods of time as

are consistent with the minimum needs of the industry under the circumstances, but in no event shall any such contract be for a period in excess of one year and at not less than prevailing market price in the area for like production. The proceeds of the Unitized Substances so disposed of by Unit Operator shall be paid to the party entitled thereto.

Any party receiving in kind or separately disposing of all or any part of the Unitized Substances allocated to any Tract or receiving the proceeds therefrom shall be responsible for making payment therefor to the parties entitled thereto, and shall indemnify all parties hereto, including Unit Operator, against any liability for all royalties, overriding royalties, production payments, and all other payments chargeable against or payable out of such Unitized Substances or the proceeds therefrom.

If, after the effective date of this Agreement, there is any Tract or Tracts within the Unit Area not qualified hereunder as of the effective date hereof but which are subsequently qualified for participation under the provisions of Section 11 (Tracts Qualified for Participation) and Section 26 (Nonjoinder and Subsequent Joinder), or if any Tract is excluded from this Unit Agreement as provided for in Section 25 (Loss of Title), the schedule of participation as shown in Exhibit C, subject to Section 10 (Tract Participation) or Section 26 (Nonjoinder and Subsequent Joinder), whichever is appropriate, shall be revised by Unit Operator and distributed to the Supervisor to show the new Tract Participations of all the then qualified Tracts; and said revised Exhibit C, upon approval by the Supervisor, shall govern all the allocation of Unitized Substances produced on and after the effective date thereof until the effective date of a new schedule so filed and approved by the Supervisor. In any such revision of Exhibit C pursuant to this paragraph, the Tract Participation of the previously qualified Tracts shall remain in the same ratio one to the other.

SECTION 13. ROYALTY SETTLEMENT. The United States of America and all Royalty Owners who, under an existing contract, are entitled to take in kind a share of the substances produced from any Tract unitized hereunder, shall continue to be entitled to such right to take in kind their share of the Unitized Substances allocated to such Tract, and Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for Royalty Interest not taken in kind shall be made by the party responsible therefor under existing contracts, laws and regulations, on or before the last day of each month for Unitized Substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any royalty due under their leases, except that such royalty shall be computed in accordance with the terms of this Unit Agreement.

Royalty due to the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all Unitized Substances on the basis of the amounts thereof allocated to unitized Federal land as provided herein at the rate specified in the respective Federal leases or at such lower rate or rates as may be authorized by law or regulation; provided, that for any Federal lease committed hereto on which the royalty rate depends on the daily average production per well, such average production shall be determined in accordance with the operating regulations as though the Unitized Land were a single consolidated lease.

If the amount of production or the proceeds thereof accruing to any Royalty Owner (except the United States of America) in a Tract depends upon the average production per well or the average pipeline run per well from such Tract during any period of time, then such production shall be determined from and after the effective date hereof by dividing the quantity of Unitized Substances allocated hereunder to such Tract during such period of time by the number of wells located thereon capable of producing as of the effective date hereof.

All royalty due Royalty Owners hereunder (other than the United States of America) shall be computed and paid on the basis of all Unitized Substances allocated to the respective Tract or Tracts qualified hereunder, in lieu of actual production from such Tract or Tracts.

Each Royalty Owner (other than the United States of America) that ratifies this Agreement represents and warrants that he is the owner of a Royalty Interest in a Tract or Tracts within the Unit Area as his interest appears in Exhibit B attached hereto. If any Royalty Interest in a Tract or Tracts should be lost by title failure or otherwise in whole or in part, during the term of this Agreement, then the Royalty Interest of the party representing himself to be the owner thereof shall be reduced proportionately and the interest of all parties in the affected Tract or Tracts shall be adjusted accordingly.

If gas obtained from lands or formations not subject to this Agreement is introduced into the Unitized Formation for use in repressuring, stimulation of production or increasing ultimate recovery in conformity with a plan of operation first approved by the Supervisor, a like amount of gas, less appropriate deduction for loss or depletion from any cause may be withdrawn from the Unitized Formation royalty free as to dry gas, but not as to the products extracted therefrom; provided, that such withdrawal shall be at such time and pursuant to such conditions and formulas as may be prescribed in the approved plan of operation or as may otherwise be consented to by the Supervisor as conforming to good petroleum engineering practices and provided further, that such right of withdrawal shall terminate on the termination date of this Unit Agreement.

