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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
OIL CONSERVATION COMMISSION CONFERENCE ROOM
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO
Wednesday, November 29, 1972

IN THE MATTER OF:

Application of Samedan Oil Corporation)
for a unit agreement, Lea County,)
Mexico)

Case No. 4871

BEFORE: Richard L. Stamets,
Examiner

TRANSCRIPT OF HEARING

1 MR. STAMETS: We call next Case 4871, application of
2 Samedan Oil Corporation for a unit agreement, Lea County, New
3 Mexico.

4 MR. KELLAHIN: If the Examiner please, Jason Kellahin,
5 Kellahin & Fox, Santa Fe, appearing for the applicant. We have
6 one witness we'd like to have sworn.

7 MR. STAMETS: Are there any other appearances in this
8 case?

9 (No Response.)

10 WILLIAM McCUEN

11 a Witness, having been first duly sworn according to law, upon
12 his oath, was examined and testified as follows:

13 DIRECT EXAMINATION

14 BY JASON KELLAHIN:

15 Q Would you state your name, please?

16 A William McCuen.

17 Q How would you spell that?

18 A M-c-C-u-e-n.

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

20 A Production Superintendent for Samedan Oil Corporation,
21 Midland.

22 Q Are you a petroleum engineer?

23 A Yes, sir.

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

1 A No, sir, I have not.

2 Q For the benefit of the Examiner, would you briefly outline
3 your education and experiences as a petroleum engineer?

4 A I'm a graduate of the University of Tulsa; I've been
5 employed by Samedan for a little over 20 years, petroleum
6 engineer and superintendent.

7 Q And where did you get your education as petroleum engineer?

8 A University of Tulsa.

9 Q And you've been with Samedan since your graduation?

10 A Yes, sir.

11 Q Do you work in Southeastern New Mexico, as well as West
12 Texas?

13 A Yes, sir.

14 Q And is the area involved in this application under your
15 jurisdiction?

16 A Yes, it is.

17 Q And is the case involved in Case 4872 under your
18 jurisdiction, too?

19 A Yes, sir.

20 Q Are you familiar with what is proposed by the applicant in
21 these cases?

22 A I am.

23 MR. KELLAHIN: If the Examiner please, I would like to
24 move at this time to consolidate, for purposes of the record,
25 Case 4871 and 4872, and use one set of Exhibits for the two.

1 MR. STAMETS: Okay, Cases 4871 and 4872 will be
2 consolidated.

3 Case 4872 is the application of Samedan Oil
4 Corporation for a waterflood project, Lea County, New Mexico.

5 MR. KELLAHIN: And it does affect the same area as
6 in Case 4871.

7 MR. STAMETS: Mr. McCuen, what was your degree, B.S.
8 Petroleum Engineer?

9 THE WITNESS: Yes.

10 MR. KELLAHIN: Are the witness' qualifications
11 acceptable?

12 MR. STAMETS: Yes.

13 Q (By Mr. Kellahin) Briefly, what is proposed by the
14 applicant in these two cases?

15 A We propose to conduct secondary recovery operations on
16 this 240-acre tract as set out on our Exhibit 2.

17 Q It has been unitized, has it not?

18 A Yes, sir.

19 Q Now, referring to what has been marked as Exhibit Number
20 1, is that the unit agreement?

21 A Yes, sir.

22 Q Has it been executed by all of the working interest owners?

23 A Yes, sir.

24 Q And has it been executed by any or all of the overriding
25 royalty owners?

- 1 A It has.
- 2 Q Are there any working interests or royalty owners who
3 have not signed it?
- 4 A There are not.
- 5 Q Has this been approved by the United States Geological
6 Survey?
- 7 A It has.
- 8 Q And is all of the acreage within the tract Federal
9 acreage?
- 10 A It is.
- 11 Q There is no State or fee acreage involved?
- 12 A No, sir.
- 13 Q And you have received preliminary approval from the
14 United States Geological Survey?
- 15 A Yes, sir, we have.
- 16 Q Is the form of the unit agreement in a form which has
17 heretofore been approved by the Commission?
- 18 A Yes, it is.
- 19 Q Now, referring to what has been marked as Exhibit 2, the
20 plat that you started to discuss, would you identify that
21 and discuss the information shown on it?
- 22 A This shows the location of all wells within two miles of
23 our proposed secondary recovery tract. Those wells in red
24 are the Seven Rivers-Queen oil wells, the Penrose Sand of
25 the Queen Formation.

- 1 Q Now, is that the formation you are proposing to flood?
- 2 A Yes. It's composed of two tracts; tract #1 of 200 acres,
3 and tract #2 of 40 acres.
- 4 Q Now, where are their locations, could you give the
5 description?
- 6 A Tract #1 is located in the northwest quarter of Section
7 17 of 37 east, 23 south; and the other 40 acres of tract 1
8 is located in the northeast of the northeast of Section 18,
9 same range and township. Tract 2 is located in the
10 southeast and northeast quarter of Section 18 of the same
11 range and township.
- 12 Q Now, is that the same area that's covered by your unit
13 agreement?
- 14 A Yes, sir.
- 15 Q Now, do you show all of the proposed injection wells on
16 that Exhibit?
- 17 A Yes, sir, they are shown there with the blue arrows.
- 18 Q Then, you have 3 proposed injection wells?
- 19 A Yes.
- 20 Q And how many producing wells will you have?
- 21 A We will have 3 producing wells.
- 22 Q Are they all shown on the Exhibit?
- 23 A All, with the exception of #14, which has just been
24 recently drilled and completed.
- 25 Q And does that appear as a location on the Exhibit?

