

CASE 3178: Application of SHELL  
for approval of the COMANCHE (SAN  
ANDRES) A UNIT AGREEMENT.

CASE NO.

3178

Application,

TRANSCRIPTS,

SMALL Exhibits

ETC.

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

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
December 15, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Shell Oil Company for  
a unit agreement, Chaves County, New Mexico.  
Applicant, in the above-styled cause, seeks  
approval of the Comanche (San Andres) A  
Unit Area comprising 16,895 acres, more or  
less, of Federal, State and Fee lands in  
Townships 6 and 7 South, Ranges 25 and 26  
East, Chaves County, New Mexico.

Case No. 3178  
through  
3183

BEFORE: ELVIS A. UTZ; EXAMINER

TRANSCRIPT OF HEARING

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BEFORE THE  
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EXAMINER HEARING

IN THE MATTER OF:

Application of Shell Oil Company for  
a unit agreement, Chaves County, New  
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cause, seeks approval of the Comanche  
(San Andres) A Unit Area comprising 16,895  
acres, more or less, of Federal, State and  
Fee lands in Townships 6 and 7 South,  
Ranges 25 and 26 East, Chaves County,  
New Mexico.

Case Nos.  
3178 through 3183

BEFORE: ELVIS A. UTZ, EXAMINER

TRANSCRIPT OF HEARING

MR. UTZ: Case 3178, through 3183 will be  
consolidated for the purposes of testimony, separate orders  
will be written on each case.

MR. MORRIS: I'm Richard Morris, appearing on behalf  
of the applicants, Shell Oil Company, in Cases 3178 through

3183. We will have one witness, Mr. Bob Johnson.

MR. UTZ: Are there any other appearances in these cases?

(Witness sworn)

MR. UTZ: You may proceed.

ROBERT E. JOHNSON

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

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Johnson, please state your name, by whom you are employed, in what capacity and where you're located.

A Mr. Robert E. Johnson, I'm employed as a reservoir engineer for Shell Oil Company in Roswell, New Mexico.

Q Have you previously testified before the New Mexico Oil Conservation Commission or one of its Examiners?

A No, sir, I haven't.

Q Would you briefly outline your education and your experience in the petroleum industry?

A I graduated from Ohio State University with degrees of

Bachelor of Petroleum Engineering and Master of Science. I've been 9½ years with Shell Oil Company as petroleum engineer in Corpus Christi, Texas, and as reservoir engineer in Houston, Texas, and Roswell, New Mexico.

Q Are you familiar with the applications of Shell Oil Company for the Comanche Unit Area "a", "b", "c", "d", "e", and "f", which are the subject of this hearing today?

A I am.

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

MR. UTZ: Yes, they are.

Q (By Mr. Morris) What does Shell seek by these applications today, Mr. Johnson?

A We're seeking approval of the Unit Agreement and designation of Unit Area for six San Andres formation units and we request that these applications be considered separately for each individual unit, although in the following testimony all references, unless otherwise indicated, are intended to mean the collective area of all six units.

Q Referring to what has been marked Exhibit Number 1 in these cases, would you tell us what that exhibit is and what it shows?

A The exhibit is a map showing the requested units by designation in Chavez County, Texas.

Q New Mexico?

A New Mexico.

Q Also shown on this exhibit, Mr. Johnson, do you have shown the Bitter Lake Area?

A Yes, the South Bitter Lake Area is shown down in the left-hand corner, the South and West Bitter Lake Area, and the Bitter Lake Area, about six miles of Unit "e".

Q What will be the purpose for formation of this units?

A These units will be for the purpose of delineating the accumulations and developing by the employment of supplemental recovery techniques the oil reserves in the Slaughter Zone of the San Andres formation within the respective Unit Areas.

Q Referring to what's been marked as Exhibit Number 2, in the course of your testimony, Mr. Johnson, would you outline it briefly, the geology of the area, in which the units are located?

A Exhibit Number 2 is a structural plate showing the outline of the six areas, this is the Hasher Area (indicating) that you see roughly in the center of the map. I have a statement that I'd like to read regarding the geology of the units. A large stratigraphically controlled oil accumulation situated about nine miles northeast of Roswell, New Mexico, and localized at shallow depth of from 800 to 1500 feet in the Slaughter Zone of the San Andres formation is suggested by the

following factors: 1. Regional easterly dip. Tertiary uplift along the Sacramento Mountains is reflected in regional, north-northeasterly strike and easterly dip in the San Andres. Structure is regionally homoclinal and dips averaging 100 feet per mile into the Permian Basin. A sharp easterly plunging syncline is indicated at the southern end of the proposed Unit Area.

2. Northward Loss of Porosity. The Slaughter Zone is present over the northwestern shelf area of the Permian Basin and occurs as a 150-foot thick porous dolomite unit about 600 feet below the top of the San Andres, and this is in our Figures 3 and 4, which will be the cross section.

Q All right. Referring to those Exhibits 3 and 4, is there anything in particular with respect to those exhibits that you'd like to point out at this time?

A Well, in the exhibit this would show the northward loss of porosity, this being Figure 3.

Q When you say "Figure 3," you're referring to Exhibit 3?

A Yes, sir, Exhibit 3. The upper part of the zone is replaced to the north by tight anhydrite and anhydritic dolomite, with porosity being lost progressively downward in a series of interfingering shingle-like steps designated as Divisions A and B.

Q And are those shown on Exhibit 3?

A Exhibit 3, yes.

Q All right, go ahead, Mr. Johnson.

A 3. Westward Permeability Barrier. A sharp transition from fresh to very saline formation water in the Slaughter Zone, this is shown on Exhibit 4, is believed to be caused by a permeability barrier, possibly developed by an asphaltic seal or by the precipitation of gypsum or anhydrite derived from solution near the outcrop some 20 to 30 miles west. The position of the fresh-salt water transition in the Slaughter Zone, as indicated by a few deep irrigation wells and scattered oil tests, extends north-south parallel to and approximately 3 miles west of the Pecos River.

There have been several small San Andres oil fields noted on Figures 1 -- Exhibits 1 and 2, have been developed in and adjacent to the area of the proposed Comanche Units. During the past 35 years, a total of 37 penetrations of the Slaughter Zone throughout the Unit Area have been reported. Of these tests, thirteen completions have been effected (5 in Linda, 4 in Pecos, and 4 in an undesignated area) with nine wells currently testing completions. The remaining fifteen wells were plugged and abandoned as "dry" holes. The history of field wells indicates very low productive rates and unattractive ultimate primary recoveries, even though considerable oil is indicated to

be in place. Most of the "dry" holes drilled in the area encountered excellent oil shows in the Slaughter Zone. Many of these wells bailed, swabbed, or production tested live oil in quantities comparable to field wells. Many of the reported shows were in old wells drilled in the 1920's and 1930's, others were in wells drilled to deeper objectives and not evaluated.

In summary, a very large oil accumulation at shallow depth is indicated in the upper part of the Slaughter Zone at the updip limits of porosity and permeability. The proposed boundary of the Comanche Units is drawn to include the suggested area of accumulation downdip from these limits and updip from the synclinal area to the south, and the Linda and Acme Field areas are excluded since it would be difficult to include them on an equitable basis.

Q What are some of the reservoir features of the Strawn Zone?

A Based on available log, core analysis and production data the Slaughter Zone has a gross thickness of 150 feet, average porosity of 10½ per cent, permeability 2-5 millidarcies, average pay thickness of 27 feet, water saturation 35 per cent, and the oil gravity 22-27 degrees API. And it is estimated to be 12,420 stock tank barrels per acre.

MR. UTA: What was the porosity?

THE WITNESS: 10½ per cent.

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Q (By Mr. Morris) Mr. Johnson, you've given us some basic data concerning the number of wells that have been drilled to the Slaughter Zone in this area and the present status of those wells and have given a general indication of production from the Slaughter Zone in this area that has not been satisfactory. Would you elaborate a little more on that?

A As I previously mentioned, the primary performance of the Slaughter Zone Fields in the general area have been very poor. The average per well primary recovery is estimated to be less than 4,000 barrels, or approximately 1 per cent of the estimated original oil in place which is not sufficient to pay out development cost. It is considered that the principal reason for these extremely low recoveries can be attributed to the lack of natural reservoir energy associated with the shallow depth of this accumulation. Contributing factors are low permeability and moderately high crude viscosity.

Q Does Shell have any interest in the South Bitter Lake Area?

A Shell has an interest in the South Bitter Lake San Andres Field. We recently instituted a pilot water flood project. It is anticipated that an injection of water in this field will supplement the natural reservoir energy and result in the recovery of heretofore unrecoverable oil, but as yet we have not observed any conclusive results at this time.

Q How long has the project been going on?

A It has been going on since April.

Q In this South Bitter Lake Area it has been strictly water injection?

A Strictly water injection program, yes.

Q Will you be able to gain valuable information from the South Bitter Lake Field that you hope to be helpful in analyzing the situation in the Comanche Area?

A Right, since we feel that the reservoir parameters are the same, basically the same, we feel that anything we do in the Bitter Lakes Area can likewise apply to the Comanche Area.

Q And if the water flooding should not prove to be entirely satisfactory in the Bitter Lakes Area, other forms of supplementary recovery might be considered, presented to the Commission at a later time for the Comanche Area?

A That's correct.

Q Now, Mr. Johnson, you've taken a rather large area here and instead of presenting it to the Commission as one unit it's been broken up into six contiguous Unit Areas, what is the reason for that?

A The division of the proposed unitized area into six smaller units in lieu of one large unit, is strictly for unitization and operational convenience. All geologic evidence indicates the entire Unit area to possess equal production

potential. In this regard, the smaller Units will reduce the diverse working and royalty interest ownerships, facilitate both unitization and subsequent operations in each unit. The individual unit boundaries were determined as much as possible with the objective of creating units of roughly equivalent areas and shapes. However, adjustments wherever necessary to maintain individual royalty and/or working interest ownership within a single unit were made, if such adjustments proved feasible.

Q What is the basis for participation in the Comanche Unit Area?

A Each Unit is a fixed participation type unit, as to both working and royalty interests, based on surface acres has been selected as the best suited for the planned type of operation inasmuch as no one portion of any unit can be considered as having greater potential than any other portion of the same unit. And since the use of supplemental recovery methods will be required at or shortly after primary development in order to recover the reserves in this area, an expanding participating area type of Unit would not be practical from both administrative and operational standpoints.

Q Mr. Johnson, we have marked as Exhibit 5 in each of the cases a copy of the Unit Agreement for each unit and these Unit agreements are before the Examiner at this time, marked as Exhibit 5 in each case. Could you describe briefly the form





that each of these Unit agreements take?

A Well, to my understanding, the Unit Agreement for each Comanche Unit is the conventional form employed wherever Federal and State lands are involved. However, there are some unusual features which occur in Section 11 of this agreement entitled Development Obligation, which provides for a fixed minimum number of wells to be drilled during the first two years after formation of the Unit, and in Section 12, a Plan of Development and Operation, which provides that a plan for development be filed for not only the first two-year period after unitization, but also for an additional three-year period whereby a minimum fixed number of wells be drilled.

Q Now, before we go further into the plan of development would you refer to what has been marked Exhibit 6 and state what that is?

A Exhibit 6 is just a breakdown of each Unit with the amount of acreage approximately, the location, township, range and section within each Unit.

Q Referring next to what we've marked as Exhibit 8 in each of these cases, would you state what that is and what it shows?

MR. UTZ: Exhibit 7 or --

THE WITNESS: Exhibit 7.

MR. MORRIS: Excuse me, Exhibit 7.



THE WITNESS: Exhibit 7 is the classification of the Unit acreage in the Comanche San Andres Unit, broken down by Unit, by Federal, State, by private, along with the percentage of each classification within the Unit.

Q (By Mr. Morris) And by Exhibit 8, what does that show?

A Exhibit 8 is a breakdown of the development obligation wells and the plan of development which I previously mentioned by Unit, showing the number of wells to be drilled in each Unit over the five-year period.

Q Would you amplify somewhat, Mr. Johnson, on what your development plan for the Comanche Unit is?

A The initial development plans for each of the six units will consist of drilling evaluation wells to determine reservoir continuity and productivity throughout the respective Unit Areas. In this regard, a minimum number of Development Obligation Wells as provided in Section 11, is set up to be drilled in each of the six units during the first two years. The total combined obligation during this period for the six units will amount to 25 wells which is just slightly less than the development during the past 35 years.

Under the provisions of Section 12, "Plan of Development and Operation," of the Unit Agreements, a commitment for the third, fourth, and fifth years' development in each unit

is set forth. The five-year development plan for the Comanche Units will call for a total of 118 wells. Our plans for instituting supplemental recovery programs in each of the six units will be formulated based on information obtained from the evaluation wells in conjunction with the results of pilot operations currently being conducted in the South Bitter Lake Field, and possible future pilot operations within the requested Unit Areas.

Q What is the present status of the formation of each of the Comanche and San Andres Units?

A As the initial step in the formulation of the aforesaid six units, Shell, as the major working interest owner in each unit, called a meeting with the other working interest owners on May 6m 1964, in order to submit geologic and engineering data, economics, and a draft of the Unit Agreement. Subsequent to this meeting, application for preliminary approval of the Unit Agreement and designation of Unit Area was submitted to the United States Geological Survey and the Commissioner of Public Lands. This preliminary approval was received August 6, 1964, from the United States Geological Survey and ratification copies of the Unit Agreement and Unit Operating Agreement were dispersed to the various working interest owners in all units upon receipt of this approval. Subsequently, copies of the Unit Agreement have been dispersed to the royalty owners and

overriding royalty owners for ratification also.

Q Now, have all working interest owners in each of these units been contacted insofar as oil working?

A All working interest which we know of or are indicated by our records have been contacted.

Q And what response have you received so far?

A Well, the response has been twofold from the working interest so far, including Shell's section, we've got, and these are approximate figures, because the numbers change from day to day, we have about 52 per cent of the working interest in Unit A, 50 per cent in Unit B, 46 per cent in Unit C, 58 per cent in Unit D, 53 per cent in Unit E and 45 per cent in Unit F, but so far we've only received refusals from two parties.

Q And do these two parties own substantial working interests?

A No, one of them owns two tenths of 1 per cent, and the other one owns 4 per cent in Unit E and two tenths of 1 per cent in Unit F.

Q Would the nonjoinder of those interests adversely affect your control of the Unit Area?

A No, it would not.

MR. UTZ: What percentage do you have in Unit B?

MR. DEARNLEY: 51, 50 1/2 per cent.



Q (By Mr. Morris) Do you expect to receive further ratifications or approvals of your proposed Unit Agreement from other working interests?

A Oh, yes, we can expect to receive further ratifications, it is just that wheels turn slowly on things like this.

Q Now, with respect to royalty interests, you have Federal, State and private lands involved in each of these units?

A That's right.