SECTION 14. RENTAL SETTLEMENT. Rentals or minimum royalties due on leases committed hereto shall be paid by the party responsible therefor under existing contracts, laws and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof, due under their leases. Rental or minimum royalty for lands of the United States of America subject to this Agreement shall be paid at the rate specified in the respective leases from the United States of America, unless such rental or minimum royalty is waived, suspended or reduced by law or by approval of the Secretary or his duly authorized representative.

SECTION 15. CONSERVATION. Operations hereunder and production of Unitized Substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to Federal and State laws and regulations.

SECTION 16. DRAINAGE. The Unit Operator shall take appropriate and adequate measures to prevent drainage of Unitized Substances from Unitized Land by wells on land not subject to this Agreement.

SECTION 17. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions and provisions of all leases, subleases and other contracts relating to exploration, drilling, development or operation for oil or gas on Land Subject to this Agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise shall remain in full force and effect, and the parties hereto hereby consent that the Secretary, by his approval hereof, or by the approval hereof by his duly authorized representative, does hereby establish, alter, change or revoke the drilling, producing, rental, minimum royalty and royalty requirements of Federal leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this Agreement.

Without limiting the generality of the foregoing, all leases, subleases and contracts are particularly modified in accordance with the following:

(a) The development and operation of Land subject to this Agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part or separately owned Tract subject to this Agreement, regardless of whether there is any development of any particular part or Tract of the Unitized Land, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto or their respective predecessors in interest, or any of them.

(b) Drilling, producing or secondary recovery operations performed hereunder upon any Tract of Unitized Land shall be accepted and deemed to be performed upon and for the benefit of each and every Tract of Unitized Land, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on land therein embraced.

(c) Suspension of drilling or producing operations on all Unitized Land pursuant to direction or consent of the Supervisor or his duly authorized representative, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every Tract of Unitized Land.

(d) Each lease, sublease, or contract relating to the exploration, drilling, development or operation for oil and gas which by its terms might expire prior to the termination of this Agreement is hereby extended beyond any such term so provided therein, so that it shall be continued in full force and effect for and during the term of this Agreement.

(e) Termination of this Agreement shall not affect any lease which, pursuant to the terms thereof or any applicable laws, shall continue in force and effect thereafter.

(f) Any lease which is made subject to this Agreement shall continue in force beyond the term provided therein as to the lands committed hereto until the termination hereof.

(g) The segregation of any Federal lease committed to this Agreement is governed by the following provision in the fourth paragraph of Section 17 (j) of the Mineral Leasing Act, as amended by the Act of September 2, 1960, (74 Stat. 781-784): "Any (Federal) lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization: Provided, however, that any such lease as to the nonunitized portion shall continue in force and effect for the term thereof but for not less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities." In the application of this provision the terms "area" and "lands" shall be the Unit Area as defined in the first paragraph of Section 2 hereof.

SECTION 18. MATHEMATICAL ERRORS. It is hereby agreed by all parties to this Agreement that Unit Operator is empowered to correct any mathematical or clerical errors which might exist in the pertinent exhibits to this Agreement upon approval by the Supervisor.

SECTION 19. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the interest of the parties hereto and their successors in interest until this Agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee or

other successor in interest. No assignment or transfer of any Royalty Interest subject hereto shall be binding on Unit Operator, until the first day of the calendar month after Unit Operator is furnished with the original or exceptable photostatic or certified copy, of the recorded instrument of transfer.

SECTION 20. EFFECTIVE DATE AND TERM. This Agreement shall become binding upon each party who executes or ratifies it as of the date of execution or ratification by such party and shall become effective as of 7:00 A. M. of the first day of the calendar month after the following requirements have been met:

(a) Tracts comprising seventy percent (70%) or more of the Unit Area as shown on the original Exhibit A have qualified under the provisions of Section 11; and

(b) The approval of this Agreement by the Commission and by the Director or his duly authorized representative; and

(c) The filing of at least one counterpart of this Agreement for record in the office of the County Clerk of Lea County, New Mexico, by Unit Operator and provided, further, that if (a), (b) and (c) above are not accomplished on or before March 1, 1970, this Agreement shall ipso facto expire on said date and thereafter be of no further force or effect.