- 1 A Yes, sir, as a location.
- 2 Q And it has been already completed, is presently producing
- 3 from the Queen Formation?
- 4 A Yes, sir.
- 5 Q Now, is this proposed waterflood project offset by a
- 6 waterflood project?
- 7 A Yes, it is offset to the north by the Skelly-Penrose B
- 8 Unit.
- 9 Q And have you incorporated an agreement with Skelly in
- 10 connection with your proposed waterflood project?
- 11 A Well, we are in the midst of working one out with them at
- 12 the present time.
- 13 Q Now, referring to Exhibits 3, 4, and 5, would you
- 14 identify those exhibits, please?
- 15 A 3, 4, and 5 are copies of the open hole logs of the
- 16 proposed injection wells.
- 17 Do you want those by name?
- 18 Q I don't believe it will be necessary to name them, they
- 19 appear on the exhibit.
- 20 Now, referring to what has been marked as Exhibits 6,
- 21 7, and 8, would you identify those exhibits, please?
- 22 A These are diagrammatic sketches of the proposed completions
- 23 as injection wells; the three wells we have previously
- 24 mentioned.
- 25 Q Those are the same ones of which you have the logs?

- 1 A Yes sir.
- 2 Q Are all of the completions to be the same?
- 3 A Basically the same, yes.
- 4 Q There are differences in the casing and cementing program,
5 as depicted on the Exhibit, is that correct?
- 6 A Yes, to some degree.
- 7 Q Now, how will you make your completion, will you inject
8 through tubing and under the packer?
- 9 A Yes.
- 10 Q And annulus internally coated tubing?
- 11 A Yes.
- 12 Q Do you propose to set a pressure gauge at the surface to
13 measure the pressure in the casing tubing annulus?
- 14 A Yes.
- 15 Q And what is the source of your fluids?
- 16 A Source of what?
- 17 Q What is the source of water?
- 18 A Skelly, in the area, has what is known as their Jowle
19 water supply system. We propose to purchase water from
20 that system.
- 21 Q And that's Capitan Reef Water, isn't it?
- 22 A Yes sir.
- 23 Q Now, what volume of water do you propose to use?
- 24 A 550 barrels per day, per well.
- 25 Q What kind of pressure do you anticipate you will encounter

1 on injection?

2 A All probability, a maximum of 2,000 P.S.I.

3 Q Will the casing and packers, as you have proposed on your
4 injection wells, withstand that kind of pressure safely?

5 A Yes, sir.

6 Q Is this reservoir at an advanced stage of depletion?

7 A Yes, sir, it is.

8 Q What, roughly, is the present production from the unit
9 area?

10 A Well, of the six wells, one being temporarily abandoned,
11 the other five wells are producing an average of 10 to 12
12 barrels a day.

13 Q Does that include the well that has just been completed,
14 the #14 well?

15 A No, the well that has just been completed, the #14, after
16 two months, it's pumping somewhere between 30 and 35
17 barrels a day.

18 Q Now, when was it completed?

19 A Approximately the end of September of this year.

20 Q And did it show a rapid decline in production?

21 A Yes, sir, it did.

22 Q Does that indicate to you that the reservoir has been,
23 well, exhausted on primary production?

24 A It has.

25 Q Is it ready for secondary recovery, in your opinion?

1 A It is.

2 Q In your opinion, will the injection of water as a
3 secondary recovery mechanism result in the recovery of
4 oil that would otherwise not be recovered from this
5 reservoir?

6 A Yes, sir, it would.

7 Q Have you any estimate of the approximate volume of
8 additional recovery you might achieve?

9 A We've recovered, to date, primary, in the neighborhood of
10 220,000 barrels. We expect 1 to 1 ratio of secondary,
11 somewhere in the neighborhood of 200 to 220 thousand
12 barrels of secondary oil.

13 Q And, in your opinion, will that be in the interest of
14 conservation?

15 A Yes, sir.

16 Q Will any waste occur?

17 A No, sir.

18 Q Were Exhibits 1 through 6 prepared by you or under your
19 supervision?

20 A They were.

21 MR. KELLAHIN: At this time, I'd like to offer Exhibits
22 1 through 8 inclusive.

23 MR. STAMETS: Without objection, they will be admitted
24 into evidence.

25 MR. KELLAHIN: That's all I have on Direct Examination.

CROSS EXAMINATION

1
2 BY MR. STAMETS:

3 Q Mr. McCuen, what are the productivity capacities of the
4 offsetting wells to your #14 well? Are they low marginal
5 wells?