Q Now, would you amplify your comments a little bit with respect to your negotiations with the United States Geological Survey?

A We have received the temporary approval of the U.S. G.S. as I have indicated, and I believe the exhibits which we have designated for each unit are copies of their approval.

Q I believe that those letters of approval with respect to each unit are marked as Exhibit 9 in each case?

A Exhibit 9 in each case.

MR. MORRIS: Is that correct, Mr. Examiner, it's marked as Exhibit 9?

MR. UTZ: Yes, sir.

Q (By Mr. Morris) What steps have been taken to present this matter to the State Land Office, Mr. Johnson?

A The State Land Office we have written, filed with the Land Office, paid the filing fee and requested the temporary

approval for the unit, there has been to my understanding, two meetings held with the State Land Office, one with the Commissioner and his staff regarding these units. We have not received anything to indicate they would not go along with it.

Q Have you been in touch with the royalty interests that are held in fee insofar as possibilities?

A Insofar as possibilities, we've attempted to contact every royalty interest and overriding royalty interest in the six-unit area and we've received replies from approximately 150 royalty interests and we've received approval from 67 of them, which is about 44 per cent.

Q Now, as to all interests in the unit, both working interests, royalty interests and overriding royalty interests, will continuing efforts be made by Shell Oil Company to secure their approval and ratifications to these Unit Agreements?

A It will be, yes.

Q Would you summarize your proposals, Mr. Johnson?

A In summary, Shell has attempted to show that the formation of the six Comanche Units, as proposed, will result neither in waste of hydrocarbon resources nor violation of correlative rights, but will, through the application of supplemental recovery methods, result in increased recovery from this heretofore low-potential San Andres (Slaughter) accumulation.



We therefore request approval of the Unit Agreement and designation of Unit Area for Comanche San Andres Units A, B, C, D, E, and F.

Q Were Exhibits 1 through 8 prepared at your direction or under your supervision?

A They were, yes.

Q And Exhibit 9, of course, are letters from the U.S.G.S. We offer Exhibits 1 through 9 in evidence with respect to each of the cases before the Examiner at this time.

MR. UTZ: Without objection Exhibits 1 through 9 will be entered into the record of these cases.

MR. MORRIS: That completes our direct examination of Mr. Johnson.

MR. UTZ: Any questions of the witness?

CROSS EXAMINATION

BY MR. UTZ:

Q The only difference in this type of Unit Agreement, the usual type, would you say is in the matter of the participating area?

A That's right.

Q MR. MORRIS: Any other questions? The witness may be excused. Any other statements in this case? The case will be taken under advisement and we will have a delayed coffee break.

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STATE OF NEW MEXICO     )  
                                  ) ss  
COUNTY OF BERNALILLO    )

I, JOHN ORFANIDES, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

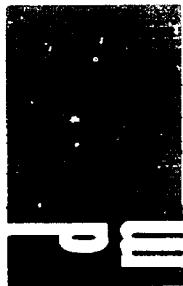
John Orfanides  
COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3128-383 heard by me on Jan 15, 1964.  
Thurston J. [Signature], Examiner  
New Mexico Oil Conservation Commission.

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I N D E X

WITNESS

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ROBERT E. JOHNSON

Direct Examination by Mr. Morris

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Cross Examination by Mr. Utz

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E X H I B I T S

NUMBER

OFFERED

ADMITTED

Exhibits 1 through 9

17

17

TESTIMONY TO BE PRESENTED TO THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
REQUESTING APPROVAL OF COMANCHE (SAN ANDRES) UNITS  
AND UNIT AGREEMENT  
DECEMBER 15, 1964

3178  
thm  
3183

**QUALIFICATIONS** - Graduated from Ohio State University with degrees of Bachelor of Petroleum Engineering and Master of Science. Employed 9 1/2 years with Shell Oil Company as Exploitation Engineer in Corpus Christi, Texas, and as a Reservoir Engineer in Houston, Texas, and Roswell, New Mexico. Have recently made independent study and am familiar with area of interest.

**LIST OF EXHIBITS**

**Figure 1 Unit Area Map**

**Figure 2 Structure Map - Top San Andres (Slaughter) Zone**

**Figure 3 Cross-section (north-south)**

**Figure 4 Cross-section (east-west)**

**Table 1 Description of Unit Acreage**

**Table 2 Classification of Unit Acreage by Type**

**Table 3 Development Plans - All Units**

**\*Unit Agreement - Comanche Unit A**

**\*Unit Agreement - Comanche Unit B**

**\*Unit Agreement - Comanche Unit C**

**\*Unit Agreement - Comanche Unit D**

**\*Unit Agreement - Comanche Unit E**

**\*Unit Agreement - Comanche Unit F**

**\*Previously submitted with Application for Hearing**

**Letters from U.S.G.S. (Dept. of Interior) granting temporary approval  
of Units A, B, C, D, E, and F.**

#### PURPOSE AND INTRODUCTION

Shell Oil Company herewith applies for approval of the Unit Agreement and designation of Unit Area for six San Andres formation Units. We request that these applications be considered separately for each individual Unit, although in the following testimony all references, unless otherwise indicated, are intended to mean the collective area of all six Units.

The area to be designated Comanche San Andres Units A, B, C, D, E, and F is comprised of approximately 102,880 acres of Federal, State, and Private Lands located in Townships 6, 7, 8 and 9 South, Ranges 25 and 26 East, Chaves County, New Mexico (See Figure 1 and Tables 1 and 2.) Formation of these six units will be for the purpose of delineating the accumulations and developing by the employment of supplemental recovery techniques the oil reserves in the Slaughter Zone of the San Andres formation within the respective unit areas.

#### GEOLOGY OF THE COMANCHE UNITS:

A large stratigraphically controlled oil accumulation situated about nine miles northeast of Roswell, New Mexico, and localized at shallow depth (800-1500 feet) in the Slaughter Zone of the San Andres formation is suggested by the following factors:

1. Regional Easterly Dip

Tertiary uplift along the Sacramento Mountains *to west* is reflected in regional, north-northeasterly strike and easterly dip in the San Andres (Figure 2). Structure is regionally homoclinal and dips averaging 100 feet per mile into the Permian Basin. A sharp easterly plunging syncline is indicated at the southern end of the proposed Unit Area.

2. Northward Loss of Porosity

The Slaughter Zone is present over the northwestern shelf area of the Permian Basin and occurs as a 150-foot thick porous dolomite unit about 600 feet below the top of the San Andres (Figures 3 and 4). The upper part of the zone is replaced to the north by tight anhydrite and anhydritic dolomite, with porosity being lost progressively downward in a series of interfingering shingle-like steps designated as Divisions A and B (Figure 3).

3. Westward Permeability Barrier

A sharp transition from fresh to very saline formation water in the Slaughter Zone (Figure 4) is

believed to be caused by a permeability barrier, possibly developed by an asphaltic seal or by the precipitation of gypsum or anhydrite derived from solution near the outcrop some 20 to 30 miles west. The position of the fresh-salt water transition in the Slaughter Zone, as indicated by a few deep irrigation wells and scattered oil tests, extends north-south parallel to and approximately 3 miles west of the Pecos River.

#### 4. Evidence and Nature of Accumulation

Several small San Andres oil fields (noted on Figures 1 and 2) have been developed in and adjacent to the area of the proposed Comanche Units. During the past 35 years, a total of 37 penetrations of the Slaughter Zone throughout the Unit Area have been reported. Of these tests, thirteen completions have been effected (5 in Linda, 4 in Pecos, and 4 in an undesignated area) with nine wells currently testing completions. The remaining fifteen wells were plugged and abandoned as "dry" holes. The history of field wells indicates very low productive rates and unattractive ultimate primary recoveries, even though considerable oil is indicated to be in place. Most of the "dry" holes drilled in the area encountered excellent oil shows in the Slaughter Zone. Many of these wells bailed, swabbed, or production tested live oil in

quantities comparable to field wells. Many of the reported shows were in old wells drilled in the 1920's and 1930's; others were in wells drilled to deeper objectives <sup>slightly</sup> and not evaluated.

In summary, a very large oil accumulation at shallow depth is indicated in the upper part of the Slaughter Zone at the updip limits of porosity and permeability. The proposed boundary of the Comanche Units is drawn to include the suggested area of accumulation downdip from these limits and updip from the synclinal area to the south. The Linda and Acme Field areas are excluded since it would be difficult to include them on an equitable basis.

SLAUGHTER ZONE RESERVOIR CHARACTERISTICS:

Based on available log, core analysis and production data from wells in and adjacent to the Unit Area, the following average parameters have been assumed to be applicable to the Slaughter Zone reservoir development within the Unit Area: gross thickness 150 feet, porosity 10.5 per cent, permeability 2-5 md., net pay 27 feet, water saturation 35 per cent, and oil gravity 22-27 deg. API. From these parameters the original oil-in-place has been estimated to be 12,420 stock tank barrels per acre.

As previously mentioned, the primary performance of the Slaughter Zone fields in the general area has been very poor. The average per well primary recovery is estimated to be less than 4,000 barrels, or approximately one per cent of the estimated original oil-in-place, which is not sufficient to payout development costs. It is considered that the principal reason for these extremely low recoveries can be attributed to the lack of natural reservoir energy associated with the shallow depth of this accumulation. Contributing factors are low permeability and moderately high crude viscosity.

Shell Oil Company has recently instituted a pilot water-flood project in the South Bitter Lake San Andres Field located approximately seven miles south of the Comanche Unit Area. It is anticipated that the injection of water in this field will supplement the natural reservoir energy and result in the recovery of heretofore unrecoverable oil reserves although it is too early to observe any conclusive results at this time. Since the South Bitter Lake Field is considered to be typical of the Slaughter Zone

2 inverted  
spot  
flood  
since  
oil  
strictly  
water  
injection

accumulation in the area, the injection of water or some other fluid should be equally applicable in the Comanche Unit Area.

#### SELECTION OF UNIT TYPE AND ACREAGE

The division of the proposed unitized area into six smaller units, in lieu of one large unit, is strictly for unitization and operational convenience as all geologic evidence indicates the entire Unit Area to possess equal production potential. In this regard, the smaller Units will reduce the diverse working and royalty interest ownerships; therefore, facilitating both unitization and subsequent operations in each unit. The individual unit boundaries were determined as much as possible with the objective of creating units of roughly equivalent areas and shapes. However, adjustments wherever necessary to maintain individual royalty and/or working interest ownership within a single unit were made, if such adjustments proved feasible.

A fixed participation type unit, as to both working and royalty interests, based on surface acres has been selected as the best suited for the planned type of operation inasmuch as no one portion of any unit can be considered as having greater potential than any other portion of the same unit. Since the use of supplemental recovery methods will be required at or shortly after primary development in order to recover the reserves in this area, an expanding participating area type of Unit would not be practical from both administrative and operational standpoints.

#### DESCRIPTION OF UNIT AGREEMENTS

The Unit Agreement for each Comanche Unit is the conventional form employed wherever Federal and State Lands are involved. However, unusual features of this Agreement occur in Section 11, Development Obligation, which provides for a fixed minimum number of wells to be drilled during the first two years after formation of the Unit, and in Section 12, Plan of Development and Operation, which provides that a plan for development be filed for not only the first two-year period after unitization; but also for an additional three-year period whereby a minimum fixed number of wells be drilled.

#### DEVELOPMENT PLANS FOR THE COMANCHE UNITS

The initial development plans for each of these six units will consist of drilling evaluation wells to determine reservoir continuity and productivity throughout the respective Unit Areas. In this regard, a minimum number of Development Obligation Wells, as provided in Section 11 of the Unit Agreement, is set up to be drilled in each of the six units during the first two years. The total combined obligation during this period for the six units will amount to 25 wells which, it should be noted, is approximately equal to the total development in the Unit Area during the past 35 years. A summary of the Development Obligation Wells for each unit is presented in Table 3.

Under the provisions of Section 12, "Plan of Development and Operation," of the Unit Agreements, a commitment for the third, fourth, and fifth years' development in each unit is set forth (See Table 3). The five-year development plan for the Comanche Units will call for a total of 113 wells.

Plans for instituting supplemental recovery programs in each of the six units will be formulated based on information obtained from the evaluation wells in conjunction with the results of pilot operations currently being conducted in the South Bitter Lake Field, and possible future pilot operations within the requested unit areas.

#### CURRENT STATUS OF UNITIZATION PROCEEDINGS

As the initial step in the formulation of the aforementioned six units, Shell, as the major working interest owner in each unit, called a meeting with the other working interest owners on May 6, 1964, in order to submit geologic and engineering data, economics, and a draft of the Unit Agreement. Subsequent to this meeting, application for preliminary approval of the Unit Agreement and designation of Unit Area was submitted to the United States Geological Survey and the Commissioner of Public Lands. This preliminary approval was received August 6, 1964, from the United States Geological Survey. Ratification copies of the Unit Agreement and Unit Operating Agreement were dispersed to the various working interest owners in all units upon receipt of this approval. Subsequently, copies of the Unit Agreement have been dispersed to the royalty owners and overriding royalty owners for ratification.

SUMMATION AND REQUEST FOR APPROVAL

In summary, Shell has attempted to show that the formation of the six Comanche (San Andres) Units, as proposed, will result neither in waste of hydrocarbon resources nor violation of correlative rights; but will, through the application of supplemental recovery methods, result in increased recovery from this heretofore low-potential San Andres (Slaughter) accumulation.

We, therefore, request approval of the Unit Agreement and designation of Unit Area for Comanche San Andres Units A, B, C, D, E, and F.

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UNIT AGREEMENT  
COMANCHE (SAN ANDRES) A UNIT  
CHAVES COUNTY, NEW MEXICO

A

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	5
CASE NO.	3178

UNIT AGREEMENT  
FOR THE DEVELOPMENT AND OPERATION  
OF THE  
COMANCHE (SAN ANDRES) A UNIT  
COUNTY OF CHAVES  
STATE OF NEW MEXICO

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UNIT AGREEMENT  
COMANCHE (SAN ANDRES) A UNIT  
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Exhibit "A" (Map of Unit Area)

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UNIT AGREEMENT  
FOR THE DEVELOPMENT AND OPERATION OF THE  
COMANCHE (SAN ANDRES) A UNIT  
CHAVES COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 15th day of May, 1964, by and between the parties subscribing, ratifying or consenting hereto, and herein referred to as "parties hereto",

WITNESSETH: That,

WHEREAS, the parties hereto are the owners of working, royalty or other oil or gas interests in the Unit Area subject to this agreement; and

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

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by law (Volume 2, Chapter 7, Article 11, New Mexico Statutes 1953 Annotated) 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 by approval hereof to amend all oil and gas leases embracing State lands committed hereto so that the length of the terms of said leases will coincide with the term of this agreement; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by law (Volume 9, Part 2, Chapter 65, Article 3, New Mexico Statutes 1953 Annotated) to approve this agreement and the conservation provisions hereof; and

WHEREAS, the parties hereto hold sufficient interests in the Comanche (San Andres) A Unit comprised of the Unit Area hereinafter designated, to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto to conserve natural resources, prevent waste and secure the other benefits obtainable through development and operation of the Unit Area subject to this agreement under the terms, conditions and limitations herein set forth:

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

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

SECTION 2. DEFINITIONS: For the purpose of this agreement, the following terms and expressions as used herein shall mean:

(a) "Unit Area" is defined as the land shown on Exhibit "A" and described by Tracts in Exhibit "B" attached hereto, and said land is hereby designated and recognized as constituting the Unit Area.

