

CASE 2837: Application of CONTINENTAL
for approval of the EASTCAP QUEEN
POOL UNIT AGREEMENT, Chaves County.

2837

him, Transcript,
Exhibits, Etc.

SUBSEQUENT JOINDER
12-21-64

Unit Name EASTCAP QUEEN POOL UNIT (WATERFLOOD)
Operator CONTINENTAL OIL COMPANY
County CHAVES

cc

STATE	LEASE	INSTL-	SEC.	TWP.	RGE.	SUBSECTION	RATIFIED	ACRES	ACREAGE	NOT	LESSEE
TRACT NO.	NO.	TUTION					DATE		RATIFIED	RATIFIED	
5	K-4496	C.S.	35	14S	31E	NW/4NW/4	1-1-64	40.00			CONTINENTAL OIL CO

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Unit Name FASTCAP QUEEN POOL UNIT (WATERFLOOD)
 Operator CONTINENTAL OIL COMPANY
 County CHAVES

DATE	OCC CASE NO. 2837	EFFECTIVE DATE	TOTAL ACREAGE	STATE	FEDERAL	INDIAN-FEE	SEGREGATION CLAUSE	TERM
APPROVED	OCC ORDER NO. R-2515							
Commissioner:	OCC: July 9, 1963	11-1-63	1,480.00	1,320.00	-0-	-0-	160.00	Yes
10-1-63								Indef.

UNIT AREA

TOWNSHIP 14 SOUTH, RANGE 31 EAST, NEW MEXICO PRINCIPAL MERIDIAN

Section 22: E/2SE/4
 Section 23: W/2SW/4
 Section 27: All
 Section 34: NE/4NW/4, S/2NW/4, SW/4, E/2
 Section 35: W/2, NW/4

TERMINATED
 11-30-74
 CH

Unit Name EASTCAP QUEEN POOL UNIT (WATERFLOOD)
 Operator CONTINENTAL OIL COMPANY
 County CHAVES

STATE	LEASE	INSTI-	SEC.	TWP.	RGE.	SUBSECTION	RATIFIED	ACRES	ACREAGE	LESSOR
TRACT NO.	NO.	TUTION					DATE		NOT	
									RATIFIED	
3	B-8459	C.S.	27	14S	31E	N/2NE/4	9-10-62	80.00		Gulf Oil Corporati
4	B-8459	C.S.	27	14S	31E	W/2, N/2SE/4, S/2NE/4	4-30-63	480.00		Gulf Oil Corporati
4-A	B-8459	C.S.	27	14S	31E	S/2SE/4	4-30-63	80.00		Gulf Oil Corporati
5	E-5444	C.S.	35	14S	31E	NW/4NW/4			40.00	R. W. Fair
6	E-5364	C.S.	34	14S	31E	E/2	9-23-63	320.00		Continental Oil Co
7	E-1467	C.S.	34	14S	31E	NE/4NW/4	9-24-62	40.00		Texas Pacific Coal & Oil Company
8	E-7662	C.S.	34	14S	31E	S/2NW/4, SW/4	4-30-63	240.00		Gulf Oil Corporati
9	E-3277	C.S.	35	14S	31E	SW/4NW/4	9-17-63	40.00		Phillips Petroleum Company

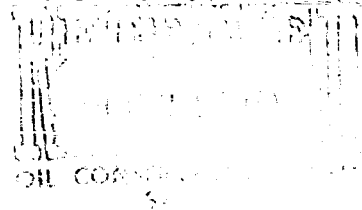
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 C.H.

State of New Mexico



Commissioner of Public Lands
December 20, 1974

TELEPHONE
505-827-2748



ALEX J. ARMIJO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO

REGISTERED MAIL

Agua, Inc.
P. O. Box 1978
Bosque, New Mexico 88340

Re: Eastcap Queen Pool Unit
TERMINATION
Chaves County, New Mexico

ATTENTION: Mr. W. C. Abbott-Manager

Gentlemen:

The Eastcap Queen Pool Unit was approved on October 1, 1961, effective as of November 1, 1973. Our records reflect that unit operations are no longer profitable, feasible or in the interest of conservation.

Your Monthly Operator's Report filed with the New Mexico Oil Conservation Commission reflects that during the Month of August, 1974, the actual production was 534 barrels. It also shows that this report would be the final report since the property has been sold.

Under Article 17.1 it states that "the term of this agreement shall be for and during the time that Unitized Substances are produced in paying quantities and as long thereafter as drilling, reworking or other operations are prosecuted without cessation of more than Ninety (90) consecutive days".

In view of the above the Commissioner of Public Lands has this date terminated your Eastcap Queen Pool Unit effective as of November 20, 1974.

Please notify all interested parties of this action.

Very truly yours,

RAY D. GRAHAM, Director
Oil and Gas Department

AJA/ESG/s

cc: OGC-Santa Fe, New Mexico

70 MAR 12 PM 1 00

2837

CONTINENTAL OIL COMPANY

P. O. Box 460

HOBBS, NEW MEXICO 88240

PRODUCTION DEPARTMENT

HOBBS DIVISION

L. P. THOMPSON

Division Manager

G. C. JAMIESON

Assistant Division Manager

March 9, 1970

1001 NORTH TURNER
TELEPHONE 393-4141

The Commissioner of Public Lands
State of New Mexico
P. O. Box 1148
Santa Fe, New Mexico

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

Gentlemen:

Subject: Transfer of Ownership - Eastcap Queen Pool Unit
Chaves County, New Mexico

Continental Oil Company and the other Working Interest Owners in the Eastcap Queen Pool Unit are completing arrangements to transfer their interests in the unit to Mr. C. W. Trainer. This transfer of interest is to become effective April 1, 1970. Continental Oil Company hereby gives notice of its intention to resign as unit operator of the Eastcap Queen Pool Unit, effective concurrently with the transfer of ownership. Mr. C. W. Trainer will assume the duties of unit operator at that time.

Please advise if there is other notice or other instruments which need to be filed with your offices in order to accomplish a smooth transfer of unit operations.

Yours very truly,

SIGNED: L. P. THOMPSON

LPT-VM

MAIN OFFICE OCC
1963 SEP 27 PM 3:18

2857

September 27, 1963

Continental Oil Company
P. O. Box 1377
Roswell, New Mexico

Re: Eastcap Queen Pool Unit
Chaves County, New Mexico

Attention: Mr. A. B. Slaybaugh

Gentlemen:

The Commissioner of Public Lands is approving as of October 1, 1963, the Eastcap Queen Pool Unit, Chaves County, New Mexico.

We are handing to your Mr. Vic Lyon seven originally signed Certificates of Approval.

Please furnish us copies of C-110 on all units wells. Also copy of C-115 Operators Monthly Report.

Enclosed is Official Receipt No. G-15155 in the amount of Twenty Five (\$25.00) Dollars which covers the filing fee.

Very truly yours,

E. S. JOHNNY WALKER
COMMISSIONER OF PUBLIC LANDS

BY:
(Mrs.) Marian M. Shea, Supervisor
Unit Division

ESW/mmr/v

encl:

cc: Oil Conservation Commission
Santa Fe, New Mexico

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 26, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Continental Oil Company
for a unit agreement, Chaves County,
New Mexico. Applicant, in the above-
styled cause, seeks approval of the
Eastcap Queen Pool Unit Area comprising
1480 acres of State and Fee lands,
located in Township 14 South, Range 31
East, Chaves County, New Mexico.

Case 2837

Application of Continental Oil Company
for a waterflood project, Chaves County,
New Mexico. Applicant, in the above-
styled cause, seeks authority to institute
a waterflood project by the injection of
water into the Queen formation, Caprock
Queen Pool, through 17 wells located in
Sections 22, 23, 27, 34, and 35, Town-
ship 14 South, Range 31 East, Chaves
County, New Mexico.

Case 2838

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order, please.
We will call Case 2837. Application of Continental Oil Company
for a unit agreement, Chaves County, New Mexico. We will also
call Case 2838. Application of Continental Oil Company for a
waterflood project, Chaves County, New Mexico.

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MR. KELLAHIN: If the Examiner please, Jason Kellahin, Kellahin & Fox, Santa Fe, representing the applicant. I would like at this time to move that the two cases are consolidated for the purpose of receiving testimony only.

MR. NUTTER: Is there objection to consolidation of Cases 2837 and 2838 for the purposes of taking testimony? The cases will be consolidated.

MR. KELLAHIN: We have two witnesses we would like to have sworn, please.

(Witnesses sworn.)

(Whereupon, Applicant's Exhibits 1, 2 & 3-c were marked for identification.)

VICTOR T. LYON

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Victor T. Lyon.

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

A Continental Oil Company, as Senior Engineer located in Roswell, New Mexico.



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

A Yes, sir.

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

MR. NUTTER: They are.

Q Mr. Lyon, are you familiar with the application of Continental Oil Company in Case No. 2837 pertaining to the Eastcap Queen Pool unit agreement?

A Yes, sir.

Q Are you familiar with the unit agreement?

A Yes, sir.

Q Referring to what has been marked as Exhibit No. 1, would you identify that exhibit, please?

A Exhibit No. 1 is the unit agreement for the Eastcap Queen Pool Unit. The copy which I am submitting today differs slightly from the one which was forwarded with the application in that Exhibits A and B have been revised.

Q What was the character of the revision of those two exhibits?

A Several of the tracts have changed their designation due to the fact that Gulf Oil Corporation exercised a preferential



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right that they had to take over some of the properties, and these changes in ownership have been shown.

Q They amount only, then, to changes to reflect the change in ownership?

A Yes.

Q It didn't materially change the unit agreement itself, did it?

A No, it did not.

Q Would you refer to what has been marked as Exhibit 2 A and identify that exhibit, please?

A Exhibit 2-A is a copy of the plat which was submitted with the application with some slight additions.

Q Was the exhibit attached to the application marked Exhibit 2 on the application, is that correct?

A Yes, it was.

Q And 2-A, then, is a revision of Exhibit 2 submitted with the application?

A Yes, sir. Exhibit 2-A shows the unit area and the lands within two miles of the unit. The unit is outlined in red. There are two other units adjacent to the proposed unit, the Dricky Queen Sand Unit is shown outlined in yellow and the South Caprock Queen Unit is shown outlined in green.

Q Then the proposed Eastcap Queen Unit fits in with the



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other units in the immediate vicinity, is that correct?

A Yes, sir. The Eastcap Queen Pool Unit occupies a portion of the area which was, by the wording of Order R-1728, I believe it is, which established the South Caprock Queen Unit. This unit which we propose was included in the lands described as a part of that unit, but the acreage which we are proposing to unitize here in this application are tracts which are non-qualified tracts for that unit and Union Oil Company of California, the operator of the South Caprock Queen Unit is preparing to reduce their unit area to conform with what we show on here.

Q Now, the Eastcap Queen Unit -- first, would you describe the unit area in general terms, Mr. Lyon?

A Yes. The unit area is proposed to consist of the East Half of the Southeast Quarter of Section 22, the West Half of the Southwest Quarter of Section 23, all of Section 27, the East Half of Section 34, the Southwest Quarter of Section, let me describe Section 34 again, the East Half, the Southwest Quarter, the South Half of the Northwest Quarter and the Northeast Quarter of the Northwest Quarter of Section 34, and the West Half of the Northwest Quarter of Section 35, all in Township 14 South, Range 31 East.

Q Do you know what the total acreage is?



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A Yes, sir, the acreage is 1480 acres.

Q Now, none of this acreage has been actually committed to the unit operated by Union, is that correct?

A No, it has not.

Q What vertical interval is being unitized by this unit agreement?

A We propose to unitize the Artesia Red Sand which is found in the Continental Oil Company State R-34 Well No. 4 between the depth of 3,053 feet and 3,105 feet. This log we have and would like to introduce as Exhibit No. 3-c. By inadvertence we failed to include that log as one of the logs submitted with the application; since it is the type log described in the unit agreement we would like to offer it into evidence at this hearing.

MR. NUTTER: That's on the R-34 No. 4?

A Yes, sir.

Q The log submitted with the application was a different type log of the same well, was it not?

A No. It was a log we had submitted logs of two other wells which are injection wells.

MR. NUTTER: What is the top of the Artesia Red Sand?

A The top is 3,053 feet and the bottom is 3,105 feet.

MR. NUTTER: Thank you.

Q That's in the State R-34 Well No. 4 that you are



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referring to?

A Yes, sir.

Q What is the purpose of this unitization, Mr. Lyon?

A The purpose is to place the working interest and the operation of the area in such a position there we can conduct waterflood operations.

Q Who is the unit operator?

A Continental Oil Company has been designated the operator.

Q Have all the working interest owners in the Eastcap Queen Unit been given an opportunity to join the unit?

A Yes, they have.

Q Have they joined the unit?

A All operators have joined the unit with the exception of R. W. Fair, who owns the tract which is the Northwest Quarter, Northwest Quarter of Section 35, and Bill Sheldon, who operates the West Half of the Southwest Quarter of Section 23.

Q What percentage of the working interest owners have agreed to join the unit?

A Approximately 91%.

Q Does the unit agreement provide for further expansion of the unit area?

A Yes, it does. Article 11, pages 5 and 16 of the



agreement provide for enlargement of the unit area.

Q Does it also provide for subsequent joinder of working interest and royalty interest in the unit?

A Yes, sir. Article 8.2 on page 13 provides for subsequent joinder of working interest and royalty owners to the unit.

Q On what basis do the various tracts in the unit participate?

A Article 8 on pages 11 and 12 set out the means by which the tract can qualify. The unit participation is based on a split formula, a primary phase and a secondary phase. The primary phase will extend from the formation of the unit until such time as 350,000 barrels of oil have been produced from the unit area subsequent to August 1st, 1960. The secondary phase will start from that point and continue until the dissolution of the unit.

Q Does the unit create an initial participating area which is different from the unit area?

A No, sir. All tracts which elect to join the unit will be in the initial participating area.

Q When does the unit agreement become effective?

A It becomes effective as of 7:00 A.M. on the first day of the month following the ratification of the agreement by

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working interest owners of 80% of the unit area and the approval of the agreement by the State Land Commissioner and the New Mexico Oil Conservation Commission.

Q What lands in the unit are Federal, State and Fee?

A The State lands comprise approximately 1320 acres or 89.19% of the unit, and two tracts having 160 acres or 10.18% of the unit area are Fee lands. There are no Federal lands in the unit.

Q I believe you already stated that 91% of the working interest owners have tentatively approved the agreement, is that correct?

A Yes, sir.

Q Have you received approval as to form and content from the Commissioner of Public Lands?

A Yes, sir, we have.

Q Is the form of this unit agreement essentially the same as agreements previously approved by the Commission?

A It's my understanding that this form has been approved by the Commission previously. This is essentially the API standard form and it has been submitted to the Land Commissioner and certain changes have been made at his request.

Q I don't believe I asked you as to the approval of the royalty owners. What is the status of the agreement as to

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royalty ownership?

A Well, of course, we have approval by the State Land Commissioner as to form which comprises the large majority of the acreage. I do not believe that we have approval from any of the royalty interest other than the State.

Q In your opinion does this agreement contain the elements normally found in agreements affecting State lands?

A Yes, sir.

Q Will it prevent waste in your opinion?

A Yes, sir. In my opinion it will prevent waste and improve efficiency, primarily due to the greater efficiency which is always possible by a compact area being operated by a single operator. Further, it will be more efficient in that we can collect the production into a central tank battery with the elimination of unnecessary equipment, the reduction of vapor losses and other savings which are possible by such an arrangement.

In addition to this it will permit us to waterflood this area, which will result in the recovery of a considerable amount of oil, which otherwise would not be recovered.

Q Mr. Lyon, Exhibit No. 1 is the form of unit agreement as it has been amended and were Exhibits 2-a and 3-c prepared by you or under your supervision?



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A Yes, sir.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibits 1, 2-a and 3-c.

MR. NUTTER: Exhibits 1, 2-a and 3-c are admitted in evidence.

(Whereupon, Applicant's Exhibits 1, 2-a & 3-c were offered and admitted in evidence.)

MR. KELLAHIN: That's all the questions I have of this witness.

MR. NUTTER: Are there any questions of Mr. Lyon?

MR. DURRETT: Yes, sir.

MR. NUTTER: Mr. Durrett.

CROSS EXAMINATION

BY MR. DURRETT:

Q I want to get straight on the status as to this acreage formerly being approved as a part of a unit, am I correct it was part of the South Caprock Queen Unit as approved by the Commission?

A As described by the Commission's order.

Q As described by the order?

A Yes, sir.

Q Would you give me that order number?

A I believe it was R-1728.

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MR. KELLAHIN: That's correct.

Q 1728?

MR. KELLAHIN: Yes, sir.

Q You stated that Union Oil is the operator?

A Yes, sir.

Q And that they will be willing not to include this acreage within their unit, is that correct?

A Yes, sir, that is correct.

Q Have you requested from them a letter or anything, what I'm interested in, I want to get something in the Commission's official files to show that they will not go ahead and try to unitize this area and that you can go ahead and proceed with it. Do you have a letter or anything to that effect?

A I have a letter which they have furnished us which is a proposed letter to the United States Geological Survey, which since they're Federal lands in their unit, the contraction of the unit must be approved by the United States Geological Survey. This has not been mailed as yet, but they have advised us that they will furnish you a copy at our request.

Q Would you request that they furnish us a copy and also I imagine the State Land Office would like to have a copy of the letter showing that they're going to contract their unit?

A Yes, sir.



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Q Would you have any objection from the standpoint of your company, for us to withhold approval of this unit until we do have such a letter in our file?

A That will be satisfactory.

BY MR. NUTTER:

Q Mr. Lyon, the participation in this unit is going to be, in other words, the entire unit area is a participating area?

A Yes, sir.

Q That is the acreage which is committed to the unit. You said that you had two tracts in which you haven't had agreement by the operators to join the unit?

A Yes.

Q That would be Tract No. 1 in the West Half of the Southwest Quarter of Section 23, that's the Shelton tract?

A Yes, sir.

Q And Tract No. 5, the Fair tract in the Northwest, Northwest of 35?

A Yes, sir.

Q Have those operators indicated that they wouldn't join the unit or they just simply haven't done it yet?

A They simply haven't done it yet.

Q Do you anticipate that they will come in, or do you



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know about that?

A We think that they will, but of course, this unit provides if they do not, they can come in within six months after the effective date of the unit. On the same basis that they can at the present time, or until the effective date.

Q If they come in after the six months-period, then the perimeters have to be renegotiated for them?

A That's true. They would have to be negotiated into the unit. As far as those tracts which are unitized within the effective date and six months thereafter, their participating interest will be proportional to that shown on Exhibit A.

Q Now, Exhibit A divides up the participation among the tracts both primary phase and secondary phase?

A Yes.

Q And it includes Tracts No. 1 and 5?

A Yes.

Q Would this participation have to be revised upward in the event that these two operators don't dedicate these two tracts?

A Yes, sir, they would be revised up in proportion to their present participation so that the total interest of the unit would total 100%.

Q I see. The only thing that is being unitized is the



Artesia Red Sand between the marks on the log of the R-34 No. 4 at 3053 and 3105?

A Right.

Q Referring to Exhibit No. 2-a, Mr. Lyon, this area to the Northwest of your proposed unit which lies between the Dricky Queen Unit and the South Caprock Queen Unit, is that contained in a unit at the present time?

A Not at the present time. It is my understanding that a unit is being formed in there by Phillips. I couldn't say at what time they would be up here, but it is my understanding that it is actively forming at this time.

Q If that's the Phillips Unit, I think that has already been formed, if I can testify.

MR. KELLAHIN: I think it has.

MR. NUTTER: Any further questions of Mr. Lyon? He may be excused.

(Witness excused.)

(Whereupon Applicant's Exhibits 1, - 11, with 8 A through Q were marked for identification.)

DAVID L. BOWLER

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

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DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A David L. Bowler.

Q By whom are you employed and in what position?

A By Continental Oil Company as a production engineer in Hobbs, New Mexico.

Q Have you ever testified before the Oil Conservation Commission of New Mexico?

A No, sir.

Q For the benefit of the Examiner would you outline your education and experience as a professional engineer?

A I received a degree of Petroleum Engineer from Colorado School of Mines in May, 1958. Since that time I've worked for Continental Oil Company in production engineering, the last three and a half years of which have been in Southeast New Mexico.

Q Have you been working in the area that is involved in the application in Cases 2837 and 2838?

A Yes, sir, for the last three and a half years I have.

Q Have you actively participated in the study of this area in connection with this case?

A Yes, sir.

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

MR. NUTTER: Yes, sir.

Q Are you familiar with the Eastcap Queen Pool Unit area, Mr. Bowler?

A Yes, sir. I've had experience in the area for the last three and a half years.

Q Now, referring back to what was marked as Exhibit No. 2-A as presented by Mr. Lyon, would you explain that exhibit a little further?

A Exhibit 2-A is a lease plat of the Eastcap Queen Pool Unit area and surrounding areas. The outlines of the Eastcap Queen Pool Unit and the two adjacent units, the Dricky Queen Sand Unit and the South Caprock Queen Unit are shown also on this plat.

Q Could you give us a brief history of the Eastcap Queen Pool Unit area?

A Referring to the area map marked Exhibit 2-A, the J. J. O'Neil No. 1 Midland A located 1980 feet from the North line and 1980 feet from the West line of Section 8, Township 15 South, Range 31 East was completed November 19, 1954 as a discovery well in what was then called the South Dricky Queen Pool. This well was drilled to a total depth of 3131 feet and completed for an

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initial potential of 461 barrels of oil per day flowing. This was after being fractured with about 8,000 pounds of sand and 8,000 gallons of refined oil.

In 1955 the Oil Conservation Commission combined the South Dricky, the Dricky and the Caprock and North Caprock Queen Pools and consolidated this as the Caprock Queen Pool. The Eastcap Queen Pool Unit is a portion of what was originally the South Dricky Queen Pool.

In the Eastcap Queen Pool Unit area itself the Gulf BKC No. 1, located 660 feet from the South and West lines of Section 34, Township 14 South, Range 31 East was the first well drilled within this area. It was completed November 7, 1955 for an initial potential of 100 barrels of oil per day. This well was also fractured with 8,000 pounds of sand and 8,000 pounds of crude oil. Since that time 32 producing wells have been completed within the unit area, also three non-commercial wells were drilled within this area.

Development in the Eastcap Queen Pool Unit area was completed by July, 1958. Of the 32 producing wells within the unit area, 13 wells were cased through the pay and perforated, the remaining 19 wells were completed open hole by setting casing just above the Artesia Red Sand. Ten of these 32 producing wells were fractured upon completion with 6 to 15,000 gallons of sand



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oil treatment, reported initial potential ranged from 41 to 900 barrels of oil per day. Most of these wells were completed flowing, but were put on pump early in their life due to rapid loss in bottom hole pressure.

Q What is the current daily average production in the unit area?

A During April of 1963 the unit area averaged 148.5 barrels of oil per day with 27.4 barrels of water, and 81.8 MCF of gas per day. This gave an average GOR of 550 cubic feet per barrel. The per well average is 4.7 barrels of oil per day. Also the maximum daily production from any one well within the unit area was 14.8 barrels per day during the same month.

Q At what stage of production would you say this area is at the present time?

A I would say that it is in the advanced stages of primary.

Q Calling your attention to what has been marked as Exhibit 4, would you identify that exhibit and discuss it?

A Exhibit No. 4 represents the primary producing history of the Eastcap Queen Pool Unit area. As can be seen on this decline curve, the decline has been rather rapid, approximating about 33% decline per year. The relatively low cumulative production in this rapid decline indicates that production within



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this unit area is primarily by means of solution gas drive.

As is shown on the latest production shown on this cruce, which was for February, I believe, of 1963, the monthly production within the unit at that time was about 4600 barrels per month.

Q Are the wells approaching their economic limit, in your opinion?

A Yes, sir, in my opinion they are.

Q What's the cumulative production within the unit area, did you discuss that?

A As of May 1st, 1963, the unit area had produced 1,363,353 barrels of oil, an estimated 914,000 MCF of gas.

Q A thousand MCF?

A Yes, sir, and 69,669 barrels of water.

Q What is the API gravity of the oil produced in this Eastcap Queen Unit area?

A Gravities as reported to the New Mexico Oil Conservation Commission range from 36 degrees to 38 degrees API.

Q Referring to what has been marked as Exhibit No. 5, would you identify that exhibit and discuss it?

A Exhibit No. 5 is a structure map contoured on top of the Artesia Red Sand section; as shown on this structure map, the structure is dipping to the east at approximately 40 to 50 feet per mile in the area of the Eastcap Queen Pool Unit.