6 A Yes, sir, they are.

7 Q And this Skelly-Penrose B unit, is that actually under
8 waterflood at this time?

9 A Yes, sir.

10 Q That's the water injection wells, the ones with the little
11 triangle?

12 A They would be three locations from our lease line.

13 Q And you are anticipating the lease line agreement with
14 Skelly?

15 A Yes.

16 Q You said the logs were on the openhole and I see here that
17 each of the wells has 5 1/2 or 4 1/2 inch casing. Is that
18 recently run, or was that run when the wells were completed?

19 A When they were completed.

20 Q How long ago was this?

21 A Well, let's see. The Federal H well is September of 1967;
22 and the Hughes B-4 #11, December of 1965; and in the case
23 of the Hughes B-4 #8, April of 1955.

24 Q And the packer that you proposed here would be well below
25 the top of the cement in each case?

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A Yes.

MR. STAMETS: Are there any other questions of the witness?

MR. KELLAHIN: No sir.

MR. STAMETS: He may be excused.

Are there any statements in this case?

MR. KELLAHIN: That's all we have, Mr. Stamets.

MR. STAMETS: We will take the case under advisement.

CERTIFICATION - DETERMINATION

Pursuant to the authority vested in the Secretary of Interior, under the act approved February 25, 1920, 41 Stat. 437, as amended, 30 U. S. C. Secs. 181, et seq., and delegated to the Oil and Gas Supervisor of the Geological Survey (33 F. R. 5812), I do hereby:

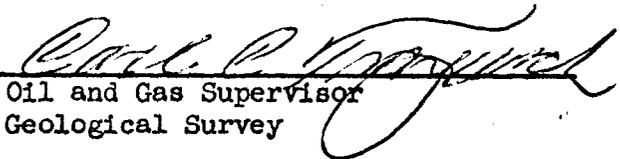
A. Approve the attached agreement for the development and operation of the Langlie-Mattix "B-4" Penrose (Queen) Unit, County of Lea, State of New Mexico.

B. Certify and determine that the unit plan of development and operation contemplated in the attached agreement is necessary and advisable in the public interest for the purpose of more properly conserving the natural resources.

C. Certify and determine that the drilling, producing, rental, minimum royalty, and royalty requirements of all Federal leases committed to said agreement are hereby established, altered, changed, or revoked to conform with the terms and conditions of this agreement.

Dated November 6, 1972

Acting Area Oil and Gas Supervisor
Geological Survey



Contract Number 14-08-0001-12394

BEFORE EXAMINER STAMETS OIL CONSERVATION COMMISSION <u>Samedon</u> EXHIBIT NO: <u>1</u> CASE NO: <u># 4871, # 4872</u> Submitted by <u>William E. McEwen</u> Hearing Date <u>11-29-72</u>
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OCT 6 1972

U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION
OF THE LANGLIE-MATTIX "B-4" PENROSE (QUEEN) UNIT
LEA COUNTY, NEW MEXICO.

U N I T A G R E E M E N T

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UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION
OF THE
LANGLIE-MATTIX "B-4" PENROSE (QUEEN) UNIT
COUNTY OF LEA
STATE OF NEW MEXICO

THIS AGREEMENT, entered into as of the 1st day of _____
August, 1972, by and between the parties subscribing, ratifying
or consenting hereto, and herein referred to as the "parties hereto",

W I T N E S S E T H:

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

WHEREAS, the term "Working Interest" as used herein shall
mean the interest held in Unitized Substances or in lands containing
Unitized Substances by virtue of a lease, operating agreement, fee title,
or otherwise, which is chargeable with and obligated to pay or bear
all or a portion of the costs of drilling, developing, producing, and
operating the land under the unit or cooperative agreement. "Royalty
Interest" as used herein shall mean a right to or interest in any portion
of the Unitized Substances or proceeds thereof other than a Working Interest;
and

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

WHEREAS, the parties hereto hold sufficient interest in the
Langlie-Mattix "B-4" Penrose (Queen) Unit Area covering the land herein-
after described to give reasonably effective control of operations herein;
and

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

NOW THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this agreement their respective interests in the below-defined Unit Area, and agree severally among themselves as follows:

1. ENABLING ACT AND REGULATIONS. The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid, pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder or 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.

2. UNIT AREA. The area specified on the plat attached hereto marked Exhibit "A" is hereby designated and recognized as constituting the Unit Area, containing 240 acres, more or less.

Exhibit "A" shows in addition to the boundary of the Unit Area, the boundaries and identity of tracts and leases in said Area to the extent known to the Unit Operator. Exhibit "B" attached hereto is a schedule showing to the extent known to the Unit Operator the acreage, percentage and kind of ownership of oil interests in all land in the Unit Area. Exhibit "C" attached hereto, is a schedule showing the percentage of participation credited to each Tract in the Unit Area based upon a presumed one hundred per cent (100%) commitment. (Tract means each parcel of land described as such and given a Tract Number in Exhibit "B".) However, nothing herein or in said schedule or map shall be construed as a representation by any party as to the ownership of any interest other than such interest or interests as are shown in said map or schedule as owned by such party. Exhibits "A" and "B" shall be revised by the Unit Operator whenever changes in the Unit Area render such revision necessary, or when requested by the Oil and Gas Supervisor, hereinafter referred to as "Supervisor", and not less than six (6) copies of the revised exhibits shall be filed with the Supervisor.