(b) "Department" is defined as the Department of the Interior of the United States of America.

(c) "Secretary" is defined as the Secretary of the Interior of the United States of America.

(d) "Director" is defined as the Director of the United States Geological Survey.

(e) "Supervisor" is defined as the Oil and Gas Supervisor of the United States Geological Survey.

(f) "Commissioner" is defined as the Commissioner of Public Lands of the State of New Mexico.

(g) "Commission" is defined as the Oil Conservation Commission of the State of New Mexico.

(h) "Unitized Formation" is defined as that subsurface portion of the Unit Area extending from the surface down to the base of the San Andres formation as identified at a depth of 2335 feet below the kelly bushing on the Schlumberger Sonic Log, dated February 18, 1962, of the Cities Service Government "F" Well No. 1, located 330 feet from the North line and 560 feet from the East line of Section 23, Township 8 South, Range 26 East, N.M.P.M., Chaves County, New Mexico.

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

(j) "Working Interest" is defined as an interest in Unitized Substances by virtue of a lease, operating agreement, fee title, or otherwise, including a carried interest, 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. Any interest in Unitized Substances which is a Working Interest as of the date the owner thereof executes or ratifies this agreement, or which at any time thereafter becomes a Working Interest, shall thenceforth be treated as a Working Interest for all purposes of this agreement. The oil and gas rights that are free of lease or other instrument conveying the Working Interest to another shall be regarded as a Working Interest to the extent of seven-eighths (7/8) interest in Unitized Substances, and as a Royalty Interest with respect to the remaining one-eighth (1/8) interest therein.

(k) "Working Interest Owner" is defined as a party hereto who owns a Working Interest.

(l) "Royalty Interest" is defined as a right to or interest in any portion of the Unitized Substances or proceeds thereof other than a Working Interest.

(m) "Royalty Owner" is defined as a party hereto who owns a Royalty Interest.

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

(o) "Unit Operating Agreement" is defined as that agreement which is entered into by Working Interest Owners effective as of the same date as the effective date of this agreement.

(p) "Unit Operator" is defined as the Working Interest Owner designated hereunder to develop and operate the Unitized Formation, acting as operator and not as a Working Interest Owner.

(q) "Tract Participation" is defined as the percentage shown on Exhibit "C" for allocating Unitized Substances to a Tract under this agreement.

(r) "Unit Participation" of each Working Interest Owner is defined as the sum of the percentages obtained by multiplying the Working Interest of such Working Interest Owner in each Tract by the Tract Participation of such Tract.

(s) "Oil and Gas Rights" is defined as the right to 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.

(t) "Unit Operations" is defined as all operations conducted by Working Interest Owners or Unit Operator pursuant to this agreement and the Unit Operating Agreement for or on account of the development and operations of the Unitized Formation for the production of Unitized Substances.

(u) Unless the context otherwise clearly indicates, words used in the singular include the plural, the plural include the singular, and the neuter gender include the masculine and the feminine.

SECTION 3. EXHIBITS: Exhibit "A" attached hereto is a map showing the Unit Area and, to the extent known to Unit Operator, the boundaries and identity of Tracts and leases in the Unit Area. Exhibit "B" attached hereto is a schedule showing, to the extent known to Unit Operator, the land description and acreage content as to each Tract, the identity of the lease thereon

and the percentage and kind of ownership of the Oil and Gas Rights therein. However, nothing herein or in said map or schedule shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown in said map or schedule as being owned by such party. Exhibit "C" attached hereto is a schedule showing the Tract Participation of each Tract in the Unit Area, which Tract Participation has been calculated upon the basis of all Tracts in the Unit Area being committed to this agreement as of the effective date hereof. If less than all Tracts are committed to this agreement, Exhibit "C" shall be revised as hereinafter provided.

The shapes and descriptions of the respective Tracts have been established by using the best information available. If it subsequently appears that any Tract, because of diverse royalty or working interest ownership on the effective date hereof, should be divided into more than one Tract, or that any mechanical miscalculation has been made, Unit Operator, with the approval of Working Interest Owners having a combined Unit Participation of fifty-one per cent (51%) or more and the Supervisor and Commissioner, shall correct the mistake by revising the exhibits to conform to the facts. Each such revision of an exhibit shall be effective at 7:00 a.m. on the first day of the calendar month next following the filing for record of the revised exhibit or on such other date as may be approved and set forth in the revised exhibit.

If an exhibit is revised pursuant to this agreement, Unit Operator shall certify and file not less than five (5) copies of the revised exhibit with the Supervisor, two (2) copies with the Commissioner and one (1) copy with the Commission, and shall file a copy for record with the County Clerk of Chaves County, New Mexico.

When reference is herein made to an exhibit, such reference is to the exhibit as originally attached hereto, or, if revised, to the latest revision thereof.

SECTION 4. EXPANSION: The Unit Area may, when practicable, be expanded to include therein any additional tract or tracts regarded as reasonably necessary or advisable for the purposes of this agreement. Such expansion shall be effected in the following manner:

(a) The owners of the working interest in a tract or tracts desiring to bring such tract or tracts into the Unit Area shall file an application therefor with Unit Operator requesting such admission.

(b) Unit Operator shall circulate a notice to each Working Interest Owner of the proposed expansion, and after negotiation (at a Working Interest Owners' meeting or otherwise), if Working Interest Owners having a combined Unit Participation of ninety per cent (90%) or more agree to such tract or tracts being brought into the Unit Area, then Unit Operator shall, after preliminary concurrence by the Director and Commissioner:

(1) Prepare a notice of proposed expansion describing the contemplated changes in the boundaries of the Unit Area, the reason therefor, the basis for admission of the additional tract or tracts, the Tract Participation to be allocated thereto and the proposed effective date thereof; and

(2) Furnish copies of said notice to the Director, Commissioner and Commission and mail copies thereof to the last known address of each Working Interest Owner, lessee and lessor whose interests are affected, advising such parties that thirty (30) days will be allowed for submission to the Unit Operator of any objections to such proposed expansion; and

(3) File, upon the expiration of said thirty-day period as set out in Subsection (2) immediately above, with the Director, Commissioner and Commission the following: (a) evidence of mailing copies of said notice of expansion; (b) an application for approval of such expansion; (c) an instrument containing the appropriate joinders in compliance with the qualification requirements of Section 15, infra; and (d) a copy of any objections received.

After due consideration of all pertinent information and upon approval by the Director, Commissioner and Commission, the expansion shall become effective as of the date prescribed in the notice thereof, or on such other date as set by the Director and Commissioner in the order or instrument approving such expansion, and Unit Operator shall revise Exhibits "A", "B" and "C" accordingly.

If the Unit Area is expanded, the Tract Participations of the Tracts that were in the Unit Area prior to the expansion shall remain in the same ratio one to another. There shall be no retroactive allocation or adjustment of operating expenses or interests in the Unitized Substances produced, or the proceeds thereof; however, this limitation shall not prevent an adjustment of investment by reason of the expansion.

SECTION 5. OIL AND GAS RIGHTS UNITIZED: Subject to the provisions of this agreement, all Oil and Gas Rights of Royalty Owners in and to the committed lands shown on Exhibit "A" and described in Exhibit "B", and all Oil and Gas Rights of Working Interest Owners in and to said lands, are hereby unitized insofar as the respective Oil and Gas Rights pertain to the Unitized Formation. The lands so unitized by commitment hereto may be referred to as unitized lands or lands subject hereto.

Nothing herein shall be construed to unitize, pool, or in any way affect the oil, gas and other minerals contained in or that may be produced from any formation other than the Unitized Formation.

SECTION 6. UNIT OPERATOR: SHELL OIL COMPANY, a Delaware corporation, with offices in Midland, Texas, is hereby designated as Unit Operator, and by signing this instrument as Unit Operator it agrees and consents to accept the duties and obligations of Unit Operator for the development, operation and production of Unitized Substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as an owner of interests in Unitized Substances, and the term "Working Interest Owner" when used herein shall include or refer to Unit Operator as the owner of a Working Interest when such an interest is owned by it.

SECTION 7. RESIGNATION OR REMOVAL OF UNIT OPERATOR: Unit Operator shall have the right to resign at any time, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of six (6) months after written notice of intention to resign has been given by Unit Operator to all Working Interest Owners and the Director, Commissioner and Commission and until all wells then drilled hereunder are placed in a satisfactory condition for suspension or abandonment, whichever is required by the Supervisor, as to Federal lands, and the Commission, as to nonfederal lands, unless a new Unit Operator shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

The Unit Operator shall, upon default or failure in the performance of its duties and obligations hereunder, be subject to removal by vote of Working Interest Owners having a combined Unit Participation of ninety per cent (90%) or more, exclusive of the Unit Participation of the Working Interest Owner who is the Unit Operator. Such removal shall be effective upon notice thereof to the Director and Commissioner.

In all such instances of effective resignation or removal, until a successor to Unit Operator is selected and approved as hereinafter provided, the Working Interest Owners shall be jointly responsible for the performance of the duties of the Unit Operator and shall, not later than thirty (30) days before such resignation or removal becomes effective, appoint an Acting Unit Operator to represent them in any action to be taken hereunder.

The resignation or removal of Unit Operator under this agreement shall not terminate its right, title or interest as the owner of a Working Interest or other interest in Unitized Substances, but upon the resignation or removal of Unit Operator becoming effective, such Unit Operator shall deliver possession of all equipment, books and records, materials, appurtenances and any other assets used in conducting Unit Operations and owned by the Working Interest Owners (including any and all data and information which it might have gained or assembled by reason of its operation of the Unit Area) to the new duly qualified successor Unit Operator, or to the Acting Unit Operator if no such new Unit Operator is elected, to be used for the purpose of conducting Unit Operations hereunder. Nothing herein shall be construed as authorizing removal of any material, equipment or appurtenances needed for the preservation of any wells. Nothing herein contained shall be construed to relieve or discharge any Unit Operator who resigns or is removed hereunder from any liability or duties accruing to or performable by it prior to the effective date of such resignation or removal.

SECTION 8. SUCCESSOR UNIT OPERATOR: Whenever Unit Operator shall tender its resignation as Unit Operator or shall be removed as hereinabove provided, the Working Interest Owners shall, by affirmative vote of Working Interest Owners having a combined Unit Participation of not less than seventy per cent (70%), select a successor Unit Operator; provided, however, that should any Working Interest Owner have a Unit Participation of more than thirty per cent (30%), its negative vote or failure to vote shall not serve to disapprove the selection of a new Unit Operator approved by Working Interest Owners having a combined Unit Participation of fifty-one per cent (51%) or more, unless such negative vote or abstention from voting is supported by the negative vote of one or more Working Interest Owners having a combined Unit Participation of at least five per cent (5%), and provided, further, that the vote of the outgoing Unit Operator shall not be considered for such purpose if it votes to succeed itself. Such selection shall not become effective until: (a) a Unit Operator so selected shall accept in writing the duties and responsibilities of Unit Operator, and (b) written notice of such selection shall have been filed with the Supervisor and approved by the Commissioner. If no successor Unit Operator is selected and qualified as herein provided, the Director and Commissioner at

their election may declare this agreement terminated, effective as of the first day of the month following such joint declaration.

SECTION 9. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT: Costs and expenses incurred by Unit Operator in conducting Unit Operations hereunder shall be paid, apportioned among and borne by the Working Interest Owners in accordance with the Unit Operating Agreement. Such Unit Operating Agreement shall also provide the manner in which the Working Interest Owners shall be entitled to receive their respective proportionate and allocated share of the benefits accruing hereunder in conformity with their underlying operating agreements, leases or other independent contracts and such other rights and obligations as between Unit Operator and the Working Interest Owners as may be agreed upon by the Unit Operator and the Working Interest Owners; however, such Unit Operating Agreement shall not be deemed either to modify any of the terms and conditions of this Unit Agreement or to relieve the Unit Operator of any right or obligation established under this agreement, and in case of an inconsistency or conflict between this agreement and the Unit Operating Agreement, this agreement shall prevail. Three (3) true copies of the Unit Operating Agreement shall be filed with the Supervisor and one (1) copy with the Commissioner, prior to approval of this agreement by the Director.

SECTION 10. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR: Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for developing and operating the Unit Area, including producing, by primary and secondary methods, storing, allocating and distributing the Unitized Substances, are hereby delegated to and shall be exercised by the Unit Operator as herein provided. Upon request therefor, acceptable evidence of title to said rights shall be deposited with the Unit Operator, and together with this agreement, shall constitute and define the rights, privileges and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

SECTION 11. DEVELOPMENT OBLIGATION: Subject to the further provisions of this agreement, Unit Operator shall be obligated hereunder to drill

upon the unitized lands not less than four (4) wells during the first two (2) years after the effective date hereof, with not less than three (3) of said wells to be drilled during the first year, all of which wells shall be drilled to a depth sufficient to evaluate the capability of the Unitized Formation to produce Unitized Substances and to produce or enhance the production of Unitized Substances; unless it is established to the satisfaction of the Supervisor and Commissioner that further drilling of any such well or wells after commencement of drilling would be unwarranted or impracticable.

The Director and Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time whenever, in their opinion, such action is warranted.

Nothing in this section shall be deemed to limit the right of the Unit Operator to resign as provided in Section 7 hereof, or as requiring Unit Operator to commence or continue any drilling during the period pending such resignation becoming effective in order to comply with the requirements of this section.

Upon failure to comply with the drilling requirements of this section, the Director and Commissioner may, after reasonable notice to the Unit Operator and each Working Interest Owner, lessee and lessor at their last known addresses, declare this agreement terminated.

SECTION 12. PLAN OF DEVELOPMENT AND OPERATION: Upon submission of this agreement for approval by the Director and Commissioner, Unit Operator shall file for approval of the Supervisor and Commissioner a plan for the development and operation of the unitized lands for the first two (2) years after the effective date hereof, and thereafter from time to time prior to the expiration of any existing plan, Unit Operator shall file for approval of the Supervisor and Commissioner a plan for the development and operation of said lands for an additional specified period of time. The plan filed for the first two (2) years after the effective date hereof shall provide for the drilling of the wells required to be drilled under the provisions of Section 11 hereof. The plans filed for the third, fourth, and fifth years after the effective date hereof shall provide for the drilling of not less than five (5) additional wells during each of said years. Any wells drilled during any prior year after the effective date hereof in excess of the required number may be applied by Unit Operator against the number of wells required to be drilled

during any subsequent year. Such plans shall provide for the reasonable development and operation of the unitized lands and for the proper conservation of the Unitized Substances lying thereunder, and shall:

(a) specify the number and tentative location of any wells to be drilled and the proposed order for the drilling of such wells; and

(b) to the extent practicable, specify the operating practices regarded as necessary and advisable for the proper conservation of the Unitized Substances underlying the Tracts committed to this agreement.

Subject to compliance by Unit Operator with its obligation to drill the wells required to be drilled under the provisions of Section 11 hereof, said plans may be modified or supplemented by Unit Operator when necessary to meet changed conditions or to protect the interests of all parties to this agreement. Reasonable diligence shall be exercised by Unit Operator in complying with all such plans.

SECTION 13. OPERATING METHODS AND INJECTION RIGHTS: It is recognized and agreed by the parties hereto that from all available information, all of the Unit Area can reasonably be considered to be underlain by Unitized Substances consisting of oil and gas, but due to a deficiency in natural reservoir energy, it is unlikely that such Unitized Substances can be produced by conventional primary recovery methods in sufficient quantities to offset development and operating costs. Prior to the effective date hereof, Unit Operator initiated pilot waterflood operations in the same formation as the Unitized Formation in the vicinity of the Unit Area. It is the intention of Working Interest Owners that at such time as they determine that production of such Unitized Substances by conventional primary methods of recovery may be unprofitable, they will initiate water injection or such other supplemental recovery methods as Working Interest Owners may from time to time consider to be economical and practicable, whether such supplemental recovery methods are now known or are hereafter developed, and it is the object and purpose of this agreement to permit Working Interest Owners to formulate and to put into effect such supplemental recovery projects in order to effect additional recovery of Unitized Substances, prevent waste and conserve natural resources. The parties hereto agree that the Unit Operator, subject to approval by the Commission and the filing of a plan of operation with the Supervisor and Commissioner, may inject

into the Unitized Formation, through any well or wells completed therein, brine, water, air, gas, oil, liquefied petroleum gas and any one or more other substances or combination of any of said substances, whether or not produced from the Unitized Formation, and that the location of input wells, the rates of injection therein and the rate of production shall be governed by standards of good geologic and petroleum engineering practices and conservation methods. The parties hereto, to the extent they have the right so to do, hereby grant Unit Operator the right to use brine or water, or both, produced from any formation underlying the Tracts committed to this agreement for injection into Unitized Formation; provided, however, that this grant of said right shall not preclude the grantor's use of brine or water, or both, produced from any such formation other than the Unitized Formation for injection into formations other than the Unitized Formation. After commencement of any such supplemental recovery operations, Unit Operator shall furnish the Supervisor and Commissioner such periodic reports as may be required upon the progress of such operations.

SECTION 14. TRACT PARTICIPATION: The Tract Participation allocated to each Tract committed to this agreement shall be equal to the ratio (expressed as a percentage) that the number of surface acres contained in such Tract bears to the total number of surface acres contained in all Tracts committed to this agreement, as such acreage is shown in Exhibit "B".

In Exhibit "C", there are listed and numbered the various Tracts within the Unit Area, and set forth opposite each Tract are figures which represent the Tract Participation allocated to such Tract, calculated upon the basis of all Tracts within the Unit Area being committed to this agreement as of the effective date hereof.

In the event less than all of the Tracts within the Unit Area are committed to this agreement as of the effective date hereof, Unit Operator shall, as soon as practicable after said effective date, prepare a revised Exhibit "C" setting forth the committed Tracts within the Unit Area and showing the revised Tract Participation of each committed Tract, which revised Tract Participation shall be calculated upon the basis of surface acreage, as hereinabove provided. Copies of the revised Exhibit "C" shall be filed by Unit Operator in accordance with the provisions of Section 3 hereof.

SECTION 15. TRACTS QUALIFIED FOR PARTICIPATION: On and after the effective date hereof, the Tracts within the Unit Area that shall be entitled to participate in the production of Unitized Substances therefrom shall be those Tracts described in Exhibit "B" that corner or have a common boundary (Tracts separated only by a public highway or a railroad right of way shall be considered to have a common boundary), and that otherwise qualify as follows:

(a) Each Tract as to which Working Interest Owners owning one hundred per cent (100%) of the Working Interest therein have become parties hereto and as to which Royalty Owners owning seventy-five per cent (75%) or more of the Royalty Interest therein have become parties hereto.

(b) Each Tract as to which Working Interest Owners owning one hundred per cent (100%) of the Working Interest therein have become parties hereto and as to which Royalty Owners owning less than seventy-five per cent (75%) of the Royalty Interest therein have become parties hereto and, further, as to which:

(i) All Working Interest Owners in such Tract have joined in a request for the commitment of such Tract to this agreement, and

(ii) Seventy-five per cent (75%) of the combined voting interests of Working Interest Owners in all Tracts meeting the requirements of Section 15(a) hereof have voted in favor of the commitment of such Tract.

For the purposes of this Section 15(b), a Working Interest Owner's "voting interest" shall be equal to the ratio (expressed as a percentage) which its aggregate Unit Participation in all Tracts qualifying under Section 15(a) bears to the total Unit Participation of all Working Interest Owners in all Tracts qualifying under Section 15(a), as such Unit Participation is determined from the Tract Participation set out in Exhibit "C".

(c) Each Tract as to which Working Interest Owners owning less than one hundred per cent (100%) of the Working Interest therein have become parties hereto, regardless of the percentage of Royalty Interest therein which is committed hereto and, further, as to which:

(i) The Working Interest Owner operating any such Tract and all of the other Working Interest Owners in such Tract who have become parties hereto have joined in a request for the commitment of such Tract to this agreement and have executed and delivered an indemnity agreement indemnifying and agreeing to hold harmless the other Working Interest Owners in the Unit Area, their successors and assigns, against all claims and demands which may be made by the owners of working interests in such Tract who are not parties hereto and which arise out of the commitment of such Tract to this agreement, and

(ii) Seventy-five per cent (75%) of the combined voting interests of Working Interest Owners in all Tracts meeting the requirements of Section 15(a) and 15(b) have voted in favor of the commitment of such Tract and acceptance of the indemnity agreement.

For the purpose of this Section 15(c), a Working Interest Owner's "voting interest" shall be equal to the ratio (expressed as a percentage) which its aggregate Unit Participation in all Tracts qualifying under Section 15(a) and 15(b) bears to the total Unit Participation of all Working Interest Owners in all Tracts qualifying under Section 15(a) and 15(b) as such Unit Participation is determined from the Tract Participation set out in Exhibit "C". Upon the commitment of such a Tract to this agreement, the Unit Participation that would have been attributed to the nonsubscribing owners of the Working Interest in such Tract, had they become parties to

this agreement and the Unit Operating Agreement, shall be attributed to the Working Interest Owners in such Tract who have become parties to such agreements in proportion to their respective Working Interests in the Tract.

If on the effective date of this agreement there is any Tract or Tracts which have not been effectively committed to or made subject to this agreement by qualifying as above provided, then such Tract or Tracts shall not be entitled to participate in Unitized Substances produced hereunder, and Unit Operator shall prepare a revised Exhibit "C" in accordance with the provisions of Section 14 hereof and shall file copies of the revised Exhibit "C" in accordance with the provisions of Section 3 hereof.

**SECTION 16. ALLOCATION OF UNITIZED SUBSTANCES:** All Unitized Substances produced and saved from the committed Tracts within the Unit Area (less, save and except any part of such Unitized Substances which is used in conformity with good operating practices on the Unit Area for drilling, operating, camp and other production, development and pressure maintenance purposes, or which is unavoidably lost) shall be apportioned among and allocated to the committed Tracts within the Unit Area in accordance with the respective Tract Participations as shown in Exhibit "C". The amount of Unitized Substances so allocated to each Tract, and only that amount (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract), shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among or accounted for to the parties hereto 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.

No Tract committed to this agreement and qualified for participation in Unitized Substances produced hereunder as hereinabove provided shall be subsequently excluded from such participation on account of depletion of Unitized Substances or incapability to produce Unitized Substances.

If the Working Interest or the Royalty Interest in any Tract is, on or after the effective date hereof, divided with respect to separate parcels or portions of such Tract and owned severally by different persons, the Tract

Participation assigned to such Tract shall, in the absence of a recordable instrument executed by all owners and furnished to Unit Operator fixing the divisions of ownership, be divided among such parcels or portions in proportion to the number of surface acres in each.

The Unitized Substances allocated to each Tract shall be delivered in kind to the respective Working Interest Owners and parties entitled thereto by virtue of the ownership of Oil and Gas Rights therein or by purchase from such owners. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose on the Unit Area, provided the same are so constructed, maintained and operated as not to interfere with operations carried on pursuant hereto or with operations upon or with regard to formations other than the Unitized Formation conducted within the Unit Area. Subject to Section 17 hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party receiving the same in kind.

If any party fails to take in kind or separately dispose of its share of Unitized Substances, Unit Operator shall have the right, for the time being and subject to revocation at will by the party owning the share, to purchase for its own account or sell to others such share at not less than the market price prevailing in the area; provided that, all contracts of sale by Unit Operator of any other party's share of Unitized Substances shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the circumstances, but in no event shall any such contract be for a period in excess of one year. The proceeds of the Unitized Substances so disposed of by Unit Operator shall be paid to the party entitled thereto.

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

SECTION 17. ROYALTY SETTLEMENT: The United States of America, the State of New Mexico and all Royalty Owners who, under existing contracts, are

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

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

Royalty due on account of State lands shall be computed as provided for in the State lease and paid on the basis of all Unitized Substances allocated to such lands.

SECTION 18. RENTAL SETTLEMENT: Rentals or minimum royalties due on leases committed hereto shall be paid by Working Interest Owners responsible therefor under existing contracts, laws and regulations; provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof due under their leases. Rental or minimum royalty for lands of the United States of America subject to this agreement shall be paid at the rate specified in the respective leases from the United States of America, unless rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative. Rental for

lands of the State of New Mexico subject to this agreement shall be paid at the rate specified in the respective leases from the State of New Mexico.

SECTION 19. CONSERVATION: Operations hereunder and production of Unitized Substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to Federal and State laws and regulations.

SECTION 20. DRAINAGE: The Unit Operator shall take appropriate and adequate measures to prevent drainage of Unitized Substances from unitized land by wells on land not subject to this agreement.

SECTION 21. LEASES AND CONTRACTS CONFORMED AND EXTENDED: The terms, conditions and provisions of all leases, subleases and other contracts relating to exploration, drilling, development or operation for oil or gas on lands committed to this agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect, and the parties hereto hereby consent that the Secretary and the Commissioner, respectively, shall and by their approval hereof or by the approval hereof by their duly authorized representatives, do hereby establish, alter, change or revoke the drilling, producing, rental, minimum royalty and royalty requirements of Federal and State leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this agreement.

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

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

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

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

(d) Any Federal lease for a fixed term of twenty (20) years or any renewal thereof or any part of such lease which is made subject to this agreement shall continue in force beyond the term provided therein until the termination hereof. Any other Federal lease committed hereto shall continue in force beyond the term so provided therein or by law as to the land committed so long as such lease remains subject hereto, provided that production is had in paying quantities (to-wit: quantities sufficient to repay the cost of drilling and producing operations, with a reasonable profit) under this Unit Agreement prior to the expiration date of the term of such lease, or in the event actual drilling operations are commenced on unitized land, in accordance with the provisions of this agreement, prior to the end of the primary term of such lease and are being diligently prosecuted at that time, such lease shall be extended for two (2) years and so long thereafter as oil or gas is produced in paying quantities in accordance with the provisions of the Mineral Leasing Act Revision of 1960.

(e) Each sublease or contract relating to the operation and development of Unitized Substances from lands of the United States committed to this agreement, which by its terms would expire prior to the time at which the underlying lease, as extended by the immediately preceding paragraph, will expire, is hereby extended beyond any such term so provided therein so that it shall be continued in full force and effect for and during the term of the underlying lease as such term is herein extended.

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

(g) 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.

(h) Any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto shall be segregated as to that portion committed and that portion not committed, and the terms of such lease shall apply separately 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 oil or gas are capable of being produced in paying quantities from some part of the lands embraced in such lease committed to this agreement; or (2) if, and for so long as some part of the lands embraced in such lease committed to this agreement are allocated Unitized Substances; or (3) 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 oil or gas said lease shall continue in full force and effect as to all the lands embraced therein so long thereafter as oil or gas in paying quantities is being produced from any portion of said lands.

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

SECTION 22. COVENANTS RUN WITH LAND: The covenants herein shall be construed to be covenants running with the land with respect to the interests of the parties hereto and their successors in interest until this agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and is hereby conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee, or other successor in interest. No assignment or transfer of any Working Interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, or an acceptable photostatic or certified copy, of the recorded instrument of transfer; and no assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer.

SECTION 23. EFFECTIVE DATE AND TERM: This agreement shall become effective upon approval by the Director and Commissioner, or their duly authorized representatives, as of the date of approval by the Director and, unless sooner terminated in accordance with the provisions hereof, shall be for a term of five (5) years from and after the effective date hereof and so long thereafter as Unitized Substances can be produced from any well or wells located upon the Tracts committed to this agreement in quantities sufficient to pay the cost of operating such well or wells, and, should production cease, so long thereafter as operations are in progress for the restoration of production or development of new production, with no cessation of such operations for more than ninety (90) consecutive days, and for so long thereafter as Unitized Substances can be produced in the quantities aforesaid.

This agreement may be terminated at any time, either during or after the fixed five-year term hereof, with the approval of the Director and Commissioner, by Working Interest Owners having a combined Unit Participation of seventy-five per cent (75%) or more whenever such Working Interest Owners determine that further drilling hereunder would be unwarranted or impracticable, that Unitized Substances cannot be produced in paying quantities from the Tracts committed to this agreement or that Unit Operations are no longer

profitable, feasible or in the interest of conservation. Notice of termination shall be given by Unit Operator to all parties hereto, the Supervisor, Commissioner and Commission, and a certificate as to such termination shall be filed for record with the County Clerk of Chaves County, New Mexico.

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.

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.

**SECTION 24. RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION:** The Director is hereby vested with authority to alter or modify from time to time in his discretion the quantity and rate of production under this agreement when such quantity and rate is not fixed pursuant to Federal or State law or does not conform to any state-wide voluntary conservation or allocation program, which is established, recognized, and generally adhered to by the majority of operators in such State, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification. Without regard to the foregoing, the Director is also hereby vested with authority to alter or modify from time to time in his discretion the rate of prospecting and development and the quantity and rate of production under this agreement when such alteration or modification is in the interest of attaining the conservation objectives stated in this agreement and is not in violation of any applicable Federal or State law. It is agreed, further, that no such alteration or modification shall be effective as to any land of the State of New Mexico as to the rate of prospecting and development in the absence of the specific written approval thereof by the Commissioner and as to any land of the State of New Mexico or privately owned land subject to this agreement as

to the quantity and rate of production in the absence of specific written approval thereof by the Commission.