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Q Have you made a volumetric study of the reservoir underlying the unit area?

A Yes, sir. Exhibit No. 6 represents an isopach map contoured through the Artesia Red Sand and this represents a pay section in that area. By planimetrying this isopach map, a total acre feet of pay sand within the unit area of 5,491 acre feet of pay was obtained.

Q What's the average reservoir thickness in the unit area?

A Approximately 3.7 feet.

Q And on what do you base this estimate?

A This is the total acre feet as planimetryed divided by the number of acres within the unit area.

Q What other information did you have, Mr. Bowler, in arriving at that?

A The acre feet of pay, 5,491 acre feet, is stated; also average porosity core analysis of 21% was determined; the water saturation of 26.2% average from the log calculation, and initial formation volume factor of 1.125 was obtained from a reservoir fluid sample.

Q What percent of the original oil in place has been produced in your opinion?

A As of May 1st, 1963, approximately 23.3% of the



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original oil in place was produced.

Q What's the average permeability of the Queen pay?

A The Queen sand reservoir averages approximately 230 millidarcies permeability. This average is obtained from an analysis of 89 cores from 89 wells in and immediately surrounding the Eastcap Queen Pool Unit.

Q What's the present reservoir oil saturation?

A The present saturation is calculated to be approximately 53.8% of the pore volume.

Q Is waterflooding of the Artesian Queen sand in the Eastcap Queen feasible in your opinion?

A Yes, in my opinion it is. Such factors as the oil saturation, at the present time the permeability, the porosity, and primary performance and water saturation and depth are generally favorable factors toward waterflooding.

Q Are there other successful waterflood operations in the immediate vicinity of this unit?

A As I understand, there are several floods being conducted in the Queen sand that are successful.

Q Will waterflooding tend to prevent waste and conserve natural resources, in your opinion?

A In my opinion it will, because by waterflooding reserves will be recovered that could not be produced economically



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or by any other means in the primary production.

Q You mean they just wouldn't be produced at all unless there is a secondary project, is that correct?

A Yes, sir.

Q How much oil will be recovered by waterflooding the Eastcap Queen Unit area?

A It's been estimated that approximately 1.1 million barrels of oil will be recovered by secondary recovery by waterflood and this approximates about 80% of that recovered by primary life.

Q What is the predicted life of this waterflood?

A Approximately six and a half years.

Q What type of injection pattern do you propose to utilize?

A A modified 80-acre five spot. This is shown on Exhibit 7, the green triangles representing the injection wells in the area. As shown on here, there will be 16 producing and one temporarily shut-in well converted to water injection in this pattern.

Q What type of flood is this going to be?

A We intend to put in a full-scale flood.

Q There will be no pilot flood program in this area, is that correct?



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A No, sir.

Q Will there be adequate protection of all underground water sources from contamination by water injection?

A In my opinion there will be.

Q Now, referring to the exhibits marked as Exhibit No. 8-A through Q, would you identify those exhibits, please?

A Exhibits 8-A through 8-Q are schematic diagrams of the casing programs of all proposed injection wells in the Eastcap Queen Pool Unit. The size of the surface casing, the depth set and the amount of sacks of cement used are shown, the oil string, the depths set, the amount of cement used to cement it with, the total depth is shown, and also the cement top behind the production casing is shown.

These cement tops were obtained by temperature survey or calculated as indicated on each one of these exhibits. The method crossed out, or the method not crossed out to determine the cement top is the one by which it was determined on those particular wells.

Q In your opinion does the casing and cementing program of each of these wells protect adequately producing formations and fresh water zones encountered in this area?

A In my opinion, yes, sir.

Q What facilities will be provided for quantity and



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pressure measurements of the injected water?

A Meters to measure the volume of water going to each injection well will be installed, and also a system to measure the injection pressure, surface injection pressure to each injection well will be installed.

Q What injection pressures do you anticipate will be necessary in this area?

A We anticipate a maximum pressure of 1500 pounds.

Q What's the anticipated water injection rate for this flood?

A A maximum water injection rate of approximately a hundred and two thousand barrels per month, or 250 barrels of water per day per injection well is anticipated.

MR. NUTTER: What was that figure again, please?

A It's a hundred two thousand barrels per month for the unit, and 250 barrels of water per day per injection well average.

Q What is the source of this water?

A The unit will secure water from an outside source. The source, Continental has made an agreement to secure water for this unit at this time.

Q They have made an agreement. Is it your understanding that some negotiations are still being carried on in connection



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with that?

A Yes, sir.

Q What's to be done with their produced water from the unit?

A This water will be reinjected into the formation.

Q What's the total estimated water injection requirement for the flood?

A Five million barrels of water will be required to complete this flood, of which two million barrels will be produced, water reinjected back into the formation.

Q So it will require something like three million barrels of water from outside sources?

A Yes.

Q How many tank batteries are presently in use in the Eastcap Queen Unit area?

A Presently there are 11 tank batteries.

Q Will all of these tank batteries be necessary for the operation?

A No. One central tank battery for the entire unit would be much more efficient, this would mean a total of 16 producing wells, or 33 proration units would be producing into this one central battery. Automatic custody transfer equipment would be installed at this central battery to serve these wells.



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Q Referring to what has been marked as Continental's Exhibit No. 9, would you identify that exhibit, please?

A Exhibit No. 9 is a location plat showing the proposed location of this central tank battery, and also indicated on it are the flow lines to, schematically indicated reflow lines to the producing wells within the unit.

Q Referring to what has been marked as Exhibit No. 10, would you identify that exhibit, please?

A Exhibit No. 10 is a schematic diagram of the proposed central battery installation. On this are indicated the individual well test system, a normal production system, and ACT location.

Q Is that type of tank battery an installation that has heretofore been approved by the Commission?

A Yes, sir.

Q Referring to what has been marked as Exhibit No. 11, would you identify that exhibit, please?

A Exhibit No. 11 is a schematic diagram of the proposed ACT system for this central battery location.

Q Is that ACT installation one that is of a type heretofore approved by the Oil Conservation Commission?

A Yes, sir.

Q In your opinion will any inequities arise from the



installation of a central tank battery within this unit?

A No, since each lease or tract within the unit shares in the total unit production on the basis of the set participating percentages of the unit agreement, none would arise.

Q Will there be adequate test facilities to test the individual wells in the unit from time to time?

A Yes. Facilities to periodically test in each individual well production will be installed.

Q Will this unit be operated under the provisions of Rule 701 as a waterflood?

A Yes, sir.

Q What would be the maximum daily allowable for the unit according to your calculations?

A Based on the 33 proration units each having a producing well or an injection well in a unit area, the maximum allowable would be 1386 barrels of oil per day.

Q Were the Exhibits 4 through 11 prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: At this time we would like to offer in evidence Exhibits 4 through 11.

MR. NUTTER: Continental's Exhibits 4 through 11 are admitted in evidence.



(Whereupon, Applicant's Exhibits 4 through 11 were offered and admitted in evidence.)

Q Will the approval of this application for a waterflood project be in the interest of conservation and the prevention of waste?

A Yes, since oil that will not be recovered by any other means during primary life will be recovered, this will prevent oil from being left in the ground.

MR. KELLAHIN: That's all the questions I have on direct examination.

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

MR. DURRETT: Yes, sir, I have a question or two.

CROSS EXAMINATION

BY MR. DURRETT:

Q I'm not sure I have your name correct, how do you spell your last name?

A B-o-w-l-e-r.

Q Mr. Bowler, did you say now in your opinion that the wells in this area are stripper wells?

A I believe I stated that they are approaching the economic limit here, they are in the advance stage of primary production.

Q Do you have any top allowable wells in there?

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A No, sir.

Q What are your better wells making?

A The maximum production during April, 1963, from any one well was 14 plus barrels per day. I believe I have that.

MR. NUTTER: 14.8 I believe you said.

A I believe that's right, 14.8 barrels per day.

Q That's your best wells that you have in the area?

A That's the best well in the area.

Q What are your poorer wells making, the worst ones, some of the bad ones?

A Some of them have declined to nothing.

Q Just not getting anything out of them?

A That's right.

MR. DURRETT: Thank you, I think that's all.

BY MR. NUTTER:

Q This average of 14.8 barrels a day, was that the April average?

A Yes.

Q You stated that you expect a recovery of 1.1 million barrels, or 80% of primary, is this typical of the other floods in the Caprock Queen Pool?

A I don't know. I don't know what their anticipated recoveries are in these other floods.



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Q This is an independent calculation made by Continental without particularly studying the other floods in the pool then?

A Yes, sir.

Q Through May 1st, 1963, the wells had made 1,163,000 barrels?

A I believe that was right. 1,363,053 barrels.

Q You computed that to be 1.23% of the original oil in place?

A Yes, sir.

Q I believe you said you would be injecting at the rate of 250 barrels per well per day?

A This is the maximum anticipated, or average anticipated rate, yes.

Q Is that during the period of time you are getting fill-up or is this after you have got fill-up and the stabilized rate of injection?

A This may occur during both times.

Q How long do you anticipate that it will take you to get fill-up here?

A I don't have that figure right at my command right now. I'm not really sure.

Q And you said that the source of water would be an outside source. What do you mean, you are going to purchase



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water from one of these water companies that supply water or not?

A Possibly. We have had negotiations on a water source and have had an agreement in the past, actually our water will be determined by its availability when we start using it or needing it.

Q At the present time Continental, however, has no water rights and plans to drill no water wells in this particular area?

A We ourselves do not have any water rights or water permits in the area right now.

Q This injection pattern that's reflected on your Exhibit 7, is that a pattern that is a continuation of the existing pattern which is being used in the Union flood to the Southwest and by the Dricky Queen flood to the Northwest?

A To my knowledge, I believe that this pattern is compatible with the pattern being used in the South Caprock Queen Pool Unit, and also with the Dricky Queen Sand Unit.

Q Now, this O'Neill Well No. 4 in the Northeast of the Southeast of Section 22 --

A Yes.

Q -- it would normally be a continuation of the pattern that you've shown, but you don't anticipate using that well as an injection well?

A No, we do not.



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Q Is that well actually drilled and abandoned or is it just an abandoned location, or what?

A It was a dry hole. It was drilled and abandoned.

Q It never did produce then?

A That's right.

Q I note that on the cement tops for the production casing they vary from several hundred feet below the surface of the ground down to fairly close to the shoe with the exception of the R-34 No. 3 well where the cement top is given as zero. Does that mean that the cement circulated on that production string?

A Yes, sir.

Q On the surface pipe most of the wells seem to have their surface casing set in the vicinity of 300 feet plus or minus a few feet. However, Gulf D No. 9-8M has its surface pipe at 203 feet, Cottage Bakers Gulf State No. 2 has its surface pipe set at 200 feet, and the Shelton Hardin Simmons No. 1 has its surface pipe set at 176 feet. Is that shallow surface pipe on those three wells adequate to protect any fresh water sands in this area?

A I believe it is. The exact depth of the fresh water in that area I'm not positive of; however, that is approximately through the depth that the water is normally encountered through



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there.

Q Well, was the water more shallow in those wells than it was in the other wells, and for that reason they didn't need 300 feet of pipe in those particular three?

A I do not know.

Q None of those three were Continental wells, I presume?

A No, sir.

MR. NUTTER: Any further questions of the witness?

Mr. Irby.

MR. IRBY: Frank Irby, State Engineer's Office.

BY MR. IRBY:

Q To go back to Mr. Nutter's line of questioning, Mr. Bowler, what is the source of this water that you are negotiating for?

A We, some two years ago, negotiated with Union Oil Company on their water rights over there. At the present time these are still in process.

MR. KELLAHIN: May I interrupt just a minute?

MR. IRBY: Yes.

MR. KELLAHIN: Would you go ahead and tell the Commission what has happened in connection with that water right, please?

A Some two years ago we went together with Union and,



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well, as I understand it, to survey and determine a water source for the South Caprock Unit, at which time we were anticipating possibly joining it, and later on we did not join or commit our acreage to it, and so at that time I believe the Union said that they had water enough for the whole area, which initially had included ourselves, and we made a contract with them to supply us with water from a well just east of the unit area. As of this month Union has told us, or delivered to us in writing that they're cancelling the contract on that water, which if this contract is cancelled, we would have to find another source, but that is the status of that particular source right now.

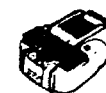
Q (By Mr. Irby) Does the water appropriated by Union Oil Company cover the area? I mean do they have the right in their permit to cover the area covered by your Eastcap Queen Pool Unit?

A I would imagine so, since our area was initially included within their unit boundaries as defined by the New Mexico Oil Conservation Commission order.

Q This is pure speculation?

A Yes, sir. At present our unit area is officially within this boundary of the South Caprock Unit.

Q To continue with Mr. Nutter's line of questioning, I



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want to talk some more about these various wells which he has pointed out where the surface casing is set at shallow depths. As I understand your testimony, you don't know whether or not this casing is set entirely through the Ogallala formation into the red beds?

A No, sir, we did not drill those wells. They belong to other people or were drilled by other people, and our only assumption was that the casing programs had been approved and any further than that we do not know.

Q Then, you can't state with certainty that the surface waters in those specific wells which occur in the vicinity of these specific wells would be protected?

A Well, the production casing is set through them and separates any well bore fluids from them, yes.

Q What protection is afforded the Santa Rosa formation, which in many localities contains useable water?

A Again this production casing is set through all these upper zones of possible water zones and separates well bore fluids.

Q It's only a single casing wall?

A Yes, sir.

Q Is that right?

A As in the case of the Santa Rosa it is.



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MR. IRBY: I would recommend to the Examiner that these points concerning the construction of these wells be taken into consideration insofar as they protect the useable waters in granting this application. I don't believe it's been stated into the record, but it's my understanding from them that it is planned to inject through the casing rather than through tubing and packer.

Q (By Mr. Irby) Is this correct, Mr. Bowler?

A Yes, sir.

MR. IRBY: That's all I have.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Do you know of any water production from the Santa Rosa in this area?

A Not personally.

RECROSS EXAMINATION

Q (By Mr. Nutter) Do you know the depth of the Santa Rosa formation?

A Only approximately.

Q What is the approximate top of it?

A Around 1200 feet.

Q What is the highest point that the cement came to on the production pipe on any of these injections wells, B has 1350 feet from the top and another one is circulated?



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A Yes, sir, most of them I think are below 2,000 feet.

Q A few of them came up into the Santa Rosa and most of them, however it's below the Santa Rosa, is this a correct assumption?

A Yes, sir.

MR. NUTTER: Are there further questions of Mr. Bowler?

MR. DURRETT: Yes, sir, I have a question.

RECROSS EXAMINATION

BY MR. DURRETT:

Q Would your company be willing to inject through tubing installed in the packer in these specific wells that have been discussed here by the State Engineer's Office?

A If it were required we would do so.

Q One other question. If you can't negotiate your contract or continue it in force with Union outside of suing Union to obtain water in some way, what would your other source be, do you have any other tentative source of water?

A No, sir, this present situation just arose within the last week. We haven't made any other arrangements yet.

MR. DURRETT: Thank you. That's all.

BY MR. NUTTER:

Q I presume, Mr. Bowler, that you have no idea when the injection of water will commence in this area?



A Not exactly.

Q There are several matters that remain to be worked out?

A It would be as soon as we worked out those matters and get all the approvals and the securing of the water itself.

MR. NUTTER: Any further questions?

BY MR. IRBY:

Q If Union continues to resist or actually refuses to furnish water for this unit, would you immediately inform the State Engineer?

A I would suppose so, yes, sir.

MR. KELLAHIN: I think we would.

Q I need a definite answer on that.

MR. KELLAHIN: We will agree to do so. I think the State Engineer is entitled to know.

MR. IRBY: I would say this off the record.

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

MR. NUTTER: Are there any further questions of Mr. Bowler? If not, he may be excused.

(Witness excused.)

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

MR. KELLAHIN: That's all I have.

MR. NUTTER: Does anyone have anything they wish to offer in Cases 2837 or 2838?

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MR. KASTLER: Bill Kastler with Gulf Oil Corporation, representing Gulf. Gulf has substantial working interest in this unit area and concurs in the application. We believe it's feasible.

MR. NUTTER: Anyone else? We'll take the cases under advisement and recess the hearing until 1:15.

STATE OF NEW MEXICO)
) SS
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 27th day of June, 1963.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:
June 19,

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2837-2838 heard by me on 6/26, 1963.

Asuncion Examiner
New Mexico Oil Conservation Commission

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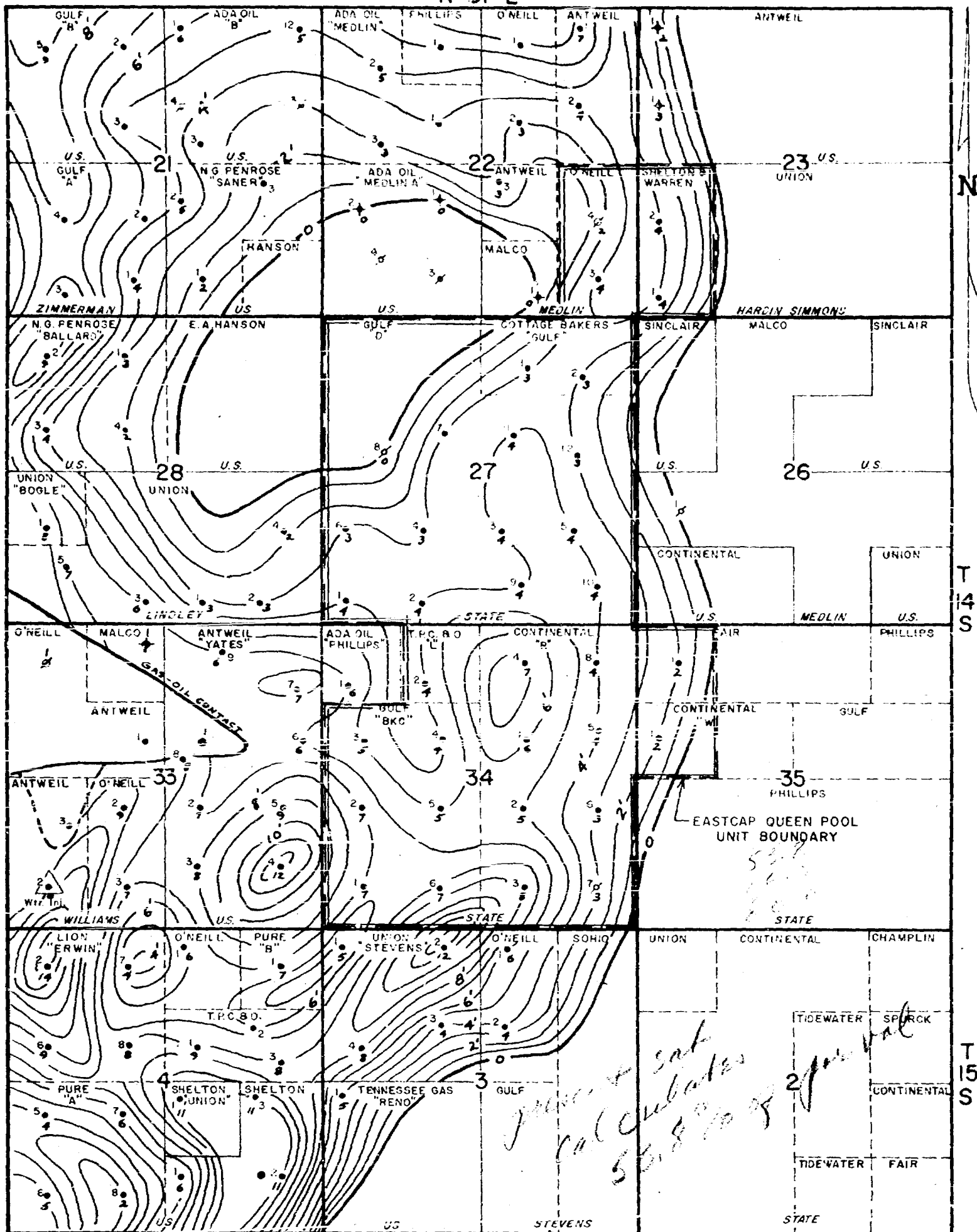
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R-31-E



planimeter map of unit
~~total acreage~~
 shows 5,491 ac. 7/14/61
 3.7 ac. new. 11/1/61
 21% ac. gas 230 and are present
 26.2% ac. water 11/1/61
 11.25% initial new unit 4/1/61
 27.2% ac. gas 11/1/61

CONTINENTAL OIL COMPANY
 PRODUCTION DEPARTMENT
 HOBBS DISTRICT

EASTCAP QUEEN POOL UNIT AREA
 CHAVES COUNTY, NEW MEXICO

SCALE: 0 100 200'

LEGEND: ISOPACHOUS MAP
 N.E.P. = QUEEN SAND
 (ARTESIA)

JAG-3/14/62

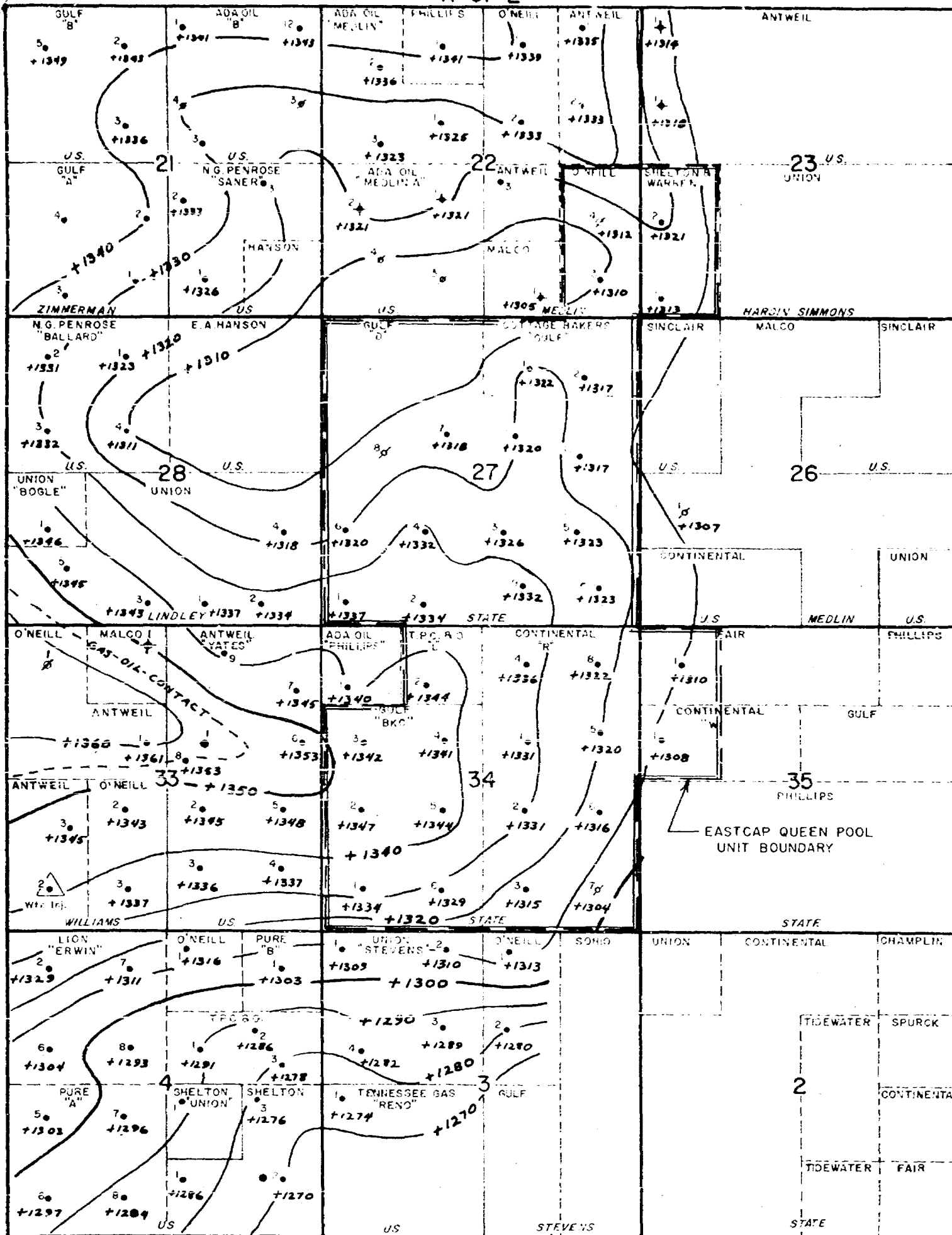
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R-31-E