3. EXPANSION OF UNIT AREA. It is recognized that at some time or times in the future it might be desirable and beneficial to expand the Unit Area to include therein additional Tracts of land. The Unit Area may, therefore, with the approval of the Director of the United States Geological Survey, hereinafter referred to as "Director", be expanded to include therein any additional Tract or Tracts, whenever such expansion is necessary or advisable to conform with the purposes of this Agreement, and Unit Operator, has negotiated an agreement or agreements with the owners of such Tract or Tracts fixing the tract participation of each such Tract and committing such owners to this Agreement and to the Unit Operating Agreement. Whenever the Unit Area is enlarged so as to admit additional land qualified for participation, Exhibit "C" shall be revised as set forth in Section 12, Participation and Allocation of Production. Any such expansion shall be effected in the following manner:

(a) Unit Operator, on its own motion, after preliminary concurrence by the Director, shall prepare a notice of proposed expansion describing the contemplated changes in the boundaries of the Unit Area, the reasons therefore, and the proposed effective date thereof, preferably the first day of a month subsequent to the date of notice.

(b) Said notice shall be delivered to the Supervisor, and copies thereof mailed to the last known address of each Working Interest Owner, Lessee, and Lessor whose interests are affected, advising that thirty (30) days will be allowed for submission to the Unit Operator of any objections.

(c) Upon expiration of the thirty (30) day period provided in the preceding item (b) hereof, Unit Operator shall file with the Supervisor evidence of mailing of the notice of expansion and a copy of any objections thereto which have been filed with the Unit Operator, together with an application in sufficient number, for approval of such expansion and with appropriate joinders.

(d) After due consideration of all pertinent information, the expansion shall, upon approval by the Superior become effective as of the date prescribed in the notice thereof.

4. UNITIZED LAND AND UNITIZED SUBSTANCES. All land committed to this Agreement as provided in Section 5, Tracts Qualified for Participation, as to the Unitized formation defined immediately below, shall constitute land referred to herein as "Unitized Land" or "land subject to this agreement". All oil, gas, gaseous substances, sulphur contained in gas, condensate, and all associated and constituent liquid or liquefiable hydrocarbons produced from unit wells completed in the Unitized Formation are unitized under the terms of this Agreement and herein is called "Unitized Substances".

"Unitized Formation" is defined as that interval underlying the proposed unit area with vertical limits from a point of 100' above the base of the Seven Rivers formation to the base of the Queen formation. Said interval occurring in the Samedan Oil Corporation Hughes "B-4" Well No. 8 (located 1980' from the north line and 1800' from the west line, Section 17, T-23-S, R-37-E, Lea County, New Mexico) at an indicated depth of 3239' to 3606' as recorded on the McCullough Tool Company Radiation Log recorded April 16, 1955. Said log being measured from an elevation of 3316' above sea level.

5. TRACTS QUALIFIED FOR PARTICIPATION. Inasmuch as the objective of this Agreement is to have lands in the Unit Area operated and entitled to participation under the terms hereof, no joinder shall be considered a commitment to this Agreement unless the Tract involved is qualified under this Section. On or after the effective date hereof, the Tracts within the Unit Area which shall be entitled to participation in the production of Unitized Substances therefrom shall be those Tracts within the Unit Area more particularly described in Exhibit "B" that are qualified as follows (for the purposes of this section, the record interest shall replace the royalty interest as to Federal Land):

(a) Each Tract as to which Working Interest Owners owning one hundred per cent (100%) of the Working Interest have signed or ratified this Agreement, and Royalty Owners owning seventy-five per cent (75%) or more of the royalty created by the basic leases have signed or ratified this Agreement;

(b) Each Tract as to which Working Interest Owners owning one hundred per cent (100%) of the Working Interests have signed or ratified this Agreement, and Royalty Owners owning less than seventy-five percent (75%) of the royalty interests

created by the basic leases have signed or ratified this Agreement, and as to which (1) all Working Interest Owners in such Tract join in a request for inclusion of such Tract in unit participation upon the basis of such commitment status, and further as to which (2) seventy-five percent (75%) or more of the combined voting interests of Working Interest Owners in all Tracts which meet the requirements of Subsection 5 (a) vote in favor of the acceptance of such Tract as qualified. For the purpose of this Subsection 5 (b), the voting interest of each Working Interest Owner shall be equal to the ratio (expressed in percentage) which the total of such Working Interest Owner's percentage participation in all Tracts which qualify under Subsection 5 (a), bears to the total percentage participation of all Working Interest Owners in all Tracts which qualify under said Subsection 5 (a) as such percentages are shown on Exhibit "C";

(c) Each Tract as to which Working Interest Owners owning less than one hundred percent (100%) of the Working Interest have signed or ratified this Agreement, regardless of the percentage of royalty interest therein that is committed hereto, and as to which (1) the Working Interest Owners who operate the Tract and all of the other subscribing Working Interest Owners in such Tract have joined in a request for inclusion of such Tract in unit participation upon the basis of such commitment status and have tendered and executed and delivered an indemnity agreement, indemnifying and agreeing to hold the owners of the working interests in the other qualified Tracts harmless from and against any and all claims and demands that may be made by the non-subscribing Working Interest Owners in such Tract on account of the inclusion of the same in unit participation, and further as to which (2) seventy-five percent (75%) or more of the combined voting interests of the Working Interest Owners in all Tracts which meet the requirements of Subsections 5 (a) and 5 (b) above, vote in favor of the inclusion of such Tract. For the purpose of this Subsection.