Unit Operator shall, within thirty (30) days after the effective date of this Agreement, file for record in the office where a counterpart of this Agreement is recorded, a certificate to the effect that this Agreement has become effective according to its terms and stating further the effective date.

The term of this Agreement shall be for and during the time that Unitized Substances are or can be produced in paying quantities from the Unit Area and so long thereafter as drilling, reworking or other operations (including secondary recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days, and so long thereafter as such Unitized Substances can be produced as aforesaid.

This Agreement may be terminated by Unit Operator at any other time and for any other reason with the approval of the Supervisor. Notice of any such approved termination shall be filed with the County Clerk of Lea County, New Mexico, and given to all parties hereto within thirty (30) days after the effective date of termination.

Upon termination of this Agreement, Unit Operations shall cease and the parties hereto shall thereafter be governed by the terms and provisions of the leases and contracts affecting the separate Tracts.

If not otherwise provided by the leases unitized under this Agreement, Royalty Owners hereby grants Unit Operator a period of six (6) months after termination of this Agreement in which to salvage, sell, distribute or otherwise dispose of the personal property and facilities used in connection with Unit Operations.

SECTION 21. RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION. The Director is hereby vested with authority to alter or modify from time to time in his discretion the quantity and rate of production under this Agreement when such quantity and rate of production under this Agreement is not fixed pursuant to Federal or State law or does not conform to any statewide voluntary conservation or allocation program, which is established, recognized, and generally adhered to by the majority of operators in such State, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification. Without regard to the foregoing, the Director is also hereby vested with authority to alter or modify from time to time in his discretion the rate of prospecting and development and the quantity and rate of production under this Agreement when such alteration or modification is in the interest of attaining the conservation objectives stated in this Agreement and is not in violation of any applicable Federal or State law. No such alteration or modification shall be effective as to any privately-owned lands subject to this Agreement as to the quantity and rate of production in the absence of specific written approval thereof by the Commission.

Powers in this Section vested in the Director and the Commission shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than fifteen (15) days from notice.

SECTION 22. NONDISCRIMINATION. In connection with the performance of work under this Agreement, Unit Operator agrees to comply with all of the provisions of Section 202 (1) to (7) inclusive of Executive Order 11246, (30 F.R. 12319), which are hereby incorporated by reference in this Agreement.

SECTION 23. NO WAIVER OF CERTAIN RIGHTS. Nothing in this Agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any Federal or State law, or rules and regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive; provided, however, that each party hereto covenants that during the term of this Agreement such party will not resort to any action at law or in equity to partition the Unit Area or the facilities used in the development or operation hereof and to that extent waives the benefits of all laws authorizing such partition.

SECTION 24. UNAVOIDABLE DELAY. All obligations under this Agreement requiring Unit Operator to commence or continue secondary recovery operations or to operate on or produce Unitized Substances from any of the Lands Subject to this Agreement shall be suspended while, but only so long as Unit Operator, despite the exercise of due care and diligence is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State or municipal law or agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of Unit Operator, whether similar to matters herein enumerated or not. No unit obligation which is suspended pursuant to this Section shall become due less than thirty (30) days after it has been determined that the suspension is no longer applicable. Determination of creditable "unavoidable delay" time shall be made by Unit Operator subject to the approval of the Supervisor.

SECTION 25. LOSS OF TITLE. In the event title to any Tract of Unitized Land shall fail so as to render the Tract inoperable under this Agreement and the true owner cannot be induced to join this Unit Agreement, such Tract shall be automatically regarded as not committed hereto and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In such event, Unit Operator shall recompute the Tract Participation of each of the Tracts remaining subject to this Agreement and shall revise Exhibit C accordingly. The revised Exhibit C shall be effective as of the first day of the calendar month in which such failure of title is finally determined. The participation percentages so recomputed for the qualified Tract shall remain in the same ratio one to the other as before the loss of title was determined.

If title to a Royalty Interest fails, but the Tract to which it relates remains qualified, the parties whose title failed shall not be entitled to share hereunder with respect to such interest. In the event of a dispute as to title as to any Royalty Interest, payment or delivery on account thereof may be withheld without liability or interest until the dispute is finally settled; provided, that as to Federal land or leases, no payments of funds due the United States of America shall be withheld, but such funds shall be deposited as directed by the Supervisor to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

SECTION 26. NONJOINER AND SUBSEQUENT JOINER. If the owner of any substantial interest in a Tract within the Unit Area fails or refuses to subscribe or consent to this Agreement, Unit Operator may withdraw said Tract from this Agreement by written notice to the Supervisor prior to the approval of this Agreement by the Supervisor.

Any oil & gas interests in the Unitized Formation not committed hereto prior to the effective date of this Agreement may thereafter be committed hereto upon compliance with the applicable provisions of this Section and of Section 11, at any time during a period of twelve (12) months after the effective date of the Unit Agreement on the same basis of participation as provided in Section 10, by the owner or owners thereof subscribing, ratifying or consenting in writing to this Agreement.

It is understood and agreed, however, that after such twelve (12) month period the right of subsequent joinder as provided in this Section shall be subject to such requirements or approvals and on such equitable basis as may be agreed upon by Unit Operator and the Supervisor. After the effective date hereof, joinder by a Royalty Owner to this Agreement must be consented to in writing by Unit Operator. Except as may be otherwise herein provided, subsequent joinder to this Agreement shall be effective at 7:00 A.M. of the first day of the month following the filing with the Supervisor of duly executed counterparts of any and all documents necessary to establish effective commitment of any Tract or interest to this Agreement, unless objection to such joinder by the Supervisor is duly made within sixty (60) days after such filing.

SECTION 27. APPEARANCES. Unit Operator shall have the right to appear for or on behalf of any and all interests affected hereby before the Department and the Commission, and to appeal from any order issued under the rules and regulations of the Department or the Commission, or to apply for relief from any of said rules and regulations or in any proceedings relative to operations before the Department or the Commission, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceeding.

SECTION 28. NOTICES. All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by postpaid certified mail, addressed to such party or parties at their respective addresses set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 29. COUNTERPARTS. This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification or consent hereto with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the land within the above described Unit Area.

SECTION 30. COMMITMENT OF INTEREST TO UNIT. The execution of this Agreement by a party shall commit all interests owned or controlled by such party as of the date of execution, and additional interests acquired before the effective date hereof. The commitment of any interest in any Tract within the Unit Area which occurs later than twelve (12) months after the effective date hereof, shall be upon such terms as may be negotiated by Unit Operator and the owner of such interest.

SECTION 31. TAXES. Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount of value of the Unitized Substances produced from the Unitized Land; provided, however, that if it is required or if it be determined that Unit Operator must pay or advance said taxes for the account of the parties hereto, it is hereby expressly agreed that Unit Operator shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No such taxes shall be charged to the United States nor to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 32. BORDER AGREEMENTS. Unit Operator may, subject to approval of the Supervisor, enter into a border-protection agreement or agreements with the oil and gas leasehold owners or operators of adjacent lands along the exterior boundary of the Unit Area with respect to the operations in the border area for the maximum ultimate recovery, conservation purposes and proper protection of the parties and interests.

SECTION 33. PERSONAL PROPERTY EXCEPTED. All lease and well equipment, materials, and other facilities heretofore or hereafter placed by Unit Operator on the lands subject to this Agreement shall be deemed to be and shall remain personal property of Unit Operator and may be removed by Unit Operator.

SECTION 34. NO PARTNERSHIP. The duties, obligations and liabilities of the parties hereto are intended to be several and not joint or collective. This Agreement is not intended to create, and shall not be construed to create, an association or trust, or to impose a partnership duty, obligation or liability with regard to any one or more of the parties hereto. Each party hereto shall be individually responsible for its own obligations as herein provided.

SECTION 35. OIL IN LEASE TANKAGE ON EFFECTIVE DATE. Unit Operator shall make a proper and timely gauge of all lease and other tanks on the Unitized Land in order to determine the amount of merchantable oil above the pipeline connection in such tanks as of 7:00 A.M. on the effective date hereof. All such oil which has been produced as a part of the prior allowable of the well or wells from which produced shall remain the property of the parties entitled thereto the same as if the Unit had not been formed, and any said oil shall be promptly removed from the Unit Area. Any such oil not so removed may be sold

by Unit Operator for the account of the parties entitled thereto, subject to the terms and provisions of this Agreement and make payment of Royalty to Royalty Owners under the terms of applicable lease or other contracts affected. Any oil as is in excess of the prior allowable of the well or wells from which the same was produced shall be regarded and treated the same as Unitized Substances produced after the effective date hereof. If, as of the effective date hereof, any Tract is overproduced with respect to the allowable of the well or wells on that Tract and the amount of overproduction has been sold or otherwise disposed of, such overproduction shall be regarded and included as a part of the Unitized Substances produced after the effective date hereof and the amount thereof shall be charged to such Tract as having been delivered to the parties entitled to Unitized Substances allocated to such Tract.

SECTION 36. LIMITATION OF APPROVALS. Notwithstanding anything herein contained to the contrary, if no Federal lands are committed to this Agreement, then no consents or approvals provided herein shall be required of the Department, the Secretary, the Director, or the Supervisor; and it shall not be necessary to file any instrument hereunder with said offices or agencies unless and until Federal lands are committed to this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first above written and have set opposite their respective names the date of execution.

MOBIL OIL CORPORATION

Date

Attorney-in-Fact

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1969, by _____, _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

* * * * *

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1969, by _____, _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

* * * * *

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1969, by _____.

My Commission Expires:

Notary Public

* * * * *

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1969, by _____.

My Commission Expires:

Notary Public

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1969, by _____, _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

* * * * *

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1969, by _____, _____ of _____, a _____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

* * * * *

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1969, by _____.

My Commission Expires:

Notary Public

* * * * *

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 1969, by _____.

My Commission Expires:

Notary Public

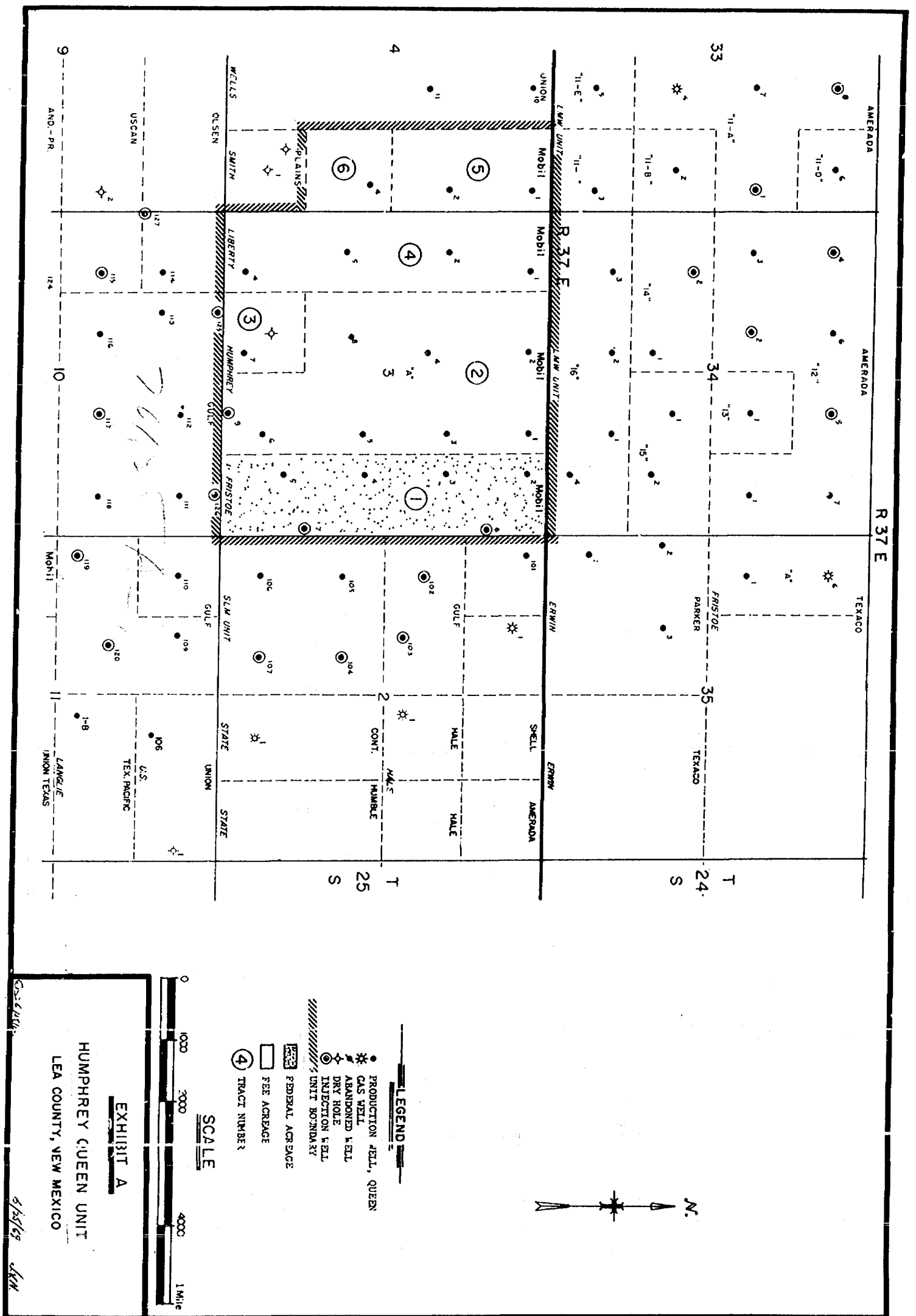


EXHIBIT B
TO
UNIT AGREEMENT
HUMPHREY QUEEN UNIT
LEA COUNTY, NEW MEXICO

TRACT NUMBER	DESCRIPTION	NUMBER OF ACRES	LEASE NO. & EXPIRATION DATE	BASIC ROYALTY	LESSEE OF RECORD	OVERRIDE ROYALTY OWNER AND AMOUNT	WORKING INTEREST OWNER AND AMOUNT
FEDERAL LANDS							
1	Township 25 South, Range 37 East Section 3: Lot 1, SE/4 NE/4, and E/2 SE/4	160.19	LC-032592-(a) 2-28-78	U.S.A.-A11 (Schedule C)	Texaco Inc.	Texaco Inc. .0500000 Ruth Carrow .0187500 Frank Elcott .0093750 Mrs. O. R. Hall, Jr. .0093750 Robert E. Hanberg, Tr. .0187500 Della White .0093750 William J. White .0093750	Mobil Oil Corp. 100% To 3900'

Total: One Federal Tract - 160.19 Acres or 21.04% of the Unit Area

FEE LANDS							
2	Township 25 South, Range 37 East Section 3: Lots 2 and 3, SW/4 NE/4, W/2 SE/4, SE/4 NW/4, and NE/4 SW/4	280.48	HBP	Earnest W. Anguish, Jr. Ancillary Exec. of Est. of E. W. Anguish, Decd. 9.3750 G. L. Buckles 3.1250 D. H. Byrd 2.0834 Hugh Corrigan, III 6.2500	Mobil Oil Corp.	Scope Industries .0502930	Mobil Oil Corp. 100%

TRACT NUMBER	DESCRIPTION	NUMBER OF ACRES	LEASE NO. & EXPIRATION DATE	BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY OWNER AND AMOUNT	WORKING INTEREST OWNER AND AMOUNT
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FEE LANDS
2 (Contd)

	J. Patrick Corrigan			6.2500			
	Ronald K. Deford			1.5625			
	Jack Frost			2.0834			
	Texas Natl. Bank of Houston U/W of T. J. Galbraith			3.1250			
	1st Trust Co. of St. Paul for Acct. of Grace D. Gale			1.5625			
	Nancy Harman			2.0833			
	Mary Lee Hart			28.1250			
	Clarence E. Hinkle			6.2500			
	Joan R. Jones			0.7813			
	Llora B. LaForce			0.1874			
	W. Watson LaForce			0.7500			
	Sarah A. Link, Indv. & as Ind. Executrix of Est. L. C. Link, Dec'd.			3.1250			
	Marilyn R. Lutz			0.7813			
	Midwest Oil Corp.			9.3750			
	Barbara Jean Robertson			1.0417			
	Sabine Royalty Corporation			5.3125			