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

SECTION 25. NONDISCRIMINATION: In connection with the performance of work under this agreement, Unit Operator agrees to comply with all of the provisions of Section 301(1) to (7) inclusive, of Executive Order 10925, as amended (28 F.R. 6485), which are incorporated by reference in this agreement.

SECTION 26. APPEARANCES: Unit Operator shall have the right to appear for or on behalf of any and all interests affected hereby before the Department, Commissioner and Commission, and to appeal from any order issued under the rules and regulations of the Department, Commissioner and Commission, or to apply for relief from any of said rules and regulations or in any proceedings relative to operations before the Department, Commissioner and Commission, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceedings.

SECTION 27. NOTICES: All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by postpaid certified mail addressed to such party or parties at their respective addresses set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 28. NO WAIVER OF CERTAIN RIGHTS: Nothing in this agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any Federal or State law or rule or regulation issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive; provided, however, that each party hereto covenants that during the existence of this agreement such party will not resort to any action at law or in equity to partition the Unit Area or the facilities

used in the development or operation hereof and to that extent waives the benefits of all laws authorizing such partition.

SECTION 29. UNAVOIDABLE DELAY: All obligations under this agreement requiring the Unit Operator to commence or continue drilling or supplemental recovery operations or to operate on or produce Unitized Substances from any of the lands covered by this agreement shall be suspended while, but only so long as, the Unit Operator despite the exercise of due care and diligence is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State or municipal law or agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

SECTION 30. LOSS OF TITLE: In the event any Tract ceases to have sufficient Working Interest Owners or Royalty Owners committed to this agreement to meet the conditions of Section 15 because of failure of title of any party hereto, such Tract shall be automatically regarded as not committed to this agreement effective as of 7:00 a.m. on the first day of the calendar month in which the failure of title is finally determined; provided, however, that such Tract shall not be so regarded if said Tract can be requalified for admission under Section 15 within ninety (90) days after the date on which such title failure was finally determined.

If any such Tract cannot be so requalified, Unit Operator shall revise Exhibit "C" to show the Tracts in the Unit Area that remain committed hereto and the Tract Participation of each of said Tracts, which revised Tract Participation shall be calculated and determined on the basis that the Tract Participation of each of said Tracts shall remain in the same ratio one to the other. Copies of the revised Exhibit "C" shall be filed in compliance with the provisions of Section 3 hereof and same shall be effective as of 7:00 a.m. on the first day of the calendar month in which such failure of title is finally determined.

If title to a Working Interest fails, the rights and obligations of Working Interest Owners by reason of such failure shall be governed by the Unit Operating Agreement. If title to a Royalty Interest fails, but the Tract to which it relates remains committed to this agreement, the party whose title

failed shall not be entitled to participate hereunder insofar as its participation is based on such lost Royalty Interest.

In the event of a dispute as to the title to any Working Interest or Royalty Interest subject hereto, payment or delivery on account thereof may be withheld without liability or interest until the dispute is finally settled; provided, that as to State or Federal land or leases, no payments of funds due the United States of America or the State of New Mexico shall be withheld, but such funds shall be deposited as directed by the Supervisor or Commissioner (as the case may be), to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

Unit Operator, as such, is relieved from any responsibility for any defect or failure of any title hereunder.

SECTION 31. NONJOINDER AND SUBSEQUENT JOINDER: If the owner of any interest in a Tract within the Unit Area fails or refuses to subscribe or consent in writing to this agreement, such Tract shall not be deemed committed to this agreement unless such Tract may be and is qualified as provided in Section 15 hereof. Joinder in the Unit Agreement by a Working Interest Owner, at any time, must be accompanied by appropriate joinder in the Unit Operating Agreement in order for the interest to be regarded as effectively committed to this Unit Agreement. Joinder by any owner of a Royalty Interest, at any time, must be accompanied by appropriate joinder by the owner of the corresponding Working Interest in order for the interest to be regarded as committed hereto.

Any oil or gas interest in the Unitized Formation in lands within the Unit Area not committed hereto prior to final approval of this agreement by the Director may thereafter be committed hereto upon compliance with the applicable provisions of Section 15 hereof within a period of two (2) months thereafter, on the same basis of participation as provided for in Section 14 hereof and as set forth in the original Exhibit "C" attached hereto, by the owner or owners thereof subscribing or consenting in writing to this agreement and, if the interest is a Working Interest, by the owner of such interest subscribing also to the Unit Operating Agreement.

It is understood and agreed, however, that after two (2) months from the effective date hereof, the right of subsequent joinder as provided in this

section shall be subject to Section 15 and to such requirements and upon such basis as may be agreed upon by Working Interest Owners having a combined Unit Participation of ninety per cent (90%) or more, and approved by the Director and Commissioner, provided that the Tract Participation of each previously committed Tract shall remain in the same ratio one to the other. Any such joinder by a Royalty Owner must also be consented to in writing by the Working Interest Owner responsible for the payment of any benefits that may accrue hereunder in behalf of such Royalty Owner.

Subsequent joinders to this agreement shall be effective as of 7:00 a.m. of the first day of the calendar month next following the filing with the Supervisor and Commissioner of all instruments necessary to effect such joinder, unless a different date is set by Working Interest Owners having such combined Unit Participation of ninety per cent (90%) or more, and approved by the Supervisor and Commissioner. If any such subsequent joinder results in the commitment of an additional Tract to this agreement, Unit Operator shall prepare a revised Exhibit "C" and file same in accordance with the provisions of Section 3 hereof.

SECTION 32. COUNTERPARTS: This agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification or consent hereto, effective as of the date of execution thereof by such parties, with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands within the above described Unit Area.

SECTION 33. JOINDER IN DUAL CAPACITY: Execution as herein provided by any party either as a Working Interest Owner or as a Royalty Owner shall commit all interests that may be owned or controlled by such party.

SECTION 34. TAXES: Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the unitized land; provided, however, that if it is required or if it be determined that the Unit Operator or the several Working Interest Owners must pay or advance said taxes for the

account of the parties hereto, it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No such taxes shall be charged to the United States of America or to the State of New Mexico, or to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 35. CONFLICT OF SUPERVISION: Neither the Unit Operator nor the Working Interest Owners, nor any of them, shall be subject to any forfeiture, termination or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability on account of delay or failure in whole or in part to comply with any applicable provisions thereof to the extent that the said Unit Operator or the Working Interest Owners, or any of them, are hindered, delayed or prevented from complying therewith by reason of failure of the Unit Operator to obtain, in the exercise of due diligence, the concurrence of proper representatives of the United States and proper representatives of the State of New Mexico in and about any matters or things concerning which it is required herein that such concurrence be obtained.

SECTION 36. BORDER AGREEMENTS: Unit Operator, with concurrence of Working Interest Owners having a combined Unit Participation of sixty-five per cent (65%) or more, may, subject to approval of the Supervisor and Commissioner, enter into a border-protection agreement or agreements with the working interest owners of adjacent lands along the exterior boundary of the Unit Area with respect to the operations in the border area for the purpose of increasing ultimate recovery, conservation purposes and proper protection of the parties and interests.

SECTION 37. NO PARTNERSHIP: The duties, obligations, and liabilities of the parties hereto are intended to be several and not joint or collective. This agreement is not intended to create, and shall not be construed to create, an association or trust, or to impose a partnership duty, obligation, or liability with regard to any one or more of the parties hereto. Each party hereto shall be individually responsible for its own obligations as herein provided.

SECTION 38. 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.

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

SHELL OIL COMPANY

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Attorney in Fact

Address: P. O. Box 1509  
Midland, Texas

UNIT OPERATOR AND WORKING INTEREST OWNER

ATTEST:

\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_  
\_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

ATTEST:

\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_  
\_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

ATTEST:

\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_  
\_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

OTHER WORKING INTEREST OWNERS

Date: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

ROYALTY OWNERS

STATE OF TEXAS     I  
                          I  
COUNTY OF MIDLAND I

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1964, by J. V. LINDSEY, Attorney in Fact of SHELL OIL COMPANY, a Delaware corporation, on behalf of said corporation.

My commission expires:

\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for  
Midland County, Texas

STATE OF \_\_\_\_\_ I  
                          I  
COUNTY OF \_\_\_\_\_ I

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1964, by \_\_\_\_\_ of \_\_\_\_\_, a \_\_\_\_\_ corporation, on behalf of said corporation.

My commission expires:

\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for  
\_\_\_\_\_ County, \_\_\_\_\_

STATE OF \_\_\_\_\_ I  
                          I  
COUNTY OF \_\_\_\_\_ I

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 1964, by \_\_\_\_\_.

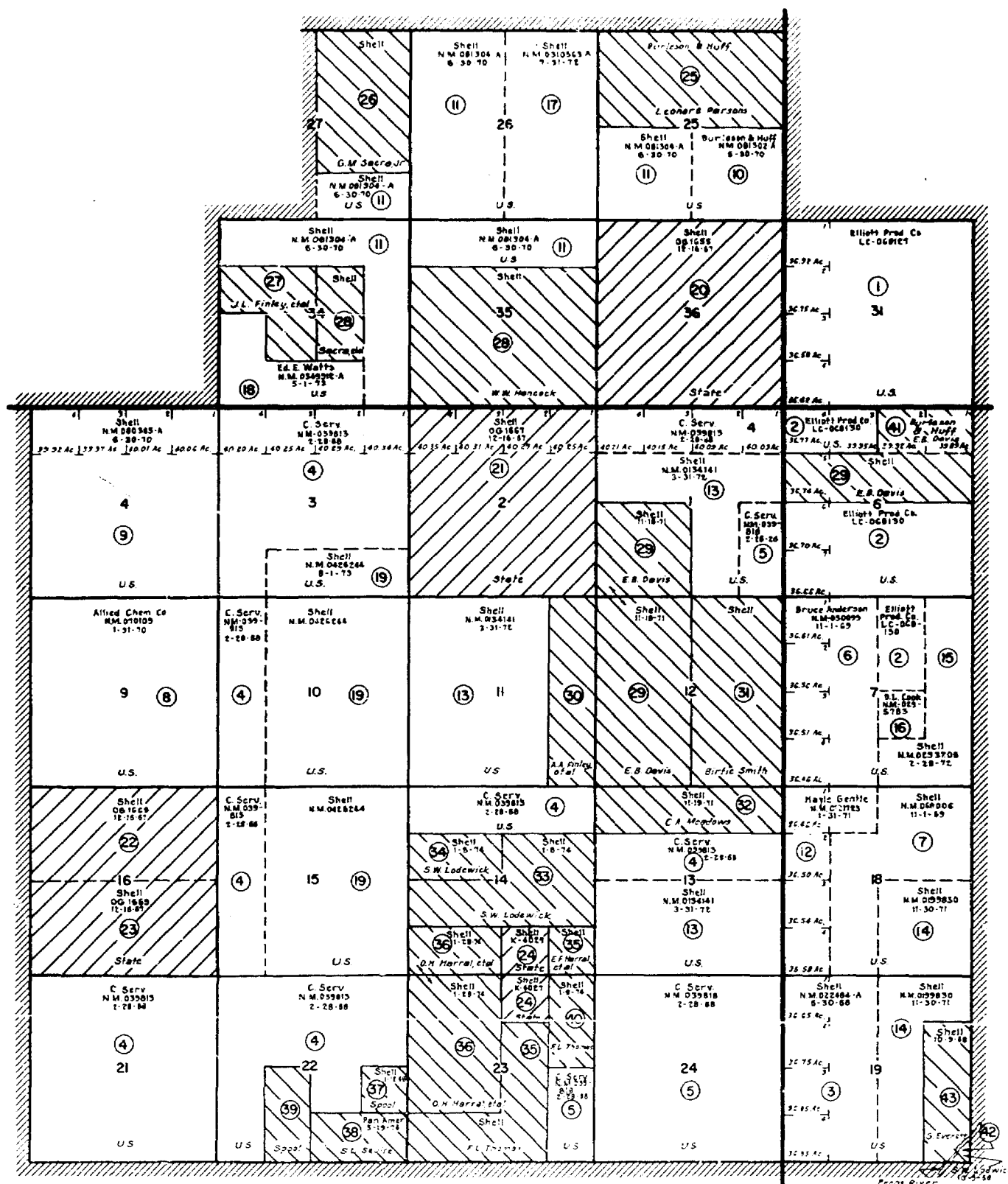
My commission expires:

\_\_\_\_\_

\_\_\_\_\_  
Notary Public in and for  
\_\_\_\_\_ County, \_\_\_\_\_

R-26-E

T  
7  
S



1320 5280

SCALE

**EXHIBIT "B"**  
**ATTACHED TO UNIT AGREEMENT**  
**COMANCHE (SAN ANDRES) A UNIT**  
**CHAVES COUNTY, NEW MEXICO**

Tract No.	Description	Number of Acres	Lease No. & Expiration Date	Basic Royalty Percentage	Lessee of Record	Overriding Royalty Percentage	Working Interest Owner and Percentage
<b>Federal Land</b>							
1	<u>T-6-S, R-26-E</u> Sec. 31; All	626.67	LC-068127 Producing	All	Elliot Production Company	1.250000	Elliot Production Company All
2	<u>T-7-S, R-26-E</u> Sec. 6; Lots 3, 4, 6, 7, E/2 SW/4, SE/4 Sec. 7; W/2 NE/4	470.08	LC-068130 Producing	All	Elliot Production Company	1.250000	Elliot Production Company All
3	<u>T-7-S, R-26-E</u> Sec. 19; Lots 1, 2, 3, 4, E/2 W/2	307.20	NM-022484-A 6-30-66	All	Shell Oil Company	4.000000	Shell Oil Company All
4	<u>T-7-S, R-26-E</u> Sec. 1; Lots 1, 2, 3, 4, Sec. 3; Lots 1, 2, 3, 4, S/2 N/2, N/2 S/2, SW/4 SW/4 Sec. 10; W/2 W/2 Sec. 13; S/2 N/2 Sec. 14; N/2 W/2 Sec. 15; W/2 W/2 Sec. 21; All Sec. 22; N/2, W/2 SW/4, NW/4 SE/4	2401.56	NM-039813 2-28-68	All	Cities Service Oil Company	None	Cities Service Oil Company All
5	<u>T-7-S, R-26-E</u> Sec. 1; E/2 SE/4 Sec. 23; E/2 SE/4 Sec. 24; All	800.00	NM-039818 2-28-68	All	Cities Service Oil Company	None	Cities Service Oil Company All
6	<u>T-7-S, R-26-E</u> Sec. 7; Lots 1, 2, 3, 4, E/2 W/2	306.14	NM-050099 11-1-69	All	Bruce Anderson	None	Bruce Anderson All
7	<u>T-7-S, R-26-E</u> Sec. 18; NE/4, SE/4 NW/4 E/2 SW/4	280.00	NM-068006 1-31-70	All	Shell Oil Company	3.000000	Shell Oil Company All
8	<u>T-7-S, R-26-E</u> Sec. 9; All	640.00	NM-070109 1-31-70	All	Allied Chemical Company	1.000000	Allied Chemical Company All
9	<u>T-7-S, R-26-E</u> Sec. 4; All	639.96	NM-080365-A 6-30-70	All	Shell Oil Company	5.000000	Shell Oil Company All
10	<u>T-6-S, R-26-E</u> Sec. 25; SE/4	160.00	NM-081302-A 6-30-70	All	Lewis B. Burleson and Jack Huff	3.000000	Lewis B. Burleson and Jack Huff All
11	<u>T-6-S, R-26-E</u> Sec. 25; SW/4 Sec. 26; W/2 Sec. 27; S/2 SE/4 Sec. 34; N/2 N/2, E/2 SE/4, SE/4 NE/4 Sec. 35; W/2 N/2	1000.00	NM-081304-A 6-30-70	All	Shell Oil Company	3.000000	Shell Oil Company All
12	<u>T-7-S, R-26-E</u> Sec. 18; Lots 1, 2, 3, 4, NE/4 NW/4	186.08	NM-0121723 1-31-71	All	Hazel L. Gentile	0.500000	Hazel L. Gentile All