5 (c), the voting interest of each Working Interest Owner shall be equal to the ratio (expressed in percentage) which the total of such Working Interest Owner's percentage participation attributed to Tracts which qualify under Subsections 5 (a) and 5 (b) bears to the total percentage of all Working Interest Owners attributed to all Tracts which qualify under Subsections 5 (a) and 5 (b), as such percentages are set out in Exhibit "C".

6. UNIT OPERATOR. Samedan Oil Corporation is hereby designated as Unit Operator, and by signature hereto as Unit Operator agrees and consents to accept the duties and obligations of Unit Operator for the development 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 interest 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.

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 that Operator's rights as such for a period of six (6) months after notice of intention to resign has been served by Unit Operator on all Working Interest Owners and the Director, and until all wells are placed in a satisfactory condition for suspension or abandonment whichever is required by the Supervisor, unless a new Unit Operator shall have been selected and approved and shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

The resignation of Unit Operator shall not release the Unit Operator from any liability for default by it hereunder occurring prior to the effective date of its resignation.

The Unit Operator may, upon default or failure in the performance of its duties or obligations hereunder, be subject to removal by an affirmative vote of the Working Interest Owners of at least ninety percent (90%) of the voting interest remaining after excluding the

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

The resignation or removal of Unit Operator under this Agreement shall not terminate its rights, 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 wells, equipment, materials and appurtenances used in conducting the Unit operations and owned by the Working Interest Owners to the new duly qualified successor Unit Operator or to the owners thereof 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 and appurtenances needed for the preservation of any wells.

8. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender his or its resignation as Unit Operator or shall be removed as hereinabove provided, or a change of Unit Operator is negotiated by Working Interest Owners, a successor Unit Operator shall be selected by Working Interest Owners voting according to their respective Tract participation in all unitized land by a majority vote; provided, that, if a majority but less than 75 percent of the Working Interest qualified to vote are owned by one party to this agreement, a concurring vote of one or more additional Working Interest Owners shall be required to select a new Operator. 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) the selection shall have been approved by the Supervisor.

If no successor Unit Operator is selected and qualified as herein provided, the Director at his election may declare this Agreement terminated.

9. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT.

If the Unit Operator is not the sole owner of Working Interest, costs and expenses incurred by Unit Operator in conducting Unit Operations hereunder shall be paid and apportioned among and borne by the owners of Working Interests, all in accordance with the agreement or agreements, whether one or more, separately or collectively, entered into by and between the Unit Operator and the owners of Working Interest. Any agreement or agreements, whether one or more, entered into between the Working Interest Owners and the Unit Operator as provided in this section are herein referred to as the "Unit Operating Agreement".

Such Unit Operating Agreement shall also set forth such other rights and obligations as between Unit Operator and the Working Interest Owners as may be agreed upon by Unit Operator and the Working Interest Owners; however, no such Unit Operating Agreement shall be deemed either to modify any of the terms and conditions of this Agreement or to relieve the Unit Operator of any right or obligation established under this Agreement, and in case of any inconsistency or conflict between this Agreement and the Unit Operating Agreement, this Agreement shall prevail. Three (3) true copies of any Unit Operating Agreement executed pursuant to this section shall be filed with the Supervisor prior to approval of this Agreement, and thereafter promptly after any revision or amendment.

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, including surface rights, which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the Unitized Substances are hereby delegated to and shall be exercised by the Unit Operator as herein provided. Acceptable evidence of title to said rights shall be deposited with said Unit Operator upon his request 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.

11. PLAN OF OPERATION. It is recognized and agreed by the parties hereto that the Unit Area is developed and productive, and only such drilling as is incidental to a secondary recovery or pressure maintenance program is contemplated.

Inasmuch as the primary purpose of this Agreement is to permit the institution and consummation of a secondary recovery or pressure maintenance program for the maximum economic production of Unitized Substances consistent with good engineering and conservation practices, Unit Operator, concurrently with the filing of this Agreement for final approval, shall submit to the Supervisor a plan of operation for the Unitized Land, and upon approval thereof such plan shall constitute the future operating obligations of the Unit Operator under this Agreement for the period specified therein. Thereafter, from time to time before the expiration of any existing plan, the Unit Operator shall submit for like approval a plan for an additional specified period of operation; said plan or plans shall be modified or supplemented when necessary to meet changed conditions, or to protect the interest of all parties to this Agreement. Reasonable diligence shall be exercised in complying with the obligations of any approved plan of operation.