TRACT NUMBER	DESCRIPTION	NUMBER OF ACRES	LEASE NO. & EXPIRATION DATE	BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY OWNER AND AMOUNT	WORKING INTEREST OWNER AND AMOUNT
FEE LANDS							
2 (Contd)				Mary Helen Seeton 3.1250 Charles D. Vertrees 1.5625 F. Walter Voss 1.0416 Thomas G. Voss 1.0416			
FEE LANDS							
3	Township 25 South, Range 37 East Section 3: SE/4 SW/4	40.00	HBP	Earnest W. Anguish, Jr. Mobil Oil Corp. Ancillary Exec. of Est. E. W. Anguish, Decd. 9.3750 G. L. Buckles 3.1250 D. H. Byrd 2.0834 Hugh Corrigan, III 6.2500 J. Patrick Corrigan 6.2500 Ronald K. Deford 1.5625 Jack Frost 2.0834 Texas Natl. Bank of Houston U/W of T. J. Galbraith 3.1250 1st Trust Co. of St. Paul for Acct. of Grace D. Gale 1.5625 Nancy Hartman 2.0833 Mary Lee Hart 28.1250	Scope Industries .0585938	Mobil Oil Corp. 100%	

TRACT NUMBER	DESCRIPTION	NUMBER OF ACRES	LEASE NO. & EXPIRATION DATE	BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY OWNER AND AMOUNT	WORKING INTEREST OWNER AND AMOUNT
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FEE LANDS
3 (Contd)

Clarence E. Hinkle
6.2500
Joan R. Jones
0.7813
Llora B. LaForce
0.1874
W. Watson LaForce
0.7500
Sarah A. Link, Indv. &
as Ind. Executrix of
Est. L. C. Link, Decd.
3.1250
Marilyn R. Lutz
0.7812
Midwest Oil Corp.
9.3750
Barbara Jean Robertson
1.0417
Sabine Royalty Corp.
5.3126
Mary Helen Seeton
3.1250
Charles D. Vertrees
1.5625
F. Walter Voss
1.0416
Thomas G. Voss
1.0416

Rocket Oil & Gas Co.
100.0000
(Subject to Harris
County Charity Fdn.
Production Payment)

Scope Industries
.0507810
Harris County Charity
Foundation
.1875000 P.P.

4 Township 25 South, Range 37 East
Section 3: Lot 4, SW/4 NW/4,
W/2 SW/4

160.29

HBP

Mobil Oil Corp.

Mobil Oil Corp.
100%

TRACT NUMBER	DESCRIPTION	NUMBER OF ACRES	LEASE NO. & EXPIRATION DATE	BASIC ROYALTY	LESSEE OF RECORD	OVERRIDE ROYALTY OWNER AND AMOUNT	WORKING INTEREST OWNER AND AMOUNT
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FEE LANDS

5 Township 25 South, Range 37 East
Section 4: Lot 1, SE/4 NE/4

80.29

HBP

Florence Breacher 12.5000
Mrs. Alice Aileen Brett 25.0000
Donald C. Frankel 12.5000
Southland Royalty Co. 50.0000

Margaret B. Clay .0156250

Mobil Oil Corp. 100%

Rufus G. Clay Trusts .0156250
Adrienne Gars Simon .0312500

FEE LANDS

6 Township 25 South, Range 37 East
Section 4: NE/4 SE/4

40.00

HBP

Southland Royalty Co. 50.0000
Donald C. Frankel 12.5000
Florence Breacher 12.5000
Alice Aileen Brett* 12.5000
Rosalind Redfern** 4.1666
J. H. Herd** 4.1666
John J. Redfern, Jr.** 2.0834
Frank J. Redfern** 2.0834

Margaret B. Clay .0156250

Mobil Oil Corp. 100%

Rufus G. Clay Trusts .0156250
Adrienne Gars Simon .0312500

* 25.0000% Interest Above 3400'.
** No Interest Above 3400'.

8/11/69

Total Five Fee Tracts - 601.06 Acres or 78.96% of the Unit Area
Grand Total Six Tracts - 761.25 Acres or 100% of the Unit Area

B-5

EXHIBIT C
TO
UNIT AGREEMENT
HUMPHREY QUEEN UNIT
LEA COUNTY, NEW MEXICO

<u>Tract Number</u>	<u>Description of Tract</u>	<u>Tract Participation Percentage</u>
1.	Lot 1, SE/4 NE/4, and E/2 SE/4 Section 3, T-25-S, R-37-E	24.2849
2.	Lots 2 & 3, SW/4 NE/4, SE/4 NW/4, W/2 SE/4, and NE/4 SW/4 Section 3, T-25-S, R-37-E	38.8012
3.	SE/4 SW/4, Section 3, T-25-S, R-37-E	2.0077
4.	Lot 4, SW/4 NW/4, and W/2 SW/4, Section 3, T-25-S, R-37-E	17.2119
5.	Lot 1 and SE/4 NE/4 Section 4, T-25-S, R-37-E	14.4991
6.	NE/4 SE/4 Section 4, T-25-S, R-37-E.	3.1952
TOTAL		<u>100.0000</u>

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; ~~provided~~ however, ~~provided further~~, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection, ~~and provided further~~, that said injection wells are drilled no closer than 6 feet to the outer boundary of the Humphrey Queen Unit nor closer than 10 feet to any quarter-quarter section or sub ^{see} ~~division~~ inner boundary ^{under} ~~Area~~, Langlie-Mattix Pool,

by the injection of water into the Queen sand formation at orthodox and unorthodox locations through the following-described wells/in Township 25

~~North~~ South, Range 37 ~~West~~ East, NMPM, Lea

County, New Mexico:

<u>Unit Well No.</u>	<u>Previous Well Name and Number</u>	<u>Unit</u>	<u>Section</u>
2	Mobil - Liberty Well No. 1	D	3
4	Mobil - Humphrey "A" Well No. 1	B	3
6	Mobil - Fristoe Well No. 6	A	3
9	Mobil - Humphrey "A" Well No. 4	F	3
15	Mobil - Liberty Well No. 5	L	3
17	Mobil - Humphrey "A" Well No. 5	J	3
19	Mobil - Fristoe Well No. 7	I	3
23	Mobil - Humphrey "A" Well No. 9	O	3
20	to be drilled - 100 FSL and 5 FWL	H	3
7	Mobil - Smith Well No. 2	H	4
13	to be drilled - 2522 FSL + 1220 FEL	H	4

(2) That the subject waterflood project is hereby designated the Mobil Langlie-Mattix Humphrey Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve expansion of the

~~Waterflood Project to include such additional lands and injection wells at orthodox and unorthodox locations~~ ^{within said waterflood project area} as may be necessary

Superseded.

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve ~~expansion of the~~ _____
~~Waterflood Project to include~~ such additional ~~lands and~~ injection
wells at orthodox and unorthodox locations, ^{within said waterflood project area} as may be necessary
to complete an efficient injection pattern; provided said wells
are drilled no closer than 330 feet to the outer boundary of
the Humphrey Queen Unit nor closer than 10 feet to
any quarter-quarter section or subdivision inner boundary, and
provided further, that the application therefor has been filed
in accordance with Rule 701 B of the Commission Rules and
Regulations, and provided further, that a copy of the application
has been sent to all offset operators, if any there be, and no
such operator has objected within 15 days. The showing of well
response as required by Rule 701 E-5 shall not be necessary
before obtaining administrative approval for the conversion of
additional wells to water injection.

(SEE UNDER)

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. 4204

Order No. R- 3824

APPLICATION OF MOBIL OIL CORPORATION
FOR A WATERFLOOD PROJECT / LEA COUNTY,
NEW MEXICO.

AND UNORTHODOX INJECTION WELL LOCATIONS,

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 27, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 27th day of August, 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, Mobil Oil Corporation,
seeks permission to institute a waterflood project in the
Humphrey Queen Unit Area, Langlie-Mattix Pool, by
the injection of water into the Queen sand formation
at orthodox and unorthodox locations
through 11 injection wells/in sections 3 and 4,
Township 25 ~~XXXXXX~~ South, Range 37 ~~XXXXX~~ East, NMPM,
Lea County, New Mexico.

(3) That the applicant further seeks the establishment of
an administrative procedure whereby the Secretary-Director of
the Commission may authorize ~~expansion of said project to include~~
additional ~~lands and~~ injection wells at orthodox and unorthodox
locations ^{within said waterflood project area} as may be necessary to complete an efficient injection
pattern without the necessity of showing well response.

(SEE UNDER)

CASE 4205: Application of TESORO
FOR 4 UNORTHODOX INJECTION WELL
LOCATIONS & AMENDMENT OF R-2807.