BEFORE EXAMINER NUTTER

CONSERVATION COMMISSION

FILE NO. 5

CASE NO. 2637-38

CONTINENTAL OIL COMPANY
PRODUCTION DEPARTMENT
HOBBS DISTRICT

EASTCAP QUEEN POOL UNIT AREA
CHAVES COUNTY, NEW MEXICO

SCALE: 0' 100' 200'

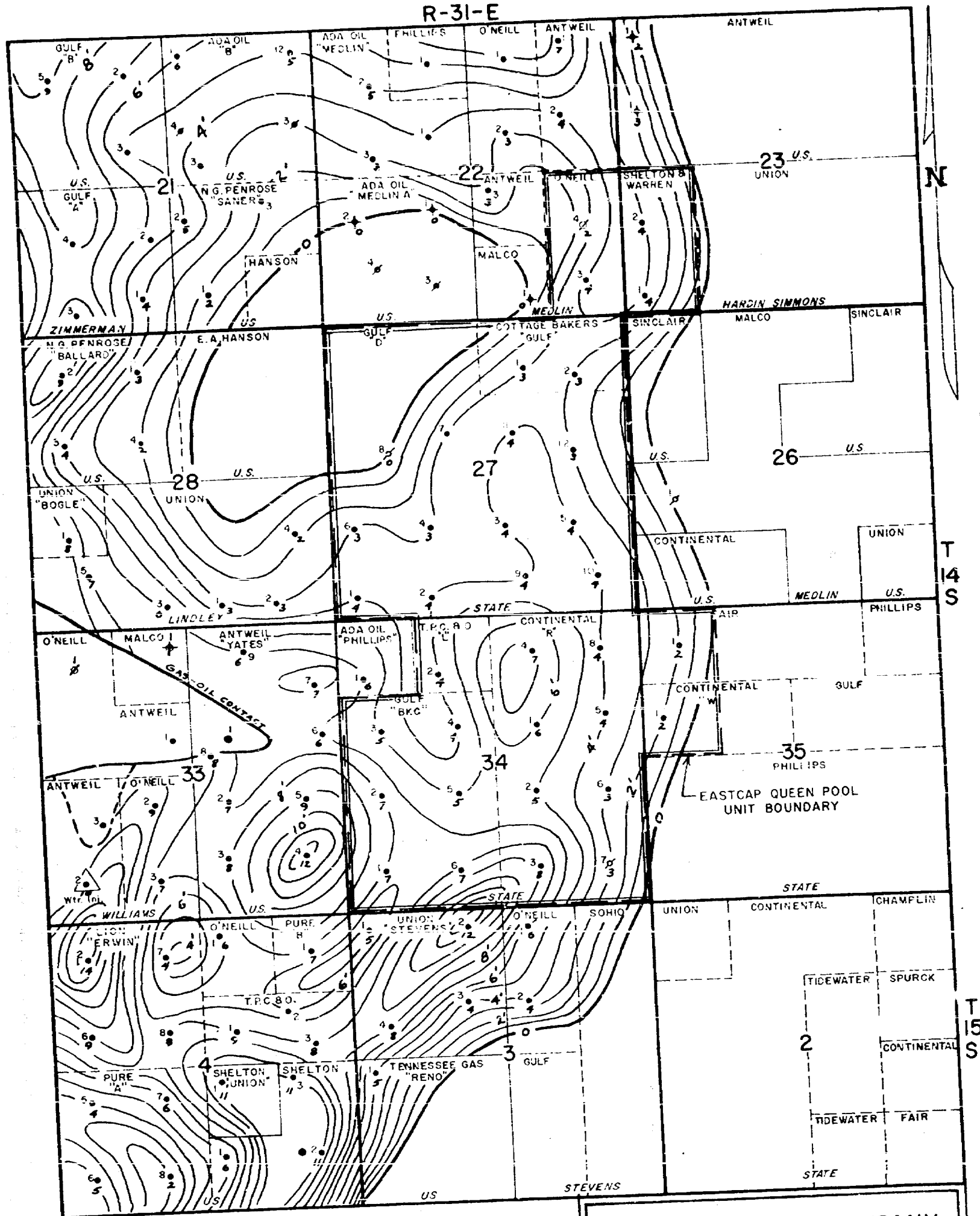
LEGEND: STRUCTURE MAP
TOP OF QUEEN (ARTESIA)

J.A.G.

3-14-62

V

R-31-E



BEFORE EXAMINER NUTTER
 CIVIL CONSERVATION COMMISSION
 EXHIBIT NO. 6
 CASE NO. 2837-38

CONTINENTAL OIL COMPANY
 PRODUCTION DEPARTMENT
 HOBBS DISTRICT

EASTCAP QUEEN POOL UNIT AREA
 CHAVES COUNTY, NEW MEXICO

SCALE: 0 1000 2000'

LEGEND: ISOPACHOUS MAP
 N.E.P. - QUEEN SAND
 (ARTESIA)

JAG-3/14/62

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
EASTCAP QUEEN POOL UNIT
CHAVES COUNTY, NEW MEXICO

NO. _____

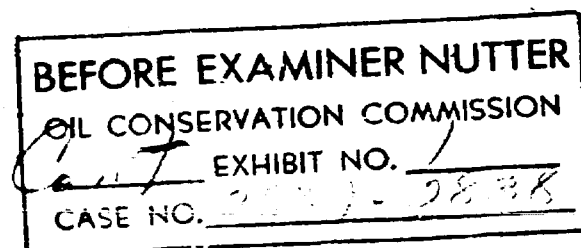
THIS AGREEMENT, entered into as of the 16th day of July,
1962, by and between the parties subscribing, ratifying or
consenting hereto, and herein referred to as "parties hereto",

WITNESSETH: That,

WHEREAS, in the interest of the public welfare and to promote
the conservation and increase the ultimate recovery of oil, gas
and associated minerals from the unitized formation underlying the
Unit Area hereinafter defined, to prevent waste and to protect
the rights of the owners of interests therein, it is deemed
necessary and desirable to enter into this agreement unitizing
the oil and gas rights in and under the unitized formation covered
hereby in order to effect a secondary recovery, pressure maintenance
or other recovery program as hereinafter provided; and

WHEREAS, The parties hereto are the owners of sufficient oil
and gas interests within the Unit Area to give reasonably effective
control of operations therein, and the Commissioner of Public
Lands of the State of New Mexico is authorized to consent to or
approve this agreement on behalf of the State of New Mexico insofar
as it covers and includes lands and mineral interests of the State
of New Mexico, and the Oil Conservation Commission of the State of
New Mexico is authorized to approve this agreement and the conserva-
tion provisions hereof;

NOW, THEREFORE, in consideration of the premises and of the
mutual covenants and agreements herein contained, the parties
hereto commit to this agreement their entire respective oil and
gas rights within the Unit Area hereinafter described insofar as
the unitized formation covered hereby underlies the same, all
upon the following terms and conditions.



ARTICLE I
DEFINITIONS

As used in this agreement, the terms hereinafter set out shall have the following meaning:

1.1 Unit Area, shall mean the lands situated within the Caprock Queen Field, Chaves County, New Mexico, described by Tracts in Exhibit "A" and shown on Exhibit "B", as to which this agreement becomes effective or to which it may be extended as provided herein.

1.2 Unitized Formation, shall mean that subsurface portion or portions of the Unit Area commonly known or described as the Artesia Red Sand member of the Queen formation in the Guadalupian Series. The Artesia Red Sand member is found between the subsurface depths of 3053 and 3105 feet, measured from Kelly bushing, in the Continental Oil Company State "R-34" well No. 4, located 660 feet from the North line and 1980 feet from the East line of Section 34, Township 14 South, Range 31 East, N.M.P.M., Chaves County, New Mexico.

1.3 Unitized Substances, shall mean all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Unitized Formation.

1.4 Working Interest Owner, shall mean any party hereto, including a carried working interest owner, holding an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise, which interest is chargeable with and obligated to pay or bear, either in cash or out of production or otherwise, all or a portion of the cost of drilling, developing, producing and operating the Unitized Formation.

1.5 Royalty Owner, shall mean any party hereto who owns a right to or interest in any portion of the Unitized Substances or proceeds thereof other than that of a Working Interest Owner.

1.6 Commissioner, shall mean the Commissioner of Public Lands of the State of New Mexico.

1.7 Commission, shall mean the Oil Conservation Commission of

the State of New Mexico.

1.8 Tract, shall mean each parcel of land described as such and given a Tract number in Exhibit "A."

1.9 Unit Operating Agreement, shall mean the agreement entitled "Unit Operating Agreement, Eastcap Queen Unit, Chaves County, New Mexico," of the same effective date as the effective date of this agreement, and executed by and between the Working Interest Owners who are parties to this agreement, and any amendment thereof.

1.10 Unit Operator, shall mean the Working Interest Owner designated by the Working Interest Owners pursuant to the Unit Operating Agreement to develop and operate the Unitized Formation.

1.11 Tract Participation shall mean that percentage of Unitized Substances produced from the Unitized Formation which is allocated to a tract under this agreement, whether during the primary phase or the secondary phase.

1.12 Unit Participation of Each Working Interest Owner shall mean the sum of the percentages obtained by multiplying such Working Interest Owner's fractional working interest in each tract by the tract participation of such tract separately for each the primary phase and the secondary phase, and "Primary Phase Unit Participation" shall mean such Unit Participation during the primary phase, and "Secondary Phase Unit Participation" shall mean such Unit Participation during the secondary phase.

1.13 Outside Substances, shall mean all substances obtained from any source other than the Unitized Formation, and which are injected into the Unitized Formation.

1.14 Oil and Gas Rights, shall mean the right to explore, develop and operate lands within the Unit Area for the production of Unitized Substances or to share in the production so obtained or the proceeds thereof.

1.15 Primary Phase shall mean that period from the effective date until 7 a.m. on the first day of the month next following the month during which the cumulative total production from August 1, 1960, has reached 350,000 barrels (the cumulative production used

herein shall be from individual lease operators' reports to the NMOCC from August 1, 1960, until the effective date of unitization and then from the unit operator's report to the NMOCC until a total of 350,000 barrels has been produced).

1.16 Secondary Phase shall mean that period commencing upon termination of the primary phase and continuing throughout the duration hereof.

ARTICLE 2

EXHIBITS

2.1 Exhibits. Attached hereto are the following exhibits incorporated herein by reference:

2.1.1 Exhibit "A," is a schedule describing each Tract in the Unit Area and showing its Tract Participation.

2.1.2 Exhibit "B," is a map of the Caprock Queen Field, showing the boundary lines of the Unit Area and Tracts thereon.

2.2 Reference to Exhibits. Whenever in this agreement reference is made to any of said exhibits, such reference shall mean said exhibits as originally attached hereto; or if the same have been revised, it shall mean the latest revision thereof.

2.3 Exhibits Considered Correct. Said exhibits for all purposes of this agreement shall be considered as true and correct unless and until they are revised or corrected as herein provided.

2.4 Correcting Errors. The shapes and descriptions of the respective Tracts have been established using the best information available. In the event it subsequently appears that any Tract should, because of diverse royalty or working interest ownership on the effective date hereof, be divided into more than one Tract, or that any mechanical miscalculation has been made, Unit Operator, with the approval of Working Interest Owners, may correct such mistake by revising the exhibits to conform to the facts. Such corrections shall not include any re-evaluation of previously established engineering or geological interpretations used in establishing Tract Participation. Each such revision of exhibits, if made after this agreement becomes effective, shall be effective at 7:00 o'clock a.m. on the first day of the calendar month next

following the filing of the exhibit relating thereto or on such other date as is determined by Working Interest Owners. Any such revision made prior to the effective date hereof shall be effective on the effective date.

2.5 Filing Revised Exhibits. If and when the exhibits, or any revision thereof, are revised pursuant to this agreement, Unit Operator shall certify and file the revised exhibits for record in the County or Counties in which this agreement is filed.

ARTICLE 3

CREATION AND EFFECT OF UNIT

3.1 Oil and Gas Rights Unitized. Subject to the terms and conditions of this agreement, all the Oil and Gas Rights of the Royalty Owners in and to the lands described in Exhibit "A", and all of the Oil and Gas Rights of the Working Interest Owners in and to said lands are hereby unitized insofar as said respective Oil and Gas Rights pertain to the Unitized Formation, all to the same extent as if the Unitized Formation had been included in a single lease executed by all the Royalty Owners, as lessors, in favor of all the Working Interest Owners, as lessees, and as if said lease had been subject to all of the terms and conditions of this agreement.

3.2 Personal Property Excepted. Working Interest Owners have each individually heretofore placed in or on their wells and in or on lands affected by this agreement, various items of personal property which are lease and well equipment, as to all of which Working Interest Owners have the right, as provided in their respective leases, to remove such property from the premises and all of which installations were made with the intention and understanding that all of the same would be and remain personal property and that no part thereof would be or become a part of the realty. Working Interest Owners except from the terms and provisions of this agreement, and hereby sever from said lands, for all purposes, all such lease and well equipment which may be or may hereafter become located in or on the lands or in the wells on the lands affected hereby. To conform their respective investments in such equipment, Working Interest Owners have made a separate agreement

with each other with respect thereto.

3.3 Amendment of Leases and Other Agreements. The provisions of the various leases, agreements, division and transfer orders, or other instruments covering the respective Tracts or the production therefrom are amended to the extent necessary to make them conform to the provisions of this agreement, but otherwise shall remain in effect.

3.4 Continuation of Leases and Term Royalties. Unit Operations conducted on any part of the Unit Area shall be considered with respect to leases and term royalties as follows:

3.4.1 Operations, including drilling operations, conducted with respect to the Unitized Formation on any part of the Unit Area, or production from any part of the Unitized Formation, except for the purpose of determining payments to Royalty Owners, shall be considered as operations upon or production from each Tract, and such operations or production shall continue in effect each lease or term royalty interest as to all lands covered thereby just as if such operations had been conducted and a well had been drilled on and was producing from each Tract.

3.4.2 Any lease embracing lands of the State of New Mexico 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.

3.4.3 Any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto, shall be segregated as to the portion committed and that portion not committed, and the terms of such lease shall apply separately as to such segregated portions commencing as of the effective date hereof. Notwithstanding any of the provisions of this agreement to the contrary, any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto shall continue in full force and effect beyond the term provided therein as to all lands embraced in such lease (whether within or without the Unit Area), (1) if, and for so long as Unitized Substances

are capable of being produced in paying quantities from some part of the lands embraced in such lease committed to this agreement, of (ii) if, and for so long as some part of the lands embraced in such State lease are included in the Participating Area; or (iii) if, at the expiration of the secondary term, the lessee or the Unit Operator is then engaged in bona fide drilling or reworking operations on some part of the lands embraced therein and for so long as such operations are being diligently prosecuted, and if they result in the production of Unitized Substances, said lease shall continue in full force and effect as to all of the lands embraced therein, as provided in (i) or (ii) above.

3.5 Titles Unaffected by Unitization. Nothing herein shall be construed to result in the transfer of title to the Oil and Gas Rights covered hereby between the parties hereto or to Unit Operator, other than the right to exercise such Oil and Gas Rights and to share in the Unitized Substances or the proceeds therefrom to the extent and manner herein provided.

3.6 Injection Rights. Royalty Owners hereby grant unto Working Interest Owners the right to inject into the Unitized Formation any substances in whatever amounts the Working Interest Owners deem expedient, including the right to place and maintain injection wells on the Unit Area and to use producing or abandoned oil or gas wells for said purposes.

ARTICLE 4

PLAN OF OPERATIONS

4.1 Unit Operator. Working Interest Owners are, as of the effective date of this agreement, entering into a Unit Operating Agreement, designating Continental Oil Company Unit Operator. Unit Operator shall have, subject to the terms, provisions and limitations expressed in the Unit Operating Agreement, the exclusive right to develop and operate the Unit Area for the production of Unitized Substances. Such operations shall be conducted in conformity with the provisions of this agreement and the Unit Operating Agreement. In the event of any conflict between such agreements, this agreement shall govern.

4.2 Lien of Unit Operator. Unit Operator shall have a lien upon the interests of Working Interest Owners in the Unit Area to the extent provided in the Unit Operating Agreement.

4.3 Operating Methods. To the end that the quantity of Unitized Substances ultimately recoverable may be increased and waste prevented, Working Interest Owners shall, with diligence and in accordance with good engineering and production practices, engage in secondary recovery operations by the injection of water or other substance into the unitized formation.

4.4 Change of Operating Methods. Such other methods of operation as may from time to time be determined by Working Interest Owners to be feasible, necessary or desirable to efficiently and economically increase the ultimate recovery of Unitized Substances may be conducted by Working Interest Owners. Nothing herein contained shall prevent Working Interest Owners from discontinuing or changing in whole or in part any particular method of operation if, in their opinion, such method of operation is no longer in accord with good engineering or production practices.

ARTICLE 5

TRACT PARTICIPATION

5.1 Tract Participation. The Tract Participation of each tract for each the primary phase and the secondary phase is shown in Exhibit "A." Tract Participation for the primary phase for each tract is the percentage derived by dividing estimated primary production remaining recoverable by ordinary means underlying that tract by the estimated primary production remaining recoverable by ordinary means underlying the Unit Area, and Tract Participation for the secondary phase for each tract is the percentage derived by dividing the estimated reserves recoverable by secondary recovery operations for that tract by estimated reserves recoverable by secondary operations underlying the Unit Area, all with respect to the Unitized Formation.

5.2 Relative Tract Participations. Whenever the Unit Area is enlarged or reduced, the revised Tract Participations of the respective tracts included within the Unit Area for each the primary phase and the secondary phase, prior to such enlargement

or reduction, shall remain in the same ratio one to the other.

ARTICLE 6

ALLOCATION OF UNITIZED SUBSTANCES

6.1 Allocation to Tracts. All Unitized Substances produced and saved shall be apportioned among and allocated to the several Tracts within the Unit Area in accordance with the respective Tract Participations effective hereunder during the respective periods such Unitized Substances were produced, as set forth in Exhibit "A." 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.

6.2 Distribution within Tracts. The Unitized Substances allocated to each Tract shall be distributed among, or accounted for to, the parties 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 participated 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.

6.3 Taking Unitized Substances in Kind. The Unitized Substances allocated to each Tract shall be delivered in kind to the respective parties entitled thereto by virtue of the ownership of Oil and Gas Rights therein or by purchase from such owners. Such parties shall have the right to construct, maintain and operate within the Unit Area all necessary facilities for that purpose, provided the same are so constructed, maintained and operated as not to interfere with operations carried on pursuant hereto. Any extra expenditures incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party receiving the same in kind.

6.4 Failure to Take in Kind. To the extent that any party entitled to take and receive in kind any portion of the Unitized Substances shall fail to take or otherwise adequately dispose of

the same currently as and when produced, then so long as such conditions continue, Unit Operator, as agent and for the account and at the expense of such party shall, in order to avoid curtailing the operation of the Unit Area, dispose of such production on a day-to-day basis in any reasonable manner Unit Operator sees fit, and the account of such party shall be charged therewith as having received the same. The proceeds, if any, of the Unitized Substances so disposed of by Unit Operator shall be paid to the party entitled thereto. Notwithstanding the foregoing, Operator shall not make a sale into interstate commerce of any other party's share of gas production without first giving such other party sixty days' notice of such intended sale.

6.5 Responsibility for Royalty Settlements. Any party receiving in kind or separately disposing of all or part of the Unitized Substances allocated to any Tract, or receiving the proceeds therefrom if the same is sold or purchased by Unit Operator, shall be responsible for the payment of, and shall indemnify all other parties, including Unit Operator, against any liability for any and all royalties, overriding royalties, production payments and any and all other payments chargeable against or payable out of such Unitized Substances or the proceeds therefrom.

6.6 Royalty on Outside Substances. With respect to any outside substance consisting of natural gas, fifty percent (50%) of any like substance contained in Unitized Substances subsequently produced and sold or used for other than operations hereunder shall be deemed to be a recovered outside substance until the aggregate of said recovered outside substance equals the accumulated volume of such outside substance so injected into the Unitized Formation. With respect to any outside substance consisting of those substances commonly classified in the petroleum industry as LPG, ten percent (10%) of all Unitized Substances subsequently produced and sold or used for other than operations hereunder shall be deemed to be a recovered outside substance until the value of the aggregate of said recovered outside substances equals the value of such outside substances so injected into the Unitized Formation.

No payment shall be due or payable to royalty owners on any substance which is classified hereby as a recovered outside substance.

ARTICLE 7

USE OR LOSS OF UNITIZED SUBSTANCES

7.1 Use of Unitized Substances. Working Interest Owners may use as much of the Unitized Substances as they deem necessary for the operation and development of the Unit Area, including but not limited to the injection thereof into the Unitized Formation.

7.2 Royalty Payments. No royalty, overriding royalty, production or other payments shall be payable upon or with respect to Unitized Substances used or consumed in the operation or development of the Unit Area or which may be otherwise lost or consumed in the production, handling, treating, transportation or storing of Unitized Substances.

ARTICLE 8

TRACTS TO BE INCLUDED IN UNIT

8.1 Percentages of Commitment Required. On and after the effective date hereof and until the enlargement or reduction thereof, the Unit Area shall be composed of the following Tracts listed in Exhibit "A" which corner, adjoin or are contiguous to each other:

8.1.1 Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the working interest have signed or ratified this agreement and Royalty Owners owning eighty percent (80%) or more of the royalty interest have signed or ratified this agreement; and

8.1.2 Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the working interest have signed or ratified this agreement and Royalty Owners owning less than eighty percent (80%) of the royalty interest have signed or ratified this agreement, and as to which (a) all Working

Interest Owners in such Tract join in a request for the inclusion of such Tract in the Unit Area, and further as to which (b) One hundred percent (100%) of the combined voting interests of Working Interest Owners in all Tracts which meet the requirements of Section 8.1.1 vote in favor of the inclusion of such Tract. For the purpose of this Section 8.1.2 the voting interest of each Working Interest Owner shall be equal to the ratio (expressed in percentage) which the total of such Working Interest Owner's Unit Participation attributable to Tracts which qualify under Section 8.1.1 bears to the total of the Unit Participation of all Working Interest Owners attributable to all Tracts which qualify under said Section 8.1.1; and

8.1.3 Each Tract as to which Working Interest Owners owning less than one hundred percent (100%) of the working interest have signed or ratified this agreement, regardless of the percentage of royalty interest therein that is committed hereto, and as to which (a) the Working Interest Owner who operates the Tract and all of the other subscribing Working Interest Owners in such Tract have joined in a request for inclusion of such Tract in the Unit Area and have executed and delivered an indemnity agreement acceptable to the other Working Interest Owners in the Unit Area indemnifying and agreeing to hold such parties harmless from and against all claims and demands that may be made by the nonsubscribing owners in such Tract on account of the inclusion of the same in the Unit Area, and further as to which (b) one hundred percent (100%) of the combined voting interest of the Working Interest Owners in all Tracts which meet the requirements of Sections 8.1.1 and 8.1.2 above, vote in favor of the inclusion of such Tract. For the purposes of this Section 8.1.3 the voting interest of each Working Interest Owner shall be equal to the ratio (expressed in percentage) which the total of such Working Interest Owner's Unit Participation attributable to Tracts which qualify under Sections 8.1.1 and 8.1.2 bears to the total Unit Participation of all Working Interest Owners attributable to all Tracts which qualify under said Sections 8.1.1 and 8.1.2.

8.2 Subsequent Commitment of Interest to Unit. Any interest in any tract within the Unit Area not committed hereto prior to the effective date of this agreement may thereafter be committed hereto upon compliance with the applicable provisions of this article hereof, at any time for a period to and including six months after the effective date of this agreement on the same basis of participation as provided in this article and in Article 5, by the owner or owners thereof subscribing, ratifying, or consenting in writing to this agreement and, if the interest is a working interest, by the owners of such interest subscribing also to the Unit Operating Agreement.

It is understood and agreed however, that from and after six months from the effective date hereof, the commitment hereto of any interest in any tract within the Unit Area shall be upon such terms and conditions as may be negotiated by Working Interest Owners and owners of such interest.

8.3 Revision of Exhibits. In the event any of the Tracts described in Exhibit "A" fail to qualify for inclusion in the Unit Area, Unit Operator shall recompute, using the original basis of computation, the Tract Participation of each of the qualifying Tracts and shall revise Exhibits "A" and "B" accordingly. Said revised exhibits shall be effective as of the effective date hereof.

ARTICLE 9

TITLES

9.1 Removal of Tract from Unit Area. In the event a Tract ceases to have sufficient Working Interest Owners or Royalty Owners committed to this agreement to meet the conditions of Article 8 because of failure of title of any party hereto, such Tract shall be eliminated from the Unit Area as of the first day of the calendar month in which such failure of title is finally determined; provided, however, that a Tract shall not be removed from the Unit Area if, within ninety (90) days of the date of final determination of the failure of title, Working Interest Owners and Royalty Owners become parties to this agreement in sufficient numbers to meet the qualifying provisions of Section 8.1.1 or the Tract otherwise qualifies under the provisions of

Section 8.1.2 or 8.1.3.

9.2 Revision of Exhibits. In the event any Tract is eliminated from the Unit Area because of the failure of title pursuant to the provisions of this Article, Unit Operator shall recompute the Tract Participation of each of the Tracts remaining in the Unit Area and shall revise Exhibits "A" and "B" accordingly. Said revised exhibits shall be effective as of the first day of the calendar month in which such failure of title is finally determined.

9.3 Working Interest Titles. If title to a working interest fails, the rights and obligations as between the Working Interest Owners in respect thereto shall be governed by the Unit Operating Agreement.

9.4 Royalty Owner Titles. If title to a royalty interest fails, but the Tract to which it relates is not eliminated from the Unit Area, the party whose title failed shall not be entitled to share hereunder in respect to such interest.

9.5 Production Where Title in Dispute. If the title or right of any person claiming the right to receive in kind all or any portion of the Unitized Substances allocated to a Tract is in dispute, Unit Operator at the discretion of Working Interest Owners shall either:

9.5.1 Require that the person or persons to whom such Unitized Substances are delivered or to whom the proceeds thereof are paid, furnish security for the proper accounting therefor to the rightful owner or owners in the event the title or right of such person or persons shall fail in whole or in part, or

9.5.2 Withhold and market the portion of Unitized Substances with respect to which title is in dispute, and impound the proceeds thereof until such time as the title or right thereto is established by a final judgment of a court of competent jurisdiction or otherwise to the satisfaction of Working Interest Owners, whereupon the proceeds so impounded shall be paid to the person or persons rightfully entitled thereto.

ARTICLE 10

EASEMENTS OR USE OF SURFACE

10.1 Grant of Easements. The parties hereto, to the extent of their rights and interests, hereby grant to Working Interest

Owners the right to use as much of the surface of the land within the Unit Area as may be reasonably necessary for the operation and development of the Unit Area hereunder; provided, that nothing herein shall be construed as leasing or otherwise conveying to Working Interest Owners a site for a water, gas injection, processing or other plant, or camp site.

10.2 Use of Water. Working Interest Owners shall have free use of water from the Unit Area for operations hereunder except water from Royalty Owners' wells, private lakes, ponds, or irrigation ditches.

10.3 Surface Damages. Working Interest Owners shall pay the rightful owners for damages to growing crops, timber, fences, improvements and structures on the Unit Area resulting from operations hereunder.

ARTICLE 11

ENLARGEMENTS OF UNIT AREA

11.1 Enlargements of Unit Area. The Unit Area may be enlarged to include acreage reasonably proved to be productive under such terms and conditions as determined by the Working Interest Owners, including but not limited to, the following, and if the acreage qualifies as provided in Article 8:

11.1.1 The participation to be allocated to the acreage added to the Unit Area shall be based on all available information to the end that a reasonable and fair participation shall be so allocated.

11.1.2 There shall never be any retroactive allocation or adjustment of operating expenses or of interests in the Unitized Substances produced, or proceeds thereof, by reason of an enlargement of the Unit Area; provided, however, this limitation shall not prevent an adjustment of investment by reason of such enlargement.

11.1.3 In the event of an enlargement of the Unit Area, Unit Operator shall, subject to Section 5.2, recompute the Tract Participation of each Tract within the Unit Area as enlarged and shall revise Exhibits "A" and "B" accordingly.

11.1.4 The effective date of any enlargement of the Unit Area shall be 7:00 o'clock a.m. on the first day of the

calendar month following compliance with conditions for enlargement as specified by Working Interest Owners, approval of the enlargement of the Unit Area by the appropriate governmental authority, if required, and the recording of revised Exhibits "A" and "B" in the records of the County or Counties in which this agreement is recorded.

ARTICLE 12

TRANSFER OF INTEREST

12.1 Agreement is a Covenant. All of the terms and provisions of this agreement shall extend to, be binding upon and inure to the benefit of the respective heirs, devisees, legal representatives, successors and assigns of the parties hereto, and shall constitute a covenant running with the lands, leases and interests covered hereby.

12.2 Effect of Transfers. Any transfer, assignment or conveyance of all or any part of any interest owned by any party hereto with respect to any Tract shall be made expressly subject to this agreement. No such transfer, assignment or conveyance shall be binding for any purpose upon any party hereto other than the party so conveying the same, until the first day of the calendar month next succeeding the date of receipt by Unit Operator of a certified copy of the recorded instrument evidencing such change in ownership.

12.3 Waiver of Rights to Partition. Each party hereto covenants that, during the existence of this agreement, such party shall not resort to any action at law or in equity to partition the Unit Area or the facilities used in the development or operation thereof and to that extent waives the benefits of all laws authorizing such partition.

ARTICLE 13

RELATIONSHIP OF PARTIES

13.1 No partnership. The duties, obligations and liabilities of the parties hereto are intended to be several and not joint or collective, and nothing herein contained shall ever be construed to create an association, trust or impose a partnership duty, obligation or liability with regard to any one or more

parties hereto. Each party hereto shall be individually responsible for its own obligations as herein provided.

13.2 No Sharing of Market. Nothing in this agreement shall be construed as providing, directly or indirectly, for any co-operative refining or joint sale or cooperative marketing of Unitized Substances.

13.3 Royalty Owners Free of Costs. It is understood and agreed that this agreement shall never be construed as imposing upon any Royalty Owner any obligation to pay for any development or operating expense unless such Royalty Owner is obligated to pay for same by the terms of agreements existing before the execution of this agreement.

13.4 Information to Royalty Owners. Each Royalty Owner shall be entitled to all information in possession of Unit Operator to which such Royalty Owner is entitled by his existing agreement with any Working Interest Owner with the express stipulation that if, by reason of this agreement, such information is not available, the nearest approximation or equivalent of such information shall be made available.

ARTICLE 14

LAWS AND REGULATIONS

14.1 Laws and Regulations. This agreement shall be subject to the conservation laws of the State of New Mexico, to the valid rules, regulations and orders of the Oil Conservation Commission of New Mexico and to all other applicable federal, state and municipal laws, rules, regulations and orders. It is not the intention of this agreement to limit, restrict or prorate unit production, it being recognized that such powers are exclusively exercised by governmental authority.

ARTICLE 15

FORCE MAJEURE

15.1 Force Majeure. All obligations of each party hereto, except for the payment of money, shall be suspended while said party is prevented from complying therewith, in whole or in part, by strikes, fire, war, civil disturbances, acts of God, federal, state or municipal laws, orders or regulations, inability to

secure materials or other causes beyond the reasonable control of said party; provided, however, that performance shall be resumed within a reasonable time after such cause has been removed; and provided further that no party shall be required against its will to adjust or settle any labor dispute. This agreement or the leases or other interests subject hereto shall not be terminated by reason of suspension of unit operations due to the aforesaid causes.

ARTICLE 16

EFFECTIVE DATE

16.1 Effective Date. 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 o'clock a.m. of the first day of the second calendar month next following (a) the execution or ratification of this agreement and the Unit Operating Agreement by Working Interest Owners owning a combined Unit Participation of at least eighty percent (80%), and the execution or ratification of this Agreement by Royalty Owners owning a combined interest of at least eighty percent (80%) of the royalty interest, in said Unit Area; (b) the approval of this agreement by the appropriate governmental authority, if required; and (c) the filing of at least one counterpart of this agreement for record in the records of Chaves County, New Mexico, by Unit Operator; and provided, further, that if (a), (b) and (c) above are not accomplished on or before May 1, 1963, this agreement shall ipso facto terminate on said date (hereinafter called "termination date") and thereafter be of no further force or effect, unless prior thereto this agreement has been executed or ratified by Working Interest Owners owning a combined Unit Participation of at least fifty percent (50%) and Working Interest Owners owning a combined Unit Participation of at least eighty percent (80%) committed to this agreement have decided to extend said termination date for a period not to exceed six months. If said termination date is so extended and (a), (b) and (c) above are not accomplished on or before said extended termination date, this agreement shall ipso facto terminate on said extended termina-

tion date and thereafter be of no further force or effect. For the purposes of this Article, ownership shall be computed on the basis of Unit Participation as determined from Exhibit "C" attached to the Unit Operating Agreement.

16.2 Certificate of Effectiveness. Unit Operator shall within thirty (30) days after the effective date of this agreement file for record in the office or offices 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.

ARTICLE 17

TERM

17.1 Term. The term of this agreement shall be for and during the time that Unitized Substances are produced in paying quantities and as long thereafter as drilling, reworking or other operations are prosecuted without cessation of more than ninety (90) consecutive days, unless sooner terminated by Working Interest Owners in the manner hereinafter provided.

17.2 Termination by Working Interest Owners. This agreement may be terminated by Working Interest Owners owning eighty percent (80%) Unit Participation whenever such Working Interest Owners determine that unit operations are no longer profitable, feasible or in the interest of conservation.

17.3 Effect of Termination. Upon termination of this agreement, the further development and operation of the Unit Area as a unit shall be abandoned, unit operations shall cease, and thereafter the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate Tracts just as if this agreement had never been entered into.

17.4 Salvaging Equipment upon Termination. If not otherwise covered by the leases unitized under this agreement, Royalty Owners hereby grant Working Interest Owners 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.

ARTICLE 18
COUNTERPART

18.1 Separate Counterparts or Ratifications. This agreement may be executed in any number of counterparts and each executed counterpart shall have the same force and effect as an original instrument and as if all of the parties to the aggregate counterparts had signed the same instrument; or, may be ratified by a separate instrument in writing referring to this agreement. Each such ratification shall have the force and effect of an executed counterpart hereof and of adopting by reference all of the provisions hereof.

18.2 Joinder in Dual Capacity. It shall not be necessary for parties owning both working interests and royalty interests to execute this agreement in both capacities in order to commit both classes of interests. Execution hereof by any such party in one capacity shall also constitute execution in the other capacity.

ARTICLE 19
GENERAL

19.1 Amendments Affecting Working Interest Owners. Amendments hereto relating wholly to Working Interest Owners may be made if signed by all Working Interest Owners.

IN WITNESS WHEREOF, The parties hereto have executed this agreement upon the respective dates indicated opposite their respective signatures.

ATTEST:

CONTINENTAL OIL COMPANY

By _____
Attorney in Fact

Date: _____

UNIT OPERATOR AND WORKING
INTEREST OWNER

ATTEST:

COTTAGE BAKERS

By _____

Date: _____

ATTEST:

GULF OIL CORPORATION

By _____

Date: _____

ATTEST:

TEXAS PACIFIC COAL AND OIL
COMPANY

By _____

Date: _____

Date: _____

BILL A. SHELTON

Date: _____

JOSEPH I. O'NEILL

ATTEST:

UNION OIL COMPANY OF
CALIFORNIA

By _____

Date: _____

ATTEST:

WESTERN DEVELOPMENT COMPANY

By _____

Date: _____

ATTEST:

S. P. YATES DRILLING COMPANY

By _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

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Date: _____

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Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

OWNERS OF OVERRIDING
ROYALTIES OR PRODUCTION
PAYMENTS

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
_____ day of _____, 1962, by _____,
_____ of _____
a _____ corporation, on behalf of said corporation.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
_____ day of _____, 1962, by _____,
_____ of _____
a _____ corporation, on behalf of said corporation.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
_____ day of _____, 1962, by _____,
_____ of _____
a _____ corporation, on behalf of said corporation.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
_____ day of _____, 1962, by _____,
_____ of _____
a _____ corporation, on behalf of said corporation.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____.

My Commission Expires: _____ Notary Public
_____ County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____.

My Commission Expires: _____ Notary Public
_____ County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____.

My Commission Expires: _____ Notary Public
_____ County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____
and _____, his wife.

My Commission Expires: _____ Notary Public
_____ County, _____

EXHIBIT "A" - UNIT AGREEMENT
SCHEDULE OF TRACTS
(CHAVES COUNTY, NEW MEXICO)

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER & EXPIRATION DATE	BASIC ROYALTY	WORKING INTEREST OWNER AND PERCENTAGE	OVERRIDE ROYALTY OWNER AND PERCENTAGE	PERCENTAGE PARTICIPATION PRIMARY PHASE	PERCENTAGE PARTICIPATION SECONDARY PHASE
3	State Land T14S-R31E: Section 27: N1/2, S1/2, S1/4	80.00	B-8459 - HBP	State of NM 12.5%	Cottage Bakers Gulf Oil Corp. 95.0% 5.0%	Gulf Oil Corp: Primary Phase Secondary Phase 12.5% 25.0%	8.90694	4.60163
4	T14S-R31E: Section 27: N1/2, S1/2, S1/4	480.00	B-8459 - HBP	State of NM 12.5%	Gulf Oil Corp. 100.0%	None	20.00693	22.36787
4a	T14S-R31E: Section 27: S1/2, S1/4	80.00	B-8459 - HBP	State of NM 12.5%	Gulf Oil Corp. 100.0%	None	5.46506	6.01104
5	T14S-R31E: Section 25: N1/2, S1/2, S1/4	40.00	E-5444 - HBP	State of NM 12.5%	R W Fair S P Yates Gus W Arnold International Oil & Gas Corp. S P Yates Drilg Co. 57.0% 10.0% 3.0% 20.0% 10.0%	None	0.05585	0.46016
6	T14S-R31E: Section 24: S1/2	320.00	E-5364 - HBP	State of NM 12.5%	Continental Oil Company 100.0%	None	33.27155	32.29687
7	T14S-R31E: Section 34: S1/2, S1/4	40.00	E-1467 - HBP	State of NM 12.5%	Texas Pacific Coal and Oil Company 100.0%	None	4.03642	4.44386
8	T14S-R31E: Section 34: S1/2, S1/4	240.00	E-7662 - HBP	State of NM 12.5%	Gulf Oil Corp. 100.0%	None	13.62398	21.04260
9	T14S-R31E: Section 37: S1/2, S1/4	40.00	E-3277 - HBP	State of NM 12.5%	Continental Oil Company 100.0%	Phillips Petroleum Company 5.46875%	0.03070	0.26295

Ten State of New Mexico Tracts containing 1,320.00 acres or 89.1891% of the Unit Area

EXHIBIT "A" - UNIT AGREEMENT--Continued

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	EXPIRATION DATE	BASIC ROYALTY	WORKING INTEREST OWNER AND PERCENTAGE	COVERING ROYALTY OWNER AND PERCENTAGE	PERCENTAGE PARTICIPATION PRIMARY PHASE	PERCENTAGE PARTICIPATION SECONDARY PHASE
<u>Fee or Privately Owned Land</u>								
1	<u>Tracts 23:</u> W1/4	80.00	HBP	Luther B Harris & wife, Loul 6.25% Hardin-Simmons University 6.25%	Bill A Shelton 93-1/3% Margaret Ross 6-2/3% Secondary Phase: Union Oil Co. of California 50.0% Bill A Shelton 50.0%	Union Oil Company of California: Primary Phase 1/16	9.00365	5.57455
2	<u>Tracts 22:</u> E1/4	80.00	HBP	M H Hedlin Estate 12.5%	Frank A Howard 3.000000% G Wilmer Lundbeck 2.500000% Edward L Shea 7.500000% Peter L Shea 5.858333% E T Anderson 1.850000% Walter Duncan 13.42417% J Walter Duncan, Jr. 14.88367% Vincent J Duncan 5.607000% Raymond T Duncan 2.788833% Edwina S Brokaw 5.85834% Joseph I O'Neill, Jr. 36.71666%	When production averages 15 barrels or more of oil per well per day per calendar month, the following will apply: Malco Refineries, Inc. 6.25000% E T Anderson 0.60938% N C Dragistic, Trustee 0.20312% H A Savage 0.40625% When production averages less than 15 barrels of oil per day per well per calendar month, the following will apply: Malco Refineries, Inc. 3.12500% E T Anderson 0.63281% N C Dragistic, Trustee 0.21094% H A Savage 0.42188%	5.59892	2.93847

Two Fee Tracts containing 160.00 acres or 10.81081% of the Unit Area

Total of Twelve Tracts containing 1,480.00 acres



CONTINENTAL OIL COMPANY

P. O. BOX 1377
ROSWELL, NEW MEXICO

PRODUCTION DEPARTMENT
NEW MEXICO DIVISION
A. R. SLAYBAUGH
DIVISION SUPERINTENDENT
V. C. EISSLER
ASSISTANT DIVISION SUPERINTENDENT

October 30, 1963

825 PETROLEUM BUILDING
TELEPHONE: MAIN 2-4202

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.
Secretary-Director

Gentlemen:

Attached is a conformed copy of the Unitization Agreement and the Certificate of Unitization which is recorded in Book 87, Page 150 of the Miscellaneous Records, Chaves County, New Mexico, October 22, 1963.

Please note that Exhibits A and B have been revised.

Yours very truly,

PLC-sg

Attachment

1963 OCT 31 AM

MAIN OFFICE OCC

ATTEST:

CERTIFIED THIS 22nd DAY OF
Oct., 1963 AS A TRUE
AND CORRECT COPY OF THE
ORIGINAL FILED IN THE
OFFICE.

Rec. #7719 C
Fee. \$1.75

State of New Mexico, } ss.
County of Chaves }

FILED FOR RECORD

OCT 22 1963

CERTIFICATE OF UNITIZATION
EASTCAP QUEEN POOL UNIT AGREEMENT
CHAVES COUNTY, NEW MEXICO
EFFECTIVE DATE: NOVEMBER 1, 1963

at 3:00 o'clock P. M., and recorded in
book 87 page 150
Dorothy Herring County Clerk
/s/ Pat Smith Deputy

Dorothy Herring

CLERK OF CHAVES COUNTY

By:

WHEREAS, that certain Unit Agreement for the Development and Operation of the Eastcap Queen Pool Unit, Chaves County, New Mexico, and the Unit Operating Agreement companion thereto, each dated July 16, 1962, has been executed or ratified by Working Interest Owners owning a combined Unit Participation of more than 80% (based upon either Primary Phase or Secondary Phase Participation), and the said Unit Agreement has been executed or ratified by Royalty Owners owning a combined interest of more than 80% (based upon either Primary Phase or Secondary Phase Participation); and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico has approved said Unit Agreement by executing a Certificate of Approval dated October 1, 1963; and

WHEREAS, the approval of the Oil Conservation Commission of the State of New Mexico has been obtained as evidenced by its Order No. R-2515 (Case No. 2837) dated July 9, 1963; and

WHEREAS, a fully executed counterpart of said Unit Agreement was on October 4, 1963, filed for record and is recorded in Book 87, Page 41, of the Oil and Gas Records of Chaves County, New Mexico, such recording having been made as expeditiously as possible after its approval and return by the Commissioner of Public Lands of the State of New Mexico with the consent of the Working Interest Owners so executing or ratifying; and

WHEREAS, Tracts 3, 4, 4a, 6, 7, 8 and 9 which corner, adjoin or are contiguous to each other, (representing a combined Unit Participation in excess of 80% within the original Unit Area depicted on Exhibit B to said Unit Agreement) have been committed to said Unit Agreement and Unit Operating Agreement, 100% of both Working Interest Owners and Royalty Owners in each of such Tracts having executed or ratified the same as provided therein, and each and every prerequisite to the Unit's effectiveness has now been met as provided in Article 16 of the said Eastcap Queen Pool Unit Agreement insofar as said Tracts 3, 4, 4a, 6, 7, 8 and 9 are concerned;

NOW THEREFORE, CONTINENTAL OIL COMPANY as Unit Operator does hereby declare and certify to all of the foregoing, and that said Unit shall be and it is hereby effective as to Tracts 3, 4, 4a, 6, 7, 8 and 9 described in Exhibit "A" of said Unit Agreement as of 7:00 A.M. on the first day of November, 1963.

IN WITNESS WHEREOF, this certificate is executed this 22nd day of October, 1963, by the undersigned, as Unit Operator, pursuant to Article 16 of said Unit Agreement.

CONTINENTAL OIL COMPANY

By

Roy M. Mays
Attorney in Fact

STATE OF TEXAS }
COUNTY OF TARRANT }

The foregoing instrument was acknowledged before me this 22nd day of October, 1963, by ROY M. MAYS, Attorney in Fact of CONTINENTAL OIL COMPANY, a Delaware corporation, on behalf of said corporation.

My Commission Expires:

[Signature]
Notary Public, Tarrant County,
Texas

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
EASTCAP QUEEN POOL UNIT
CHAVES COUNTY, NEW MEXICO

NO. _____

THIS AGREEMENT, entered into as of the 16th day of July,
1962, by and between the parties subscribing, ratifying or
consenting hereto, and herein referred to as "parties hereto",

WITNESSETH: That,

WHEREAS, in the interest of the public welfare and to promote
the conservation and increase the ultimate recovery of oil, gas
and associated minerals from the unitized formation underlying the
Unit Area hereinafter defined, to prevent waste and to protect
the rights of the owners of interests therein, it is deemed
necessary and desirable to enter into this agreement unitizing
the oil and gas rights in and under the unitized formation covered
hereby in order to effect a secondary recovery, pressure maintenance
or other recovery program as hereinafter provided; and

WHEREAS, The parties hereto are the owners of sufficient oil
and gas interests within the Unit Area to give reasonably effective
control of operations therein, and the Commissioner of Public
Lands of the State of New Mexico is authorized to consent to or
approve this agreement on behalf of the State of New Mexico insofar
as it covers and includes lands and mineral interests of the State
of New Mexico, and the Oil Conservation Commission of the State of
New Mexico is authorized to approve this agreement and the conserva-
tion provisions hereof;

NOW, THEREFORE, in consideration of the premises and of the
mutual covenants and agreements herein contained, the parties
hereto commit to this agreement their entire respective oil and
gas rights within the Unit Area hereinafter described insofar as
the unitized formation covered hereby underlies the same, all
upon the following terms and conditions.

ARTICLE I
DEFINITIONS

As used in this agreement, the terms hereinafter set out shall have the following meaning:

1.1 Unit Area, shall mean the lands situated within the Caprock Queen Field, Chaves County, New Mexico, described by Tracts in Exhibit "A" and shown on Exhibit "B", as to which this agreement becomes effective or to which it may be extended as provided herein.

1.2 Unitized Formation, shall mean that subsurface portion or portions of the Unit Area commonly known or described as the Artesia Red Sand member of the Queen formation in the Guadalupian Series. The Artesia Red Sand member is found between the subsurface depths of 3053 and 3105 feet, measured from Kelly bushing, in the Continental Oil Company State "R-34" well No. 4, located 660 feet from the North line and 1980 feet from the East line of Section 34, Township 14 South, Range 31 East, N.M.P.M., Chaves County, New Mexico.

1.3 Unitized Substances, shall mean all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Unitized Formation.

1.4 Working Interest Owner, shall mean any party hereto, including a carried working interest owner, holding an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise, which interest is chargeable with and obligated to pay or bear, either in cash or out of production or otherwise, all or a portion of the cost of drilling, developing, producing and operating the Unitized Formation.

1.5 Royalty Owner, shall mean any party hereto who owns a right to or interest in any portion of the Unitized Substances or proceeds thereof other than that of a Working Interest Owner.

1.6 Commissioner, shall mean the Commissioner of Public Lands of the State of New Mexico.

1.7 Commission, shall mean the Oil Conservation Commission of

the State of New Mexico.

1.8 Tract, shall mean each parcel of land described as such and given a Tract number in Exhibit "A."

1.9 Unit Operating Agreement, shall mean the agreement entitled "Unit Operating Agreement, Eastcap Queen Unit, Chaves County, New Mexico," of the same effective date as the effective date of this agreement, and executed by and between the Working Interest Owners who are parties to this agreement, and any amendment thereof.

1.10 Unit Operator, shall mean the Working Interest Owner designated by the Working Interest Owners pursuant to the Unit Operating Agreement to develop and operate the Unitized Formation.

1.11 Tract Participation shall mean that percentage of Unitized Substances produced from the Unitized Formation which is allocated to a tract under this agreement, whether during the primary phase or the secondary phase.

1.12 Unit Participation of Each Working Interest Owner shall mean the sum of the percentages obtained by multiplying such Working Interest Owner's fractional working interest in each tract by the tract participation of such tract separately for each the primary phase and the secondary phase, and Primary Phase Unit Participation shall mean such Unit Participation during the primary phase, and Secondary Phase Unit Participation shall mean such Unit Participation during the secondary phase.

1.13 Outside Substances, shall mean all substances obtained from any source other than the Unitized Formation, and which are injected into the Unitized Formation.

1.14 Oil and Gas Rights, shall mean the right to explore, develop and operate lands within the Unit Area for the production of Unitized Substances or to share in the production so obtained or the proceeds thereof.

1.15 Primary Phase shall mean that period from the effective date until 7 a.m. on the first day of the month next following the month during which the cumulative total production from August 1, 1960, has reached 350,000 barrels (the cumulative production used

herein shall be from individual lease operators' reports to the NMOCC from August 1, 1960, until the effective date of unitization and then from the unit operator's report to the NMOCC until a total of 350,000 barrels has been produced).

1.16 Secondary Phase shall mean that period commencing upon termination of the primary phase and continuing throughout the duration hereof.

ARTICLE 2

EXHIBITS

2.1 Exhibits. Attached hereto are the following exhibits incorporated herein by reference:

2.1.1 Exhibit "A," is a schedule describing each Tract in the Unit Area and showing its Tract Participation.

2.1.2 Exhibit "B," is a map of the Caprock Queen Field, showing the boundary lines of the Unit Area and Tracts thereon.

2.2 Reference to Exhibits. Whenever in this agreement reference is made to any of said exhibits, such reference shall mean said exhibits as originally attached hereto; or if the same have been revised, it shall mean the latest revision thereof.

2.3 Exhibits Considered Correct. Said exhibits for all purposes of this agreement shall be considered as true and correct unless and until they are revised or corrected as herein provided.

2.4 Correcting Errors. The shapes and descriptions of the respective Tracts have been established using the best information available. In the event it subsequently appears that any Tract should, because of diverse royalty or working interest ownership on the effective date hereof, be divided into more than one Tract, or that any mechanical miscalculation has been made, Unit Operator, with the approval of Working Interest Owners, may correct such mistake by revising the exhibits to conform to the facts. Such corrections shall not include any re-evaluation of previously established engineering or geological interpretations used in establishing Tract Participation. Each such revision of exhibits, if made after this agreement becomes effective, shall be effective at 7:00 o'clock a.m. on the first day of the calendar month next

following, the filing of the exhibit relating thereto or on such other date as is determined by Working Interest Owners. Any such revision made prior to the effective date hereof shall be effective on the effective date.

2.5 Filing Revised Exhibits. If and when the exhibits, or any revision thereof, are revised pursuant to this agreement, Unit Operator shall file two copies of such revised exhibits with the Commissioner, and shall certify and file the revised exhibits for record in the County or Counties in which this agreement is filed.

ARTICLE 3

CREATION AND EFFECT OF UNIT

3.1 Oil and Gas Rights Unitized. Subject to the terms and conditions of this agreement, all the Oil and Gas Rights of the Royalty Owners in and to the lands described in Exhibit "A", and all of the Oil and Gas Rights of the Working Interest Owners in and to said lands are hereby unitized insofar as said respective Oil and Gas Rights pertain to the Unitized Formation, all to the same extent as if the Unitized Formation had been included in a single lease executed by all the Royalty Owners, as lessors, in favor of all the Working Interest Owners, as lessees, and as if said lease had been subject to all of the terms and conditions of this agreement.

3.2 Personal Property Excepted. Working Interest Owners have each individually heretofore placed in or on their wells and in or on lands affected by this agreement, various items of personal property which are lease and well equipment, as to all of which Working Interest Owners have the right, as provided in their respective leases, to remove such property from the premises and all of which installations were made with the intention and understanding that all of the same would be and remain personal property and that no part thereof would be or become a part of the realty. Working Interest Owners except from the terms and provisions of this agreement, and hereby sever from said lands, for all purposes, all such lease and well equipment which may be or may hereafter become located in or on the lands or in the wells on the lands affected hereby. To conform their respective investments in such equipment, Working Interest Owners have made a separate agreement

with each other with respect thereto.

3.3 Amendment of Leases and Other Agreements. The provisions of the various leases, agreements, division and transfer orders, or other instruments covering the respective Tracts or the production therefrom are amended to the extent necessary to make them conform to the provisions of this agreement, but otherwise shall remain in effect.

3.4 Continuation of Leases and Term Royalties. Unit Operations conducted on any part of the Unit Area shall be considered with respect to leases and term royalties as follows:

3.4.1 Operations, including drilling operations, conducted with respect to the Unitized Formation on any part of the Unit Area, or production from any part of the Unitized Formation, except for the purpose of determining payments to Royalty Owners, shall be considered as operations upon or production from each Tract, and such operations or production shall continue in effect each lease or term royalty interest as to all lands covered thereby just as if such operations had been conducted and a well had been drilled on and was producing from each Tract.

3.4.2 Any lease embracing lands of the State of New Mexico 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.

3.4.3 Any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto, shall be segregated as to the portion committed and that portion not committed, and the terms of such lease shall apply separately as to such segregated portions commencing as of the effective date hereof. Notwithstanding any of the provisions of this agreement to the contrary, any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto shall continue in full force and effect beyond the term provided therein as to all lands embraced in such lease (whether within or without the Unit Area), (1) if, and for so long as Unitized Substances

are capable of being produced in paying quantities from some part of the lands embraced in such lease committed to this agreement, of (ii) if, and for so long as some part of the lands embraced in such State lease are included in the Participating Area; or (iii) if, at the expiration of the secondary term, the lessee or the Unit Operator is then engaged in bona fide drilling or reworking operations on some part of the lands embraced therein and for so long as such operations are being diligently prosecuted, and if they result in the production of Unitized Substances, said lease shall continue in full force and effect as to all of the lands embraced therein, as provided in (i) or (ii) above.

3.5 Titles Unaffected by Unitization. Nothing herein shall be construed to result in the transfer of title to the Oil and Gas Rights covered hereby between the parties hereto or to Unit Operator, other than the right to exercise such Oil and Gas Rights and to share in the Unitized Substances or the proceeds therefrom to the extent and manner herein provided.

3.6 Injection Rights. Royalty Owners hereby grant unto Working Interest Owners the right to inject into the Unitized Formation any substances in whatever amounts the Working Interest Owners deem expedient, including the right to place and maintain injection wells on the Unit Area and to use producing or abandoned oil or gas wells for said purposes.

ARTICLE 4

PLAN OF OPERATIONS

4.1 Unit Operator. Working Interest Owners are, as of the effective date of this agreement, entering into a Unit Operating Agreement, designating Continental Oil Company Unit Operator. Unit Operator shall have, subject to the terms, provisions and limitations expressed in the Unit Operating Agreement, the exclusive right to develop and operate the Unit Area for the production of Unitized Substances. Such operations shall be conducted in conformity with the provisions of this agreement and the Unit Operating Agreement. In the event of any conflict between such agreements, this agreement shall govern.

4.2 Lien of Unit Operator. Unit Operator shall have a lien upon the interests of Working Interest Owners in the Unit Area to the extent provided in the Unit Operating Agreement.

4.3 Operating Methods. To the end that the quantity of Unitized Substances ultimately recoverable may be increased and waste prevented, Working Interest Owners shall, with diligence and in accordance with good engineering and production practices, engage in secondary recovery operations by the injection of water or other substance into the unitized formation.

4.4 Change of Operating Methods. Such other methods of operation as may from time to time be determined by Working Interest Owners to be feasible, necessary or desirable to efficiently and economically increase the ultimate recovery of Unitized Substances may be conducted by Working Interest Owners. Nothing herein contained shall prevent Working Interest Owners from discontinuing or changing in whole or in part any particular method of operation if, in their opinion, such method of operation is no longer in accord with good engineering or production practices.

ARTICLE 5

TRACT PARTICIPATION

5.1 Tract Participation. The Tract Participation of each tract for each the primary phase and the secondary phase is shown in Exhibit "A." Tract Participation for the primary phase for each tract is the percentage derived by dividing estimated primary production remaining recoverable by ordinary means underlying that tract by the estimated primary production remaining recoverable by ordinary means underlying the Unit Area, and Tract Participation for the secondary phase for each tract is the percentage derived by dividing the estimated reserves recoverable by secondary recovery operations for that tract by estimated reserves recoverable by secondary operations underlying the Unit Area, all with respect to the Unitized Formation.

5.2 Relative Tract Participations. Whenever the Unit Area is enlarged or reduced, the revised Tract Participations of the respective tracts included within the Unit Area for each the primary phase and the secondary phase, prior to such enlargement

or reduction, shall remain in the same ratio one to the other.

ARTICLE 6

ALLOCATION OF UNITIZED SUBSTANCES

6.1 Allocation to Tracts. All Unitized Substances produced and saved shall be apportioned among and allocated to the several Tracts within the Unit Area in accordance with the respective Tract Participations effective hereunder during the respective periods such Unitized Substances were produced, as set forth in Exhibit "A." 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.

6.2 Distribution within Tracts. The Unitized Substances allocated to each Tract shall be distributed among, or accounted for to, the parties 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 participated 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.

6.3 Taking Unitized Substances in Kind. The Unitized Substances allocated to each Tract shall be delivered in kind to the respective parties entitled thereto by virtue of the ownership of Oil and Gas Rights therein or by purchase from such owners. Such parties shall have the right to construct, maintain and operate within the Unit Area all necessary facilities for that purpose, provided the same are so constructed, maintained and operated as not to interfere with operations carried on pursuant hereto. Any extra expenditures incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party receiving the same in kind.

6.4 Failure to Take in Kind. To the extent that any party entitled to take and receive in kind any portion of the Unitized Substances shall fail to take or otherwise adequately dispose of

the same currently as and when produced, then so long as such conditions continue, Unit Operator, as agent and for the account and at the expense of such party shall, in order to avoid curtailing the operation of the Unit Area, dispose of such production on a day-to-day basis in any reasonable manner Unit Operator sees fit, and the account of such party shall be charged therewith as having received the same. The proceeds, if any, of the Unitized Substances so disposed of by Unit Operator shall be paid to the party entitled thereto. Notwithstanding the foregoing, Operator shall not make a sale into interstate commerce of any other party's share of gas production without first giving such other party sixty days' notice of such intended sale.

6.5 Responsibility for Royalty Settlements. Any party receiving in kind or separately disposing of all or part of the Unitized Substances allocated to any Tract, or receiving the proceeds therefrom if the same is sold or purchased by Unit Operator, shall be responsible for the payment of, and shall indemnify all other parties, including Unit Operator, against any liability for any and all royalties, overriding royalties, production payments and any and all other payments chargeable against or payable out of such Unitized Substances or the proceeds therefrom.

6.6 Royalty on Outside Substances. With respect to any outside substance consisting of natural gas, fifty percent (50%) of any like substance contained in Unitized Substances subsequently produced and sold or used for other than operations hereunder shall be deemed to be a recovered outside substance until the aggregate of said recovered outside substance equals the accumulated volume of such outside substance so injected into the Unitized Formation.

No payment shall be due or payable to royalty owners on any substance which is classified hereby as a recovered outside substance.

ARTICLE 7

USE OR LOSS OF UNITIZED SUBSTANCES

7.1 Use of Unitized Substances. Working Interest Owners may use as much of the Unitized Substances as they deem necessary for the operation and development of the Unit Area, including but not limited to the injection thereof into the Unitized Formation.

7.2 Royalty Payments. No royalty, overriding royalty, production or other payments shall be payable upon or with respect to Unitized Substances used or consumed in the operation or development of the Unit Area or which may be otherwise lost or consumed in the production, handling, treating, transportation or storing of Unitized Substances.

ARTICLE 8

TRACTS TO BE INCLUDED IN UNIT

8.1 Percentages of Commitment Required. On and after the effective date hereof and until the enlargement or reduction thereof, the Unit Area shall be composed of the following Tracts listed in Exhibit "A" which corner, adjoin or are contiguous to each other:

8.1.1 Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the working interest have signed or ratified this agreement and Royalty Owners owning eighty percent (80%) or more of the royalty interest have signed or ratified this agreement; and

8.1.2 Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the working interest have signed or ratified this agreement and Royalty Owners owning less than eighty percent (80%) of the royalty interest have signed or ratified this agreement, and as to which (a) all Working

Interest Owners in such Tract join in a request for the inclusion of such Tract in the Unit Area, and further as to which (b) One hundred percent (100%) of the combined voting interests of Working Interest Owners in all Tracts which meet the requirements of Section 8.1.1 vote in favor of the inclusion of such Tract. For the purpose of this Section 8.1.2 the voting interest of each Working Interest Owner shall be equal to the ratio (expressed in percentage) which the total of such Working Interest Owner's Unit Participation attributable to Tracts which qualify under Section 8.1.1 bears to the total of the Unit Participation of all Working Interest Owners attributable to all Tracts which qualify under said Section 8.1.1; and

8.1.3 Each Tract as to which Working Interest Owners owning less than one hundred percent (100%) of the working interest have signed or ratified this agreement, regardless of the percentage of royalty interest therein that is committed hereto, and as to which (a) the Working Interest Owner who operates the Tract and all of the other subscribing Working Interest Owners in such Tract have joined in a request for inclusion of such Tract in the Unit Area and have executed and delivered an indemnity agreement acceptable to the other Working Interest Owners in the Unit Area indemnifying and agreeing to hold such parties harmless from and against all claims and demands that may be made by the nonsubscribing owners in such Tract on account of the inclusion of the same in the Unit Area, and further as to which (b) one hundred percent (100%) of the combined voting interest of the Working Interest Owners in all Tracts which meet the requirements of Sections 8.1.1 and 8.1.2 above, vote in favor of the inclusion of such Tract. For the purposes of this Section 8.1.3 the voting interest of each Working Interest Owner shall be equal to the ratio (expressed in percentage) which the total of such Working Interest Owner's Unit Participation attributable to Tracts which qualify under Sections 8.1.1 and 8.1.2 bears to the total Unit Participation of all Working Interest Owners attributable to all Tracts which qualify under said Sections 8.1.1 and 8.1.2.

8.2 Subsequent Commitment of Interest to Unit. Any interest in any tract within the Unit Area not committed hereto prior to the effective date of this agreement may thereafter be committed hereto upon compliance with the applicable provisions of this article hereof, at any time for a period to and including six months after the effective date of this agreement on the same basis of participation as provided in this article and in Article 5, by the owner or owners thereof subscribing, ratifying, or consenting in writing to this agreement and, if the interest is a working interest, by the owners of such interest subscribing also to the Unit Operating Agreement.

It is understood and agreed however, that from and after six months from the effective date hereof, the commitment hereto of any interest in any tract within the Unit Area shall be upon such terms and conditions as may be negotiated by Working Interest Owners and owners of such interest, and upon approval by the Commissioner.

8.3 Revision of Exhibits. In the event any of the Tracts described in Exhibit "A" fail to qualify for inclusion in the Unit Area, Unit Operator shall recompute, using the original basis of computation, the Tract Participation of each of the qualifying Tracts and shall revise Exhibits "A" and "B" accordingly. Said revised exhibits shall be effective as of the effective date hereof.

ARTICLE 9

TITLES

9.1 Removal of Tract from Unit Area. In the event a Tract ceases to have sufficient Working Interest Owners or Royalty Owners committed to this agreement to meet the conditions of Article 8 because of failure of title of any party hereto, such Tract shall be eliminated from the Unit Area as of the first day of the calendar month in which such failure of title is finally determined; provided, however, that a Tract shall not be removed from the Unit Area if, within ninety (90) days of the date of final determination of the failure of title, Working Interest Owners and Royalty Owners become parties to this agreement in sufficient numbers to meet the qualifying provisions of Section 8.1.1 or the Tract otherwise qualifies under the provisions of

Section 8.1.2 or 8.1.3.

9.2 Revision of Exhibits. In the event any Tract is eliminated from the Unit Area because of the failure of title pursuant to the provisions of this Article, Unit Operator shall recompute the Tract Participation of each of the Tracts remaining in the Unit Area and shall revise Exhibits "A" and "B" accordingly. Said revised exhibits shall be effective as of the first day of the calendar month in which such failure of title is finally determined.

9.3 Working Interest Titles. If title to a working interest fails, the rights and obligations as between the Working Interest Owners in respect thereto shall be governed by the Unit Operating Agreement.

9.4 Royalty Owner Titles. If title to a royalty interest fails, but the Tract to which it relates is not eliminated from the Unit Area, the party whose title failed shall not be entitled to share hereunder in respect to such interest.

9.5 Production Where Title in Dispute. If the title or right of any person claiming the right to receive in kind all or any portion of the Unitized Substances allocated to a Tract is in dispute, Unit Operator at the discretion of Working Interest Owners shall either:

9.5.1 Require that the person or persons to whom such Unitized Substances are delivered or to whom the proceeds thereof are paid, furnish security for the proper accounting therefor to the rightful owner or owners in the event the title or right of such person or persons shall fail in whole or in part, or

9.5.2 Withhold and market the portion of Unitized Substances with respect to which title is in dispute, and impound the proceeds thereof until such time as the title or right thereto is established by a final judgment of a court of competent jurisdiction or otherwise to the satisfaction of Working Interest Owners, whereupon the proceeds so impounded shall be paid to the person or persons rightfully entitled thereto.

ARTICLE 10

EASEMENTS OR USE OF SURFACE

10.1 Grant of Easements. The parties hereto, to the extent of their rights and interests, hereby grant to Working Interest

Owners the right to use as much of the surface of the land within the Unit Area as may be reasonably necessary for the operation and development of the Unit Area hereunder; provided, that nothing herein shall be construed as leasing or otherwise conveying to Working Interest Owners a site for a water, gas injection, processing or other plant, or camp site.

10.2 Use of Water. Working Interest Owners shall have free use of water from the Unit Area for operations hereunder except water from Royalty Owners' wells, private lakes, ponds, or irrigation ditches.

10.3 Surface Damages. Working Interest Owners shall pay the rightful owners for damages to growing crops, timber, fences, improvements and structures on the Unit Area resulting from operations hereunder.

ARTICLE 11

ENLARGEMENTS OF UNIT AREA

11.1 Enlargements of Unit Area. The Unit Area may be enlarged to include acreage reasonably proved to be productive under such terms and conditions as determined by the Working Interest Owners, including but not limited to, the following, and if the acreage qualifies as provided in Article 8:

11.1.1 The participation to be allocated to the acreage added to the Unit Area shall be based on all available information to the end that a reasonable and fair participation shall be so allocated.

11.1.2 There shall never be any retroactive allocation or adjustment of operating expenses or of interests in the Unitized Substances produced, or proceeds thereof, by reason of an enlargement of the Unit Area; provided, however, this limitation shall not prevent an adjustment of investment by reason of such enlargement.

11.1.3 In the event of an enlargement of the Unit Area, Unit Operator shall, subject to Section 5.2, recompute the Tract Participation of each Tract within the Unit Area as enlarged and shall revise Exhibits "A" and "B" accordingly.

11.1.4 The effective date of any enlargement of the Unit Area shall be 7:00 o'clock a.m. on the first day of the

calendar month following compliance with conditions for enlargement as specified by Working Interest Owners, upon approval of the enlargement of the Unit Area by the Commissioner and the Commission, and the recording of revised Exhibits "A" and "B" in the records of the County or Counties in which this agreement is recorded.

ARTICLE 12

TRANSFER OF INTEREST

12.1 Agreement is a Covenant. All of the terms and provisions of this agreement shall extend to, be binding upon and inure to the benefit of the respective heirs, devisees, legal representatives, successors and assigns of the parties hereto, and shall constitute a covenant running with the lands, leases and interests covered hereby.

12.2 Effect of Transfers. Any transfer, assignment or conveyance of all or any part of any interest owned by any party hereto with respect to any Tract shall be made expressly subject to this agreement. No such transfer, assignment or conveyance shall be binding for any purpose upon any party hereto other than the party so conveying the same, until the first day of the calendar month next succeeding the date of receipt by Unit Operator of a certified copy of the recorded instrument evidencing such change in ownership.

12.3 Waiver of Rights to Partition. Each party hereto covenants that, during the existence of this agreement, such party shall not resort to any action at law or in equity to partition the Unit Area or the facilities used in the development or operation thereof and to that extent waives the benefits of all laws authorizing such partition.

ARTICLE 13

RELATIONSHIP OF PARTIES

13.1 No partnership. The duties, obligations and liabilities of the parties hereto are intended to be several and not joint or collective, and nothing herein contained shall ever be construed to create an association, trust or 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.

13.2 No Sharing of Market. Nothing in this agreement shall be construed as providing, directly or indirectly, for any co-operative refining or joint sale or cooperative marketing of Unitized Substances.

13.3 Royalty Owners Free of Costs. It is understood and agreed that this agreement shall never be construed as imposing upon any Royalty Owner any obligation to pay for any development or operating expense unless such Royalty Owner is obligated to pay for same by the terms of agreements existing before the execution of this agreement.

13.4 Information to Royalty Owners. Each Royalty Owner shall be entitled to all information in possession of Unit Operator to which such Royalty Owner is entitled by his existing agreement with any Working Interest Owner with the express stipulation that if, by reason of this agreement, such information is not available, the nearest approximation or equivalent of such information shall be made available.

ARTICLE 14

LAWS AND REGULATIONS

14.1 Laws and Regulations. This agreement shall be subject to the conservation laws of the State of New Mexico, to the valid rules, regulations and orders of the Oil Conservation Commission of New Mexico and to all other applicable federal, state and municipal laws, rules, regulations and orders. It is not the intention of this agreement to limit, restrict or prorate unit production, it being recognized that such powers are exclusively exercised by governmental authority.

ARTICLE 15

FORCE MAJEURE

15.1 Force Majeure. All obligations of each party hereto, except for the payment of money, shall be suspended while said party is prevented from complying therewith, in whole or in part, by strikes, fire, war, civil disturbances, acts of God, federal, state or municipal laws, orders or regulations, inability to

secure materials or other causes beyond the reasonable control of said party; provided, however, that performance shall be resumed within a reasonable time after such cause has been removed; and provided further that no party shall be required against its will to adjust or settle any labor dispute. This agreement or the leases or other interests subject hereto shall not be terminated by reason of suspension of unit operations due to the aforesaid causes.

ARTICLE 16

EFFECTIVE DATE

16.1 Effective Date. 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 o'clock a.m. of the first day of the month next following (a) the execution or ratification of this agreement and the Unit Operating Agreement by Working Interest Owners owning a combined Unit Participation of at least eighty percent (80%), and the execution or ratification of this Agreement by Royalty Owners owning a combined interest of at least eighty percent (80%) of the royalty interest, in said Unit Area; (b) the approval of this agreement by the Commissioner and the Commission and (c) the filing of at least one counterpart of this agreement for record in the records of Chaves County, New Mexico, by Unit Operator; and provided, further, that if (a) and (b) above are not accomplished on or before November 1, 1963, this agreement shall ipso facto terminate on said date (hereinafter called "termination date") and thereafter be of no further force or effect, unless prior thereto this agreement has been executed or ratified by Working Interest Owners owning a combined Unit Participation of at least fifty percent (50%) and Working Interest Owners owning a combined Unit Participation of at least eighty percent (80%) committed to this agreement have decided to extend said termination date for a period not to exceed six months. If said termination date is so extended and (a) and (b) above are not accomplished on or before said extended termination date, this agreement shall ipso facto terminate on said extended termination date and thereafter be of

no further force or effect. For the purposes of this Article, ownership shall be computed on the basis of Unit Participation as determined from Exhibit "C" attached to the Unit Operating Agreement.

16.2 Certificate of Effectiveness. Unit Operator shall, within thirty (30) days after the effective date of this agreement, file with the Commissioner and the Commission, and file for record in the office or offices 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.

ARTICLE 17

TERM

17.1 Term. The term of this agreement shall be for and during the time that Unitized Substances are produced in paying quantities and as long thereafter as drilling, reworking or other operations are prosecuted without cessation of more than ninety (90) consecutive days, unless sooner terminated by Working Interest Owners in the manner hereinafter provided.

17.2 Termination by Working Interest Owners. This agreement may be terminated, with the approval of the Commissioner, by Working Interest Owners owning eighty percent (80%) Unit Participation whenever such Working Interest Owners determine that unit operations are no longer profitable, feasible or in the interest of conservation.

17.3 Effect of Termination. Upon termination of this agreement, the further development and operation of the Unit Area as a unit shall be abandoned, unit operations shall cease, and thereafter the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate Tracts just as if this agreement had never been entered into.

17.4 Salvaging Equipment upon Termination. If not otherwise covered by the leases unitized under this agreement, Royalty Owners hereby grant Working Interest Owners 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.

ARTICLE 18
COUNTERPART

18.1 Separate Counterparts or Ratifications. This agreement may be executed in any number of counterparts and each executed counterpart shall have the same force and effect as an original instrument and as if all of the parties to the aggregate counterparts had signed the same instrument; or, may be ratified by a separate instrument in writing referring to this agreement. Each such ratification shall have the force and effect of an executed counterpart hereof and of adopting by reference all of the provisions hereof.

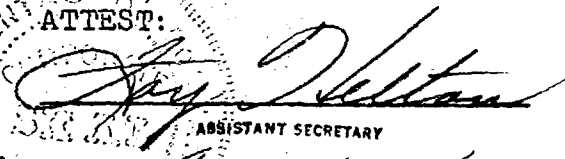
18.2 Joinder in Dual Capacity. It shall not be necessary for parties owning both working interests and royalty interests to execute this agreement in both capacities in order to commit both classes of interests. Execution hereof by any such party in one capacity shall also constitute execution in the other capacity.

ARTICLE 19

GENERAL

19.1 Amendments Affecting Working Interest Owners. Amendments hereto relating wholly to Working Interest Owners may be made if signed by all Working Interest Owners.

IN WITNESS WHEREOF, The parties hereto have executed this agreement upon the respective dates indicated opposite their respective signatures.

ATTEST:

ASSISTANT SECRETARY
Date: August 15, 1962

CONTINENTAL OIL COMPANY

By John R. Kell
Attorney in Fact

UNIT OPERATOR AND WORKING
INTEREST OWNER

ATTEST:

COTTAGE BAKERS

By _____

Date: _____

Law	<i>W</i>
Contract	
Exp.	
Prod.	<i>3</i>

Date:

ATTEST:

Date:

Date:

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Date:

GULF OIL CORPORATION

By

Attorney In Fact

TEXAS PACIFIC COAL AND OIL
COMPANY

By

BILL A. SHELTON

JOSEPH I. O'NEILL

UNION OIL COMPANY OF
CALIFORNIA

By

WESTERN DEVELOPMENT COMPANY

By

S. P. YATES DRILLING COMPANY

By

XXXXXX

ATTEST:

GULF OIL CORPORATION

By _____

Date: _____

ATTEST:

TEXAS PACIFIC COAL AND OIL
COMPANY

By _____

Date: _____

Date: _____

BILL A. SHELTON

Date: _____

JOSEPH I. O'NEILL

ATTEST:

UNION OIL COMPANY OF
CALIFORNIA

By _____

Date: _____

ATTEST:

WESTERN DEVELOPMENT COMPANY

By _____

Date: _____

ATTEST:

S. P. YATES DRILLING COMPANY

By _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

Date: _____

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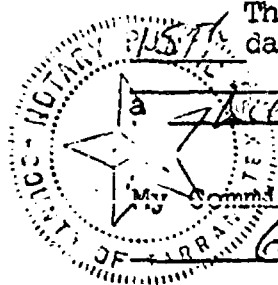
Date: _____

Date: _____

Date: _____

OWNERS OF OVERRIDING
ROYALTIES OR PRODUCTION
PAYMENTS

STATE OF Texas
COUNTY OF Tarrant



The foregoing instrument was acknowledged before me this
day of August, 1962, by JOHN L. KELLY,
Attorney in Fact of Continental Oil Corporation,
a Texas corporation, on behalf of said corporation.

Amelia Wood
Notary Public
Tarrant County, Texas

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____,
a _____ Corporation, on behalf of said corporation.

Notary Public

My Commission Expires: _____

County, _____

STATE OF NEW MEXICO
COUNTY OF CHAVES

The foregoing instrument was acknowledged before me this
day of October, 1962, by W. B. Hopkins,
Attorney in Fact of GULF OIL CORPORATION,
a PENNSYLVANIA corporation, on behalf of said corporation.

My Commission Expires: _____

My Commission Expires August 15, 1964

Eva Marie Cooper
Notary Public
CHAVES County, NEW MEXICO

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____,
of _____
a _____ corporation, on behalf of said corporation.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____
and _____, his wife.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____.

My Commission Expires: _____

Notary Public

County, _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this
day of _____, 1962, by _____
and _____, his wife.

My Commission Expires: _____

Notary Public

County, _____

EXHIBIT "A" - UNIT AGREEMENT
SCHEDULE OF TRACTS
CHAVES COUNTY, NEW MEXICO

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER & EXPIRATION DATE	BASIC ROYALTY	WORKING INTEREST OWNER AND PERCENTAGE	OVERRIDING ROYALTY OWNER AND PERCENTAGE	PERCENTAGE PARTICIPATION PRIMARY PHASE	PERCENTAGE PARTICIPATION SECONDARY PHASE
3	<u>State Land</u> T14S-R31E; Section 27; N1/2	80.00	3-8459 - HBP	State of NM 12.5%	Cottage Eakers Gulf Oil Corp. 95.0% 5.0%	Gulf Oil Corp: Primary Phase Secondary Phase 12.5% 25.0%	10.43681	5.05525
4	T14S-R31E; Section 27; N1/2, N3/2, S1/2	480.00	B-8459 - HBP	State of NM 12.5%	Gulf Oil Corp. 100.0%	None	23.44336	24.57284
4a	T14S-R31E; Section 27; S1/2	80.00	B-8459 - HBP	State of NM 12.5%	Gulf Oil Corp. 100.0%	None	6.40375	6.60359
5	T14S-R31E; Section 35; N1/2NW1/4	40.00	E-5444 - HBP	State of NM 12.5%	R W Fair S P Yates Gus W Arnold International Oil & Gas Corp. S P Yates Drilg Co. 57.0% 10.0% 3.0% 20.0% 10.0%	None	Not committed	
6	T14S-R31E; Section 34; E1/4	320.00	E-5364 - HBP	State of NM 12.5%	Continental Oil Company 100.0%	None	38.98633	35.46061
7	T14S-R31E; Section 34; N3/4NW1/4	40.00	E-1467 - HBP	State of NM 12.5%	Texas Pacific Coal and Oil Company 100.0%	None	4.72972	4.69102
8	T14S-R31E; Section 34; S1/2NW1/4, SW1/4	240.00	E-7662 - HBP	State of NM 12.5%	Gulf Oil Corp. 100.0%	None	15.96406	23.11692
9	T14S-R31E; Section 35; SW1/4NW1/4	40.00	E-3277 - HBP	State of NM 12.5%	Continental Oil Company 100.0%	Phillips Petroleum Company 5.46875%	0.03597	0.28867

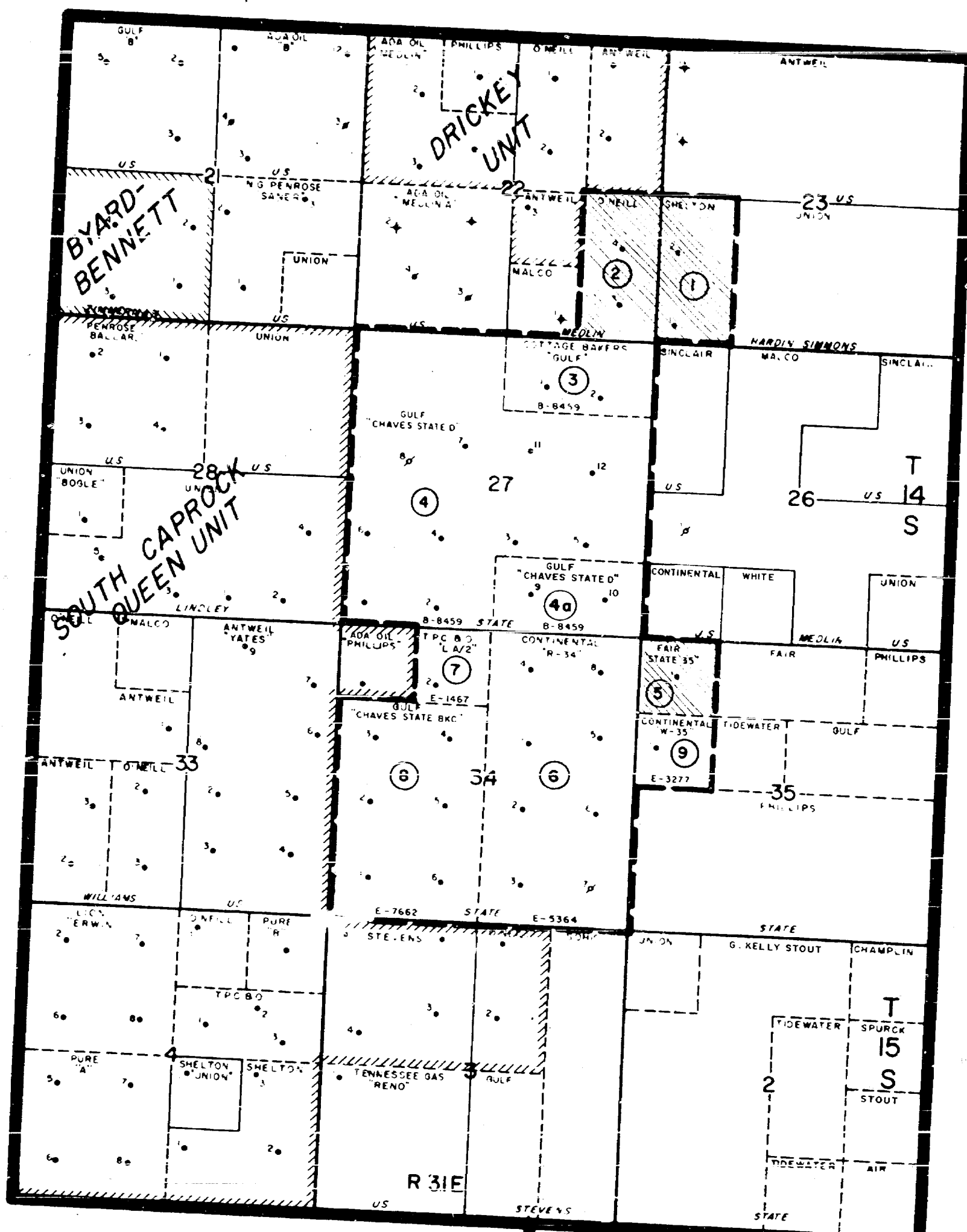
Eight State of New Mexico Tracts containing 1,320.00 acres or 89.1891% of the Unit Area
Seven State of New Mexico Tracts committed containing 1,280.00 acres or 86.4864% of the Unit Area

EXHIBIT "A" - UNIT AGREEMENT--Continued

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	EXPIRATION DATE	BASIC ROYALTY	WORKING INTEREST OWNER AND PERCENTAGE	OVERRIDING ROYALTY OWNER AND PERCENTAGE	PERCENTAGE PARTICIPATION PRIMARY PHASE SECONDARY PHASE
1	<u>Fee or Privately Owned Land</u> T14S-R31E: Section 23: W/4S/4	80.00	HBP	Luther B Harris & wife, Loul 6.25% Hardin-Stimons University 6.25%	Bill A Shelton 93-1/3% Margaret Ross 6-2/3% Secondary Phase: Union Oil Co. of California 50.0% Bill A Shelton 50.0%	Union Oil Company of California: Primary Phase 1/16	Not committed
2	T14S-R31E: Section 22: E/4S/4	30.00	HBP	M. H. Madlin Estate 12.5%	Frank A Howard 3.00000% G Hilmer Lurbeck 2.50000% Edward L Shea 2.50000% Peter L Shea 5.85833% E T Anderson 1.85000% Walter Duncan 13.42917% J Walter Duncan, Jr. 14.88967% Vincent J Duncan 5.60900% Raymond T Duncan 2.78883% Edwina S Brokaw 5.85834% Joseph I O'Neill, Jr. 36.71666%	When production averages 15 barrels or more of oil per well per day per calendar month, the following will apply: Valco Refineries, Inc. 6.25000% E T Anderson 0.60938% N C Dragistic, Trustee 0.20312% H A Savage 0.40525% When production averages less than 15 barrels of oil per day per well per calendar month, the following will apply: Valco Refineries, Inc. 3.12500% E T Anderson 0.63281% N C Dragistic, Trustee 0.21094% H A Savage 0.42188%	Not committed

Two Fee Tracts not committed containing 160.00 acres or 10.87081% of the Unit Area

Total of Ten Tracts containing 1,480.00 acres



COMMITTED ACREAGE ☐

NOT COMMITTED ACREAGE ☐

CONTINENTAL OIL COMPANY EASTCAP QUEEN UNIT CHAVES COUNTY, NEW MEXICO

LEGEND

SCALE 0 1000' 2000'

UNIT AREA —————

TRACT NUMBERS - - - - -


5/18/61
Rev. 6/12/63

FLM-OW
7-18-62

RATIFICATION OF UNIT AGREEMENT
EASTCAP QUEEN UNIT
CHAVES COUNTY, NEW MEXICO

The undersigned is the owner of "oil and gas rights," either as a "Royalty Owner," or "Working Interest Owner," or both, as those terms are defined in that certain Unit Agreement For The Development And Operation Of The Eastcap Queen Pool Unit, Chaves County, New Mexico, dated as of the 16th day of July, 1962, wherein CONTINENTAL OIL COMPANY is designated Unit Operator, and has been furnished with a true copy of said Unit Agreement, and if a Working Interest Owner, with a true copy of that certain Unit Operating Agreement, Eastcap Queen Unit, Chaves County, New Mexico, of even date therewith and companion thereto; and the undersigned ratifies and confirms said Unit Agreement as to all of its interests within the unitized formation underlying the Unit Area described in said Unit Agreement and adopts the same for every purpose as fully as if the undersigned had executed a counterpart thereof, and ratifies, confirms and adopts said Unit Operating Agreement as to any working interest of the undersigned, as fully as if the undersigned had executed a counterpart thereof.

WITNESS the execution hereof this 24th day of
September, 1962.

 *J. I. Norman*
(J. I. Norman) Secretary

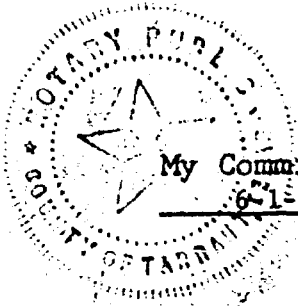
Texas Pacific Coal & Oil Company

R. W. Hines
R. W. Hines, Executive Vice-President

APPROVED
AS TO FORM
[Signature]
AS TO CONTENT

STATE OF Texas I
COUNTY OF Tarrant I

The foregoing instrument was acknowledged before me
this 24th day of September, 1962, by R. W. Hines
Executive Vice-President
of Texas Pacific Coal & Oil Company, a Texas
corporation, on behalf of said corporation.



My Commission Expires:
6-1-63

Ruth Barfield /Ruth Barfield
Notary Public, Tarrant
County, Texas

STATE OF _____ I
COUNTY OF _____ I

The foregoing instrument was acknowledged before me
this _____ day of _____, 1962, by _____

My Commission Expires:

Notary Public, _____
County, _____

RATIFICATION OF UNIT AGREEMENT
EASTCAP QUEEN UNIT
CHAVES COUNTY, NEW MEXICO

The undersigned is the owner of "oil and gas rights," either as a "Royalty Owner," or "Working Interest Owner," or both, as those terms are defined in that certain Unit Agreement For The Development And Operation Of The Eastcap Queen Pool Unit, Chaves County, New Mexico, dated as of the 16th day of July, 1962, wherein CONTINENTAL OIL COMPANY is designated Unit Operator, and has been furnished with a true copy of said Unit Agreement, and if a Working Interest Owner, with a true copy of that certain Unit Operating Agreement, Eastcap Queen Unit, Chaves County, New Mexico, of even date therewith and companion thereto; and the undersigned ratifies and confirms said Unit Agreement as to all of its interests within the unitized formation underlying the Unit Area described in said Unit Agreement and adopts the same for every purpose as fully as if the undersigned had executed a counterpart thereof, and ratifies, confirms and adopts said Unit Operating Agreement as to any working interest of the undersigned, as fully as if the undersigned had executed a counterpart thereof.

WITNESS the execution hereof this 10th day of
September, 1962.

Cottage Baker
H.B. Browning

STATE OF New Mexico X
 COUNTY OF Bernalillo X

The foregoing instrument was acknowledged before me
 this 10th day of September, 1962, by _____
 of _____, a _____
 corporation, on behalf of said corporation.

My Commission Expires: _____

Notary Public, _____
 County, _____

STATE OF New Mexico X
 COUNTY OF Bernalillo X

The foregoing instrument was acknowledged before me
 this 10th day of September, 1962, by _____
H. B. Browning

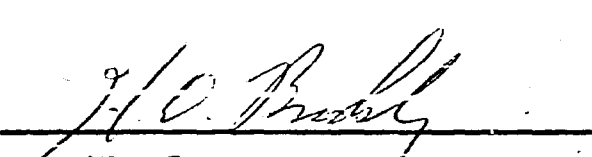
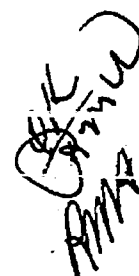


My Commission Expires: _____
2-23-66

Hedwig E. Wank
 Notary Public, Bernalillo
 County, New Mexico

FLM-OW
7-18-62RATIFICATION OF UNIT AGREEMENT
EASTCAP QUEEN UNIT
CHAVES COUNTY, NEW MEXICO

The undersigned is the owner of "oil and gas rights," either as a "Royalty Owner," or "Working Interest Owner," or both, as those terms are defined in that certain Unit Agreement For The Development And Operation Of The Eastcap Queen Pool Unit, Chaves County, New Mexico, dated as of the 16th day of July, 1962, wherein CONTINENTAL OIL COMPANY is designated Unit Operator, and has been furnished with a true copy of said Unit Agreement, and if a Working Interest Owner, with a true copy of that certain Unit Operating Agreement, Eastcap Queen Unit, Chaves County, New Mexico, of even date therewith and companion thereto; and the undersigned ratifies and confirms said Unit Agreement as to all of its interests within the unitized formation underlying the Unit Area described in said Unit Agreement and adopts the same for every purpose as fully as if the undersigned had executed a counterpart thereof, and ratifies, confirms and adopts said Unit Operating Agreement as to any working interest of the undersigned, as fully as if the undersigned had executed a counterpart thereof.

WITNESS the execution hereof this 17th day ofSeptember, 1962³
Vice President
Phillips Petroleum Company

STATE OF Oklahoma XCOUNTY OF Washington XThe foregoing instrument was acknowledged before me
this 19th day of September, 1962, by _____of H. D. Brooks, Vice-President
of Phoenix Petroleum Company, a Delaware
corporation, on behalf of said corporation.

My Commission Expires:

April 7, 1964Notary Public, _____
County, _____CA. PhelpsWashington
Oklahoma

STATE OF _____ X

COUNTY OF _____ X

The foregoing instrument was acknowledged before me
this _____ day of _____, 1962, by _____

My Commission Expires:

Notary Public, _____
County, _____

CONTINENTAL OIL COMPANY
P. O. BOX 1377
ROSWELL, NEW MEXICO

April 18, 1963

Working Interest Owners
Eastcap Queen Unit
(Address List attached)

Gentlemen:

Re: EASTCAP QUEEN UNIT,
CHAVES COUNTY, NEW MEXICO

We are preparing to obtain ratification of the Eastcap Queen Unit Agreement by the royalty owners and the State of New Mexico, and are tentatively planning to hold the hearing before the New Mexico Oil Conservation Commission in June for approval of the Unit Agreement and the proposed waterflood. In this regard, you will recall that the State Land Office gave tentative approval to the form of Unit Agreement which we proposed to use and to its terms. In their examination of the completed agreement, however, the Unit Division requested certain changes in terminology and one deletion which will require the approval of the Working Interest Owners.

Copies of the revised pages to the Unit Agreement are attached. Reference to the Commissioner has been inserted in the following articles: Art. 2.5, p. 5, Art. 8.2, p. 13, Art. 11.1.4, p. 16, Art. 16.1, p. 13, and Art. 17.2, p. 19. A more substantial change was required in Art. 6.6, p. 10; the Commissioner refused to accept the "LPG clause", the last sentence on page 10, and, because this will have no effect on our proposed operations, the sentence has been deleted in its entirety. As you will note, none of these changes affect the rights of the Working Interest Owners in the proposed waterflood operations.

We also request your approval of a change in the "termination date" from May 1, 1963, to November 1, 1963, as shown in line 15 of Article 16.1, page 18.

Please evidence your approval of these changes and your adoption thereof by signing one copy of this letter in the space provided below. Each individual working interest owner who is married should have his spouse join in the execution of this letter. Please return one copy so executed to the Unit Operator.

Yours very truly,

W. A. Mead

CRA-pr
Enc.

The undersigned approve the changes made in the Eastcap Queen Unit Agreement, as described above, re-ratify said Unit Agreement as so revised, and adopt the prior ratification thereof by the undersigned as extending to such revised agreement:

Date 9-23-63

CONTINENTAL OIL COMPANY

By

Ray M. Murphy
ATTORNEY IN FACT

Attorney

CONTINENTAL OIL COMPANY
P. O. BOX 1377
ROSNELL, NEW MEXICO

75

April 18, 1963

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Eastcap Queen Unit
(Address List attached)

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W. G. Mead

CRA-pr
Enc.

The undersigned approve the changes made in the Eastcap Queen Unit Agreement, as described above, reratify said Unit Agreement as so revised, and adopt the prior ratification thereof by the undersigned as extending to such revised agreement:

Date APR 30 1963

GULF OIL CORPORATION

Law	<i>W. G. Mead</i>
Comptroller	<i>W. G. Mead</i>
Exp.	
Pres.	

By *W. G. Mead*
Attorney in Fact

R. W. Hines, Executive Vice-President

CONTINENTAL OIL COMPANY
P. O. BOX 1377
ROSWELL, NEW MEXICO

April 18, 1963

Working Interest Owners
Eastcap Queen Unit
(Address List attached)

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W. G. Mead

CRA-pr
Enc.

The undersigned approve the changes made in the Eastcap Queen Unit Agreement, as described above, reratify said Unit Agreement as so revised, and adopt the prior ratification thereof by the undersigned as extending to such revised agreement:

Date 4-23-1963

COTTAGE BAKERS

By *W. G. Mead*

CERTIFICATE OF APPROVAL

BY COMMISSIONER OF PUBLIC LANDS, STATE OF NEW MEXICO
 EASTCAP QUEEN POOL UNIT
 CHAVES COUNTY, NEW MEXICO

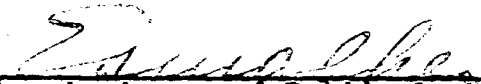
There having been presented to the undersigned Commissioner of Public Lands of the State of New Mexico for examination, the attached Agreement for the development and operation of acreage which is described within the attached Agreement, dated July 16, 1963, which has been executed or is to be executed by parties owning and holding oil and gas leases and royalty interests in and under the property described, and upon examination of said Agreement, the Commissioner finds:

- (a) That such agreement will tend to promote the conservation of oil and gas and the better utilization of reservoir energy in said area.
- (b) That under the proposed agreement the State of New Mexico will receive its fair share of the recoverable oil or gas in place under its lands in the area.
- (c) That each beneficiary Institution of the State of New Mexico will receive its fair and equitable share of the recoverable oil and gas under its lands within the area.
- (d) That such agreement is in other respects for the best interests of the state, with respect to state lands.

NOW, THEREFORE, by virtue of the authority conferred upon me under Sections 7-11-39, 7-11-40, 7-11-41, 7-11-47, 7-11-48, New Mexico Statutes Annotated 1953 Compilation, I, the undersigned, Commissioner of Public Lands of the State of New Mexico, for the purpose of more properly conserving the oil and gas resources of the State, do hereby consent to and approve the said Agreement, and any leases embracing lands of the State of New Mexico within the area shall be and the same are hereby amended to conform with the terms thereof, and shall remain in full force and effect according to the terms and conditions of said Agreement. This approval is subject to all of the provisions of the aforesaid statutes.

IN WITNESS WHEREOF, this Certificate of Approval is executed, with seal affixed, this 1st day of October 19 63.




 Commissioner of Public Lands
 of the State of New Mexico

DRAFT

JMB/ees

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. 2837

Order No. R- 2515

APPLICATION OF CONTINENTAL OIL COMPANY
FOR APPROVAL OF THE EASTCAP QUEEN POOL
UNIT AGREEMENT, CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 28, 1963, at Santa Fe, New Mexico, before Daniel S. Satter Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this July day of July, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Satter, 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, Continental Oil Company, seeks approval of the Eastcap Queen Pool Unit Agreement covering 1.480 acres, more or less, of State and Fee lands in Township 14 South, Range 31 East, NMPM, Chaves County, New Mexico.

(3) That approval of the proposed Eastcap Queen Pool Unit Agreement will in principle tend to promote the conservation of oil and gas and the prevention of waste.

IT IS THEREFORE ORDERED:

(1) That the Eastcap Queen Pool Unit Agreement is

hereby approved.

(2) That although all of said acreage was included within the boundaries of the Santa Caprock Queen Unit Area as described by Order No. R-1728, said acreage was never committed to the

Santa Caprock Unit Agreement, and application has been made to withdraw said acreage from said unit.

(2) That the plan under which the unit area shall be operated shall be embraced in the form of a unit agreement for the development and operation of the Eastcap Queen Pool Unit Area, and such plan shall be known as the Eastcap Queen Pool Unit Agreement Plan.

(3) That the Eastcap Queen Pool Unit Agreement Plan is hereby approved in principle as a proper conservation measure; provided, however, that notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the Oil Conservation Commission of New Mexico by law relative to the supervision and control of operations for the exploration and development of any lands committed to the Eastcap Queen Pool Unit, or relative to the production of oil or gas therefrom.

(4) (a) That the unit area shall be:

NEW MEXICO PRINCIPAL MERIDIAN

CHAVES COUNTY, NEW MEXICO
TOWNSHIP 14 SOUTH, RANGE 31 EAST

Section 22: $E/2 SE/4$

Section 23: $W/2 SW/4$

Section 27: All

Section 34: $NE/4 NW/4$, $S/2 NW/4$,
 $SW/4$, and $E/2$

Section 35: $W/2 NW/4$

containing 1,480 acres, more or less.

(b) That the unit area may be enlarged or contracted as provided in said plan; provided, however, that administrative approval for expansion or contraction of the unit area must also be obtained from the Secretary-Director of the Commission.

(5) That the unit operator shall file with the Commission an executed original or executed counterpart of the Eastcap
Queen Pool Unit Agreement within 30 days after the effective date thereof. In the event of subsequent joinder by any party or expansion or contraction of the unit area, the unit operator shall file with the Commission within 30 days thereafter counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(6) That this order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico and ~~the Director of the United States Geological Survey~~ and shall terminate inso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission immediately in writing of such termination.

(7) 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.



CONTINENTAL OIL COMPANY

P. O. BOX 1377
ROSWELL, NEW MEXICO

PRODUCTION DEPARTMENT
NEW MEXICO DIVISION
A. B. SLAYBAUGH
DIVISION SUPERINTENDENT
V. C. FISSLER
ASSISTANT DIVISION SUPERINTENDENT

June 3, 1963

825 PETROLEUM BUILDING
TELEPHONE: MAIN 2-4202

New Mexico Oil Conservation Commission
Post Office Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr., Secretary-Director

Gentlemen:

Re: APPLICATION FOR HEARINGS-
EASTCAP QUEEN POOL UNIT
AGREEMENT, WATERFLOOD &
CENTRAL TANK BATTERY

We forward herewith application in triplicate for the captioned project. In lieu of submitting logs on all injection wells, due to the large number involved, we are submitting as typical, logs on Continental Oil Company's State R-34 No. 1 (proposed injection) and No. 2 (proposed producer).

A copy of the application is being furnished the State Engineer's office, together with all attachments.

We should appreciate your setting this matter for examiner hearing at your earliest convenience.

Yours very truly,

A. B. Slaybaugh

VTL-pr
Enc.

cc: State Engineer, Box 1079, Santa Fe, N. M.
RGP GW JWK VGM

DOCKET MAILED

Date 6/4/63

2nd Copy
for

PIONEERING IN PETROLEUM PROGRESS SINCE 1875

BEFORE THE OIL CONSERVATION COMMISSION
OF THE
STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF CONTINENTAL
OIL COMPANY FOR APPROVAL OF THE EASTCAP QUEEN
POOL UNIT AGREEMENT EMBRACING 1480.00 ACRES,
MORE OR LESS, LOCATED IN TOWNSHIP 14 SOUTH,
RANGE 31 EAST, NMPM, CHAVES COUNTY, NEW MEXICO;
FOR PERMISSION TO INSTALL AND OPERATE A WATER-
FLOOD WITHIN THE BOUNDARIES OF SAID UNIT AREA;
AND FOR PERMISSION TO PRODUCE THE UNIT WELLS
INTO A CENTRAL TANK BATTERY

A P P L I C A T I O N

Comes now Applicant, Continental Oil Company, and
respectfully requests approval of the Eastcap Queen Pool Unit
Agreement, permission to install and operate a waterflood with-
in said unit, and permission to produce the unit wells into a
central tank battery. The Eastcap Queen Pool Unit Agreement
embraces the following described acreage:

New Mexico Prime Meridian

Township 14 South, Range 31 East

Section 22: E/2 SE/4
Section 23: W/2 SW/4
Section 27: All
Section 34: NE/4 NW/4
 S/2 NW/4
 SW/4
 E/2
Section 35: W/2 NW/4

Containing 1480.00 acres, more or less, in Chaves County, New
Mexico, and in support thereof Applicant would show:

1. That the Eastcap Queen Pool Unit Agreement
is attached hereto and marked Exhibit I.
2. That application has been made to the State
Land Office and approval of the Eastcap
Queen Pool Unit Agreement was received
on April 18, 1963.
3. That the attached lease plat marked Exhibit
II shows the Eastcap Queen Pool Unit and
surrounding area.

100 C-1 & M 6:15


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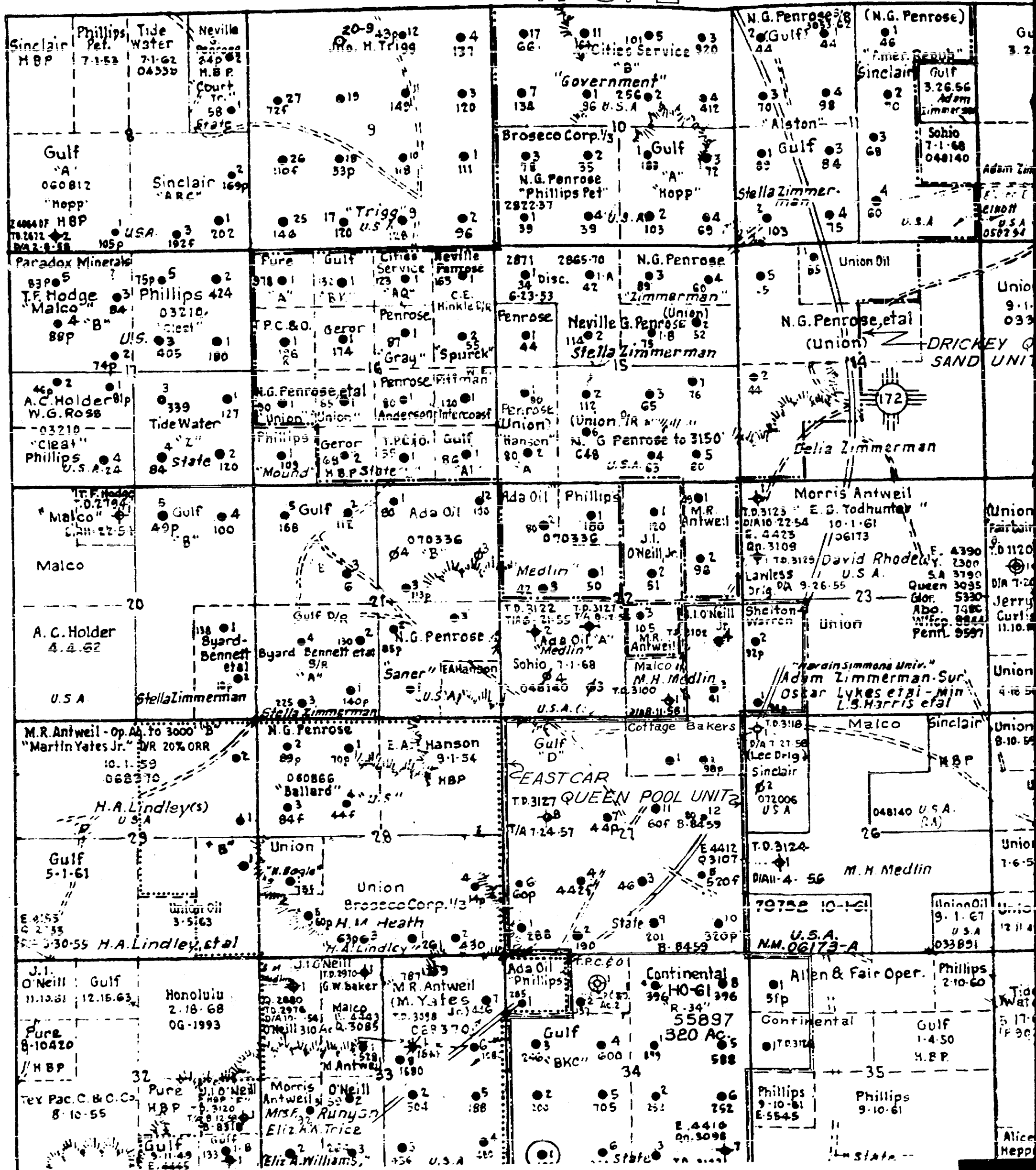
4. That production in the Eastcap Queen Pool is at an advanced stage of depletion and that recovery by primary methods is at or near the economic limit.
5. That engineering investigations indicate that waterflooding the Eastcap Queen Pool will be physically and economically feasible.
5. That agreement between the Working Interest Owners has proceeded to the extent that a logical and systematic secondary recovery operation is assured.
7. That the formation to be unitized and waterflooded is the Artesia Red sand section of the Queen formation which is specifically indicated on the radioactivity logs of the Continental Oil Company State R-34 No. 1 and No. 2 wells attached hereto and marked Exhibit IIIa and IIIb, respectively.
8. That all proposed injection wells are or will be completed in such a manner that injected water will be confined to the Artesia Red sand. The present status of all proposed injection wells is shown on the tabulation of injection well data attached hereto and marked Exhibit IV.
9. That applicant proposes to inject a total of approximately 2,900 barrels of water per day into the 17 proposed injection wells on an 80-acre five-spot pattern. Said water will be obtained from a water well located in the NW/4 of SE/4 of Section 25, T-14S, R-31E, Chaves County, New Mexico under provisions of Permit No. L-3615, Water Lease No. W-130, originally issued to Union Oil Company Of California.

10. That the said waterflood will be installed and operated in conformance with Rule 701E.
11. That the producing operations can be carried on more efficiently if all Unit wells are produced into a central tank battery, which will be served by automatic custody transfer equipment.
12. That the proposed unitization and secondary recovery will result in the recovery of hydrocarbons which would not be recovered by primary methods and is therefore in the interest of conservation and prevention of waste.

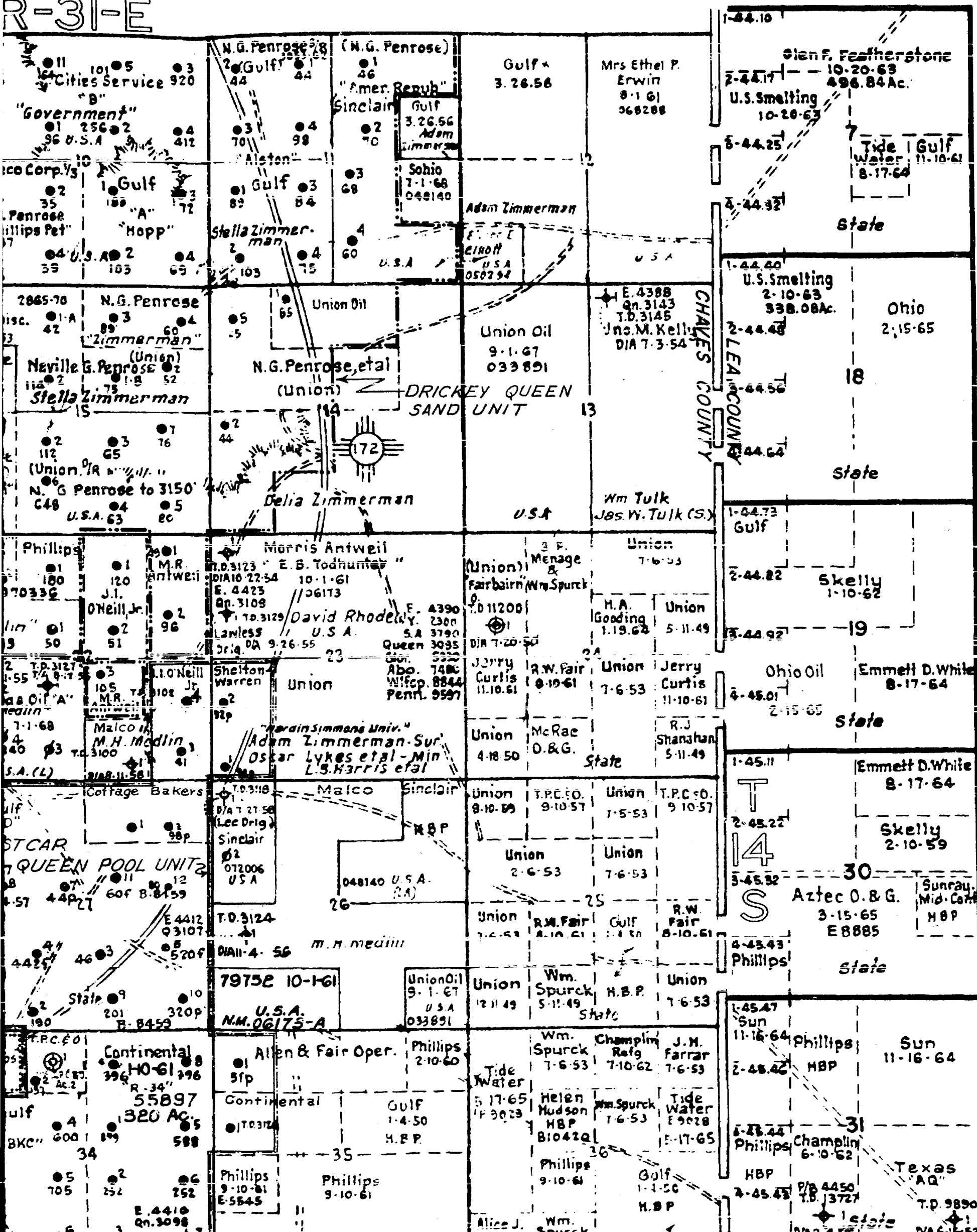
Wherefore, Applicant respectfully requests that this matter be set for hearing before the Commission's duly qualified Examiner and that upon hearing an order be entered approving the Eastcap Queen Unit Agreement, granting permission to install and operate a waterflood within the Unit Area and permitting the production of the Unit wells into a central tank battery as described herein above.

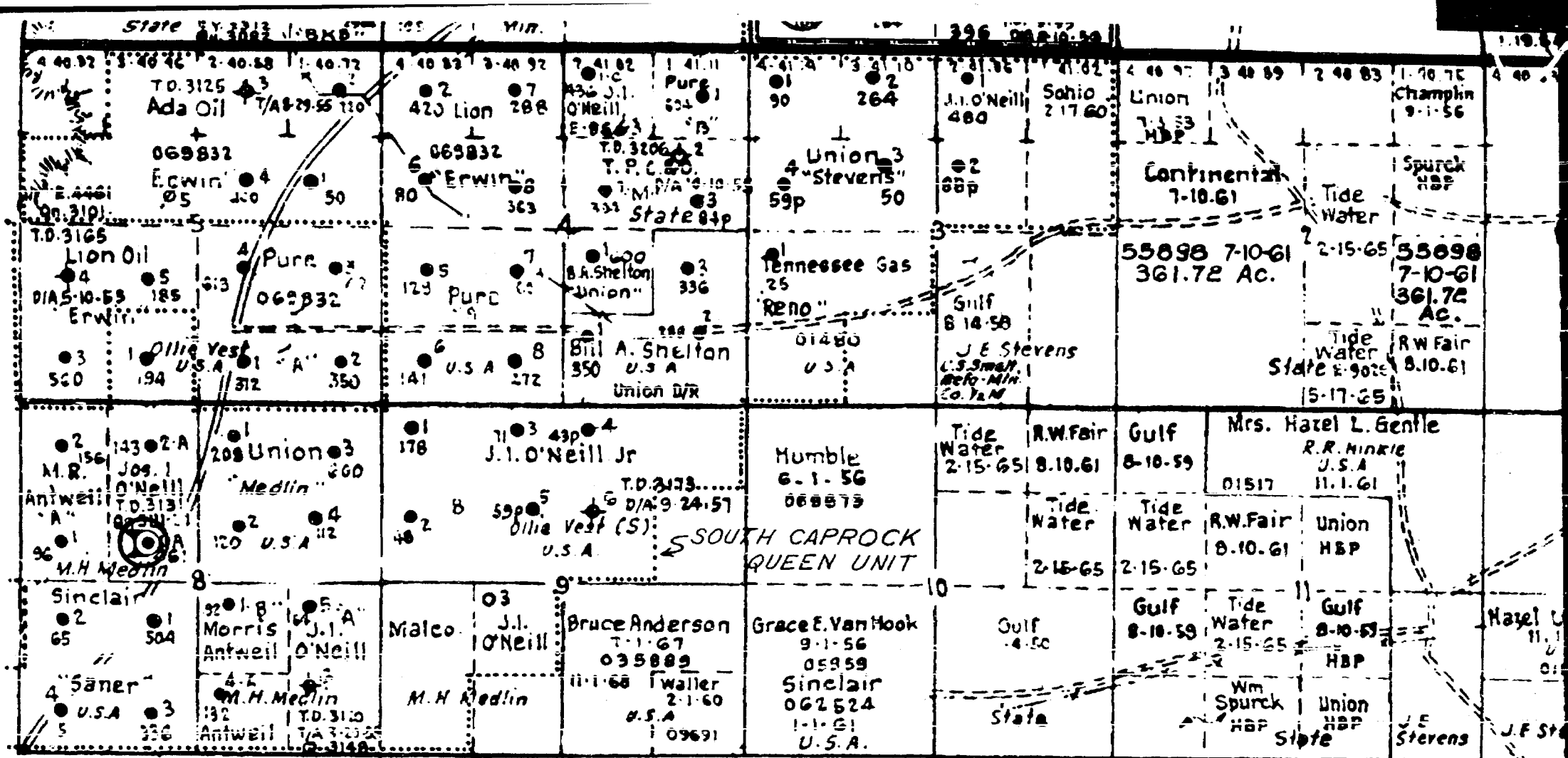
Respectfully Submitted,

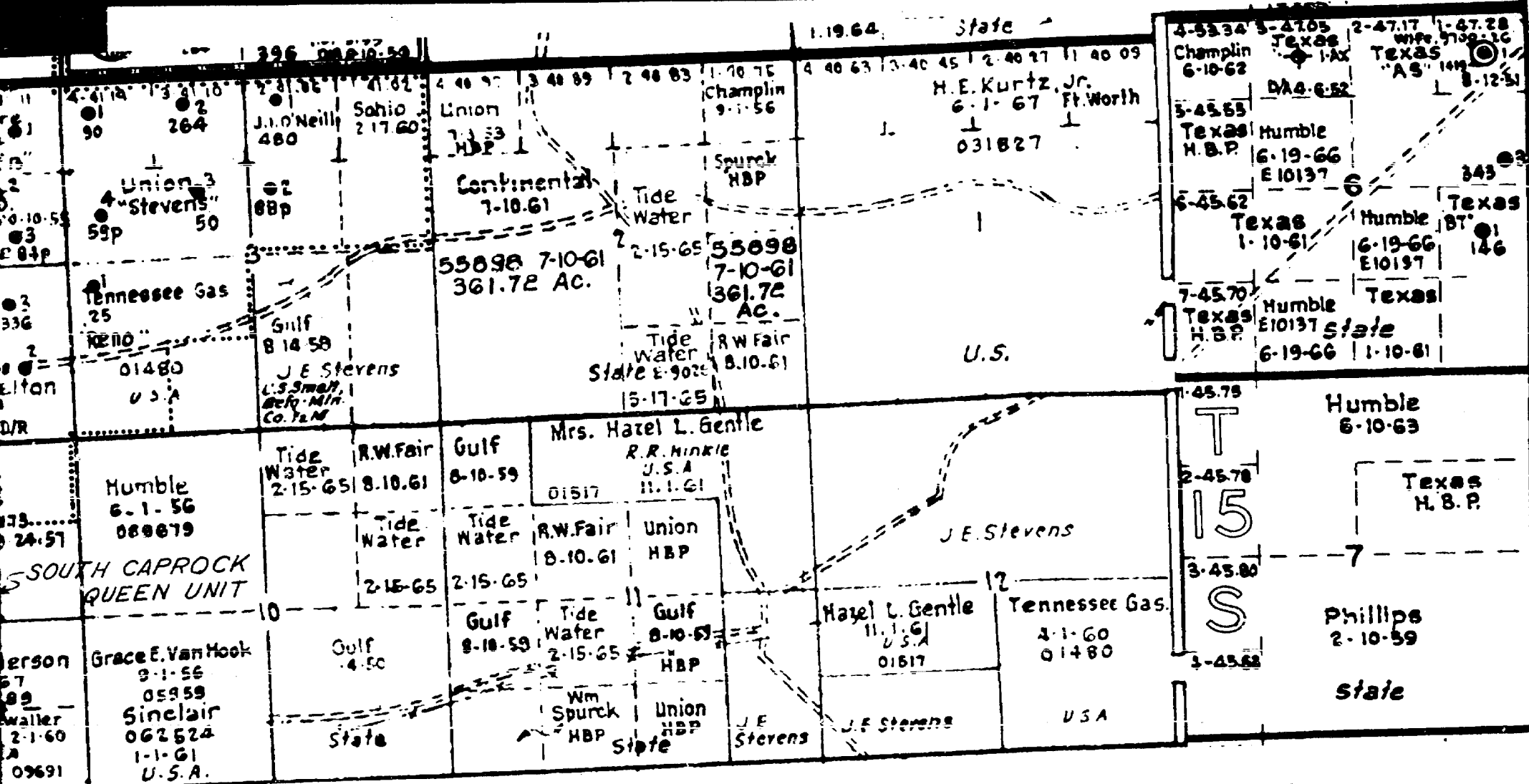

A. B. SLAYBAUGH
Division Superintendent
of Production
New Mexico Division



R-31-E







CONTINENTAL OIL COMPANY
PRODUCTION DEPARTMENT

CAPROCK QUEEN FIELD AREA
CHAVES COUNTY, NEW MEXICO

LEASE PLAT

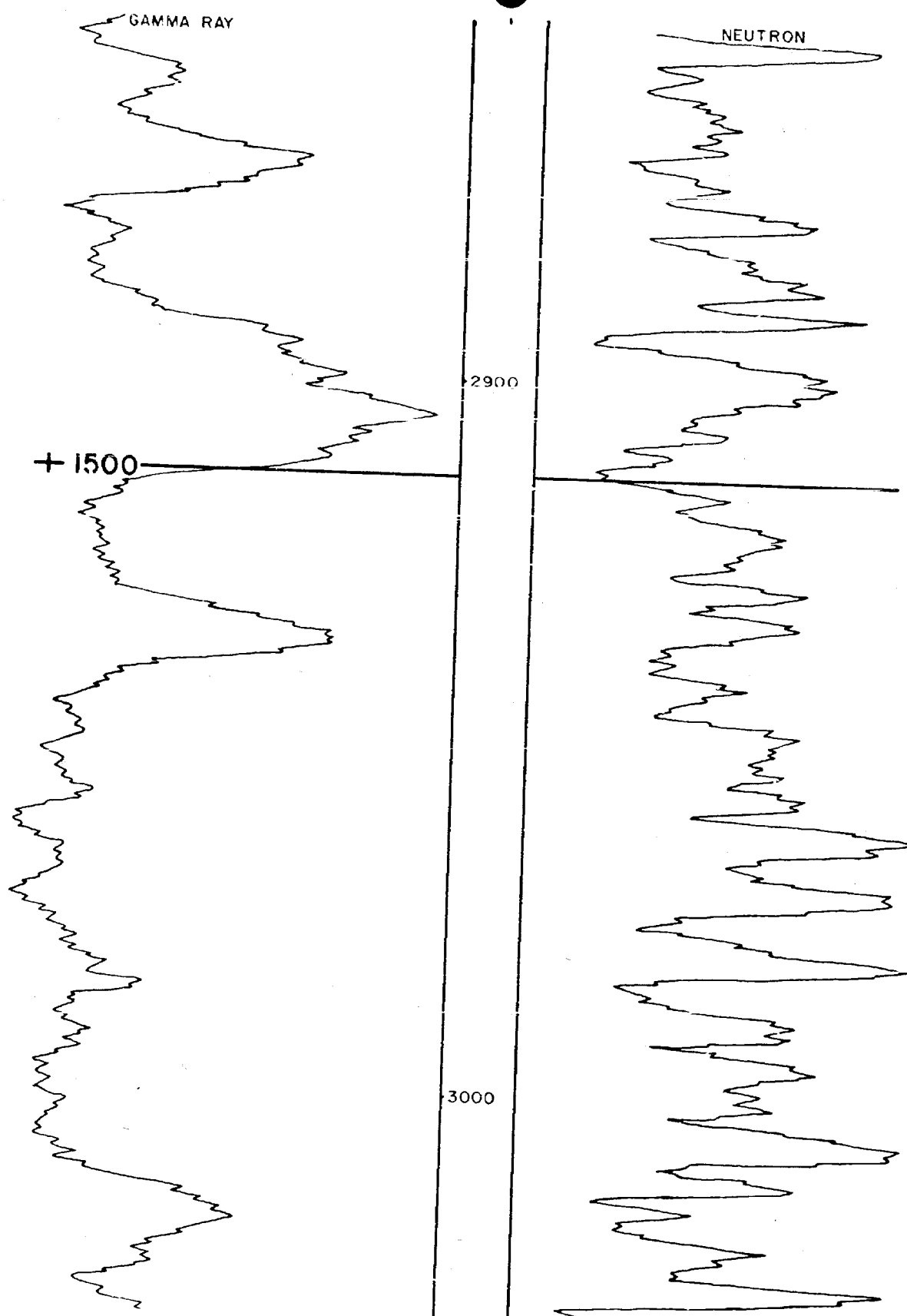
— EASTCAP QUEEN POOL UNIT BOUNDARY —

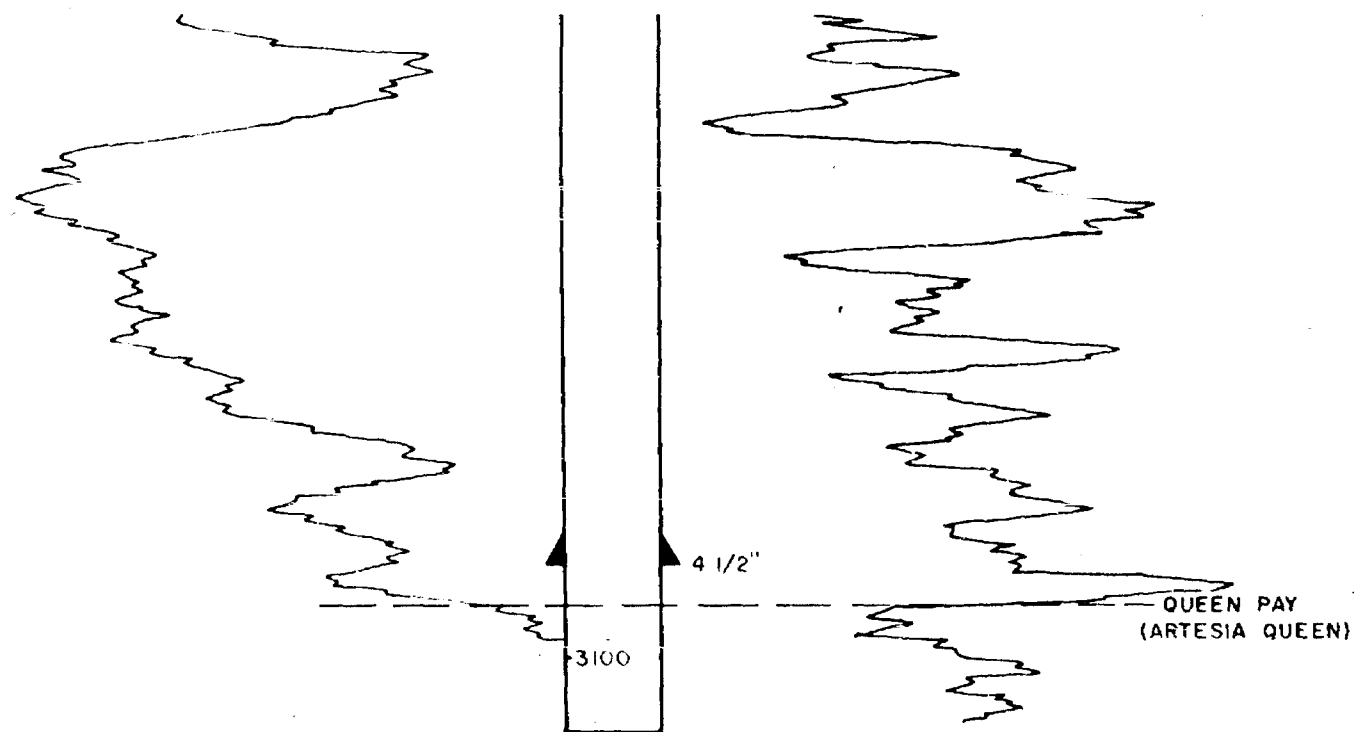
SCALE: 1" = 2000'

CONTINENTAL OIL COMPANY

STATE R-34 NO. 1

ELEVATION 4413' D.F.





Set 7 5/8" osg @ 307' w/200 sx (circ), using 2 centralizers.
 Set 4 1/2" osg @ 3090' w/710 sx (cement to 1350'), using 10 centralizers,
 90 scratchers.

TD 3108'

Completed, thru open hole, for IP of 900 BOPD, no water, based on
 4-hour test of 150 BO flowing thru 3/4" choke on 2" tubing with
 59.9 MCF gas. GOR 66. TP: 40# CP: 50#

Pay: Queen, from 3094' to 3108' (open hole).

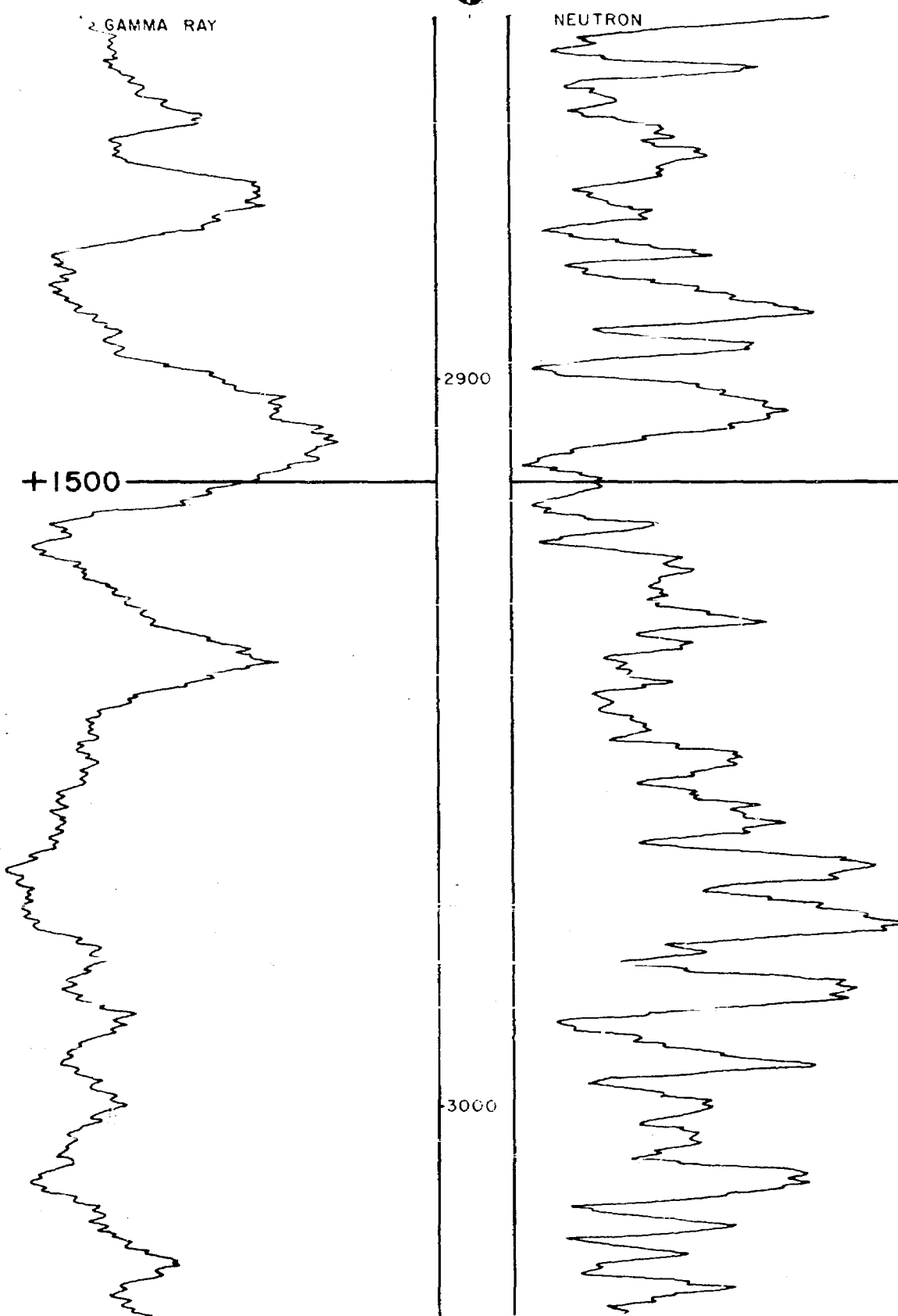
Tops: Anhydrite	1365	Base Salt	2153	Seven Rivers	2544
Salt	1465	Yates	2307	Queen Pay	3094
				(ARTES QUEEN)	

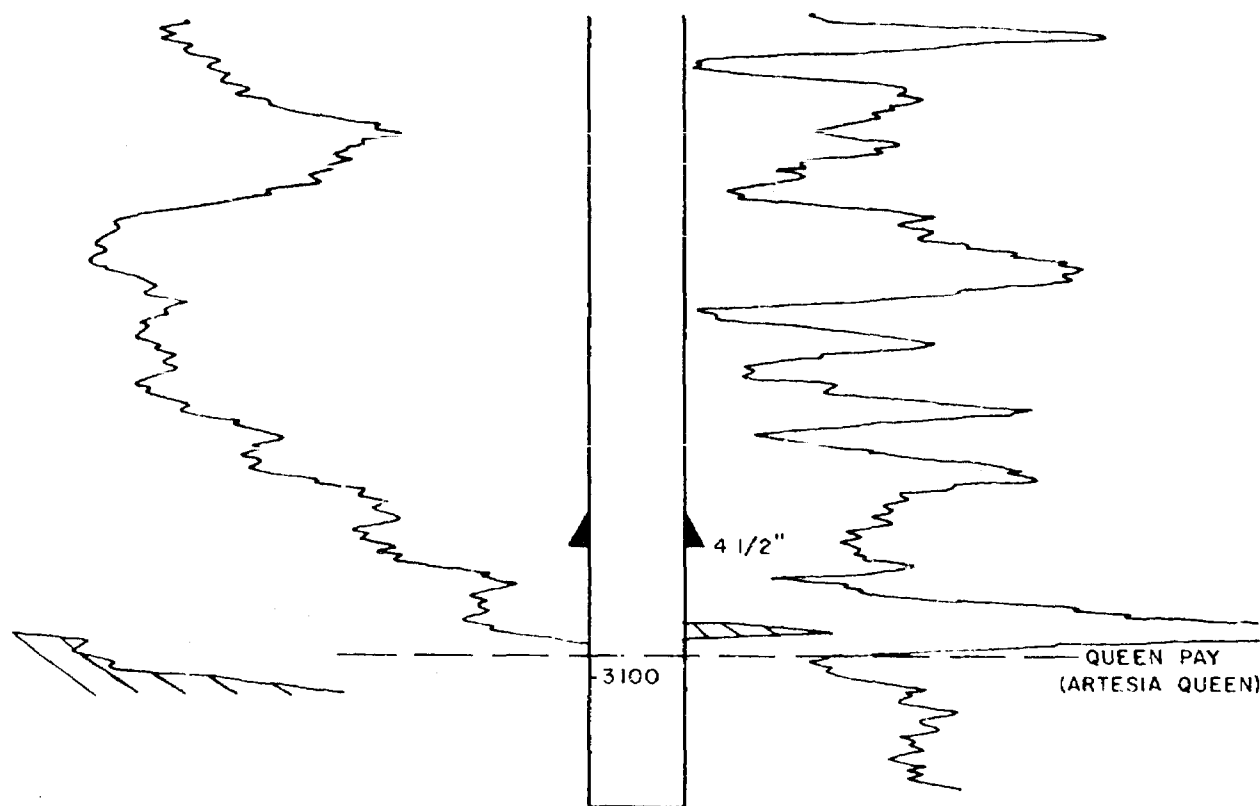
Completed: 5/27/56. Tested: 5/28/56.

CONTINENTAL OIL COMPANY

STATE R-34 No. 2

ELEVATION 4414' D.F.





Set 7 5/8" csg. @ 314' w/200 sx (circ), using 2 centralizers.
 Set 4 1/2" csg. @ 3086' w/700 sx (cement to 1540'), using 16 centralizers.

TD 3114'

Completed for IP of 252 BOPD, no water, based on 4-hour test of 42 BO
 flowing thru 3/4" choke on 2" tubing with 51.3 MCF gas, GOR 196. TP:
 150#.

Pay: Queen, 3098' to 3114' (open hole).

Tops: Anhydrite	1392	Base Salt	2150	Queen Pay (ARTESIA)	3098
Salt	1475	Yates	2314	Seven Rivers	2549

Completed: 6-8-56. Tested: 6-8-56.

EXHIBIT

IV

Location	Section	Depth	Stratigraphic Unit	Thickness	Remarks
Section 1	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 2	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 3	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 4	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 5	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 6	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 7	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 8	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 9	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 10	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 11	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
	9	100'	Shale	100'	
	10	100'	Shale	100'	
Section 12	1	100'	Shale	100'	
	2	100'	Shale	100'	
	3	100'	Shale	100'	
	4	100'	Shale	100'	
	5	100'	Shale	100'	
	6	100'	Shale	100'	
	7	100'	Shale	100'	
	8	100'	Shale	100'	
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Section 14	1	100'	Shale	100'	
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Section 16	1	100'	Shale	100'	
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Section 19	1	100'	Shale	100'	
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Union Oil Company of California

IN REPLY GIVE NO.

1963 JUN 24 AM 4 11

June 24, 1963

Director of the U. S. Geological Survey
Washington 25, D. C., through the
Regional Oil and Gas Supervisor,
Roswell, New Mexico

Re: Application for Preliminary Concurrence by the Director for Contraction of the South Caprock Queen Unit Area Bearing No. 14-08-0001-7284, Chaves County, New Mexico

Dear Sir:

Section 5 of the Unit Agreement for the development and operation of the South Caprock Queen Unit, Chaves County, New Mexico, sets forth the provisions whereby the Unit Area may be contracted to exclude unutilized land not receiving allocation and to exclude lands not effectively committed to the Unit Agreement. Unit Operator, Union Oil Company of California, on its own motion requests preliminary concurrence by the Director of the U. S. Geological Survey to the contraction of the boundaries of the Unit Area to henceforth exclude the following described lands, to-wit:

T-14-S, R-31-E, NMPM

Section 22: E/2 of SE/4 (Tract 62)
Section 23: W/2 of SW/4 (Tract 53)
Section 27: W/2 and N/2 of SE/4 (Tract 19a)
Section 27: N/2 of NE/4 (Tract 19b)
Section 27: S/2 of NE/4 and
S/2 of SE/4 (Tract 19c)
Section 34: NE NW (Tract 31)
Section 34: SW/4 and S/2 of NW/4 (Tract 44)
Section 34: E/2 (Tract 36)
Section 35: SW/4 NW/4 (Tract 34)
Section 35: NW/4 NW/4 (Tract 37)

Such lands are not effectively committed to the South Caprock Queen Unit Agreement and are not receiving an allocation of production, however, it is the intent of Continental Oil Company to form a Unit Area for the development and operation of the Eastcap Queen Pool Unit and they have filed their application before the Oil Conservation Commission of the State of New Mexico evidencing such intent, being Case No. 2837, scheduled for hearing June 26, 1963.

Union Oil Company of California, as Operator of the South Caprock Queen Unit, does not object to the formation of the Eastcap Queen Pool Unit. Both Continental Oil Company, as proposed Operator of the Eastcap Queen Pool Unit, and Union Oil Company of California contemplate equitable line well agreements with each other at a later date, when necessary.

In requesting preliminary concurrence, we believe the proper effective date of the contraction should be the same date as the effective date of the Eastcap Queen Pool Unit Agreement.

Should you give us your preliminary concurrence, we will proceed with preparation of the notices to effect this contraction.

Yours very truly,

UNION OIL COMPANY OF CALIFORNIA

R F J

Robert F. Jennings, Jr.
Supervisor of Contracts

RFJ:lm

cc: Commissioner of Public Lands,
Santa Fe, New Mexico

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 26, 1963

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

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

CASE 2821: (Continued from June 5, 1963 examiner hearing)

Application of D. W. Falls, Inc., for an extension of
Order No. R-2213, San Juan County, New Mexico. Applicant,
in the above-styled cause, seeks the extension of Order
No. R-2213, which order assigned a temporary deliverability
for allowable purposes to applicant's Federal Well No. 2-11,
located in Unit O of Section 11, Township 28 North, Range
13 West, Basin-Dakota Gas Pool, San Juan County, New Mexico.

CASE 2833: Application of Tenneco Oil Company for approval of a unit
agreement, San Juan County, New Mexico. Applicant, in the
above-styled cause, seeks approval of the Central Cha Cha
Unit Area comprising 674.05 acres, more or less, of Federal
land located in Sections 30 and 31, Township 29 North, Range
13 West, San Juan County, New Mexico.

CASE 2834: Application of Tom Brown Drilling Company for a unit agree-
ment, Eddy County, New Mexico. Applicant, in the above-
styled cause, seeks approval of the Runyan Ranch Unit Area
comprising 10,890.12 acres of State and Federal lands in
Township 19 South, Range 21 East, Eddy County, New Mexico.

CASE 2835: Application of Jake L. Hamon for a unit agreement, Lea
County, New Mexico. Applicant, in the above-styled cause,
seeks approval of the Southeast Bell Lake Unit Area com-
prising 9,597.09 acres of State, Federal and Fee lands in
Townships 24 and 25 South, Ranges 34 and 35 East, Lea County,
New Mexico.

CASE 2836: Application of Union Oil Company of California for a unit
agreement, Lea County, New Mexico. Applicant, in the
above-styled cause, seeks approval of the West McDonald
Unit Area comprising 2,320 acres of State and Fee lands in
Township 14 South, Range 35 East, Lea County, New Mexico.

CASE 2837: Application of Continental Oil Company for a unit agreement,
Chaves County, New Mexico. Applicant, in the above-styled
cause, seeks approval of the Eastcap Queen Pool Unit Area

comprising 1,000 acres of State and Fee lands, located in Township 14 South, Range 31 East, Chaves County, New Mexico.

- CASE 2838: Application of Continental Oil Company for a waterflood project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Queen formation, Caprock Queen Pool, through 17 wells located in Sections 22, 23, 27, 34, and 35, Township 14 South, Range 31 East, Chaves County, New Mexico.
- CASE 2839: Application of Amerada Petroleum Corporation for a multiple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1750-A to permit the multiple completion (tubingless), of its Wimberley Well No. 13, located in Unit M of Section 24, Township 25 South, Range 37 East, Lea County, New Mexico, to permit the production of gas from the Langlie Mattix Pool, the production of oil from the Justis-Blaine Oil Pool, and the disposal of salt water into the San Andres formation through parallel strings of casing cemented in a common well bore.
- CASE 2840: Application of Amerada Petroleum Corporation for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 120-acre non-standard gas proration unit comprising the S/2 NE/4 and NW/4 SE/4 of Section 19, Township 21 South, Range 37 East, Blaine Gas Pool, Lea County, New Mexico, to be dedicated to its L. G. Warlick "A" Well No. 2 located in Unit J of said Section 19.
- CASE 2841: Application of Shell Oil Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to drill its Middleton Federal Well No. B-1 at an unorthodox location 660 feet from the North and West lines of Section 31, Township 19 South, Range 32 East, Lusk-Morrow Gas Pool, Lea County, New Mexico.
- CASE 2842: Application of Compass Exploration, Inc. for an amendment of Commission Order No. R-2462, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-2462 concerning the Largo Gallup Gas Pool to provide 320-acre gas well spacing and an increase in the maximum allowable for each spacing unit from 500 to 1,000 MCF per day.

CASE 2843:

Application of Gulf Oil Corporation for a special gas well test, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to produce and flare approximately 3000 MCF of gas per day for a period of not less than 6 nor more than 9 days from its Hackberry Hills Unit Well No. 1, located in Unit O of Section 1, Township 22 South, Range 25 East, Eddy County, New Mexico, to determine if the gas reserves in place justify the expense of a pipeline to the nearest market outlet.

CASE 2844:

Application of Sinclair Oil & Gas Company for the creation of the Teas Pennsylvanian Gas Pool and for special temporary pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian Gas Pool for its Mahaffey-Federal (ARC) Well No. 1, located in Unit C of Section 14, Township 20 South, Range 33 East, Lea County, New Mexico, and for the establishment of temporary pool rules therefor, including a provision for 640 acre spacing units.

CASE 2845:

Application of Sinclair Oil & Gas Company for an exception to Order No. R-1670, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order permitting its Barber Gas Unit Well No. 1, located in Unit E of Section 8, Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to produce 600 MCF of gas per month in exception to the shut-in provisions of Rule 15(A) of Order No. R-1670, said gas to be utilized in the oil well gas-lift system on applicant's B. J. Barber Lease.

CASE 2846:

Application of Ralph Lowe to create a new pool for Upper Pennsylvanian gas production, and for special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for Upper Pennsylvanian Gas production in Section 21, Township 21 South, Range 24 East, and the establishment of temporary pool rules therefor, including a provision for 640-acre spacing and a provision restricting well locations.

State of New Mexico
Oil Conservation Commission



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

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. 2837
Order No. R-2515

APPLICATION OF CONTINENTAL OIL COMPANY
FOR APPROVAL OF THE EASTCAP QUEEN POOL
UNIT AGREEMENT, CHAVES COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 26, 1963, at Santa Fe, New Mexico, before Daniel S. Mutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 9th day of July, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Mutter, 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, Continental Oil Company, seeks approval of the Eastcap Queen Pool Unit Agreement covering 1,480 acres, more or less, of State and Fee lands in Township 14 South, Range 31 East, NMPM, Chaves County, New Mexico.

(3) That although all of the subject acreage was included within the boundaries of the South Caprock Queen Unit Area as described by Order No. R-1728, said acreage was not committed to the South Caprock Queen Unit Agreement, and application has been made to withdraw said acreage from said unit.

(4) That approval of the proposed Eastcap Queen Pool Unit Agreement will in principle tend to promote the conservation of oil and gas and the prevention of waste.

IT IS THEREFORE ORDERED:

(1) That the Eastcap Queen Pool Unit Agreement is hereby approved.

-2-

CASE No. 2837
Order No. R-2515

(2) That the plan under which the unit area shall be operated shall be embraced in the form of a unit agreement for the development and operation of the Eastcap Queen Pool Unit Area, and such plan shall be known as the Eastcap Queen Pool Unit Agreement Plan.

(3) That the Eastcap Queen Pool Unit Agreement Plan is hereby approved in principle as a proper conservation measure; provided, however, that notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the Oil Conservation Commission of New Mexico by law relative to the supervision and control of operations for the exploration and development of any lands committed to the Eastcap Queen Pool Unit, or relative to the production of oil or gas therefrom.

(4) (a) That the unit area shall be:

NEW MEXICO PRINCIPAL MERIDIAN

CHAVES COUNTY, NEW MEXICO
TOWNSHIP 14 SOUTH, RANGE 31 EAST
Section 22: E/2 SE/4
Section 23: W/2 SW/4
Section 27: All
Section 34: NE/4 NW/4, S/2 NW/4,
SW/4, and E/2
Section 35: W/2 NW/4

containing 1,480 acres, more or less.

(b) That the unit area may be enlarged or contracted as provided in said plan; provided, however, that administrative approval for expansion or contraction of the unit area must also be obtained from the Secretary-Director of the Commission.

(5) That the unit operator shall file with the Commission an executed original or executed counterpart of the Eastcap Queen Pool Unit Agreement within 30 days after the effective date thereof. In the event of subsequent joinder by any party or expansion or contraction of the unit area, the unit operator shall file with the Commission within 30 days thereafter counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(6) That this order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission immediately in writing of such termination.

-3-
CASE No. 2837
Order No. R-2315

(7) 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


Jack M. Campbell
JACK M. CAMPBELL, Chairman

E. S. Walker
E. S. WALKER, Member

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

esx/