Unit Operator shall have the right to inject into the Unitized Formation any substances for secondary recovery or pressure maintenance purposes in accordance with a plan of operation approved by the Supervisor, including the right to drill and maintain injection wells on the Unitized Land and completed in the Unitized Formation, and to use abandoned well or wells producing from the Unitized Formation for said purpose, and the parties hereto, to the extent of their rights and interests, hereby grant to the Unit Operator the right to use as much of the surface of the land within the Unit Area as may be reasonably necessary for the operation and the development of the Unit Area hereunder. Unit Operator shall have free use of water from the Unitized Land for operations hereunder and for operations on adjacent lands except water from surface owner's and Royalty Owner's fresh water wells, private lakes, ponds or irrigation ditches.

12. PARTICIPATION AND ALLOCATION OF PRODUCTION. On the effective date hereof, the Tract Participation of each Tract shall be based upon the following factors and formula as represented and shown on the tabulation included in Attachment No. 4 to the "B-4" Penrose Unit Engineering Report of May 17, 1972.

$$90\% \frac{\text{Tract Estimated Ultimate Primary Recovery}}{\text{Estimated Ultimate Primary Recovery - Unit Area}}$$

$$10\% \frac{\text{Tract Acreage}}{\text{Acreage - Unit Area}}$$

The figure set forth opposite each Tract in Exhibit "C" represents the Tract Participation to which such Tract is entitled if all said Tracts are committed hereto and qualified as of the effective date of this Agreement.

Promptly after approval of this Agreement, if all Tracts are not qualified hereto, Unit Operator shall revise Exhibit "C" to show all Tracts qualified for participation under this Agreement by setting forth opposite each Tract a revised Tract Participation therefor, which shall be calculated by using the same Tract factors and formula which were used to arrive at the Tract Participation of each tract as set out in the original Exhibit "C" but applying the same only to those Tracts which are qualified for participation as of the effective date of this Agreement. Said revised Exhibit "C" shall be subject to approval by the Supervisor and shall be effective as of the effective date of this Agreement.

If after the effective date of this Agreement any Tract or Tracts are subsequently committed hereto because of expansion of the Unit Area under Section 3, Expansion of Unit Area or any Tract is subsequently unitized under the provisions of Section 30, Subsequent Joinder, or if any Tract is eliminated from this Agreement as provided in Section 29, Loss of Title, the schedule of participation as shown in Exhibit "C" shall be revised by the Unit Operator to show the new Tract Participations of all the then qualified Tracts, and the revised Exhibit "C", upon approval by the Supervisor, shall govern the allocation of production from the effective date thereof until a new schedule is so approved. In any such revised Exhibit "C", pursuant to this paragraph, the Tract Participation of the previously qualified Tracts shall remain in the same ratio one to the other.

On the effective date of this Agreement, and thereafter, all Unitized Substances produced hereunder (except any part thereof used in conformity with good operating practices for drilling, operating, camp and other production or development purposes, for pressure maintenance or secondary recovery operations in accordance with a plan of operation approved by the Supervisor, or unavoidably lost), shall be deemed to be produced from the several Tracts of Unitized Land, and for the purpose of determining any benefits accruing under this Agreement each such Tract shall have allocated to it that percentage of said production equal to its Tract Participation effective hereunder during the respective period such Unitized Substances were produced, as set out in Exhibit "C".

The amount of Unitized Substances allocated to each Tract shall be deemed to be produced from such Tract irrespective of the location of the wells from which the same is produced and regardless of depletion of wells or Tracts. In the absence of a controlling contract or agreement to the contrary, when two or more leases, or part or parts thereof, have been combined into a single Tract, the percentage participation assigned to such Tract shall for all purposes be divided among the separate leases, or part or parts thereof which has been put into such Tract, in proportion to the number of surface acres of the lease, or part or parts thereof contained in such Tract, to the total surface acres contained in said Tract.

13. ROYALTY SETTLEMENT. The United States and all Royalty Owners who, under existing contract, are entitled to take in kind a share of the substances now unitized hereunder produced from any tract, shall hereafter be entitled to the right to take in kind their share of the Unitized Substances allocated to such tract, and Unit Operator shall make deliveries of such royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for Royalty Interest not taken in kind shall be made by Working Interest Owners responsible therefore 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 royalties due under their leases.

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

If natural gasoline, liquid petroleum gas fractions or other liquid hydrocarbon substances (herein collectively called "LPG's") obtained from lands or formations not subject to this Agreement and injected into the Unitized Formation, which shall be in conformity with a plan of operation first approved by the Supervisor, Working Interest Owners shall be entitled to recover, from the Unitized Formation, royalty free, part or all of such "LPG's" pursuant to such conditions and formulas as may be prescribed or approved by the Supervisor.

Royalty due the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all Unitized Substances on the basis of the amounts thereof allocated to unitized Federal land as provided herein at the rates specified in the respective Federal Leases, or at such lower 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, said average production shall be determined in accordance with the operating regulations as though the Unitized Lands were a single consolidated lease.

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

14. RENTAL SETTLEMENT. Rental or minimum royalties due on leases committed hereto shall be paid by Working Interest Owners responsible therefore 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 and minimum royalty for lands of the United States subject to this Agreement shall be paid at the rate specified in the respective leases from the United States unless such rental or minimum royalty is waived, suspended or reduced by law or by approval of the Secretary of the Interior of the United States hereinafter referred to as "Secretary", or his duly authorized representative.