**EXHIBIT "B"**  
(Continued)

Tract No.	Description	Number of Acres	Lease No. & Expiration Date	Basic Royalty Percentage	Lessee of Record	Overriding Royalty Percentage	Working Interest Owner and Percentage
<b>Federal Land (Cont'd)</b>							
13	T-7-S, R-25-E Sec. 1; S/2 N/2, W/2 SE/4 Sec. 11; W/2, W/2 E/2 Sec. 13; S/2	1040.00	NM-0134141 3-31-72	All	Shell Oil Company	1.000000	Shell Oil Company All
14	T-7-S, R-26-E Sec. 13; SE/4 Sec. 19; NE/4 NE/4, W/2 E/2	360.00	NM-0199830 11-30-71	All	Shell Oil Company	1.000000	Shell Oil Company All
15	T-7-S, R-26-E Sec. 7; E/2 E/2, SW/4 SE/4	200.00	NM-0233206 2-28-72	All	Shell Oil Company	1.000000	Shell Oil Company All
16	T-7-S, R-26-E Sec. 7; NW/4 SE/4	40.00	NM-0295783 7-31-72	All	D. L. Cook	None	D. L. Cook All
17	T-6-S, R-25-E Sec. 25; E/2	320.00	NM-0310563-A 9-30-72	All	Shell Oil Company	1.000000	Shell Oil Company All
18	T-6-S, R-25-E Sec. 34; W/2 SW/4 SE/4 SW/4, SW/4 SE/4	160.00	NM-0349912-A 5-1-73	All	Ed E. Watts	2.000000	Ed E. Watts All
19	T-1-S, R-25-E Sec. 3; S/2 SE/4, SE/4 SW/4 Sec. 10; E/2, E/2 W/2 Sec. 15; E/2, E/2 W/2	1080.00	NM-0426244 8-31-73	All	Shell Oil Company	1.000000	Shell Oil Company All
<b>Total - 19 Tracts Federal Land - 11,017.59 Acres - 65.21% of Unit Area</b>							
<b>State of New Mexico Land</b>							
20	T-6-S, R-25-E Sec. 36; All	640.00	OG-1655 12-16-67	12.500000	Shell Oil Company	None	Shell Oil Company All
21	T-7-S, R-25-E Sec. 2; All	641.20	OG-1667 12-16-67	12.500000	Shell Oil Company	None	Shell Oil Company All
22	T-7-S, R-25-E Sec. 16; N/2	320.00	OG-1668 12-16-67	12.500000	Shell Oil Company	None	Shell Oil Company All
23	T-7-S, R-25-E Sec. 15; S/2	320.00	OG-1669 12-16-67	12.500000	Shell Oil Company	None	Shell Oil Company All
24	T-7-S, R-25-E Sec. 14; SW/4 SE/4 Sec. 23; NW/4 NE/4	80.00	K-4027 4-20-74	12.500000	Shell Oil Company	None	Shell Oil Company All
<b>Total - 5 Tracts State of New Mexico Land - 2,001.20 Acres - 11.84% of Unit Area</b>							

**EXHIBIT "B"**  
(Continued)

Tract No.	Description	Number of Acres	Lease No. & Expiration Date	Basic Royalty Percentage	Lessee of Record	Overriding Royalty Percentage	Working Interest Owner and Percentage
25	<u>Patented (Fee) Land</u> T-6-S, R-25-E Sec. 25; N/2	320.00	1-9-67	12.500000	Levis B. Burleson and Jack Huff	None	Levis B. Burleson and Jack Huff All
26	T-6-S, R-25-E Sec. 27; NE/4, N/2 SE/4	240.00	5-14-71	12.500000	Shell Oil Company	None	Shell Oil Company All
27	T-6-S, R-25-E Sec. 34; S/2 NW/4, NE/4 SW/4	120.00	Not leased	12.500000	Not leased	None	Jesse L. Finley Eunice L. Harris Est. of Austin A. Finley 25.000000 50.000000
28	T-6-S, R-25-E Sec. 34; SW/4 NE/4, NW/4 SE/4 Sec. 35; S/2 N/2, S/2	560.00	5-14-71 11-14-70	6.250000 6.250000	Shell Oil Company	None	Shell Oil Company All
29	T-7-S, R-25-E Sec. 1; SW/4 Sec. 12; W/2	636.74	11-18-71	12.500000	Shell Oil Company	None	Shell Oil Company All
30	T-7-S, R-25-E Sec. 11; E/2 E/2	160.00	Not Leased	12.500000	Not Leased	None	Est. of Austin A. Finley All
31	T-7-S, R-25-E Sec. 12; E/2	320.00	12-1-73	12.500000	Shell Oil Company	None	Shell Oil Company All
32	T-7-S, R-25-E Sec. 13; N/2 N/2	160.00	11-19-71	12.500000	Shell Oil Company	None	Shell Oil Company All
33	T-7-S, R-25-E Sec. 14; S/2 NE/4, N/2 S/2	240.00	1-8-74 1-12-68 Not Leased	4.687500 6.250000 1.562500	Shell Oil Company - 7/8 Not Leased - 1/8	None	Shell Oil Company Edyth Clarke 87.500000 12.500000
34	T-7-S, R-25-E Sec. 14; S/2 NW/4	80.00	1-8-74 Not Leased	4.687500 7.812500	Shell Oil Company - 3/8 Not Leased - 5/8	None	Shell Oil Company Spool Cattle Company Edyth Clarke 37.500000 12.500000 50.000000
35	T-7-S, R-25-E Sec. 14; SE/4 SE/4 Sec. 23; S/2 SW/4, W/2 SE/4, SW/4 NE/4	240.00	1-8-74 1-12-68	6.250000 6.250000	Shell Oil Company	None	Shell Oil Company All
36	T-7-S, R-25-E Sec. 23; NW/4, N/2 SW/4 Sec. 14; S/2 SW/4	320.00	1-28-74 1-12-68	6.250000 6.250000	Shell Oil Company	None	Shell Oil Company All
37	T-7-S, R-25-E Sec. 22; NE/4 SE/4	40.00	1-12-68	12.500000	Shell Oil Company	None	Shell Oil Company All
38	T-7-S, R-25-E Sec. 22; S/2 SE/4	80.00	5-19-74	12.500000	Pan American Petroleum Corp.	None	Pan American Petroleum Corp. All
39	T-7-S, R-25-E Sec. 22; E/2 SW/4	80.00	Not Leased	12.500000	Not Leased	None	Spool Cattle Company All
40	T-7-S, R-25-E Sec. 23; E/2 NE/4	80.00	1-8-74 Not Leased	6.250000 6.250000	Shell Oil Company - 1/2 Not Leased - 1/2	None	Shell Oil Company Spool Cattle Company 50.000000 50.000000

**EXHIBIT "B"**  
(Continued)

Tract No.	Description	Number Of Acres	Lease No. & Expiration Date	Basic Royalty Percentage	Lessee of Record	Overriding Royalty Percentage	Working Interest Owner and Percentage
41	Patented (Fee) Land (Cont'd) T-7-S, R-26-E Sec. 6; Lots 1, 2	79.81	6-5-72	12.500000	Lewis B. Burleson and Jack Huff	None	Lewis B. Burleson and Jack Huff All
42	T-7-S, R-26-E Sec. 19; SE/4 NE/4, E/2 SE/4 lying East of the Pecos River	10.00	10-9-68 Not Leased	5.468750 7.031250	Shell Oil Company - 7/16 Not Leased - 9/16	None	Shell Oil Company Barnett Farm & Cattle Co. Edyth Clarke 43.750000 50.000000 6.250000
43	T-7-S, R-26-E Sec. 19; SE/4 NE/4, E/2 SE/4 lying West of the Pecos River	110.00	10-9-68 Not Leased	3.125000 9.375000	Shell Oil Company - 1/4 Not Leased - 3/4	None	Shell Oil Company Barnett Farm & Cattle Co. O.B. & B.F. Crawford Edyth Clarke 25.000000 30.000000 18.750000 6.250000
Total - 19 Tracts Patented (Fee) Land - 3,876.55 Acres - 22.95% of Unit Area							
GRAND TOTAL - 43 Tracts - 16,895.44 Acres in entire Unit Area							

EXHIBIT "C"  
ATTACHED TO UNIT AGREEMENT  
COMANCHE (SAN ANDRES) A UNIT  
CHAVES COUNTY, NEW MEXICO

Schedule of Tract Participation

<u>Tract Number</u>	<u>Tract Participation</u>
1	3.709107
2	2.782289
3	1.818242
4	14.214250
5	4.735005
6	1.811968
7	1.657252
8	3.788004
9	3.787768
10	0.947001
11	5.918757
12	1.101362
13	6.155507
14	2.130752
15	1.183751
16	0.236750
17	1.894002
18	0.947001
19	6.392257
20	3.788004
21	3.795107
22	1.894002
23	1.894002
24	0.473501
25	1.894002
26	1.420502
27	0.710251
28	3.314504
29	3.768709
30	0.947001
31	1.894002
32	0.947001
33	1.420502
34	0.473501
35	1.420502
36	1.894002
37	0.236750
38	0.473501
39	0.473501
40	0.473501
41	0.472376
42	0.059188
43	0.651063
Total	100.000000

DRAFT

JMD/esr

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE No. 3178

Order No. R- 2839

APPLICATION OF SHELL OIL COMPANY  
FOR APPROVAL OF THE COMANCHE (SAN ANDRES) A  
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  
December 15, 1964, at Santa Fe, New Mexico, before Examiner  
✓ Elvis A. Utz.

NOW, on this \_\_\_\_\_ day of December, 1964, the Commission,  
a quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

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

(2) That the applicant, Shell Oil Company,  
seeks approval of the Comanche (San Andres) A Unit Agreement  
State,  
covering 16.895.44 acres, more or less, of Federal lands  
and Fee  
described as follows:

CHAVES COUNTY, NEW MEXICO  
TOWNSHIP 6 SOUTH, RANGE 25 EAST, NMPM

Sections 25 and 26: All  
Section 27: E/2  
Sections 34 through 36: All

TOWNSHIP 6 SOUTH, RANGE 26 EAST, NMPM  
Section 31: All

TOWNSHIP 7 SOUTH, RANGE 26 EAST, NMPM  
Sections 1 through 4: All  
Sections 9 through 16: All  
Sections 21 through 24: All

TOWNSHIP 7 SOUTH, RANGE 26 EAST, NMPM  
Sections 6 and 7: All  
Sections 18 and 19: All

(3) That approval of the proposed unit agreement should promote the prevention of waste and the protection of correlative rights within the unit area.

IT IS THEREFORE ORDERED:

(1) That the Comanche (San Andres) A Unit Agreement is hereby approved.

(2) That the plan contained in said unit agreement for the development and operation of the unit area 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 Commission to supervise and control operations for the exploration and development of any lands committed to the unit and production of oil or gas therefrom.

(3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof; that 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.

(4) 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; that this order shall terminate ipso facto upon the termination of said unit agreement; and that the last unit operator shall notify the Commission immediately in writing of such termination.

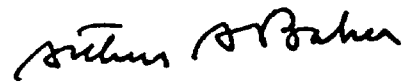
(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

IN REPLY REFER TO:	
SHELL	
RECEIVED	
AUG 17 1964	
A.C.U.	
Mr. F.	
Mr. T.	
Mr. Eng.	1
Mr. Eng.	
P-S Supv.	
Brig. F.	
Off. Supv.	
Discuss	Wall File
Reply	Lab. File
Call Up	Field File
Destroy	Gen. Cor.

Inasmuch as this unit area contains State of New Mexico lands, we are sending a copy of this letter to the Commissioner of Public Lands at Santa Fe, and we request you to contact said Commissioner in connection with this letter prior to soliciting joinders.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Arthur J. Baker".

Acting Director



IN REPLY REFER TO:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON 25, D. C.

AUG 6 1964

Shell Oil Company  
P. O. Box 1858  
Roswell, New Mexico

Attention: Mr. T. H. Dwyer

Gentlemen:

Your application of May 21 filed with the Oil and Gas Supervisor, Roswell, New Mexico, requests the designation of 22,048.92 acres, more or less, Chaves County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act, as amended. Unitization will be limited to formations above the base of the San Andres formation as identified by Section 2(h) of the proposed unit agreement form.

Pursuant to unit plan regulations of December 22, 1950, 30 CFR 226.3 (1961 reprint), the land requested as outlined on your land map marked "Exhibit A, Comanche San Andres unit F, Chaves County, New Mexico," is hereby designated as a logical unit area.

Your proposed form of unit agreement will be acceptable if modified as marked in colored pencil and/or attached riders. One copy of the marked form is returned herewith, and the remaining copies are retained for distribution to the appropriate offices of the Geological Survey.

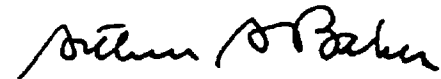
In the absence of any type of land requiring special provisions other than the wildlife stipulation or any objection not now apparent, a duly executed agreement conformed to the marked copy will be approved if submitted in approvable status within a reasonable amount of time. However, the right is reserved to deny approval of any executed agreement which, in our opinion, does not have full commitment of sufficient lands to afford effective control of unit operations.

Include the latest status of all acreage when the executed agreement is transmitted to the Supervisor for approval. The format of sample exhibits attached to the 1961 reprint of the standard form of unit agreement should be followed closely in the preparation of Exhibits A and B.

Inasmuch as this unit area contains State of New Mexico lands, we are sending a copy of this letter to the Commissioner of Public Lands

at Santa Fe, and we request you to contact said Commissioner in connection with this letter prior to soliciting joinders.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Arthur J. Baker".

Acting Director



IN REPLY REFER TO:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON 25, D. C.

AUG 6 1964

Shell Oil Company  
P. O. Box 1858  
Roswell, New Mexico

Attention: Mr. T. H. Dwyer

Gentlemen:

Your application of May 21 filed with the Oil and Gas Supervisor, Roswell, New Mexico, requests the designation of 12,323.16 acres, more or less, Chaves County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act, as amended. Unitization will be limited to formations above the base of the San Andres formation as identified by Section 2(h) of the proposed unit agreement form.

Pursuant to unit plan regulations of December 22, 1950, 30 CFR 226.3 (1961 reprint), the land requested as outlined on your land map marked "Exhibit A, Comanche San Andres unit E, Chaves County, New Mexico," is hereby designated as a logical unit area.

Your proposed form of unit agreement will be acceptable if modified as marked in colored pencil and/or attached riders. One copy of the marked form is returned herewith, and the remaining copies are retained for distribution to the appropriate offices of the Geological Survey.


In the absence of any type of land requiring special provisions other than the wildlife stipulation or any objection not now apparent, a duly executed agreement conformed to the marked copy will be approved if submitted in approvable status within a reasonable amount of time. However, the right is reserved to deny approval of any executed agreement which, in our opinion, does not have full commitment of sufficient lands to afford effective control of unit operations.

Include the latest status of all acreage when the executed agreement is transmitted to the Supervisor for approval. The format of sample exhibits attached to the 1961 reprint of the standard form of unit agreement should be followed closely in the preparation of Exhibits A and B.

Inasmuch as this unit area contains State of New Mexico lands, we are sending a copy of this letter to the Commissioner of Public Lands

at Santa Fe, and we request you to contact said Commissioner in connection with this letter prior to soliciting joinders.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "William J. Baker".

Acting Director



IN REPLY REFER TO:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON 25, D. C.

AUG 6 1964

Shell Oil Company  
P. O. Box 1858  
Roswell, New Mexico

Attention: Mr. T. H. Dwyer

Gentlemen:

Your application of May 21 filed with the Oil and Gas Supervisor, Roswell, New Mexico, requests the designation of 15,925.47 acres, more or less, Chaves County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act, as amended. Unitization will be limited to formations above the base of the San Andres formation as identified by Section 2(h) of the proposed unit agreement form.

Pursuant to unit plan regulations of December 22, 1950, 30 CFR 226.3 (1961 reprint), the land requested as outlined on your land map marked "Exhibit A, Commence San Andres unit D, Chaves County, New Mexico," is hereby designated as a logical unit area.

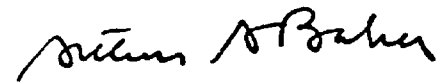
Your proposed form of unit agreement will be acceptable if modified as marked in colored pencil and/or attached riders. One copy of the marked form is returned herewith, and the remaining copies are retained for distribution to the appropriate offices of the Geological Survey.

In the absence of any type of land requiring special provisions other than the wildlife stipulation or any objection not now apparent, a duly executed agreement conformed to the marked copy will be approved if submitted in approvable status within a reasonable amount of time. However, the right is reserved to deny approval of any executed agreement which, in our opinion, does not have full commitment of sufficient lands to afford effective control of unit operations.

Include the latest status of all acreage when the executed agreement is transmitted to the Supervisor for approval. The format of sample exhibits attached to the 1961 reprint of the standard form of unit agreement should be followed closely in the preparation of Exhibits A and B.

Inasmuch as this unit area contains State of New Mexico lands, we are sending a copy of this letter to the Commissioner of Public Lands at Santa Fe, and we request you to contact said Commissioner in connection with this letter prior to soliciting joinders.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "William A. Baker".

Acting Director



IN REPLY REFER TO:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON 25, D. C.

AUG 6 1964

Shell Oil Company  
P. O. Box 1858  
Roswell, New Mexico

Attention: Mr. T. H. Dwyer

Gentlemen:

Your application of May 21 filed with the Oil and Gas Supervisor, Roswell, New Mexico, requests the designation of 15,081.46 acres, more or less, Chaves County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act, as amended. Unitization will be limited to formations above the base of the San Andres formation as identified by Section 2(h) of the proposed unit agreement form.

Pursuant to unit plan regulations of December 22, 1950, 30 CFR 226.3 (1961 reprint), the land requested as outlined on your land map marked "Exhibit A, Comanche San Andres unit C, Chaves County, New Mexico," is hereby designated as a logical unit area.

Your proposed form of unit agreement will be acceptable if modified as marked in colored pencil and/or attached riders. One copy of the marked form is returned herewith, and the remaining copies are retained for distribution to the appropriate offices of the Geological Survey.

In the absence of any type of land requiring special provisions other than the wildlife stipulation or any objection not now apparent, a duly executed agreement conformed to the marked copy will be approved if submitted in approvable status within a reasonable amount of time. However, the right is reserved to deny approval of any executed agreement which, in our opinion, does not have full commitment of sufficient lands to afford effective control of unit operations.

Include the latest status of all acreage when the executed agreement is transmitted to the Supervisor for approval. The format of sample exhibits attached to the 1961 reprint of the standard form of unit agreement should be followed closely in the preparation of Exhibits A and B.

Inasmuch as this unit area contains State of New Mexico lands, we are sending a copy of this letter to the Commissioner of Public Lands at Santa Fe, and we request you to contact said Commissioner in connection with this letter prior to soliciting joinders.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Arthur H. Barker". The signature is written in a cursive style with a prominent initial "A".

Acting Director



IN REPLY REFER TO:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON 25, D. C.

AUG 6 1964

Shell Oil Company  
P. O. Box 1858  
Roswell, New Mexico

Attention: Mr. T. H. Dwyer

Gentlemen:

Your application of May 21 filed with the Oil and Gas Supervisor, Roswell, New Mexico, requests the designation of 20,455.54 acres, more or less, Chaves County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act, as amended. Unitization will be limited to formations above the base of the San Andres formation as identified by Section 2(h) of the proposed unit agreement form.

Pursuant to unit plan regulations of December 22, 1950, 30 CFR 226.3 (1961 reprint), the land requested as outlined on your land map marked "Exhibit A, Comanche San Andres unit B, Chaves County, New Mexico," is hereby designated as a logical unit area.

Your proposed form of unit agreement will be acceptable if modified as marked in colored pencil and/or attached riders. One copy of the marked form is returned herewith, and the remaining copies are retained for distribution to the appropriate offices of the Geological Survey.

In the absence of any type of land requiring special provisions or any objection not now apparent, a duly executed agreement conformed to the marked copy will be approved if submitted in approvable status within a reasonable amount of time. However, the right is reserved to deny approval of any executed agreement which, in our opinion, does not have full commitment of sufficient lands to afford effective control of unit operations.

Include the latest status of all acreage when the executed agreement is transmitted to the Supervisor for approval. The format of sample exhibits attached to the 1961 reprint of the standard form of unit agreement should be followed closely in the preparation of Exhibits A and B.

Inasmuch as this unit area contains State of New Mexico lands, we are sending a copy of this letter to the Commissioner of Public Lands at Santa Fe, and we request you to contact said Commissioner in connection with this letter prior to soliciting joinders.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Arthur A. Bacher".

Acting Director

BEFORE THE OIL CONSERVATION COMMISSION OF NEW MEXICO

APPLICATION OF SHELL OIL COMPANY  
FOR APPROVAL OF THE COMANCHE  
(SAN ANDRES) A, B, C, D, E and  
F UNIT AGREEMENTS, CHAVES COUNTY,  
NEW MEXICO.

Case No. 264

MAIN OFFICE  
64 NOV 18 PM 4

APPLICATION

Comes now SHELL OIL COMPANY, by its attorneys, and applies to the New Mexico Oil Conservation Commission for approval of the Comanche (San Andres) A, B, C, D, E and F unit agreements, Chaves County, New Mexico, and in support of its application states:

1. Attached to and made a part of this application are copies of Comanche (San Andres) A, B, C, D, E and F unit agreements, each of which embraces federal, state and fee lands in Chaves County, New Mexico, as depicted on Exhibit "A" to each unit agreement. A schedule of the ownership in each tract in each unit agreement and a schedule of that tract's participation is as shown on Exhibit "B" and Exhibit "C" to each unit agreement.

2. Each of the subject unit agreements is being formed for the purpose of the development of the unitized formations which are defined in Section 2, subparagraph 'h' of each unit agreement as including all formations from the surface to and including the San Andres formation. Development of the unitized formations will be accomplished pursuant to Sections 11 and 12 of each unit agreement

3. Approval by the New Mexico Oil Conservation Commission of the proposed unit agreements will facilitate the development of the subject acreage in accordance with good conservation practices, preventing waste and protecting correlative rights.

WHEREFORE, Shell Oil Company requests that this application be set for hearing before the Commission or one of its

examiners at the first examiner hearing in the month of December, 1964, and that the Commission enter its order approving the proposed unit agreements.

SETH, MONTGOMERY, FEDERICI & ANDREWS

By Richard S. Morris  
350 East Palace Avenue  
Santa Fe, New Mexico

Attorneys for Shell Oil Company

BEFORE THE OIL CONSERVATION COMMISSION OF NEW MEXICO

APPLICATION OF SHELL OIL COMPANY  
FOR APPROVAL OF THE COMANCHE  
(SAN ANDRES) A, B, C, D, E and  
F UNIT AGREEMENTS, CHAVES COUNTY,  
NEW MEXICO.

Case No. 3178

APPLICATION

Comes now SHELL OIL COMPANY, by its attorneys, and applies to the New Mexico Oil Conservation Commission for approval of the Comanche (San Andres) A, B, C, D, E and F unit agreements, Chaves County, New Mexico, and in support of its application states:

1. Attached to and made a part of this application are copies of Comanche (San Andres) A, B, C, D, E and F unit agreements, each of which embraces federal, state and fee lands in Chaves County, New Mexico, as depicted on Exhibit "A" to each unit agreement. A schedule of the ownership in each tract in each unit agreement and a schedule of that tract's participation is as shown on Exhibit "B" and Exhibit "C" to each unit agreement.

2. Each of the subject unit agreements is being formed for the purpose of the development of the unitized formations which are defined in Section 2, subparagraph 'h' of each unit agreement as including all formations from the surface to and including the San Andres formation. Development of the unitized formations will be accomplished pursuant to Sections 11 and 12 of each unit agreement.

3. Approval by the New Mexico Oil Conservation Commission of the proposed unit agreements will facilitate the development of the subject acreage in accordance with good conservation practices, preventing waste and protecting correlative rights.

WHEREFORE, Shell Oil Company requests that this application be set for hearing before the Commission or one of its

DOCKET MAILED

Date

examiners at the first examiner hearing in hhe month of December, 1964, and that the Commission enter its order approving the proposed unit agreements.

SETH, MONTGOMERY, FEDERICI & ANDREWS

By Richard S. Morris  
350 East Palace Avenue  
Santa Fe, New Mexico

Attorneys for Shell Oil Company

State of New Mexico  
Oil Conservation Commission



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

3178 - R-2839  
3179 - R-2840  
3180 - R-2841  
3181 - R-2842  
3182 - R-2843  
3183 - R-2844  
3166 - R-2851

**SHELL OIL COMPANY & TENNECO**

A. L. Porter, Jr.

**OTHER** \_\_\_\_\_

DOCKET: EXAMINER HEARING - TUESDAY - DECEMBER 15, 1964

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, Alternate Examiner:

- CASE 3154: (Continued from the November 24th examiner hearing)  
Application of Atlantic Refining Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Culwin Queen Unit Area comprising 820 acres, more or less, of State and Federal lands in Townships 18 and 19 South, Ranges 30 and 31 East, Eddy County, New Mexico.
- CASE 3155: (Continued from the November 24 examiner hearing)  
Application of Atlantic Refining Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Shugart Pool in its Culwin Queen Unit Area by the injection of water into the Queen formation through six injection wells in Section 36, Township 18 South, Range 30 East, Section 31, Township 18 South, Range 31 East, Section 1, Township 19 South, Range 30 East, and Section 6, Township 19 South, Range 31 East, Eddy County, New Mexico.
- CASE 3163: Application of Gulf Oil 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 E/2 SE/4 of Section 28, and the NE/4 NE/4 of Section 33, Township 21 South, Range 37 East, Blinbry Gas Pool, Lea County, New Mexico. Said unit to be dedicated to its J. N. Carson Well No. 6 located in Unit P of said Section 28.
- CASE 3164: Application of Gulf Oil Corporation for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its W. A. Ramsay (NCT-A) waterflood project, South Eunice Pool, to include one additional water injection well to be located approximately 1320 feet from the South and West lines of Section 34, Township 21 South, Range 36 East, Lea County, New Mexico.
- CASE 3165: Application of Sam Boren & Major & Giebel Oils for a non-standard proration unit, Lea County, New Mexico. Applicants, in the above-styled cause, seek approval of a 104.18 acre non-standard oil proration unit comprising all of lots 1 and 2 of Section 1, Township 11 South, Range 33 East, South Lane Pool, Lea County, New Mexico, to be dedicated to a well to be drilled within 150 feet of the center of said lot 1.
- CASE 3166: Application of Tenneco Oil Company for four non-standard proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the following four non-standard oil proration units in the South Lane Pool:
- Unit No. 1, 93.61 acres comprising the E/2 SE/4 and Lot 1 of Section 6, dedicated to applicant's State "E" Well No. 1 located in Unit P of Section 6;
- Unit No. 2, 93.24 acres comprising the W/2 SE/4 and Lot 2 of Section 6, dedicated to applicant's State "E" Well No. 2 located in Unit J of Section 6.

December 15th Examiner Hearing

Unit No. 3, 92.87 acres comprising the E/2 SW/4 and Lot 3 of Section 6, dedicated to applicant's State "F" Well No. 1 located in Unit K of Section 6;

Unit No. 4, 81.76 acres comprising Lots 4, 5, and 6 of Section 6, dedicated to a well to be drilled 100 feet North of the center of Lot 5 of Section 6, all in Township 11 South, Range 34 East, Lea County, New Mexico.

CASE 3167: Application of IMC Drilling Mud, a division of International Minerals and Chemical Corporation for an amendment of Rule 107. Applicant, in the above-styled cause, seeks an amendment to Rule 107 of the Commission Rules and Regulations to provide an administrative procedure whereby oil-base casing packing material could be used in lieu of a portion of the portland cement normally used in cementing oil well casing.

CASE 3168: Application of Jake L. Hamon for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres, Glorieta and Yeso formations through the open hole interval from 5000 feet to 9000 feet in its Fannye M. Holloway Well No. 1 located in Unit B of Section 13, Township 17 South, Range 38 East, South Knowles Devonian Pool, Lea County, New Mexico.

CASE 3169: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the E/2 of Section 14, Township 29 North, Range 11 West, San Juan County, New Mexico.

CASE 3170: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the E/2 of Section 8, Township 30 North, Range 13 West, San Juan County, New Mexico.

CASE 3171: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the S/2 of Section 23, Township 29 North, Range 11 West, San Juan County, New Mexico.

CASE 3172: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the S/2 of Section 21, Township 29 North, Range 10 West, San Juan County, New Mexico.

CASE 3173: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the S/2 of Section 31, Township 30 North, Range 12 West, San Juan County, New Mexico.

- CASE 3174: Application of Pan American Petroleum Corporation for force-pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin Dakota Pool underlying the N/2 of Section 28, Township 29 North, Range 10 West, San Juan County, New Mexico.
- CASE 3175: Application of Pan American Petroleum Corporation for an amendment of Order No. R-2424, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment to Order No. R-2424, Special Pool Rules for Fowler Blinebry Pool to provide a limiting gas-oil ratio for oil wells in said pool of 6000 cubic feet of gas per barrel of oil.
- CASE 3176: Application of Texaco Inc. for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the triple completion (tubingless) of its C. C. Fristoe "b" (NCT-2) Well No. 9, located in Unit C of Section 35, Township 24 South, Range 37 East, Lea County, New Mexico, to produce oil from the Langlie Mattix, Justis Blinebry and North Justis Tubb-Drinkard Pools through 2-7/8 inch casing cemented in a common wellbore.
- CASE 3177: Application of Sinclair Oil & Gas Company for an amendment of Order No. R-1148, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1148, which order authorized a 160-acre non-standard Tubb gas pool proration unit comprising the W/2 SW/4, SE/4 SW/4, and SW/4 SE/4 of Section 26, Township 21 South, Range 37 East, Lea County, New Mexico, to be dedicated to its J. R. Cone Well No. 1 located in Unit M of said Section 26. Applicant seeks the rededication of said unit and the allowable accrued thereto to its J. R. Cone Well No. 2 located in Unit L of said Section 26.
- CASE 3178: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) A Unit Area comprising 16,895 acres, more or less, of Federal, State and Fee lands in Townships 6 and 7 South, Ranges 25 and 26 East, Chaves County, New Mexico.
- CASE 3179: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) B Unit Area comprising 20,456 acres, more or less, of Federal, State and Fee lands in Township 7 South, Range 26 East, Chaves County, New Mexico.
- CASE 3180: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) C Unit Area comprising 15,081 acres, more or less, of Federal, State and Fee lands in Townships 7 and 8 South, Range 25 East, Chaves County, New Mexico.
- CASE 3181: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) D Unit Area comprising 15,925 acres, more or less, of Federal, State and Fee lands in Township 8 South, Ranges 25 and 26 East, Chaves County, New Mexico.

December 15th Examiner Hearing

- CASE 3182: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) E Unit Area comprising 12,323 acres, more or less, of Federal, State and Fee lands in Townships 8 and 9 South, Range 25 East, Chaves County, New Mexico.
- CASE 3183: Application of Shell Oil Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Comanche (San Andres) F Unit Area comprising 22,049 acres, more or less, of Federal, State and Fee lands in Townships 8 and 9 South, Ranges 25 and 26 East, Chaves County, New Mexico.
- CASE 2660: (Reopened and continued from the November 12, 1964 examiner hearing) In the matter of Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348-A, which continued the original order establishing 80-acre proration units for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico, for an additional year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units. Midwest Oil Corporation also requests that the Middle Lane-Pennsylvanian Pool Rules, in addition to being made permanent, be amended to provide the definition of the vertical limits of said pool and the deletion of the fixed well location requirements as provided by said Order No. R-2348.
- CASE 3184: Application of Benson-Montin-Greer Drilling Corporation for an amendment of Order No. R-2565, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Order No. R-2565 to permit the shutting-in of wells for interference tests, to permit the accumulation and transfer of back allowables for said shut-in wells, and to permit a transfer well to produce its own allowable plus a transferred allowable up to 100% of 1 top unit allowable for the Puerto Chiquito-Gallup Oil Pool at anytime during the period of one year after the original assignment of said allowable.

# Memo

From

JAMES M. DURRETT JR.  
GENERAL COUNSEL

To Ethel

None protest  
para 2 should  
read T 7 S R 25 E  
Sections 1 through 4 etc.

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

APPLICATION OF SHELL OIL COMPANY  
FOR APPROVAL OF THE COMANCHE (SAN  
ANDRES) A UNIT AGREEMENT, CHAVES  
COUNTY, NEW MEXICO.

CASE No. 3178  
Order No. R-2839-A

NUNC PRO TUNC ORDER

BY THE COMMISSION:

It appearing to the Commission that Order No. R-2839, dated December 21, 1964, does not correctly state the intended finding of the Commission in one particular due to typographical error,

IT IS THEREFORE ORDERED:

(1) That the portion of the description in Finding No. (2) of Order No. R-2839 reading:

TOWNSHIP 7 SOUTH, RANGE 26 EAST, NNPM

Sections 1 through 4: All  
Sections 9 through 16: All  
Sections 21 through 24: All

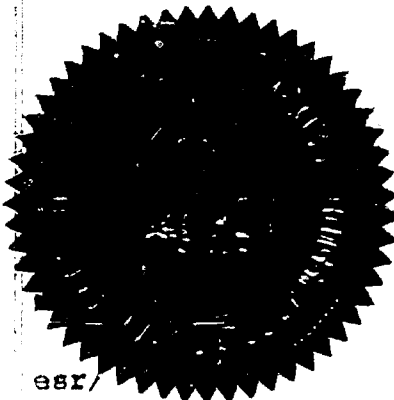
is hereby corrected to read as follows:

TOWNSHIP 7 SOUTH, RANGE 25 EAST, NNPM

Sections 1 through 4: All  
Sections 9 through 16: All  
Sections 21 through 24: All

(2) That the correction set forth above shall be effective nunc pro tunc as of December 21, 1964.

DONE at Santa Fe, New Mexico, on this 20th day of January, 1965.



STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Jack M. Campbell*  
JACK M. CAMPBELL, Chairman

*Guyton B. Hays*  
GUYTON B. HAYS, Member

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

esr/

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE No. 3178  
Order No. R-2839

APPLICATION OF SHELL OIL COMPANY  
FOR APPROVAL OF THE COMANCHE (SAN  
ANDRES) A 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 December 15, 1964, at Santa Fe, New Mexico, before Examiner Elvis A. Uts.

NOW, on this 21st day of December, 1964, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Shell Oil Company, seeks approval of the Comanche (San Andres) A Unit Agreement covering 16,895.44 acres, more or less, of State, Federal and Fee lands described as follows:

CHAVES COUNTY, NEW MEXICO

TOWNSHIP 6 SOUTH, RANGE 25 EAST, NMPM

Sections 25 and 26: All

Section 27: E/2

Sections 34 through 36: All

TOWNSHIP 6 SOUTH, RANGE 26 EAST, NMPM

Section 31: All

TOWNSHIP 7 SOUTH, RANGE 26 EAST, NMPM

Sections 1 through 4: All

Sections 9 through 16: All

Sections 21 through 24: All

-2-

CASE No. 3178

Order No. R-2839

TOWNSHIP 7 SOUTH, RANGE 26 EAST, NMPM

Sections 6 and 7: All

Sections 18 and 19: All

(3) That approval of the proposed unit agreement should promote the prevention of waste and the protection of correlative rights within the unit area.

IT IS THEREFORE ORDERED:

(1) That the Comanche (San Andres) A Unit Agreement is hereby approved.

(2) That the plan contained in said unit agreement for the development and operation of the unit area 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 Commission to supervise and control operations for the exploration and development of any lands committed to the unit and production of oil or gas therefrom.

(3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof; that 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.

(4) 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; that this order shall terminate ipso facto upon the termination of said unit agreement; and that the last unit operator shall notify the Commission immediately in writing of such termination.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

-3-

CASE No. 3178  
Order No. R-2839

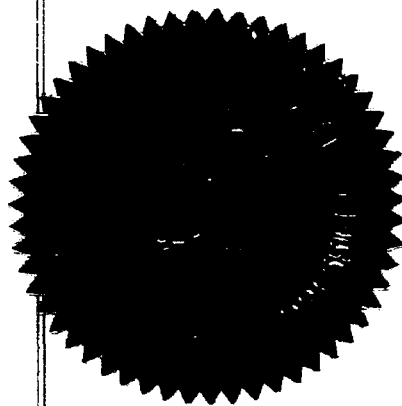
DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

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



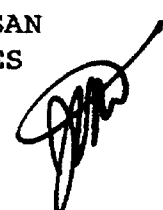
esr/

DRAFT

JMD/esr

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

APPLICATION OF SHELL OIL COMPANY  
FOR APPROVAL OF THE COMANCHE (SAN  
ANDRES) A UNIT AGREEMENT, CHAVES  
COUNTY, NEW MEXICO.



CASE No. 3178  
Order No. R-2839-A

NUNC PRO TUNC ORDER

BY THE COMMISSION:

It appearing to the Commission that Order No. R-2839, dated December 21, 1964, does not correctly state the intended finding of the Commission in one particular due to typographical error,

IT IS THEREFORE ORDERED:

✓ (1) That the portion of the ~~unit area of the Comanche (San Andres) A Unit Agreement set forth as the third paragraph of Finding No. (2) on Page 1 in Order No. R-2839~~ <sup>*description in*</sup> ~~is hereby corrected to read as follows:~~ <sup>*reading:*</sup>

TOWNSHIP 7 SOUTH, RANGE 26 EAST, NMPM  
Sections 1 through 4: All  
Sections 9 through 16: All  
Sections 21 through 24: All

~~rather than.~~ <sup>*is hereby corrected to read as follows:*</sup>

<sup>25</sup>  
TOWNSHIP 7 SOUTH, RANGE 26 EAST, NMPM  
Sections 1 through 4: All  
Sections 9 through 16: All  
Sections 21 through 24: All

(2) That the correction set forth above shall be effective nunc pro tunc as of December 21, 1964.

DONE at Santa Fe, New Mexico, on this \_\_\_\_\_ day of January, 1965.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

JACK M. CAMPBELL, Chairman

GUYTON B. HAYS, Member

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

31/1  
April 26, 1968

Shell Oil Company  
P. O. Box 1838  
Roswell, New Mexico

Attention: Mr. E. W. Nester

Re: Comanche (San Andres) Unit "A"  
Chaves County, New Mexico

Gentlemen:

The Commissioner of Public Lands approved as of April 23, 1968, the Comanche (San Andres) Unit "A", Chaves County, New Mexico. The Plan of Development for the first two years was also approved, as of the effective date of the Unit. Our approval is subject to like approval by the United States Geological Survey.

Five originally signed copies of our Certificate of Approval were handed to Mr. Nester and Mr. Lore on the date of the approval.

We are enclosing our Official Receipt No. 442318 in the amount of \$135.00 which covers the filing fee.

Very truly yours,

GUYTON B. HAYS  
COMMISSIONER OF PUBLIC LANDS

BY:  
(Mr.) Ted Hilberry, Director  
Oil and Gas Department

GBH/mar/d  
Enclosure

cc: Shell Oil Company  
P. O. Box 1509  
Midland, Texas

3176  
April 26, 1965

Shell Oil Company  
P. O. Box 1838  
Roswell, New Mexico

Attention: Mr. E. W. Nestor

Re: Comanche (San Andres) Unit "A"  
Chaves County, New Mexico

Gentlemen:

The Commissioner of Public Lands approved as of April 23, 1965, the Comanche (San Andres) Unit "A", Chaves County, New Mexico. The Plan of Development for the first two years was also approved, as of the effective date of the Unit. Our approval is subject to like approval by the United States Geological Survey.

Five originally signed copies of our Certificate of Approval were handed to Mr. Nestor and Mr. Loxe on the date of the approval.

We are enclosing our Official Receipt No. 442316 in the amount of \$135.00 which covers the filing fee.

Very truly yours,

GUYTON B. HAYS  
COMMISSIONER OF PUBLIC LANDS

BY:  
(Mr.) Ted Bilberry, Director  
Oil and Gas Department

GRH/mmr/d  
Enclosure

cc: Shell Oil Company  
P. O. Box 1509  
Midland, Texas

Shell Oil Company  
Roswell, New Mexico

April 26, 1965  
Page Two

cc: United States Geological Survey  
P. O. Drawer 1857  
Roswell, New Mexico  
Attention: Mr. John A. Anderson

New Mexico Oil Conservation Commission  
P. O. Box 2008  
Santa Fe, New Mexico



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
Drewes 1857  
Roswell, New Mexico 88201

IN REPLY REFER TO:

July 23, 1965

Shell Oil Company  
P. O. Box 1509  
Midland, Texas

Attention: Mr. James A. Love

Gentlemen:

Your letter of July 16 transmits the following described papers relating to the Comanche San Andres "A" unit agreement, No. 14-08-0001-8697, Cheaves County, New Mexico:

1. An original and four copies of Mr. Bruce Anderson's ratification and joinder to the subject unit agreement by which Mr. Anderson commits his overriding royalty interest in Federal land unit tract No. 6.
2. Five copies each of Exhibit B and Supplement to Exhibit B revised to correct errors in lease ownership and lease numbers as of June 22, 1965, the effective date of the unit agreement.
3. Five copies of Exhibit C revised pursuant to Section 14 of the unit agreement to show tract participation for the qualified tracts as of the effective date of the unit agreement.

Mr. Anderson's ratification is considered an original joinder since Section 31 of the unit agreement provides that the owner of an interest within the unit area may commit such interest within two months after the effective date of the unit agreement on the same basis as those parties originally subscribing to the unit agreement. Copies of such ratification and joinder should be furnished the Commissioner of Public Lands of the State of New Mexico and copies of the revised exhibits filed with the Commissioner of Public Lands of the State of New Mexico, the New Mexico Oil Conservation Commission, and the County Clerk of Cheaves County, New Mexico, pursuant to Sections 31 and 3 of the unit agreement.

Mr. Anderson's ratification and joinder to the Comanche San Andres "A" unit agreement and the revised exhibits are accepted for the

record, effective June 22, 1965, and copies of such papers are being distributed to the appropriate Federal offices. Copies surplus to our needs are enclosed.

Sincerely yours,

(ORIG. SGR) JOHN A. ANDERSON

JOHN A. ANDERSON  
Regional Oil and Gas Supervisor

cc:

Washington (w/attachments)

HM, Santa Fe (w/attachments)

Alvord (w/attachments)

H. Nat. Com. of Pub. Lands (ltr. only)

H.N.O.C.C. (ltr. only) ✓