51. 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 State or Federal Law or regulations.

61. 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 or, with prior consent of the Director pursuant to applicable regulations, pay a fair and reasonable compensatory royalty as determined by the Supervisor. In the event compensatory royalty is so paid, it shall be treated in the same manner as Unitized Substances.

17. GAUGE OF MERCHANTABLE OIL. Unit Operator shall make a proper and timely gauge of all leases and other tanks within the Unit Area and associated with the operation of Unitized Land in order to ascertain the amount of merchantable oil above the pipeline connections in such tanks on the effective date hereof. All such oil shall be and remain the property of the parties entitled thereto the same as if this Agreement had not been entered into; and such parties shall promptly remove said oil from said tanks. Any such oil not so removed shall be sold by Unit Operator for the account of parties entitled thereto, subject to the payment of all royalties, overriding royalties, production payments, and all other payments under the terms and provisions of the applicable lease, leases, or other contracts. If, as of the effective date hereof,

any Tract of Unitized Land is overproduced with respect to the allowable of the wells on such Tract and the amount of overproduction has been sold or otherwise disposed of, such overproduction shall be regarded as a part of the Unitized Substances produced after the effective date hereof and shall be charged to such Tract as having been delivered to the parties entitled to Unitized Substances allocated to such Tract.

18. LEASE 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 of 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 shall and by his approval hereof, or by the approval hereof by his duly authorized representative, does hereby establish, alter, change, or revoke the drilling, producing rental, minimum royalty, and royalty requirements of Federal leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this Agreement. Without limiting the generality of the foregoing, all leases, subleases, and contracts are particularly modified in accordance with the following:

(a) The development and operation of 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 part or separately owned Tract subject to this Agreement, regardless of whether there is any development of any particular part or Tract of the Unitized Land, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

(b) Drilling and producing operations performed hereunder upon any Tract of Unitized Land 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 Land pursuant to direction or consent of the Secretary or his duly authorized representative shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every Tract of Unitized Land.

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

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

(f) The segregation of any Federal lease committed to this Agreement is governed by the following provision in the fourth paragraph of Section 17 (j) of the Mineral Leasing Act, as amended by the act of September 2, 1960, (74 Stat. 781-784):

"Any (federal) Lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization; Provided, however, that any such lease as to the non-unitized 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."

19. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the interest of the parties hereto and their successors in interest until this Agreement terminates, and any grant, transfer, or conveyance, of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee, or other successor in interest. No assignment or transfer of any Working Interest shall be binding upon Unit Operator nor shall

any transfer of any Royalty Interest or other interest be binding on the Working Interest Owners responsible for payment or settlement thereof, until the first day of the calendar month after Unit Operator or the responsible Working Interest Owner, as the case may be, is furnished with the original, photostat or certified copy of the instrument of transfer.

20. EFFECTIVE DATE. This Agreement shall become binding upon each party who executes or ratifies it as of the date of execution or ratification by such party and shall become effective the first day of the calendar month next following the approval of this Agreement by the Secretary or his duly authorized delegate; and provided further, that if this Agreement is not filed for final approval on or before January 1, 1973, this Agreement shall ipso facto expire on said date (hereinafter called "expiration date") and thereafter be of no further force or effect, unless prior thereto this Agreement has been executed or ratified by Working Interest Owners whose voting interest as provided in Section 4.3.1 of the Unit Operating Agreement aggregate at least sixty percent (60%) and Working Interest Owners whose voting interests are above defined aggregate at least sixty percent (60%) of the Unit Area then committed to this Agreement have voted to extend such expiration date for a period not to exceed six (6) months. If said expiration date is so extended and this Agreement is not filed for approval by the Supervisor on or before said extended expiration date this agreement shall ipso facto expire and thereafter be of no further force or effect.

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

21. TERM. The term of this Agreement shall be for and during the time that Unitized Substances can be produced in quantities sufficient to pay for the cost of producing same from wells on Unitized Land and for as long thereafter as drilling, reworking or other operations are prosecuted on Unitized Land without cessation of more than ninety (90)

consecutive days, and so long thereafter as Unitized Substances can be produced as aforesaid, unless sooner terminated by the Director as provided in Section 8, Successor Unit Operator or with the approval of the Supervisor as provided in Section 22, Termination by Working Interest Owners.

22. TERMINATION BY WORKING INTEREST OWNERS. This Agreement may be terminated at any time by Working Interest Owners owning ninety percent (90%) or more of the participation percentage in the Unitized Land with the approval of the Supervisor. Notice of any such termination shall be given by the Unit Operator to all parties hereto.

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

If not specified otherwise by the leases unitized under this Agreement, basic 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.

Unit Operator shall, within thirty (30) days after termination of this Agreement has been determined, pursuant to Section 8 and 22 hereof, file for record in the office or offices where a counterpart of this Agreement is recorded, a certificate setting forth the fact of such termination and the date thereof.

23. 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 statewide voluntary conservation or allocation program, which is established, recognized and generally adhered to by the majority of operators in such State, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification. Without regard to the foregoing, the Director is also hereby vested with authority to alter or modify from time to time in his discretion the rate of prospecting and development and the quantity and rate of production under this Agreement when such

alteration or modification is in the interest of attaining the conservation objectives stated in this Agreement and is not in violation of any applicable Federal or State law.

Powers in this section vested in the Director shall only be exercised after notice to Unit Operator and opportunity for hearing to be held no less than fifteen (15) days from notice.

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

25. NOTICES. All notices, demands or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given, if given in writing or personally delivered to the party or sent by postpaid registered or certified mail, addressed to such party at the address such party has furnished to the party sending the notice, demand or statement.

26. 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 law of the State of New Mexico, or of the United States, or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive, provided, however, each party hereto except the United States covenants that during the existence of this Agreement, such party shall not resort to any action at law or in equity to partition the Unitized Land or the facilities used in the development or operation thereof and to that extent waives the benefits of all laws authorizing such partition.

27. UNAVOIDABLE DELAY. All obligations under this Agreement, except the payment of money, 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 agencies, unavoidable accidents, 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.

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

29. LOSS OF TITLE. In the event title to a Tract of Unitized Land shall fail so as to render the Tract inoperable under this Agreement and the true owner cannot be induced to join this Agreement, such Tract shall be regarded automatically as not committed hereto effective as of the first day of the calendar month in which such title failure is determined, and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title as to any Royalty, Working Interest or other interest subject thereto, payment or delivery on account thereof may be withheld without liability or interest until the dispute is finally settled; provided that, as to Federal land or leases, no payment of funds due the United States of America shall be withheld, but such funds shall be deposited as directed by the Supervisor, to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

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

30. SUBSEQUENT JOINDER. After the effective date of this Agreement, the commitment of any interest in any Tract within the Unit

Area shall be upon such equitable terms as may be negotiated by Working Interest Owners and the owner of such interest. After the effective date hereof, joinder by a Royalty Owner must be consented to in writing by the Working Interest Owner committed hereto and responsible for the payment of any benefits that may accrue hereunder in behalf of such Royalty Interest. Joinder by any Royalty Owner at any time must be accompanied or preceded by appropriate joinder by the Owner of the corresponding Working Interest in order for the interest to be regarded as effectively committed. Joinder to this Agreement by a Working Interest Owner at any time must be accompanied by appropriate joinder to the Unit Operating Agreement in order for the interest to be regarded as committed to this Agreement. Except as may otherwise herein be provided, subsequent joinders to this Agreement shall be effective as of the first day of the month following the filing with the Supervisor of duly executed counterparts of all or any papers necessary to establish commitment of any Tract to this Agreement unless objection to such joinder is made within sixty (60) days by the Supervisor.

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

In the event any of the parties hereto own both Working Interests and Royalty Interests, as such interests are shown on Exhibit "B", it shall not be necessary for such party to execute this Agreement in both capacities in order to commit both classes of interest. Execution hereof by any such party in one capacity shall also constitute execution in the other capacity, provided said party also executes the Unit Operating Agreement as a Working Interest Owner.

32. ROYALTY OWNERS TAXES. Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount of value of the Unitized Substances produced

from the Unitized Land; provided, however, that, if it is required or if it be determined that 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 therefore by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No taxes shall be charged to the United States, or to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

33. NO PARTNERSHIP. It is expressly agreed that the relation of the parties hereto is that of independent contractors and nothing in this Agreement contained, expressed or implied, nor any operations conducted hereunder, shall create or be deemed to have created a partnership or association between the parties hereto or any of them.

34. BORDER AGREEMENTS. Unit Operator, with concurrence of Working Interest Owners having a combined Unit Participation of sixty-five (65%) percent or more, may, subject to approval of the Supervisor, enter into an agreement or agreements with the Working Interest Owners of adjacent lands with respect to the operations designed to increase ultimate recovery, conserve natural resources and to protect the parties and interest.

35. CORRECTION OF ERRORS. It is hereby agreed by all parties to this Agreement that Unit Operator is empowered to correct any mathematical or clerical errors which may exist in the pertinent exhibits to this Agreement; provided, however, that correction of any error other than mathematical or clerical shall be made by Unit Operator only after first having obtained approval of Working Interest Owners, and the Supervisor. If any such corrections are made, Unit Operator shall file the required number of copies of the corrected pages of this Agreement or of the Exhibits hereto with the Supervisor; Unit Operator shall also provide, in conformance with Section 25, Notices, such corrected pages to the parties hereto.

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

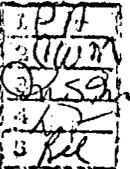
UNIT OPERATOR AND WORKING INTEREST OWNER

Date:

SAMEDAN OIL CORPORATION

July 27, 1972

BY [Signature]
Vice-President



ATTEST:

[Signature]
Secretary

RECORD TITLE OWNERS (TRACT NO. 1)

Date

Sarah B. Hughes

Date:

FIRM ROYALTIES, INC.

BY

BY

ATTEST:

ROYALTY OWNER (TRACT NO. 1)

Date:

AMOCO PRODUCTION COMPANY

9-26-72

BY [Signature]



ATTEST:
