

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION
OF THE
HORSESHOE-GALLUP UNIT AREA
COUNTY OF SAN JUAN
STATE OF NEW MEXICO

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DEFINITIONS

Definitions of the following terms appear on the following pages:

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1 UNIT AGREEMENT
2 FOR THE DEVELOPMENT AND OPERATION
3 OF THE
4 HORSESHOE-GALLUP UNIT AREA
5 COUNTY OF SAN JUAN
6 STATE OF NEW MEXICO
7 NO. _____

8 THIS AGREEMENT entered into as of the 1st day of
9 November, 1961, by and between the parties subscribing, ratifying,
10 or consenting hereto, and herein referred to as the "parties hereto",

11 W I T N E S S E T H:

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

15 WHEREAS, the Mineral Leasing Act of February 25, 1920,
16 41 Stat. 437, as amended, 30 U.S.C. Secs. 181 et seq., authorizes
17 Federal lessees and their representatives to unite with each other,
18 or jointly or separately with others, in collectively adopting and
19 operating under a cooperative or unit plan of development or opera-
20 tion of any oil or gas pool, field, or like area, or any part thereof,
21 for the purpose of more properly conserving the natural resources
22 thereof whenever determined and certified by the Secretary of the
23 Interior to be necessary or advisable in the public interest; and

24 WHEREAS, the Commissioner of Public Lands of the State
25 of New Mexico is authorized by an Act of the Legislature (Sec. 3,
26 Chap. 88, Laws 1943) as amended by Sec. 1 of Chapter 162, Laws of
27 1951, (Chap. 7, Art. 11, Sec. 39, N. M. Statutes 1953 Annot.), to
28 consent to and approve the development or operation of State lands
29 under agreements made by lessees of State land jointly or severally
30 with other lessees where such agreements provide for the unit opera-
31 tion or development of part of or all of any oil or gas pool, field
32 or area; and

33 WHEREAS, the Commissioner of Public Lands of the State of
34 New Mexico is authorized by an Act of the Legislature (Sec. 1, Chap.
35 162), (Laws of 1951, Chap. 7, Art. 11, Sec. 41, N. M. Statutes 1953

1 Annotated) to amend with the approval of lessee, evidenced by the
2 lessee's execution of such agreement or otherwise, any oil and gas
3 lease embracing State lands so that the length of the term of said
4 lease may coincide with the term of such agreements for the unit
5 operation and development of part or all of any oil or gas pool,
6 field or area; and

7 WHEREAS, the rules and regulations governing the leasing
8 of restricted allotted and tribal Indian lands for oil and gas, pro-
9 mulgated by the Secretary of the Interior (25 C.F.R.172.24(c)) under
10 and pursuant to the Allotted Land Leasing Act of March 3, 1909, 35
11 Stat. 783, 25 U.S.C. Sec. 396 and the Tribal Land Mineral Leasing
12 Act of May 11, 1938, 52 Stat. 347, 25 U.S.C. Sec. 396a et seq., and
13 the oil and gas leases covering said allotted and tribal Indian lands
14 provide for the commitment of such leases to a cooperative or unit
15 plan of development or operation; and

16 WHEREAS, the Oil Conservation Commission of the State of
17 New Mexico (hereinafter referred to as "the Commission") is authoriz-
18 ed by an Act of the Legislature (Chap. 72, Laws 1935; Chap. 65, Art.
19 3, Sec. 14 N.M. Statutes 1953 Annotated) to approve this agreement and
20 the conservation provisions hereof; and

21 WHEREAS, the parties hereto hold sufficient interests in
22 the Horseshoe-Gallup Unit Area covering the land hereinafter described
23 to give reasonably effective control of operations therein; and

24 WHEREAS, it is the purpose of the parties hereto to enable
25 institution and consummation of secondary recovery operations, to
26 conserve natural resources, prevent waste, and secure other benefits
27 obtainable through development and operation of the Area subject to
28 this agreement under the terms, conditions and limitations herein set
29 forth.

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

34 1. ENABLING ACT AND REGULATIONS: The Acts of March 3,
35 1909, May 11, 1938, and the Mineral Leasing Act of February 25, 1920,

1 as amended, supra, and all valid pertinent regulations, including
2 operating and unit plan regulations, heretofore issued thereunder
3 or valid, pertinent, and reasonable regulations hereafter issued
4 thereunder are accepted and made a part of this Agreement as to
5 Federal and Indian lands, provided such regulations are not incon-
6 sistent with the terms of this Agreement; and as to non-Federal and
7 non-Indian lands, the oil and gas operating regulations in effect as
8 of the effective date hereof governing drilling and producing opera-
9 tions, not inconsistent with the terms hereof or the laws of the State
10 in which the non-Federal and non-Indian land is located, are hereby
11 accepted and made a part of this Agreement.

12 2. UNIT AREA: The area specified on the map attached
13 hereto marked Exhibit "A" is hereby designated and is recognized as
14 constituting the "Unit Area", containing 20,925.58 acres, more or less.

15 Exhibit "A" shows, in addition to the boundary of the Unit
16 Area, the boundaries and identity of tracts and leases in said area
17 to the extent known to the Unit Operator. Exhibit "B" attached hereto
18 is a schedule showing to the extent known to the Unit Operator the
19 acreage, percentage and kind of ownership of oil and gas interests in
20 all land in the Unit Area. However, nothing herein or in said schedule
21 or map shall be construed as a representation by any party hereto as
22 to the ownership of any interest other than such interest or interests
23 as are shown in said map or schedule as owned by such party. Exhibits
24 "A" and "B" shall be revised by the Unit Operator whenever changes in
25 the Unit Area render such revision necessary, or when requested by the
26 Oil and Gas Supervisor, hereinafter referred to as "Supervisor", or
27 when requested by the Commissioner of Public Lands of the State of
28 New Mexico, hereinafter referred to as "Commissioner", and not less
29 than seven copies of the revised exhibits shall be filed with the
30 Supervisor and copies thereof shall be filed with the Commissioner
31 and the Oil Conservation Commission of the State of New Mexico. The
32 Commissioner of Indian Affairs shall hereafter be referred to as the
33 "Indian Commissioner".

34 The above described Unit Area shall, when practicable,
35 be expanded to include therein any additional tract or tracts regarded

1 as reasonably necessary or advisable for the purposes of this Agree-
2 ment, or shall be contracted to exclude lands not within any partici-
3 pating area, whenever such expansion or contraction is necessary or
4 advisable to conform with the purposes of this agreement. Such ex-
5 pansion or contraction shall be effected in the following manner:

6 (a) Unit Operator, when authorized by a vote of at least
7 sixty-five per cent (65%) of the voting interests based on the parti-
8 cipating percentages assigned to the tracts in the participating area,
9 or on demand of the Director of the Geological Survey, hereinafter
10 referred to as "Director", after preliminary concurrence by the
11 Director, or on demand of the Commissioner and Commission, shall pre-
12 pare a notice of proposed expansion or contraction describing the
13 contemplated changes in the boundaries of the Unit Area, the reasons
14 therefor, and the proposed effective date thereof, preferably the
15 first day of a month subsequent to the date of notice.

16 (b) Said notice shall be delivered to the Supervisor and
17 Commissioner and/or the Commission, and copies thereof mailed to the
18 last known address of each working interest owner, lessee, and lessor
19 whose interests are affected, advising that 30 days will be allowed
20 for submission to the Unit Operator of any objections.

21 (c) Upon expiration of the 30-day period provided in the
22 preceding item (b) hereof, Unit Operator shall file with the Super-
23 visor, Commissioner and the Commission evidence of mailing of the
24 notice of expansion or contraction and a copy of any objections there-
25 to which have been filed with the Unit Operator, together with an
26 application in sufficient number, for approval of such expansion or
27 contraction and with appropriate joinders.

28 (d) After due consideration of all pertinent information,
29 the expansion or contraction shall, upon approval by the Director,
30 Commissioner and the Commission become effective as of the date pre-
31 scribed in the notice thereof.

32 3. UNITIZED LAND AND UNITIZED SUBSTANCES. All oil and
33 gas in the hereinabove described lands committed to this agreement,
34 as to the Horseshoe-Gallup Sand, are unitized under the terms of this
35 agreement and are herein called "unitized substances", and said lands,

1 insofar as the Horseshoe-Gallup Sand is concerned, shall constitute
2 said lands herein referred to as "unitized lands" or "lands subject
3 to this agreement".

4 The Horseshoe-Gallup Sand shall mean the sand and reser-
5 voir, regardless of the depth and thickness thereof, occurring be-
6 tween the lower Gallup Correlation Point and the top of the Juana
7 Lopez Formation and which were encountered at the following depths
8 below the Kelly Bushing in the following wells in San Juan County,
9 New Mexico, as shown by the Schlumberger Electric Logs thereof:

10			Lower Gallup	Top Of
11	<u>Well</u>	<u>Location</u>	<u>Correlation</u>	<u>Juana</u>
			<u>Point</u>	<u>Lopez</u>
12	The Atlantic Refining	NW/4 of NE/4	1114'	1287'
13	Co. Navajo No. 17	Section 31 T31N-R16W		
14	El Paso Natural Gas	NW/4 of SW/4	1269'	1437'
15	Products Co. Chimney	Section 24 T31N-R17W		
16	Rock "A" No. 10			
16	El Paso Natural Gas	SE/4 of SE/4	1258'	1436'
17	Products Co. Horseshoe	Section 4 T30N-R16W		
17	Canyon No. 5			

18
19 4. UNIT OPERATOR. The Atlantic Refining Company is here-
20 by designated as Unit Operator and by signature hereto as Unit
21 Operator agrees and consents to accept the duties of Unit Operator
22 for the development and production of unitized substances as herein
23 provided. Whenever reference is made herein to the Unit Operator,
24 such reference means the Unit Operator acting in that capacity and
25 not as an owner of interest in unitized substances, and the term
26 "working interest owner" when used herein shall include or refer to
27 Unit Operator as the owner of a working interest when such interest
28 is owned by it.

29 The term "working interest owner", as used herein shall
30 mean the owner of such an interest committed hereto as may be obli-
31 gated to bear or share a portion of all costs and expenses of drill-
32 ing, developing, producing and operating the unitized land under this
33 agreement and the Unit Operating Agreement referred to in Section 7.

34 5. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit
35 Operator shall have the right to resign at any time, but such resig-

1 as reasonably necessary or advisable for the purposes of this Agree-
2 ment, or shall be contracted to exclude lands not within any partici-
3 pating area, whenever such expansion or contraction is necessary or
4 advisable to conform with the purposes of this agreement. Such ex-
5 pansion or contraction shall be effected in the following manner:

6 (a) Unit Operator, when authorized by a vote of at least
7 sixty-five per cent (65%) of the voting interests based on the parti-
8 cipating percentages assigned to the tracts in the participating area,
9 or on demand of the Director of the Geological Survey, hereinafter
10 referred to as "Director", after preliminary concurrence by the
11 Director, or on demand of the Commissioner and Commission, shall pre-
12 pare a notice of proposed expansion or contraction describing the
13 contemplated changes in the boundaries of the Unit Area, the reasons
14 therefor, and the proposed effective date thereof, preferably the
15 first day of a month subsequent to the date of notice.

16 (b) Said notice shall be delivered to the Supervisor and
17 Commissioner and/or the Commission, and copies thereof mailed to the
18 last known address of each working interest owner, lessee, and lessor
19 whose interests are affected, advising that 30 days will be allowed
20 for submission to the Unit Operator of any objections.

21 (c) Upon expiration of the 30-day period provided in the
22 preceding item (b) hereof, Unit Operator shall file with the Super-
23 visor, Commissioner and the Commission evidence of mailing of the
24 notice of expansion or contraction and a copy of any objections there-
25 to which have been filed with the Unit Operator, together with an
26 application in sufficient number, for approval of such expansion or
27 contraction and with appropriate joinders.

28 (d) After due consideration of all pertinent information,
29 the expansion or contraction shall, upon approval by the Director,
30 Commissioner and the Commission become effective as of the date pre-
31 scribed in the notice thereof.

32 3. UNITIZED LAND AND UNITIZED SUBSTANCES. All oil and
33 gas in the hereinabove described lands committed to this agreement,
34 as to the Horseshoe-Gallup Sand, are unitized under the terms of this
35 agreement and are herein called "unitized substances", and said lands,

1 insofar as the Horseshoe-Gallup Sand is concerned, shall constitute
2 said lands herein referred to as "unitized lands" or "lands subject
3 to this agreement".

4 The Horseshoe-Gallup Sand shall mean the sand and reser-
5 voir, regardless of the depth and thickness thereof, occurring be-
6 tween the lower Gallup Correlation Point and the top of the Juana
7 Lopez Formation and which were encountered at the following depths
8 below the Kelly Bushing in the following wells in San Juan County,
9 New Mexico, as shown by the Schlumberger Electric Logs thereof:

10			Lower Gallup	Top Of
11	<u>Well</u>	<u>Location</u>	<u>Correlation</u>	<u>Juana</u>
			<u>Point</u>	<u>Lopez</u>
12	The Atlantic Refining	NW/4 of NE/4	1114'	1267'
13	Co. Navajo No. 17	Section 31		
		T31N-R16W		
14	El Paso Natural Gas	NW/4 of SW/4	1269'	1437'
15	Products Co. Chimney	Section 24		
	Rock "A" No. 10	T31N-R17W		
16	El Paso Natural Gas	SE/4 of SE/4	1258'	1436'
17	Products Co. Horseshoe	Section 4		
	Canyon No. 5	T30N-R16W		

18
19 4. UNIT OPERATOR. The Atlantic Refining Company is here-
20 by designated as Unit Operator and by signature hereto as Unit
21 Operator agrees and consents to accept the duties of Unit Operator
22 for the development and production of unitized substances as herein
23 provided. Whenever reference is made herein to the Unit Operator,
24 such reference means the Unit Operator acting in that capacity and
25 not as an owner of interest in unitized substances, and the term
26 "working interest owner" when used herein shall include or refer to
27 Unit Operator as the owner of a working interest when such interest
28 is owned by it.

29 The term "working interest owner", as used herein shall
30 mean the owner of such an interest committed hereto as may be obli-
31 gated to bear or share a portion of all costs and expenses of drill-
32 ing, developing, producing and operating the unitized land under this
33 agreement and the Unit Operating Agreement referred to in Section 7.

34 5. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit
35 Operator shall have the right to resign at any time, but such resig-

1 nation shall not become effective so as to release Unit Operator
2 from the duties and obligations of Unit Operator and terminate Unit
3 Operator's rights as such for a period of six (6) months after
4 notice of intention to resign has been served by Unit Operator on all
5 working interest owners and the Director, Commissioner and the
6 Commission, and until all wells then drilled hereunder are placed
7 in satisfactory condition for suspension or abandonment whichever
8 is required by the Supervisor as to Federal lands and by the Com-
9 mission as to State lands, unless a new Unit Operator shall have
10 been selected and approved and shall have taken over and assumed the
11 duties and obligations of Unit Operator prior to the expiration of
12 said period.

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

16 Upon default or failure by Unit Operator in the perform-
17 ance of its duties or obligations hereunder, the working interest
18 owners may remove the Unit Operator by the affirmative vote of at
19 least seventy-five percent (75%) of the voting interest remaining
20 after excluding the voting interest of the Unit Operator; provided,
21 however, if the required percentage is owned by one party, a con-
22 curring vote of one or more additional working interest owners shall
23 be required to remove said Unit Operator. The voting interests
24 shall be based on the participating percentages assigned to tracts
25 in the participating area. Such removal shall be effective upon
26 notice thereof to the Director and Commissioner.

27 In all such instances of resignation or removal, until
28 a successor Unit Operator is selected and approved, as hereinafter
29 provided, the working interest owners shall be jointly responsible
30 for the performance of the duties of Unit Operator and shall, not
31 later than 30 days before such resignation or removal becomes
32 effective, appoint a temporary operator to represent them in any
33 action to be taken hereunder.

34 The resignation or removal of Unit Operator under this
35 agreement shall not terminate its right, title or interest as the

1 owner of a working interest or other interests in unitized substances,
2 but upon the resignation or removal of Unit Operator becoming effective,
3 such Unit Operator shall deliver possession of all equipment,
4 materials, and appurtenances used in conducting the unit operations
5 and owned by the working interest owners to the new duly qualified
6 successor Unit Operator or to the owners thereof if no such new Unit
7 Operator is elected, to be used for the purpose of conducting unit
8 operation hereunder. Nothing herein shall be construed as authorizing
9 removal of any material, equipment and appurtenances needed for
10 the preservation of any wells.

11 6. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator
12 shall tender his or its resignation as Unit Operator, or shall be
13 removed as hereinabove provided, the working interest owners shall
14 by affirmative vote of at least Sixty-Five per cent (65%) of the
15 voting interests remaining after excluding the voting interest of
16 the Unit Operator to be succeeded, select a successor Unit Operator.
17 The voting interests shall be based on the percentage participations
18 assigned to tracts in the participating area. Should any working
19 interest owner entitled to vote own a voting interest of more than
20 Thirty-Five (35%) per cent, its negative vote or failure to vote
21 shall not serve to disapprove the selection of a successor Unit
22 Operator approved by Ninety (90%) per cent or more of the voting
23 interests of the remaining working interest owners. Such selection
24 shall not become effective until (a) Unit Operator so selected shall
25 accept in writing the duties and responsibilities of Unit Operator,
26 and (b) the selection shall have been approved by the Director and
27 Commissioner. A Unit Operator removed for default cannot vote to
28 succeed himself. If no successor Unit Operator is selected and
29 qualified as herein provided, the Director, at his election, may
30 declare this Unit Agreement terminated.

31 7. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT.
32 All costs and expenses incurred by Unit Operator in conducting unit
33 operations hereunder shall be paid and apportioned among and borne
34 by the working interest owners, all in accordance with the agreement
35 or agreements entered into by and between the Unit Operator and the

1 working interest owners, whether one or more, separately or collec-
2 tively. Any agreement or agreements entered into between the working
3 interest owners and the Unit Operator, as provided in this section,
4 whether one or more, are herein referred to as the "Unit Operating
5 Agreement". Such Unit Operating Agreement shall also provide the
6 manner in which the working interest owners shall be entitled to
7 receive their respective proportionate and allocated share of the
8 benefits accruing hereto in conformity with their underlying operat-
9 ing agreements, leases, or other independent contracts and such other
10 rights and obligations as between Unit Operator and the working
11 interest owners as may be agreed upon by the Unit Operator and the
12 working interest owners. However, no such Unit Operating Agreement
13 shall be deemed either to modify the terms and conditions of this
14 Unit Agreement or to relieve the Unit Operator of any right or obli-
15 gation established under this Unit Agreement, and in case of any
16 inconsistency or conflict between the Unit Agreement and the Unit
17 Operating Agreement, this Unit Agreement shall prevail. Three (3)
18 true copies of any Unit Operating Agreement executed pursuant to
19 this section shall be filed with the Supervisor prior to approval
20 of this Unit Agreement by the Director, and a copy shall be filed
21 with the Commissioner.

22 8. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR. Except as
23 otherwise specifically provided herein, the exclusive right, privi-
24 lege, and duty of exercising any and all rights of the parties
25 hereto including surface rights, which are necessary or convenient
26 for the prospecting for, producing, storing, allocating, and dis-
27 tributing the unitized substances, are hereby granted and delegated
28 to and shall be exercised by the Unit Operator as herein provided.
29 Acceptable evidence of title to said rights shall be deposited with
30 said Unit Operator and, together with this agreement, shall constitute
31 and define the rights, privileges, and obligations of Unit Operator.
32 Nothing herein, however, shall be construed to transfer title to any
33 land, lease, royalty interest, working interest, operating agreement
34 or communitization agreement, it being understood that under this
35 agreement the Unit Operator, in its capacity as Unit Operator, shall

1 exercise the rights of possession and use vested in the parties
2 hereto only for the purposes herein specified.

3 9. DISCOVERY. Inasmuch as wells capable of producing
4 unitized substances in paying quantities (to-wit: quantities
5 sufficient to repay the cost of drilling and producing operations,
6 with a reasonable profit) from the Horseshoe-Gallup Sand have already
7 been drilled, tested and completed within the Unit Area and produc-
8 tion in paying quantities is currently being taken therefrom, no
9 initial test well is required under the terms of this Unit Agreement.

10 10. PLAN OF FURTHER DEVELOPMENT AND OPERATION. It is
11 agreed that the unitized land will be operated under a plan of
12 pressure maintenance or some form of secondary recovery in order to
13 effect the greatest recovery of unitized substances, prevent waste
14 and conserve natural resources. The Unit Operator is hereby authoriz-
15 ed to inject gas, oil, liquefied petroleum gas, brine, water or a
16 combination of said substances and any one or more of said substances,
17 irrespective of whether produced from the Horseshoe-Gallup Sand, into
18 the unitized Horseshoe-Gallup Sand through any well or wells now or
19 hereafter completed therein; provided, however, that the above
20 operations may be conducted by Unit Operator only in accordance with
21 a plan of operation approved by the Supervisor, Commissioner and the
22 Commission. The parties hereto hereby grant to the Unit Operator
23 the use of brine or water or both, except potable, domestic water
24 supplies, from any formation within the Unit Area for injecting into
25 the Horseshoe-Gallup Sand, except that no rights to water from
26 Indian lands are granted hereby.

27 On or before the effective date of this agreement, Unit
28 Operator shall submit for the approval of the Supervisor, Commissioner
29 and the Commission an acceptable plan of development and operation for
30 the unitized land which, when approved by the Supervisor, Commissioner
31 and the Commission, shall constitute the further drilling and operat-
32 ing obligations of the Unit Operator under this agreement for the
33 period specified therein. Thereafter, from time to time, before the
34 expiration of any existing plan, the Unit Operator shall submit for
35 the approval of the Supervisor, Commissioner and the Commission a

1 plan or plans for an additional specified period for the develop-
2 ment and operation of the unitized land. Said initial plan and all
3 revisions thereof shall be as complete and adequate as the Supervisor
4 and Commissioner may determine to be necessary for timely operations
5 and development consistent herewith. Said plan or plans shall be
6 modified or supplemented when necessary to meet changed conditions
7 or to protect the interests of all parties to this agreement. Reason-
8 able diligence shall be exercised in complying with the obligations
9 of the approved plan of development and operation. After the effec-
10 tive date hereof, no further wells, except such as may be specifically
11 approved by the Supervisor, Commissioner, and the Commission shall
12 be drilled except in accordance with a plan of development approved
13 as herein provided.

14 11. PARTICIPATION. The lands so indicated on Exhibit
15 "A" attached hereto and described in Exhibit "C" attached hereto are
16 recognized as reasonably proved to be productive of unitized sub-
17 stances in paying quantities or have been determined to be essential
18 for unit operations and are hereby designated and fixed as the
19 "initial participating area". In Exhibit "C", there are listed and
20 numbered the various tracts within the initial participating area.
21 Set opposite each tract is a figure which represents the percentage
22 participation to which such tract shall be entitled if all of said
23 tracts are committed hereto as of the effective date of this agree-
24 ment. Also set forth are the sum totals of the percentage partici-
25 pation to which each working interest owner shall be entitled if all
26 of said tracts are committed hereto as of the effective date of this
27 agreement.

28 If less than all tracts within the initial participating
29 area are committed hereto as of the effective date of this agreement,
30 Unit Operator, as soon as practicable after such date, shall file
31 with the Supervisor, Commissioner and the Commission a schedule of
32 those tracts within the initial participating area committed hereto
33 as of said effective date. Said schedule shall be designated "First
34 Revised Exhibit C" and shall be considered for all purposes as a
35 part of this agreement. Said "First Revised Exhibit C" shall set

1 forth opposite each such committed tract within the initial parti-
2 cipating area a revised percentage participation therefor, which
3 shall be calculated by using the same tract factors and formula
4 which were used to arrive at the percentage participation of each
5 tract as set out on Exhibit "C" attached hereto but applying the
6 same only to the committed tracts. The sum totals of the percent-
7 ages of participation of each working interest owner shall also be
8 revised. Unless disapproved by the Supervisor, Commissioner or the
9 Commission within 30 days after filing, said "First Revised Exhibit C"
10 shall supersede, effective as of the effective date hereof, the
11 percentages of participation set forth in Exhibit "C" attached hereto.
12 The percentage participation for each tract as shown on Exhibit "C"
13 attached hereto, or as may be shown on said "First Revised Exhibit C"
14 as above provided, is calculated and determined in accordance with
15 the tract factors and formula set forth in Section 12 hereof.

16 The participating area established hereby as the initial
17 participating area may be revised from time to time, subject to
18 approval by the Director, Commissioner, and the Commission whenever
19 such action appears proper as a result of further drilling operations
20 or otherwise, to include additional land then regarded as reasonably
21 proved to be productive in paying quantities or determined to be
22 essential for unit operations. The percentage participation for
23 each tract in the participating area so enlarged shall be revised
24 on such basis and effective date as may be agreed upon by all the
25 voting interest owners when the participating area is so enlarged,
26 subject to the approval of the Director, Commissioner and Commission.
27 Notwithstanding anything herein which may be construed to the
28 contrary, however, in any such revision of the participating area
29 the portion of the revised percentage of participation attributed
30 to the tracts and portions of tracts which were participating prior
31 to such revision shall remain in the same ratio one to another.
32 Nothing herein contained shall be construed as requiring any retro-
33 active adjustment for production obtained prior to the effective
34 date of such revision of the participating area.

35

1 Whenever it is determined subject to the approval of
2 the Supervisor as to wells on Federal and Indian land and the
3 Commissioner as to wells on State land, that a well drilled under
4 this agreement is not capable of producing in paying quantities or
5 determined not to be essential for unit operations and inclusion of
6 the land on which it is situated in a participating area is un-
7 warranted, production from such well shall, for the purposes of
8 settlement among all parties other than working interest owners, be
9 allocated to the lands on which the well is located so long as the
10 well is not within a participating area. Settlement for working
11 interest benefits for such a well shall be made as provided in the
12 Unit Operating Agreement.

13 If, subsequent to the effective date of this agreement,
14 any tract within the participating area becomes committed hereto
15 under the provisions of Section 28 hereof, or any committed tract
16 within the participating area is excluded herefrom under the provisions
17 of Section 27 hereof, Unit Operator shall revise the current Exhibit
18 "C" to show the new percentages of participation of the committed
19 tracts in the participating area, which revised schedule shall, upon
20 its approval by the Supervisor, Commissioner, and the Commission
21 supersede as of its effective date, the last previously effective
22 Exhibit "C". In any such revision of the current Exhibit "C" the
23 portion of the revised percentage of participation attributed to the
24 tracts and portions of tracts which were committed hereto prior to
25 such revision shall remain in the same ratio one to another.

26 12. ALLOCATION OF PRODUCTION. For the purpose of determin-
27 ing any and all benefits accruing under this agreement each tract
28 committed hereto within the participating area shall have allocated
29 to it a proportion equal to its percentage participation of all
30 unitized substances produced from the unitized lands, except any
31 part thereof used in conformity with good operating practices within
32 the Unitized Area for drilling, operating, camp and other production
33 or development purposes, for pressure maintenance or secondary
34 recovery operations in accordance with a plan of operation approved
35 by the Supervisor, Commissioner, and the Commission, or unavoidably

1 lost. The amount of unitized substances allocated to each tract in
 2 the participating area shall be deemed to be produced from such tract.
 3 It is hereby agreed that production of unitized substances from any
 4 part of the participating area shall be allocated as provided herein
 5 regardless of whether oil or gas is being produced from any particular
 6 tract committed hereto. If the working interests or the royalty
 7 interests in any tract are divided with respect to separate parcels
 8 or portions of such tract and owned severally by different persons,
 9 the percentage participation assigned to such tract shall, in the
 10 absence of a recordable instrument among all owners fixing the
 11 division of ownership, be divided among such parcels or portions in
 12 proportion to the number of surface acres in each.

13 The percentage participation for each tract in the initial
 14 participating area referred to in Section 11 hereof was determined
 15 in accordance with the following formula, which is hereby adopted:

$$\begin{array}{l}
 16 \quad \left\{ \begin{array}{l} \text{Tract Upper Zone} \\ \text{Original Stock} \\ \text{Tank Oil In Place} \end{array} \right\} + 1.46 \left\{ \begin{array}{l} \text{Tract Lower Zone} \\ \text{Original Stock} \\ \text{Tank Oil In Place} \end{array} \right\} \times 100 \\
 17 \quad \left\{ \begin{array}{l} \text{Total Participating} \\ \text{Area Upper Zone} \\ \text{Original Stock Tank} \\ \text{Oil In Place} \end{array} \right\} + 1.46 \left\{ \begin{array}{l} \text{Total Participating} \\ \text{Area Lower Zone} \\ \text{Original Stock Tank} \\ \text{Oil In Place} \end{array} \right\}
 \end{array}$$

20 The value of 1.46 in the above formula represents the
 21 agreed upon ratio of the recoverable stock tank oil per barrel of
 22 original stock tank oil in place in the Lower Zone of the Horseshoe-
 23 Gallup Sand to that of the Upper Zone of the Horseshoe-Gallup Sand.

24 In connection with the foregoing formula, it is recognized
 25 and agreed that the Horseshoe-Gallup Sand as defined in Section 3
 26 hereof is a common reservoir consisting of two productive intervals,
 27 each of which has a different value as to the number of barrels of
 28 stock tank oil per acre foot in place. Said productive intervals
 29 are referred to herein as Upper Zone and Lower Zone, and are defined
 30 below.

31 The Upper Zone and Lower Zone shall mean the intervals
 32 which were encountered between the following depths below the Kelly
 33 Bushing in the following wells in San Juan County, New Mexico, as
 34 shown by the Schlumberger Electric Logs thereof.

35

	<u>Well</u>	<u>Location</u>	<u>Upper Zone</u>		<u>Lower Zone</u>	
			<u>Top</u>	<u>Bottom</u>	<u>Top</u>	<u>Bottom</u>
1						
2	The Atlantic	NW/4 of NE/4	1145'	1182'	1234'	1252'
3	Refining Co.	Section 31				
4	Navajo No. 17	T31N - R16W				
5	El Paso	NW/4 of SW/4	1298'	1320'	1393'	1426'
6	Natural Gas	Section 24				
7	Prod. Co.	T31N - R17W				
8	Chimney Rock					
9	"A" No. 10					
10						
11	El Paso	SE/4 of SE/4	1292'	1323'	1387'	1417'
12	Natural Gas	Section 4				
13	Prod. Co.	T30N - R16W				
14	Horseshoe					
15	Canyon No. 5					

11 13. DEVELOPMENT OR OPERATION OF NON-PARTICIPATING LAND.

12 Any party or parties hereto owning or controlling the working interest

13 or a majority of the working interests in any unitized land having

14 thereon a regular well location may, (with the approval of the

15 Supervisor as to Federal and Indian land and the Commissioner as to

16 State land) at its sole risk, cost and expense drill or work over a

17 well to test the Horseshoe-Gallup Sand if such location is not within

18 a participating area, unless within ninety (90) days from receipt of

19 notice from said party of his intention to drill or work over the

20 well the Unit Operator elects and commences to drill or work over

21 such well in the same manner as other wells are drilled or worked

22 over by the Unit Operator under this agreement.

23 If any well drilled or worked over, as aforesaid, by a

24 working interest owner results in production such that the land upon

25 which it is situated may properly be included in a participating

26 area, such participating area shall be enlarged as provided in this

27 agreement, and the party or parties paying the cost of drilling or

28 working over such well shall be reimbursed as provided in the Unit

29 Operating Agreement for the cost of drilling or working over such

30 well, and the well shall thereafter be operated by Unit Operator in

31 accordance with the terms of this agreement and the Unit Operating

32 Agreement.

33 If any well drilled or worked over, as aforesaid, by a

34 working interest owner obtains production in quantities insufficient

35 to justify the inclusion in a participating area of the land upon

1 which such well is situated, such well may be operated and produced
2 by the party drilling or working over the same, subject to the con-
3 servations requirements of this agreement. The royalties in amount
4 or value of production from any such well shall be paid as specified
5 in the underlying lease and agreements affected.

6 14. ROYALTY SETTLEMENT. The United States, the Indians,
7 and the State of New Mexico and all royalty owners who, under exist-
8 ing contracts, are entitled to take in kind or be paid for a share
9 of the unitized substances produced from any tract, shall hereafter
10 be entitled to take in kind or be paid for their share of the
11 unitized substances allocated to such tract. Unit Operator, or in
12 case of the operation of a well by a working interest owner as
13 herein in special cases provided for, such working interest owner,
14 shall make deliveries of such royalty share taken in kind in con-
15 formity with the applicable contracts, laws and regulations. Settle-
16 ment for royalty interests not taken in kind shall be made by work-
17 ing interest owners responsible therefor under existing contracts,
18 laws and regulations on or before the last day of each month for
19 unitized substances produced during the preceding calendar month.
20 Nothing herein contained, however, shall operate to relieve the
21 lessees of any land from their respective lease obligations for the
22 payment of any royalties due under their leases except that said
23 royalties shall be computed in accordance with the terms of this
24 agreement.

25 If, subsequent to the effective date hereof, gas obtained
26 from lands not subject to this agreement is introduced into the
27 unitized land for use in pressure maintenance, stimulation of pro-
28 duction, or increasing ultimate recovery, which shall be in conformity
29 with a plan first approved by the Supervisor, Commissioner, and the
30 Commission, a like amount of gas, less appropriate deductions for
31 loss from any cause, may be withdrawn from the formation into which
32 the gas was introduced, royalty free as to dry gas, but not as to
33 the products extracted therefrom. Such withdrawal shall be pursuant
34 to such conditions and formulas as may be prescribed or approved by
35 the Supervisor and the Commissioner. Such right of withdrawal shall

1 terminate on the termination of this agreement. If liquefied petroleum
2 gases obtained from lands or formations not subject to this agreement
3 be injected into the unitized land for the purpose of increasing
4 ultimate recovery, which shall be in conformance with a plan first
5 approved by the Supervisor and Commissioner, part or all of such
6 liquefied petroleum gases may be withdrawn royalty free pursuant to
7 such limitations, conditions, and formulas as may be prescribed or
8 approved by the Supervisor and Commissioner.

9 Royalty due the United States and the Indians shall be
10 computed as provided in the operating regulations and paid in value
11 or delivered in kind as to all unitized substances on the basis of
12 the amounts of unitized substances allocated to unitized Federal and
13 Indian lands as provided herein at the rate specified in the respec-
14 tive Federal and Indian leases, or at such lower rate or rates as
15 may be authorized by law or regulation; provided that for leases on
16 which the royalty rate depends on the daily average production per
17 well such average production shall be determined in accordance with
18 the operating regulations as though the participating area were a
19 single consolidated lease.

20 Royalty due on state lands subject to this agreement shall
21 be computed and paid on the basis of all unitized substances allocat-
22 ed to such lands.

23 15. RENTAL SETTLEMENT. Rental or minimum royalties due
24 on leases committed hereto shall be paid by working interest owners
25 responsible therefor under existing contracts, laws and regulations,
26 provided that nothing herein contained shall operate to relieve the
27 lessees of any land from their respective lease obligations for the
28 payment of any rental or minimum royalty in lieu thereof due under
29 their leases. Rental or minimum royalty for lands of the United
30 States and the Indians subject to this agreement shall be paid at
31 the rate specified in the respective leases from the United States
32 and the Indians unless such rental or minimum royalty is waived,
33 suspended, or reduced by law or by approval of the Secretary of the
34 Interior (hereinafter called "Secretary") or his duly authorized
35 representative.

1 Rentals due on state lands subject to this agreement shall
2 be paid at the rate specified in the respective leases, or may be
3 reduced or suspended under the order of the Commissioner pursuant
4 to applicable laws and regulations.

5 16. CONSERVATION. Operations hereunder and production
6 of unitized substances shall be conducted to provide for the most
7 economical and efficient recovery of such substances as to prevent
8 waste as defined by or pursuant to state or federal law or regulation.

9 17. DRAINAGE. The Unit Operator shall take appropriate
10 and adequate measures to prevent drainage of unitized substances from
11 unitized land by wells on land not subject to this agreement, or,
12 with consent of the Director and Commissioner, pursuant to applicable
13 regulations pay a fair and reasonable compensatory royalty as de-
14 termined by the Supervisor and Commissioner.

15 18. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The
16 terms, conditions, and provisions of all leases, subleases, and other
17 contracts relating to exploration, drilling, development, or opera-
18 tion for oil or gas of lands committed to this agreement are hereby
19 expressly modified and amended to the extent necessary to make the
20 same conform to the provisions hereof, but otherwise to remain in
21 full force and effect. The parties hereto hereby consent that the
22 Secretary as to Federal and Indian leases and the Commissioner as to
23 State leases shall and each by his approval hereof (or by the
24 approval hereof by his duly authorized representative) does hereby
25 establish, alter, change or revoke the drilling, producing, rental,
26 minimum royalty and royalty requirements of Federal, Indian, and
27 State leases committed hereto and the regulations in respect thereto
28 to conform said requirements to the provisions of this agreement.
29 Without limiting the generality of the foregoing, all leases, sub-
30 leases, and contracts are particularly modified in accordance with
31 the following:

32 (a) The development and operation of lands
33 subject to this agreement under the terms hereof
34 shall be deemed full performance of all obligations
35 for development and operation with respect to each

1 and every part or separately owned tract subject to
2 this agreement, regardless of whether there is any
3 development of any particular part or tract of the
4 Unit Area, notwithstanding anything to the contrary
5 in any lease, operating agreement, or other contract
6 by and between the parties hereto, or their respective
7 predecessors in interest, or any of them.

8 (b) Drilling and producing operations performed
9 hereunder upon any tract of unitized land will be ac-
10 cepted and deemed to be performed upon and for the
11 benefit of each and every tract of unitized land, and
12 no lease shall be deemed to expire by reason of failure
13 to drill or produce wells situated on the land therein
14 embraced.

15 (c) Suspension of drilling or producing opera-
16 tions on all unitized land pursuant to direction or
17 consent of the Secretary (or his duly authorized repre-
18 sentative) and the Commissioner shall be deemed to con-
19 stitute such suspension pursuant to such direction or
20 consent as to each and every tract of unitized land.

21 (d) Each lease, sublease, or contract relating
22 to the exploration, drilling, development or operation
23 for oil or gas of lands committed to this agreement,
24 which, by its terms might expire prior to the termina-
25 tion of this agreement, is hereby extended beyond any
26 such term so provided therein so that it shall be con-
27 tinued in full force and effect for and during the term
28 of this agreement.

29 (e) The segregation of any Federal lease committed
30 to this agreement is governed by the following provision
31 in the fourth paragraph of Sec. 17 (j) of the Act, as
32 amended by the Act of Sept. 2, 1960 (74 Stat. 781, 784:
33 "Any (Federal) lease hereafter committed to any such
34 (unit) plan embracing lands that are in part within and
35 in part outside of the area covered by any such plan

1 shall be segregated into separate leases as to the
2 lands committed and the lands not committed as of
3 the effective date of unitization: Provided, however,
4 That any such lease as to the non-unitized portion
5 shall continue in force and effect for the term
6 thereof but for not less than two years from the
7 date of such segregation and so long thereafter as
8 oil or gas is produced in paying quantities."

9 (f) Any Indian lease having only a portion of
10 its lands committed hereto shall be segregated as to
11 the portion committed and the portion not committed,
12 and the provisions of such lease shall apply separate-
13 ly to such segregated portions commencing as of the
14 effective date hereof.

15 (g) Any lease embracing lands of the State of
16 New Mexico having only a portion of its lands com-
17 mitted hereto shall be segregated as to the portion
18 committed and as to the portion not committed and
19 the terms of such leases shall apply separately as
20 to such segregated portions commencing as of the
21 effective date hereof. Notwithstanding any of the
22 provisions of this agreement to the contrary, any
23 lease embracing lands of the State of New Mexico
24 having only a portion of its land committed hereto
25 shall continue in full force and effect beyond the
26 term provided therein as to all lands embraced in
27 such lease, if Unitized Substances are discovered
28 and are capable of being produced in paying quantities
29 from some part of the lands embraced in such lease
30 committed to this agreement or some part of the
31 lands embraced in such State lease is included in
32 the Participating Area at the expiration of the
33 secondary term of such lease; or if, at the expira-
34 tion of the secondary term, the lessee or the Unit
35 Operator is then engaged in bona fide drilling or

1 new mining operations on some part of the lands
2 embraced therein shall remain in full force and
3 effect so long as such operations are being dili-
4 gently prosecuted, and if they result in the pro-
5 duction of Unitized Substances, said lease shall
6 continue in full force and effect as to all of the
7 lands embraced therein, so long thereafter as
8 Unitized Substances are produced in paying quantit-
9 ies from any portion of said lands.

10 19. COVENANTS RUN WITH LAND. The covenants herein shall
11 be construed to be covenants running with the land with respect to
12 the interests of the parties hereto and their successors in inter-
13 est until this agreement terminates, and any grant, transfer, or
14 conveyance of interest in land or leases subject hereto shall be and
15 hereby is conditioned upon the assumption of all privileges and
16 obligations hereunder by the grantee, transferee, or other successor
17 in interest. No assignment or transfer of any working interest
18 subject hereto shall be binding upon the Unit Operator until the
19 first day of the calendar month after Unit Operator is furnished
20 with the original, photostatic or certified copy of the instrument
21 of transfer; and no assignment or transfer of any royalty interest
22 shall be binding upon the working interest owner responsible there-
23 for until the first day of the calendar month after said working
24 interest owner is furnished with the original, photostatic or certi-
25 fied copy of the instrument of transfer.

26 20. EFFECTIVE DATE AND TERM. This agreement shall become
27 effective upon approval by the Director, Commissioner and the Indian
28 Commissioner, or their duly authorized representatives, as of the first
29 day of the month following the date of approval by the Director and
30 shall remain in effect so long as unitized substances can be pro-
31 duced from the unitized land in paying quantities, i.e., in this
32 particular instance in quantities sufficient to pay for the cost of
33 producing same, and, should production cease, so long thereafter as
34 diligent operations are in progress for the restoration of produc-
35 tion and so long thereafter as such unitized substances can be pro-

1 produced as aforesaid. This agreement shall remain in effect during
2 any period of suspension approved by the Director and the Commission-
3 er as provided for in Section 18(c) hereof.

4 This agreement may be terminated at any time by the
5 working interest owners whose voting interests aggregate not less
6 than ninety per cent (90%), subject to the approval of the Director
7 and the Commissioner; notice of any such approval shall be given by
8 Unit Operator to all parties hereto.

9 21. RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION.

10 The Director is hereby vested with authority to alter or modify from
11 time to time in his discretion the quantity and rate of production
12 under this agreement when such quantity and rate is not fixed
13 pursuant to Federal or State law or does not conform to any state-
14 wide voluntary conservation or allocation program, which is establish-
15 ed, recognized, and generally adhered to by the majority of operators
16 in such State, such authority being hereby limited to alteration or
17 modification in the public interest, the purpose thereof and the
18 public interest to be served thereby to be stated in the order of
19 alteration or modification. Without regard to the foregoing, the
20 Director is also hereby vested with authority to alter or modify
21 from time to time in his discretion the rate of prospecting and
22 development and the quantity and rate of production under this agree-
23 ment when such alteration or modification is in the interest of
24 attaining the conservation objectives stated in this agreement and
25 is not in violation of any applicable Federal or State law. It is
26 agreed, further, that no such alteration or modification shall be
27 effective as to any land of the State of New Mexico as to the rate
28 of prospecting and development in the absence of the specific
29 written approval thereof by the Commissioner and as to the quantity
30 and rate of production in the absence of specific written approval
31 thereof by the Commission.

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

1 22. APPEARANCES. Unit Operator shall, after notice to
2 other parties affected, have the right to appear for or on behalf of
3 any and all interests affected hereby before the Department of the
4 Interior and the Commission and to appeal from orders issued under
5 the regulations of said department and/or Commission or to apply for
6 relief from any of said regulations or in any proceedings relative
7 to operations before the Department of the Interior, the Commission,
8 or other legally constituted authority; provided, however, that any
9 other interested party shall also have the right at his or its own
10 expense to be heard in any such proceeding.

11 23. NOTICES. All notices, demands or statements requir-
12 ed hereunder to be given or rendered to the parties hereto shall be
13 deemed fully given if given in writing and personally delivered to
14 the party or sent by postpaid registered or certified mail, addressed
15 to such party or parties at their respective addresses set forth in
16 connection with the signatures hereto or to the ratification or
17 consent hereof or to such other address as any such party may have
18 furnished in writing to party sending the notice, demand or statement.

19 24. NO WAIVER OF CERTAIN RIGHTS. Nothing in this agree-
20 ment contained shall be construed as a waiver by any party hereto
21 of the right to assert any legal or constitutional right to defense
22 as to the validity or invalidity of any law of the state wherein said
23 unitized land is located, or of the United States or regulations
24 issued thereunder in any way affecting such party, or as a waiver by
25 any such party of any right beyond his or its authority to waive.

26 25. UNAVOIDABLE DELAY. All obligations under this agree-
27 ment requiring the Unit Operator to commence or continue drilling or
28 to operate on or to produce unitized substances from any of the
29 lands covered by this agreement shall be suspended while, but only
30 so long as, the Unit Operator despite the exercise of due care and
31 diligence is prevented from complying with such obligations, in
32 whole or in part, by strikes, acts of God, Federal, State, or
33 municipal law or agencies, unavoidable accidents, uncontrollable
34 delays in transportation, inability to obtain necessary materials
35 in open market, or other matters beyond the reasonable control of

1 the Unit Operator whether similar to matters herein enumerated or
2 not.

3 26. NONDISCRIMINATION. In the performance of work under
4 this agreement the Operator agrees to comply with the nondiscrimina-
5 tion provisions of Executive Order 10925 (26 F. R. 1977).

6 27. LOSS OF TITLE. In the event title to any tract of
7 unitized land shall fail and the true owner cannot be induced to join
8 in this Unit Agreement, such tract shall be automatically regarded as
9 not committed hereto and there shall be such readjustment of future
10 costs and benefits as may be required on account of the loss of such
11 title. In the event of a dispute as to the title to any royalty,
12 working interest or any other interest subject thereto, payment or
13 delivery on account thereof may be withheld without liability for
14 interest until the dispute is finally settled; provided that as to
15 Federal land, Indian land, and State land or leases, no payment of
16 funds due the United States, Indians, or the State of New Mexico
17 should be withheld, but such funds to the United States and Indians
18 shall be deposited as directed by the Supervisor, and such funds of
19 the State shall be deposited as directed by the Commissioner, to be
20 held as unearned money pending final settlement of the title dispute,
21 and then applied as earned in accordance with the final settlement.

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

24 28. NON-JOINDER AND SUBSEQUENT JOINDER. If the owner of
25 any substantial interest in a tract within the Unit Area fails or
26 refuses to subscribe to this agreement, the owner of the working in-
27 terest in that tract may withdraw said tract from this agreement by
28 written notice to the Director, the Commissioner and the Unit
29 Operator prior to the approval of this agreement by the Director.
30 Any such tract effectively committed as to the working interest and
31 not so withdrawn shall be considered unitized, and any necessary
32 adjustment of royalty occasioned by failure of the royalty and record
33 owner to join will be for the account of the corresponding working
34 interest owner. Any oil or gas interest in the Horseshoe-Gallup
35 Sand within the Unit Area not committed hereto prior to submission

1 of this Agreement to the Director and the Commissioner for final
2 approval, may hereafter be committed hereto upon compliance with
3 the applicable provisions herein, at any time up to the effective
4 date hereof and for a period of six (6) months thereafter, on the
5 same basis of participation as provided for in Section 11 by the
6 owner or owners thereof subscribing or consenting in writing to this
7 agreement and, if the interest is a working interest, by the owner
8 of such interest subscribing also to the Unit Operating Agreement.

9 It is understood and agreed, however, that after six (6)
10 months from the effective date hereof, the right of subsequent
11 joinder as provided in this section shall be subject to such require-
12 ments or approvals and on such basis as may be agreed upon by a vote
13 of at least sixty-five percent (65%) of the voting interests based
14 on the percentages of participation assigned to the tracts in the
15 participating area at the time of such joinder. Such joinder by a
16 royalty owner must be evidenced by his execution or ratification of
17 this Unit Agreement and must be consented to in writing by the work-
18 ing interest owner responsible for the payment of any benefits that
19 may accrue hereunder in behalf of such royalty owner. Except as may
20 otherwise be provided herein, subsequent joinder to this agreement
21 shall be effective at 7:00 a.m. as of the first day of the month
22 following the filing with the Supervisor, Commission and Commissioner
23 of duly executed counterparts of all or any papers necessary to
24 establish effective commitment of any tract to this agreement, unless
25 objection to such joinder is duly made within sixty (60) days by the
26 Director or the Commissioner.

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

1 agreement has not been approved by the Director and the Commissioner
2 prior to January 1, 1963, it shall thereupon terminate and be of no
3 further force and effect.

4 30. TAXES. The working interest owners shall render and
5 pay for their account and the account of the royalty owners all valid
6 taxes on or measured by the unitized substances in and under or that
7 may be produced, gathered and sold from the land subject to this
8 contract after the effective date of this agreement, or upon the
9 proceeds derived therefrom. The working interest owners on each
10 tract shall and may charge the proper proportion of said taxes to
11 the royalty owners having interests in said tract, and may currently
12 retain and deduct sufficient of the unitized substances or deriva-
13 tive products, or net proceeds thereof from the allocated share of
14 each royalty owner to secure reimbursement for the taxes so paid.
15 No such taxes shall be charged to the United States, Indians, or the
16 State of New Mexico or to any lessor who has a contract with his
17 lessee which requires the lessee to pay such taxes.

18 31. CONFLICT OF SUPERVISION. Neither the Unit Operator
19 nor the working interest owners or any of them shall be subject to
20 any forfeiture, termination, or expiration of any rights hereunder
21 or under any leases or contracts subject hereto, or to any penalty
22 or liability on account of delay or failure in whole or in part to
23 comply with any applicable provisions thereof to the extent that the
24 said Unit Operator, working interest owners, or any of them are
25 hindered, delayed or prevented from complying therewith by reason
26 of the failure of the Unit Operator to obtain, in the exercise of
27 due diligence, the concurrence of proper representatives of the
28 United States and proper representatives of the State of New Mexico
29 in and about any matters or things concerning which it is required
30 herein that such concurrence be obtained. The parties hereto, in-
31 cluding the Commission, agree that all powers and authority vested
32 in the Commission in and by any provisions of this contract are
33 vested in the Commission and shall be exercised by it pursuant to
34 the provisions of the laws of the State of New Mexico and subject
35 in any case to appeal or judicial review as may now or hereafter

1 be provided by the laws of the State of New Mexico.

2 32. NO PARTNERSHIP. It is expressly agreed that the
3 relation of the parties hereto is that of independent contractors
4 and nothing in this agreement contained, express or implied, or any
5 operations conducted hereunder, shall create or be deemed to have
6 created a partnership or association between the parties hereto or
7 any of them.

8 33. BORDER AGREEMENTS. Subject to the approval of the
9 Supervisor and the Commissioner, the Unit Operator, with concurrence
10 of sixty-five (65%) per cent of the Working Interest Owners may
11 enter into a border-protection agreement or agreements with the
12 Working Interest Owners of adjacent lands along the exterior boundary
13 of the Unit Area with respect to the operations in the border area
14 for cooperative flooding.

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

19
20 UNIT OPERATOR AND WORKING INTEREST
OWNER

21 Date of Execution:

22 November 2, 1961

23 ATTEST:

24 Mary C. Drayer
25 Assistant Secretary
26
27

THE ATLANTIC REFINING COMPANY

By W. C. Harris Jr.
Assistant Vice President

ADDRESS: 760 Petroleum Club Building
Denver, Colorado

28 WORKING INTEREST OWNERS

29 Date of Execution:

30 _____

31 ATTEST:

32 _____
33 Secretary

By _____

ADDRESS: _____

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ATTEST:

Secretary

MOBIL OIL COMPANY

By

ADDRESS:

SOHIO PETROLEUM COMPANY

By

ADDRESS:

THE HIDDEN SPLENDOR MINING COMPANY

By

ADDRESS:

TEXACO, INC.

By

ADDRESS:

PUBCO PETROLEUM CORPORATION

By

ADDRESS:

EPROC ASSOCIATES

By

ADDRESS:

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ATTEST:

Secretary

Date of Execution:

ARIZONA EXPLORATIONS, INC.

By

ADDRESS:

CLARK & COWDEN

By

ADDRESS:

CLARK & COWDEN EXPLORATION COMPANY

By

ADDRESS:

BANNER DRILLING COMPANY

By

ADDRESS:

PAN AMERICAN PETROLEUM CORPORATION

By

ADDRESS:

J. R. ABRAHAM

ADDRESS:

Date of Execution:

VACK VENTURES

ATTEST:

By

ADDRESS:

Date of Execution:

LESTER VANCE

ADDRESS:

Date of Execution:

J. FELIX HICKMAN

ADDRESS:

Date of Execution:

ELEANOR F. SPIEGEL

ADDRESS:

Date of Execution:

RICHARD W. DAMMANN

ADDRESS:

Date of Execution:

HELBING & POD. SHAN

By _____

ADDRESS: _____

Date of Execution:

J. DOUGLAS COLLISTER

ADDRESS: _____

Date of Execution:

ATTEST:

NORTHWEST PRODUCTION CORPORATION

By _____

ADDRESS: _____

Date of Execution:

W. P. CARR

ADDRESS: _____

Date of Execution:

HAZEL BOLACK

ADDRESS: _____

Date of Execution:

NAVAJO TRIBE OF INDIANS

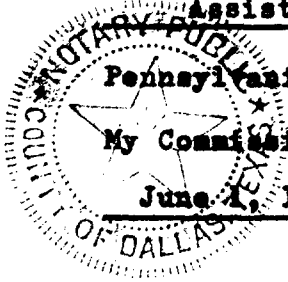
By _____

THE STATE OF TEXAS :
COUNTY OF DALLAS :

The foregoing instrument was acknowledged before me this 2nd
day of November, 1961, by H. C. Harris, Jr.,

Assistant Vice President of THE ATLANTIC REFINING COMPANY, a
Pennsylvania corporation, on behalf of said corporation.

My Commission Expires:
June 1, 1963



Holly Mae Tippet
Notary Public
Holly Mae Tippet

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of EL PASO NATURAL GAS PRODUCTS COMPANY,
a _____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of MOBIL OIL COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of SOHIO PETROLEUM COMPANY, a
_____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of THE HIDDEN SPLENDOR MINING COMPANY,
a _____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of TEXACO, INC., a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of PUBCO PETROLEUM CORPORATION, a
_____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of EPROC ASSOCIATES, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of ARIZONA EXPLORATIONS, INC., a
_____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of CLARK & COWDEN, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of BANNER DRILLING COMPANY, a
_____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of PAN AMERICAN PETROLEUM CORPORATION,
a _____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by J. R. ABRAHAM _____
_____.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of VACK VENTURES, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by LESTER VANCE _____
_____.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by J. FELIX HICKMAN _____
_____.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by ELEANOR F. SPIEGEL _____
_____.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by RICHARD W. DAMMANN _____
_____.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of HELBING & PODPECHAN, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by J. DOUGLAS COLLISTER _____
_____.
_____.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of NORTHWEST PRODUCTION CORPORATION, a
_____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by W. P. CARR _____
_____.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by HAZEL BOLACK _____
_____.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of CLARK & COWDEN EXPLORATION COMPANY, a
_____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

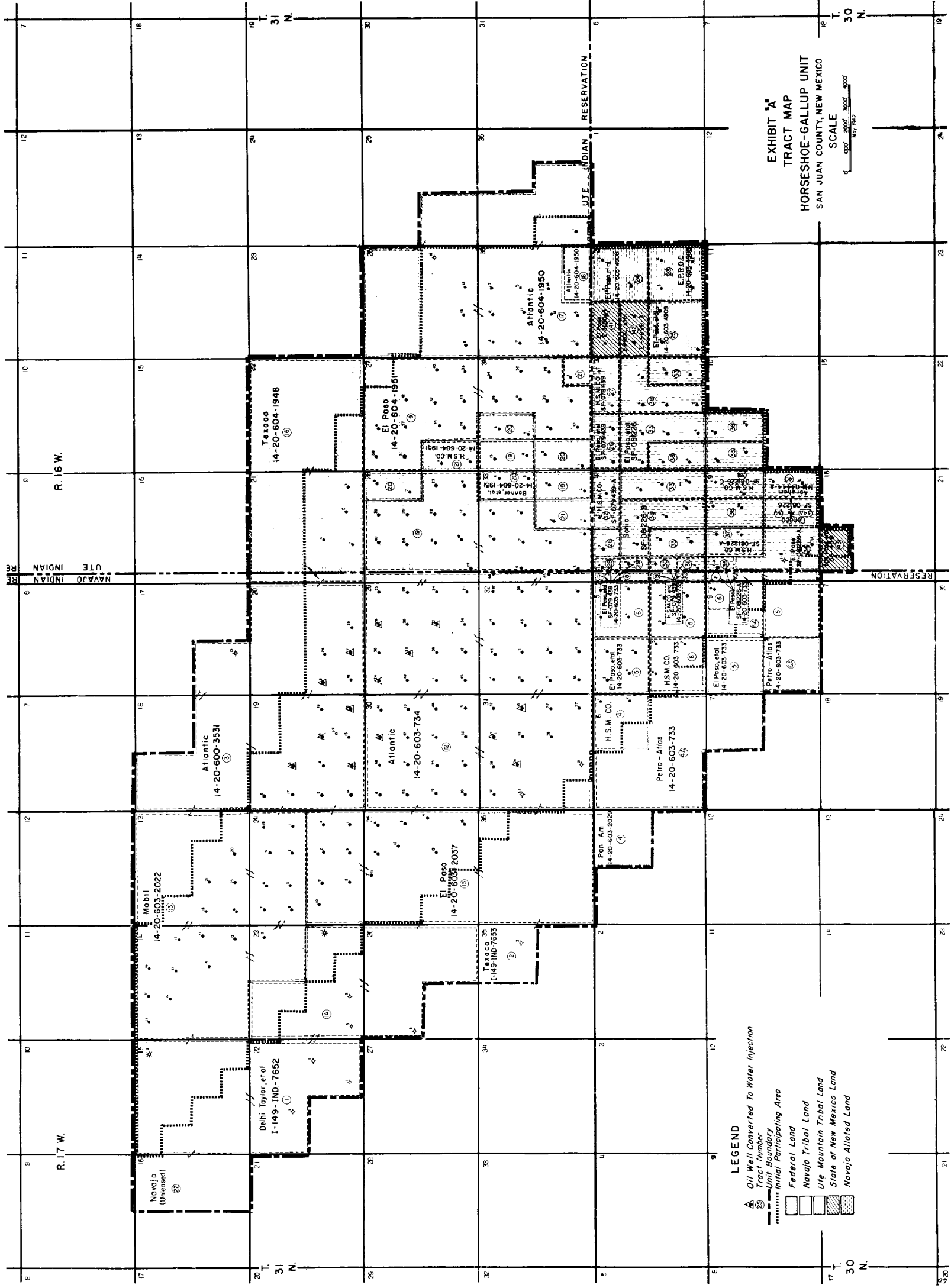


EXHIBIT "B"

HORSESHOE-GALLUP UNIT AREA, SAN JUAN COUNTY, NEW MEXICO

INDIAN TRIBAL LANDS

<u>Tract Number</u>	<u>Description</u>	<u>No. Acres</u>	<u>Serial No. & Date of Lease or Application</u>	<u>Basic Royalty & Percentage</u>	<u>Lessee of Record</u>	<u>Overriding Royalty and Percentage</u>	<u>Working Interest Percentage</u>
1	T-31-N, R-17-W Section 15: All Section 22: N/2, SE/4	1120.00	I-149-Ind-7652 12-15-47	Navajo Tribe of Indians - 12.5%	Reynolds Mining Corp. - 1/2 Delhi-Taylor Oil Corp. - 1/2	San Jacinto Pet. Corp.-1.367187% Western Natural Gas Co.-2.734375% Three States Nat. Gas Co. - <u>Oil</u> 0-40 BOPD-2.734375% 41-100 BOPD-4.1015625% 101-Up BOPD-5.46875% <u>Gas</u> 0-500 MCFPD-5.46875% 500-2000 MCFPD-8.203125% 2001-Up MCFPD-10.9375% Reynolds Mining Corp.- <u>Oil</u> 0-40 BOPD-2.734375% 41-100 BOPD-4.1015625% 101-Up BOPD-5.46875% <u>Gas</u> 0-500 MCFPD-5.46875% 500-2000 MCFPD-8.203125% 2001-Up MCFPD-10.9375%	Delhi-Taylor Oil Corp. - 50% Reynolds Mining Corp. - 50%

(El Paso Natural Gas Products Company has earned full interest in the NE/4 of Section 15. Assignment of this interest is being prepared for filing.)

INDIAN TRIBAL LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
1-A	T-31-N, R-17-W Section 23: S/2, NW/4 Section 26: N/2, SE/4	960.00	I-149-Ind-7652 12-15-47	Navajo Tribe of Indians - 12.5%	Reynolds Mining Corp. - 1/2 Delhi-Taylor Oil Corp. - 1/2	San Jacinto Pet. Corp.-1.367187% Western Natural Gas Co.-2.734375% Three States Nat. Gas Co. - Oil 0-40 BOPD-2.734375% 41-100 BOPD-4.1015625% 101-Up BOPD-5.46875% Gas 0-500 MCFPD-5.46875% 500-2000 MCFPD-8.203125% 2001-Up MCFPD-10.9375% Reynolds Mining Corp. - Oil 0-40 BOPD-2.734375% 41-100 BOPD-4.1015625% 101-Up BOPD-5.46875% Gas 0-500 MCFPD-5.46875% 500-2000 MCFPD-8.203125% 2001-Up MCFPD-10.9375%	Delhi-Taylor Oil Corp. - 50% Reynolds Mining Corp. - 50%
2	T-31-N, R-17-W Section 35: NE/4	160.00	I-149-Ind-7653 12-15-47	Navajo Tribe of Indians - 12.5%	Texaco, Inc.	None	Texaco, Inc. All
3	T-31-N, R-16-W Section 17: SW/4 Section 18: NW/4, S/2 Section 19: All Section 20: All	1941.00	14-20-600-3531 10-31-57	Navajo Tribe of Indians and Ute Mountain Tribe of Indians - 12.5%	The Atlantic Refining Co.	None	The Atlantic Refining Co. - All

(El Paso Natural Gas Products Company has earned full interest in the SE/4 of Section 23. Assignment of this interest is being prepared for filing).

INDIAN TRIBAL LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
4	T-30-N, R-16-W Section 6: NE/4	155.84	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	None	The Hidden Splendor Mining Company - All
4-A	T-30-N, R-16-W Section 6: W/2, SE/4 Section 7: NE/4	641.46	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	None	Petro-Atlas, Inc. - All
5	T-30-N, R-16-W Section 5: NW/4, SE/4 Section 8: NW/4, SE/4	635.84	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	Richard L. Jones, Trustee - 5.46875%	El Paso Natural Gas Products Company - 50% * Continental Oil Co. - 25% ** Clark & Cowden - 25%
6	T-30-N, R-16-W Section 5: NE/4, SW/4 Section 8: NE/4, NE/4	355.84	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	None	The Hidden Splendor Mining Company - All
6-A	T-30-N, R-16-W Section 8: W/2 NE/4, SE/4 NE/4, SW/4 Section 9: That part of SW/4 NW/4 and W/2 SW/4 lying within the Navajo Indian Reservation	324.19	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	None	Petro-Atlas, Inc. - All

* Operating Agreement conveying this interest to El Paso Natural Gas Products Company has been filed and approval is pending.

** Assignment of this interest to Continental Oil Company has been filed and approval is pending.

TRIBAL INDIAN LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
7	<u>T-30-N, R-16-W</u> Section 4: That part of the NW/4 NW/4 lying within the Navajo Indian Reservation	13.97	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	Richard L. Jones, Trustee - 5.46875%	El Paso Natural Gas Products Company - 50% * Continental Oil Co. - 25% ** Clark & Cowden - 25%
8	<u>T-30-N, R-16-W</u> Section 4: That part of the SW/4 NW/4 lying within the Navajo Indian Reservation	14.73	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	Richard L. Jones, Trustee - 5.46875%	El Paso Natural Gas Products Company - 50% * Continental Oil Co. - 25% ** Clark & Cowden - 25%
9	<u>T-30-N, R-16-W</u> Section 4: That part of the NW/4 SW/4 lying within the Navajo Indian Reservation	14.73	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	Richard L. Jones, Trustee - 5.46875%	El Paso Natural Gas Products Company - 50% * Continental Oil Co. - 25% ** Clark & Cowden - 25%
10	<u>T-30-N, R-16-W</u> Section 4: That part of the SW/4 SW/4 lying within the Navajo Indian Reservation	14.73	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	Richard L. Jones, Trustee - 5.46875%	El Paso Natural Gas Products Company - 50% * Continental Oil Co. - 25% ** Clark & Cowden - 25%

* Operating Agreement conveying this interest to El Paso Natural Gas Products Company has been filed and approval is pending.

** Assignment of this interest to Continental Oil Company has been filed and approval is pending.

TRIBAL INDIAN LANDS

<u>Tract Number</u>	<u>Description</u>	<u>No. Acres</u>	<u>Serial No. & Date of Lease or Application</u>	<u>Basic Royalty & Percentage</u>	<u>Lessee of Record</u>	<u>Overriding Royalty and Percentage</u>	<u>Working Interest Percentage</u>
11	T-30-N, R-16-W Section 9: That part of the NW/4 NW/4 lying within the Navajo Indian Reservation	14.73	14-20-603-733 12-22-54	Navajo Tribe of Indians - 12.5%	The Hidden Splendor Mining Company	None	The Hidden Splendor Mining Company - All
12	T-31-N, R-16-W Section 29: All Section 30: All Section 31: All Section 32: All Section 28: That part lying within the Navajo Indian Reservation Section 33: That part lying within the Navajo Indian Reservation	2684.29	14-20-603-734 12-22-54	Navajo Tribe of Indians - 12.5%	The Atlantic Refining Company	None	The Atlantic Refining Company - All
13	T-31-N, R-17-W Section 13: All Section 14: All Section 23: NE/4 Section 24: N/2	1763.10	14-20-603-2022 2-1-57	Navajo Tribe of Indians - 12.5%	Socony Mobil Oil Co., Inc.	None	Socony Mobil Oil Company, Inc. - All
14	T-30-N, R-17-W Section 1: NE/4	156.83	14-20-603-2029 1-21-57	United States of America in Trust for the benefit of the Navajo Tribe of Indians - 12.5%	Pan American Petroleum Corporation	None	Pan American Petroleum Corporation - All

INDIAN TRIBAL LANDS

<u>Tract Number</u>	<u>Description</u>	<u>No. Acres</u>	<u>Serial No. & Date of Lease or Application</u>	<u>Basic Royalty & Percentage</u>	<u>Lessee of Record</u>	<u>Overriding Royalty and Percentage</u>	<u>Working Interest Percentage</u>
15	T-31-N, R-17-W Section 24: S/2 Section 25: All Section 36: All	1600.00	14-20-603-2037 1-28-57	Navajo Tribe of Indians - 12.5%	El Paso Natural Gas Products Company	None	El Paso Natural Gas Products Company - All
16	T-31-N, R-16-W Section 21: All Section 22: All	1243.85	14-20-604-1948 6-28-57	Bureau of Indian Affairs in Trust for Navajo and Ute Mountain Tribes - 12.5%	Texaco, Inc.	None	Texaco, Inc. - All
17	T-31-N, R-16-W Section 26: All Section 35: W/2, NE/4, N/2, SE/4 Section 36: W/2, W/2 SE/4 Section 25: SW/4	1749.24	14-20-604-1950 2-25-57	United States of America in Trust for the Ute Moun- tain Tribes of the Ute Mountain Reservation - 12.5%	The Atlantic Refining Company	None	The Atlantic Refining Company-All
18	T-31-N, R-16-W Section 35: S/2 SE/4	77.46	14-20-604-1950 2-25-57	United States of America in Trust for the Ute Moun- tain Tribe of the Ute Mountain Reservation - 12.5%	The Atlantic Refining Company	None	The Atlantic Refining Company *

* By agreement between the working interest owners in the Unit, the production of unitized substances assigned to this tract shall be shared by each working interest owner in the proportion of its participation in the Unit.

INDIAN TRIBAL LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
19	T-31-N, R-16-W Section 27: E/2, E/2 W/2, W/2 NW/4 Section 28: E/2 SE/4, W/2 E/2, that part of W/2 lying within Ute Indian Reservation Section 33: W/2 NE/4, E/2 SE/4, that part of W/2 lying within Ute Indian Reservation Section 34: NE/4, W/2 SE/4, NE/4 SE/4, W/2 NW/4, E/2 SW/4	1855.65	14-20-604-1951 9-23-57	Bureau of Indian Affairs (For Navajo & Ute Tribes) Account #147180 - 12.5%	El Paso Natural Gas Products Company	None	El Paso Natural Gas Products Company - All
20	T-31-N, R-16-W Section 23: E/2 NE/4 Section 33: E/2 NE/4 Section 34: E/2 NW/4, W/2 SW/4	318.12	14-20-604-1951 9-23-57	Navajo Tribe and Ute Mountain Indian Tribe - 12.5%	El Paso Natural Gas Products Company	None	R. H. Banner, operating as Banner Drilling Company - 92% El Paso Natural Gas Products Company - 5% Clark & Cowden Expl. Co. - 1% Richard L. Jones, Trustee - 1% Richard L. Jones, Ind. - 1% The Hidden Splendor Mining Co. - 95% El Paso Natural Gas Products Company - 5%
21	T-31-N, R-16-W Section 27: W/2 SW/4 Section 33: W/2 SE/4 Section 34: SE/4 SE/4	198.23	14-20-604-1951 9-23-57	Navajo Indian Tribe and Ute Mountain Indian Tribe - 12.5%	El Paso Natural Gas Products Company	None	(Working Interest of El Paso Natural Gas Products Company, Clark and Cowden Expl. Co., Richard L. Jones, Trustee and Richard L. Jones, Ind. are free and clear of any development, operating costs and royalty payments. The Banner interest in this tract is subject to a net profits unit as follows: Clark and Cowden Expl. Co. - 25%, Continental Oil Company - 25%) El Paso Natural Gas Products Company - 5% Clark & Cowden Expl. Co. - 1% Richard L. Jones, Trustee - 1% Richard L. Jones, Ind. - 1% The Hidden Splendor Mining Co. - 95% El Paso Natural Gas Products Company - 5%

INDIAN TRIBAL LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
22	T-31-N, R-17-W Section 16: E/2	320.00	Open	Navajo Tribe of Indians - 12.5%	None	None	Navajo Tribe of Indians - All
SUBTOTAL		Number of Tracts: 25	Number of Acres: 18,333.83		Percentage of Unit Area: 87.62%		

ALLOTTED INDIAN LANDS

23	T-30-N, R-16-W Section 2: Lots 7, 8 9 and 10	158.62	Navajo Allotted Contract 14-20-603-4905 12-29-58	Yah nahs pah - 12.5%	Tenneco Oil Company	Tenneco Oil Company - 12.5%	EPROC Associates - All
24	T-30-N, R-16-W Section 2: Lots 1, 2 5 and 6	156.65	14-20-603-4908 12-22-58	Heirs of Navajo Allottee #048277 - 12.5%	El Paso Natural Gas Company	Ralph Lowe-12.5%	El Paso Natural Gas Products Company - 50% J. Felix Hickman - 25% * Eleanor F. Spiegel - 7.8125% * J. Douglas Collister - 7.8125% * Richard W. Dammann - 7.8125% * Helbing & Podpechan - 1.5625% *

* Working Interest Owners under an unfiled agreement.

ALLOTTED INDIAN LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
25	T-30-N, R-16-W Section 2: SW/4	160.00	14-20-603-4909 1-22-59	Heirs of Navajo Allottee #048280 - 12.5%	El Paso Natural Gas Products Company	None	El Paso Natural Gas Products Company - 50% J. Felix Hickman - 25% * Eleanor F. Spiegel- 7.8125% * J. Douglas Collister - 7.8125% * Richard W. Dammann- 7.8125% * Helbing & Fodpechan - 1.5625% *

* Working Interest Owners under an unfiled agreement.

SUBTOTAL Number of Tracts: 3 Number of Acres: 475.27 Percentage of Unit Area: 2.27%

FEDERAL LANDS

<u>Tract Number</u>	<u>Description</u>	<u>No. Acres</u>	<u>Serial No. & Date of Lease or Application</u>	<u>Basic Royalty & Percentage</u>	<u>Lessee of Record</u>	<u>Overriding Royalty and Percentage</u>	<u>Working Interest Percentage</u>
26	T-30-N, R-16-W Section 3: Lots 3, 4 Section 4: Lot 3	114.43	SF-079439 9-1-48	U.S.A. - 12.5%	The Hidden Splendor Mining Company	John R. Anderson-1% John A. Pierce -1% Richard L. Jones, Trustee - 4.46875%	El Paso Natural Gas Products Company - 50% Continental Oil Co. - 25% ** Clark & Cowden - 25%
27	T-30-N, R-16-W Section 3: Lots 1 & 2	76.74	SF-079439 9-1-48	U.S.A. - 12.5%	The Hidden Splendor Mining Company	John R. Anderson-1% John A. Pierce -1%	The Hidden Splendor Mining Company - All
28	T-30-N, R-16-W Section 4: Lot 4	18.83	SF-079439 9-1-48	U.S.A. - 12.5%	The Hidden Splendor Mining Company	John R. Anderson-1% John A. Pierce -1% Richard L. Jones, Trustee - 4.46875%	El Paso Natural Gas Products Company - 50% Continental Oil Co. - 25% ** Clark & Cowden - 25%
29	T-30-N, R-16-W Section 4: Lot 5	19.86	SF-079439 9-1-48	U.S.A. - 12.5%	The Hidden Splendor Mining Company	John R. Anderson-1% John A. Pierce -1% Richard L. Jones, Trustee - 4.46875%	El Paso Natural Gas Products Company - 50% Continental Oil Co. - 25% ** Clark & Cowden - 25%

** Assignment of this interest to Continental Oil Co. has been filed and approval is pending.

FEDERAL LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
30	T-30-N, R-16-W Section 4: Lot 6	15.88	SF-079439 9-1-48	U.S.A. - 12.5%	The Hidden Splendor Mining Company	John R. Anderson-1% John A. Pierce -1%	The Hidden Splendor Mining Company - All
31	T-30-N, R-16-W Section 4: Lot 7	19.89	SF-079439 9-1-48	U.S.A. - 12.5%	The Hidden Splendor Mining Company	John R. Anderson-1% John A. Pierce -1%	The Hidden Splendor Mining Company - All
32	T-30-N, R-16-W Section 4: Lots 1 & 2	76.58	SF-079439-A 9-1-48	U.S.A. - 12.5%	The Hidden Splendor Mining Company	John R. Anderson-1% John A. Pierce -1%	The Hidden Splendor Mining Company - All
33	T-30-N, R-16-W Section 3: Lots 5, 6, 9 11, 14, 16 Section 4: E/2 SE/4, E/2 SW/4, SE/4 NE/4 Section 10: Lots 1, 2	515.40	SF-081226 10-1-51	U.S.A. - 12.5%	Tom Bolack	Richard L. Jones, Trustee - 5.46875%	El Paso Natural Gas Products Company - 50% Continental Oil Company - 25% ** Clark & Cowden - 25%
34	T-30-N, R-16-W Section 9: NW/4 SE/4	40.00	SF-081226 10-1-51	U.S.A. - 12.5%	Tom Bolack	Richard L. Jones, Trustee - 2.7344%	Continental Oil Co. - 25% ** Clark & Cowden - 25% The Hidden Splendor Mining Company - 25% Tom Bolack - 25%
34-A	T-30-N, R-16-W Section 9: SW/4 SE/4	40.00	SF-081226 10-1-51	U.S.A. - 12.5%	Tom Bolack	Richard L. Jones, Trustee - 2.7344%	Continental Oil Co. - 25% ** Clark & Cowden- 25% Petro-Atlas, Inc.- 25% Tom Bolack - 25%

** Assignment of this interest to Continental Oil Co. has been filed and approval is pending.

FEDERAL LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
35	T-30-N, R-16-W Section 9: Lot 1 (This tract is subject to net profits ORR as follows: Continental Oil Company - 12.5%)	19.89	SF-081226-A 10-1-51	U.S.A. - 12.5%	The Hidden Splendor Mining Company	Richard L. Jones, Trustee - 5.46875%	El Paso Natural Gas Products Company - All
36	T-30-N, R-16-W Section 9: Lots 2, 3 and 4, E/2 SW/4	139.59	SF-081226-A 10-1-51	U.S.A. - 12.5%	The Hidden Splendor Mining Company	Richard L. Jones, Trustee - 5.46875%	El Paso Natural Gas Products Company - All
37	T-30-N, R-16-W Section 9: E/2 NW/4	80.00	SF-081226-A 10-1-51	U.S.A. - 12.5%	The Hidden Splendor Mining Company	None	The Hidden Splendor Mining Company - All
38	T-30-N, R-16-W Section 4: W/2 SE/4, SW/4 NE/4, SE/4 NW/4 Section 3: Lots 7, 8, 10, 15, 12, and 13 Section 9: W/2 NE/4 Section 10: E/2 NW/4	557.76	SF-081226-B 10-1-51	U.S.A. - 12.5%	Sohio Petroleum Company	None	Sohio Petroleum Company - All
39	T-30-N, R-16-W Section 9: E/2 NE/4	80.00	SF-081226-C 10-1-51	U.S.A. - 12.5%	The Hidden Splendor Mining Company	None	The Hidden Splendor Mining Company - All

FEDERAL LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
40	T-30-N, R-16-W Section 9: E/2 SE/4	80.00	NM-044444-A 4-1-52	U.S.A. - 12.5%	J. R. Abraham	Mary Abraham - 1% Hazel Abraham - 1% L. W. Swartz & wife, Hazel Swartz - 1% R. F. Mohrbacker & wife, Cavita B. Mohrbacker - 1% Berry B. Merritt & wife, Jean Merritt - 1%	J. R. Abraham - All

SUBTOTAL Number of Tracts: 16 Number of Acres: 1898.85 Per Cent of Unit Area: 9.07%

STATE LANDS

41	T-30-N, R-16-W Section 2: Lots 3 & 4	77.84	E-3150-4 12-10-49	State of New Mexico - 12.5%	El Paso Natural Gas Products Company	John and Jean Burroughs - 5%	El Paso Natural Gas Products Company - All
42	T-30-N, R-16-W Section 2: S/2 NW/4	80.00	E-9896-3 3-20-56	State of New Mexico - 12.5%	James M. McGrew	Monsanto Chemical Company - 10.9375%	Lester Vance, David Altman, David Canmann and Edward Keating operating collectively as VACK Ventures - 92% EPRAC Associates - 8%

STATE LANDS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
43	T-30-N, R-16-W Section 16: Lot 1, NE/4 NW/4	59.79	OG-456 12-18-56	State of New Mexico - 12.5%	Northwest Production Corporation	None	Northwest Production Corporation - 42.5% Pubco Petroleum Corporation - 42.5% W. P. Carr - 15%

SUBTOTAL Number of Tracts: 3 Number of Acres: 217.63 Per Cent of Unit Area: 1.04%

COMMUNITIZED TRACTS

7-28	T-30-N, R-16-W Section 4: Lot 4 and that part of NW/4 NW/4 lying within the Navajo Indian Reservation	18.83 13.97 32.80	SF-079439 9-1-48 14-20-603-733 12-22-54	U.S.A. - 7.176067% Navajo Tribe of Indians - 5.323933%	The Hidden Splendor Mining Company (As to Federal and Indian)	John R. Anderson- .5740855% John A. Pierce- .5740855% Richard L. Jones, Trustee - 4.0514766% & .843187%	El Paso Natural Gas Products Company - 50% * Continental Oil Company - 50% * Clark & Cowden- 25%
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(Subject to Communitization Agreement dated 11-1-58, Contract No. 14-08-001-6046, approved U.S.G.S 4-27-59, approved B.I.A. 3-30-59, recorded in San Juan County, New Mexico 5-22-59, Book 411, Page 225).

8-29	T-30-N, R-16-W Section 4: Lot 5 and that part of SW/4 NW/4 lying within the Navajo Indian Reservation	19.86 14.73 34.59	SF-079439 9-1-48 14-20-603-733 12-22-54	U.S.A. - 7.17693% Navajo Tribe of Indians - 5.32307%	The Hidden Splendor Mining Company (As to Federal and Indian)	John R. Anderson- .574154% John A. Pierce- .574154% Richard L. Jones, Trustee - 4.051306% & .843289%	El Paso Natural Gas Products Company - 50% * Continental Oil Co. - 25% ** Clark & Cowden - 25%
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(Subject to Communitization Agreement dated 11-1-58, Contract No. 14-08-001-6047, approved U.S.G.S. 4-27-59, approved B.I.A. 3-30-59, recorded in San Juan County, New Mexico 5-22-59, Book 411, Page 226).

* Operating Agreement conveying this interest to El Paso Natural Gas Products Company has been filed and approval is pending.
** Assignment of this interest to Continental Oil Co. has been filed and approval is pending.

COMMUNITIZED TRACTS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
9-30	T-30-N, R-16-W Section 4: Lot 6 and that part of NW/4 SW/4 lying within the Navajo Indian Reservation	19.88 <u>14.73</u> 34.61	SF-079439 9-1-48 14-20-603-733 12-22-54	U.S.A. - 7.18% Navajo Tribe of Indians - 5.32%	The Hidden Splendor Mining Company (As to Federal and Indian)	John R. Anderson-.5744% John A. Pierce-.5744% Richard L. Jones, Trustee - 2.3275%	El Paso Natural Gas Products Company - 21.28% * Continental Oil Co. - 10.64% ** Clark & Cowden-10.64% The Hidden Splendor Mining Co. - 57.44%

(Subject to Communitization Agreement dated 1-15-59, Contract No. 14-08-001-6068, approved U.S.G.S. 6-1-59, approved B.I.A. 3-18-59, recorded in San Juan County, New Mexico 6-22-59, Book 423, Page 1).

10-31	T-30-N, R-16-W Section 4: Lot 7 and that part of SW/4 SW/4 lying within the Navajo Indian Reservation	19.89 <u>14.73</u> 34.62	SF-079439 9-1-48 14-20-603-733 12-22-54	U.S.A. - 7.18154% Navajo Tribe of Indians - 5.31846%	The Hidden Splendor Mining Company (As to Federal and Indian)	John R. Anderson-.57450% John A. Pierce-.57450% Richard L. Jones, Trustee - 2.326954%	El Paso Natural Gas Products Company - 21.2750% * Continental Oil Co. - 10.6375% ** Clark & Cowden-10.6375% The Hidden Splendor Mining Co. - 57.45%
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(Subject to Communitization Agreement dated 1-15-59, Contract No. 14-08-001-6069, approved U.S.G.S 6-1-59, approved B.I.A. 3-18-59, recorded in San Juan County, New Mexico 6-22-59, Book 423, Page 6).

- * Operating Agreement conveying this interest to El Paso Natural Gas Products Company has been filed and approval is pending.
- ** Assignment of this interest to Continental Oil Co. has been filed and approval is pending.

COMMUNITIZED TRACTS

Tract Number	Description	No. Acres	Serial No. & Date of Lease or Application	Basic Royalty & Percentage	Lessee of Record	Overriding Royalty and Percentage	Working Interest Percentage
11-35	T-30-N, R-16-W Section 9: Lot 1 and that part of NW/4 NW/4 lying within the Navajo Indian Reservation	19.89 <u>14.73</u> 34.62	SF-081226-A 10-1-51 14-20-603-733 12-22-54	U.S.A. - 7.18154% Navajo Tribe of Indians - 5.31846%	The Hidden Splendor Mining Company (As to Federal and Indian)	Richard L. Jones, Trustee - 3.1417%	El Paso Natural Gas Products Company - 57.45234% The Hidden Splendor Mining Co. - 42.54766%

(Subject to Communitization Agreement dated 5-21-59, Contract No. 14-08-001-6387, approved U.S.G.S 9-4-59, approved B.I.A. 7-30-59, recorded in San Juan County, New Mexico 9-24-59, Book 429, Page 106).

RECAPITULATION

	Number of Tracts	Number of Acres	Per Cent of Unit Area
Indian Tribal Land	25	18,333.83	87.62
Allotted Indian Land	3	475.27	2.27
Federal Land	16	1,898.85	9.07
State of New Mexico Land	<u>3</u>	<u>217.63</u>	<u>1.04</u>
TOTALS	47 Tracts	20,925.58 Acres	100.00 Per Cent

EXHIBIT "C"

SCHEDULE OF TRACT PERCENTAGE PARTICIPATION
HORSESHOE-GALLUP FIELD UNIT
SAN JUAN COUNTY, NEW MEXICO

Tract Number	Description	No. of Acres	Serial No. and Date of Lease or Application	Percentage Participation
<u>TRIBAL INDIAN LANDS</u>				
1	<u>T-31-N, R-17-W</u> Section 15: NE/4, E/2 NW/4, NW/4 NW/4, E/2 SE/4, NW/4 SE/4	400.00	Navajo Contract I-149-Ind-7652 12-15-47	0.0163
1-A	<u>T-31-N, R-17-W</u> Section 23: E/2 SE/4, NW/4 SE/4, E/2 NW/4, NW/4 NW/4	240.00	Navajo Contract I-149-Ind-7652 12-15-47	0.0031
3	<u>T-31-N, R-16-W</u> Section 19: W/2, SE/4, S/2 NE/4 Section 20: S/2	890.48	14-20-600-3531 10-31-57	4.1735
4	<u>T-30-N, R-16-W</u> Section 6: E/2 NE/4, NW/4 NE/4	120.00	14-20-603-733 12-22-54	0.1280
5	<u>T-30-N, R-16-W</u> Section 5: NW/4, SE/4	315.84	14-20-603-733 12-22-54	1.2450
6	<u>T-30-N, R-16-W</u> Section 5: NE/4, E/2 SW/4, NW/4 SW/4 Section 8: NE/4 NE/4	315.84	14-20-603-733 12-22-54	1.5450
6-A	<u>T-30-N, R-16-W</u> Section 8: SE/4 NE/4, NW/4 NE/4 Section 9: That part of SW/4 NW/4 and NW/4 SW/4 lying within the Navajo Indian Reservation	109.46	14-20-603-733 12-22-54	0.0335
7	<u>T-30-N, R-16-W</u> Section 4: That part of the NW/4 NW/4 lying within the Navajo Indian Reservation	13.97	Navajo Contract 14-20-603-733 12-22-54	*
8	<u>T-30-N, R-16-W</u> Section 4: That part of the SW/4 NW/4 lying within the Navajo Indian Reservation	14.73	Navajo Contract 14-20-603-733 12-22-54	*
9	<u>T-30-N, R-16-W</u> Section 4: That part of the NW/4 SW/4 lying within the Navajo Indian Reservation	14.73	Navajo Contract 14-20-603-733 12-22-54	*

* This tract communitized. Refer to listing of Communitized Tracts which follows for percentage participation.

Tract Number	Description	No. of Acres	Serial No. and Date of Lease or Application	Percentage Participation
10	<u>T-30-N, R-16-W</u> Section 4: That part of the SW/4 SW/4 lying within the Navajo Indian Reservation	14.73	Navajo Contract 14-20-603-733 12-22-54	*
11	<u>T-30-N, R-16-W</u> Section 9: That part of the NW/4 NW/4 lying within the Navajo Indian Reservation	14.73	Navajo Contract 14-20-603-733 12-22-54	*
12	<u>T-31-N, R-16-W</u> Section 29: All Section 30: All Section 31: E/2, NW/4, E/2 SW/4, NW/4 SW/4 Section 32: All Section 28: That part lying within the Navajo Indian Reservation Section 33: That part lying within the Navajo Indian Reservation	2644.14	14-20-603-734 12-22-54	37.3566
13	<u>T-31-N, R-17-W</u> Section 13: SW/4, W/2 SE/4, SE/4 SE/4, SW/4 NW/4 Section 14: All Section 23: NE/4 Section 24: N/2	1442.48	14-20-603-2022 2-1-57	9.6725
15	<u>T-31-N, R-17-W</u> Section 24: S/2 Section 25: E/2, NW/4, NE/4 SW/4 Section 36: NE/4 NE/4	880.00	14-20-603-2037 1-28-57	8.5871
16	<u>T-31-N, R-16-W</u> Section 21: S/2 Section 22: S/2 SW/4	381.78	14-20-604-1948 6-28-57	0.5250
17	<u>T-31-N, R-16-W</u> Section 26: S/2 Section 35: W/2, NE/4, N/2 SE/4 Section 36: W/2 SW/4	951.77	14-20-604-1950 2-25-57	1.7757
18	<u>T-31-N, R-16-W</u> Section 35: S/2 SE/4	77.46	14-20-604-1950 2-25-57	0.1186

* This tract communitized. Refer to listing of Communitized Tracts which follows for percentage participation

Tract Number	Description	No. of Acres	Serial No. and Date of Lease or Application	Percentage Participation
19	<u>T-31-N, R-16-W</u> Section 27: SE/4, NW/4, E/2 SW/4, W/2 NE/4, SE/4 NE/4 Section 28: E/2 SE/4, W/2 E/2, that part of W/2 lying within the Ute Indian Reservation Section 33: W/2 NE/4, E/2 SE/4, that part of W/2 lying within the Ute Indian Reservation Section 34: NE/4, W/2 SE/4, NE/4 SE/4, W/2 NW/4, E/2 SW/4	1815.77	14-20-604-1951 9-23-57	9.2183

20	<u>T-31-N, R-16-W</u> Section 28: E/2 NE/4 Section 33: E/2 NE/4 Section 34: E/2 NW/4, W/2 SW/4	318.12	14-20-604-1951 9-23-57	1.4348
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21	<u>T-31-N, R-16-W</u> Section 27: W/2 SW/4 Section 33: W/2 SE/4 Section 34: SE/4 SE/4	198.28	14-20-604-1951 9-23-57	1.4297
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ALLOTTED INDIAN LANDS

23	<u>T-30-N, R-16-W</u> Section 2: Lots 7,8,9 and 10	158.62	Navajo Allotted Contract 14-20-603-4905 12-29-58	0.1713
24	<u>T-30-N, R-16-W</u> Section 2: Lots 1,2,5 and 6	156.65	Navajo Allotted Contract 14-20-603-4908 12-22-58	0.1888
25	<u>T-30-N, R-16-W</u> Section 2: SW/4	160.00	Navajo Allotted Contract 14-20-603-4909 1-22-59	0.3464

FEDERAL LANDS

26	<u>T-30-N, R-16-W</u> Section 3: Lots 3 & 4 Section 4: Lot 3	114.43	SF-079439 9-1-48	1.4373
27	<u>T-30-N, R-16-W</u> Section 3: Lots 1 & 2	76.74	SF-079439 9-1-48	0.2359
28	<u>T-30-N, R-16-W</u> Section 4: Lot 4	18.83	SF-079439 9-1-48	*
29	<u>T-30-N, R-16-W</u> Section 4: Lot 5	19.86	SF-079439 9-1-48	*

* This tract communitized. Refer to listing of Communitized Tracts which follows for percentage participation.

Tract Number	Description	No. Acres	Serial No. and Date of Lease or Application	Percentage Participation
30	<u>T-30-N, R-16-W</u> Section 4: Lot 6	19.88	SF-079439 9-1-48	*
31	<u>T-30-N, R-16-W</u> Section 4: Lot 7	19.89	SF-079439 9-1-48	*
32	<u>T-30-N, R-16-W</u> Section 4: Lots 1 & 2	76.58	SF-079439-A 9-1-48	1.1513
33	<u>T-30-N, R-16-W</u> Section 3: Lots 5, 6, 9, 11, 14 and 16 Section 4: E/2 SE/4, E/2 SW/4, SE/4 NE/4 Section 10: Lots 1 & 2	515.40	SF-081226 10-1-51	6.9546
34	<u>T-30-N, R-16-W</u> Section 9: NW/4 SE/4	40.00	SF-081226 10-1-51	0.1258
34-A	<u>T-30-N, R-16-W</u> Section 9: SW/4 SE/4	40.00	SF-081226 10-1-51	0.0629
35	<u>T-30-N, R-16-W</u> Section 9: Lot 1	19.89	SF-081226-A 10-1-51	*
36	<u>T-30-N, R-16-W</u> Section 9: Lots 2 & 3 E/2 SW/4	119.74	SF-081226-A 10-1-51	0.2064
37	<u>T-30-N, R-16-W</u> Section 9: E/2 NW/4	80.00	SF-081226-A 10-1-51	0.3348
38	<u>T-30-N, R-16-W</u> Section 4: W/2 SE/4, SW/4 NE/4, SE/4 NW/4 Section 3: Lots 7, 8, 10, 15, 12 and 13 Section 9: W/2 NE/4 Section 10: E/2 NW/4	557.76	SF-081226-B 10-1-51	8.6767
39	<u>T-30-N, R-16-W</u> Section 9: E/2 NE/4	80.00	SF-081226-C 10-1-51	0.4971
40	<u>T-30-N, R-16-W</u> Section 9: E/2 SE/4	80.00	NM-044444-A 4-1-52	0.2201

* This tract communitized. Refer to listing of Communitized Tracts which follows for percentage participation.

Tract Number	Description	No. of Acres	Serial No. and Date of Lease or Application	Percentage Participation
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STATE LANDS

41	T-30-N, R-16-W Section 2: Lots 3 & 4	77.84	E-3150-4 12-10-49	0.2057
42	T-30-N, R-16-W Section 2: S/2 NW/4	80.00	E-9896-3 3-20-56	0.2131
43	T-30-N, R-16-W Section 16: NE/4 NW/4	40.00	OG-456 12-18-56	0.0014

COMMUNITIZED TRACTS

7-28	T-30-N, R-16-W Section 4: Lot 4 and that part of the NW/4 NW/4 lying within the Navajo Indian Reservation	18.83 <u>13.97</u> 32.80	SF-079439 9-1-48 Navajo Contract 14-20-603-733 12-22-54	0.8148
8-29	T-30-N, R-16-W Section 4: Lot 5 and that part of the SW/4 NW/4 lying within the Navajo Indian Reservation	19.86 <u>14.73</u> 34.59	SF-079439 9-1-48 Navajo Contract 14-20-603-733 12-22-54	0.5736
9-30	T-30-N, R-16-W Section 4: Lot 6 and that part of the NW/4 SW/4 lying within the Navajo Indian Reservation	19.88 <u>14.73</u> 34.61	SF-079439 9-1-48 Navajo Contract 14-20-603-733 12-22-54	0.1273
10-31	T-30-N, R-16-W Section 4: Lot 7 and that part of the SW/4 SW/4 lying within the Navajo Indian Reservation	19.89 <u>14.73</u> 34.62	SF-079439 9-1-48 Navajo Contract 14-20-603-733 12-22-54	0.0928
11-35	T-30-N, R-16-W Section 9: Lot 1 and that part of The NW/4 NW/4 lying within the Navajo Indian Reservation	19.89 <u>14.73</u> 34.62	SF-081226-A 10-1-51 Navajo Contract 14-20-603-733 12-22-54	0.0992

RECAPITULATION

Indian Tribal Land	11,174.26
Allotted Indian Land	475.27
Federal Land	1,879.00
State of New Mexico Land	<u>197.84</u>
	13,726.41

SUMMARY

<u>Working Interest Owner</u>	<u>Tract Number</u>	<u>Percentage Participation</u>
J. R. Abraham	18	0.0003
	40	<u>0.2201</u>
	Total	0.2204
The Atlantic Refining Company	3	4.4735
	12	37.3566
	17	1.7757
	18	<u>0.0514</u>
	Total	43.3572
Banner Drilling Company	18	0.0017
	20	<u>1.4348 *</u>
	Total	1.4365
Tom Bolack	18	0.0001
	34	0.0315
	34-A	<u>0.0157</u>
	Total	0.0473
W. P. Carr	43	<u>0.0002</u>
	Total	0.0002
Clark and Cowden	5	0.3112
	7-28	0.2037
	8-29	0.1434
	9-30	0.0136
	10-31	0.0099
	18	0.0034
	26	0.3593
	33	1.7386
	34	0.0315
	34-A	<u>0.0157</u>
	Total	2.8303
J. Douglas Collister	24	0.0148
	25	<u>0.0271</u>
	Total	0.0419
Continental Oil Company	5	0.3113
	7-28	0.2037
	8-29	0.1434
	9-30	0.0135
	10-31	0.0099
	18	0.0034
	26	0.3593
	33	1.7387
	34	0.0315
	34-A	<u>0.0157</u>
	Total	2.8304
Richard W. Dammann	24	0.0148
	25	<u>0.0271</u>
	Total	0.0419
Delhi-Taylor Oil Corporation	1	0.0082
	1-A	<u>0.0015</u>
	Total	0.0097
El Paso Natural Gas Products Company	5	0.6225
	7-28	0.4074
	8-29	0.2868
	9-30	0.0271
	10-31	0.0197
	11-35	0.0570

* This value calculated on basis of Banner Drilling Company's working interest in Tract 20 being 100% as other interests in tract are free of development, operating costs, and royalty payment.

Working Interest Owner	Tract Number	Percentage Participation
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(continued)

El Paso Natural Gas Products Co.	15	8.5871
	18	0.0286
	19	9.2183
	24	0.0944
	25	0.1732
	26	0.7187
	33	3.4773
	36	0.2064
	41	<u>0.2057</u>
	Total	24.1302
EPROC Associates	18	0.0002
	23	0.1713
	42	<u>0.0170</u>
	Total	0.1885
Helbing and Podpechan	24	0.0029
	25	<u>0.0054</u>
	Total	0.0083
J. Felix Hickman	18	0.0002
	24	0.0472
	25	<u>0.0866</u>
	Total	0.1340
The Hidden Splendor Mining Co.	4	0.1280
	6	1.5450
	9-30	0.0731
	10-31	0.0533
	11-35	0.0422
	18	0.0066
	21	1.4297 *
	27	0.2359
	32	1.1513
	34	0.0313
	37	0.3348
	39	<u>0.4971</u>
	Total	5.5283
Socony Mobil Oil Company, Inc.	13	9.6725
	18	<u>0.0115</u>
	Total	9.6840
Northwest Production Corp.	43	0.0006
	Total	0.0006
Petro-Atlas, Inc.	6-A	0.0335
	34-A	<u>0.0158</u>
	Total	0.0493
Pubco Petroleum Corp.	43	0.006
	Total	0.006
Reynolds Mining Corp.	1	0.0081
	1-A	<u>0.0016</u>
	Total	0.0097
Sohio Petroleum Company	18	0.0103
	38	<u>8.6767</u>
	Total	8.6870

<u>Working Interest Owner</u>	<u>Tract Number</u>	<u>Percentage Participation</u>
Eleanor F. Spiegel	18	0.0001
	24	0.0147
	25	<u>0.0270</u>
	Total	0.0418
Texaco, Incorporated	16	0.5250
	18	<u>0.0006</u>
	Total	0.5256
VACK Ventures	18	0.0002
	42	<u>0.1961</u>
	Total	0.1963

* This value calculated on basis of Hidden Splendor's working interest in Tract 21 being 100% as other interest in tract is free of development, operating costs, and royalty payment.

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: _____

December 13, 1961

NAME: _____

J. R. Abraham

(Spouse) _____

Dorothy Abraham

ADDRESS: _____

THE STATE OF _____

Texas

COUNTY OF _____

Dallas

The foregoing instrument was acknowledged before me this 13th day ofDecember, 1961, by J. R. Abraham + Dorothy Abraham

My Commission Expires:

6-1-63

Notary Public

Notary Public

1 be provided by the laws of the State of New Mexico.

2 32. NO PARTNERSHIP. It is expressly agreed that the
3 relation of the parties hereto is that of independent contractors
4 and nothing in this agreement contained, express or implied, or any
5 operations conducted hereunder, shall create or be deemed to have
6 created a partnership or association between the parties hereto or
7 any of them.

8 33. BORDER AGREEMENTS. Subject to the approval of the
9 Supervisor and the Commissioner, the Unit Operator, with concurrence
10 of sixty-five (65%) per cent of the Working Interest Owners may
11 enter into a border-protection agreement or agreements with the
12 Working Interest Owners of adjacent lands along the exterior boundary
13 of the Unit Area with respect to the operations in the border area
14 for cooperative flooding.

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

19
20 UNIT OPERATOR AND WORKING INTEREST
OWNER

21 Date of Execution: THE ATLANTIC REFINING COMPANY

22 November 2, 1961

23 ATTEST:

24 Mary C. Draper
25 Assistant Secretary

By W. H. Harris Jr.
Assistant Vice President

ADDRESS: 760 Petroleum Club Building
Denver, Colorado

26
27
28 WORKING INTEREST OWNERS

29 Date of Execution: EL PASO NATURAL GAS PRODUCTS COMPANY

30 _____

31 ATTEST:

32 _____
33 Secretary

By _____

ADDRESS: _____

34

35

THE STATE OF TEXAS §
 :
COUNTY OF DALLAS §

The foregoing instrument was acknowledged before me this 2nd
day of November, 1961, by H. C. Harris, Jr.,
Assistant Vice President of THE ATLANTIC REFINING COMPANY, a
Pennsylvania corporation, on behalf of said corporation.

My Commission expires:

June 1, 1963

Holly Mae Tippett
Notary Public
HOLLY MAE TIPPETT

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of EL PASO NATURAL GAS PRODUCTS COMPANY,
a _____ corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____
day of _____, 196____, by _____,
_____ of MOBIL OIL COMPANY, a _____
corporation, on behalf of said corporation.

My Commission Expires:

Notary Public

RATIFICATION AND JOINDER
OF
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

Tract 42

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned, EPROC ASSOCIATES, as an owner of certain lands, leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement, consents to the inclusion of the S/2 of NW/4 of Section 2, T-30-N, R-16-W, San Juan County, New Mexico (sometimes hereinafter referred to as the "said lands") within the Unit Area therein defined; joins, approves, ratifies and adopts the terms and provisions of said Unit Agreement (but only with respect to the said lands) to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to the said lands and interests; agrees that the term of any lease covering the said lands given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement; agrees that the drilling, development and producing requirements of all leases and other contracts covering the said lands in which its rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement; and agrees that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the said lands, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such aforesaid leases or other contracts.

It is expressly understood and agreed that this Ratification and Joinder shall be effective only as to the above-described lands (being those lands which constitute Tract 42 on Exhibit "B" to the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, SAN JUAN COUNTY, NEW MEXICO) and shall not apply to any other lands in the Unit Area in which EPROC ASSOCIATES may own an interest.

This Ratification and Joinder of Unit Agreement shall become effective and be binding upon EPROC ASSOCIATES, its successors or assigns in interest, upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder.

ATTEST: R. E. Lanthier

EPROC ASSOCIATES

DATE: FEBRUARY 12, 1962

By W. E. Carr, partner

Address: P.O. Box 1710
Durango, Colorado

THE STATE OF Colorado
COUNTY OF Ta Plata

The foregoing instrument was acknowledged before me this 12th
day of February, 1962, by W. E. Carr

Partnership of EPROC ASSOCIATES, a general
corporation, on behalf of said Partnership
corporation.

My commission expires:
MAY 23, 1964

William L. Mott
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, its successors or assigns in interest.

~~ADDRESS~~

CLARK & COWDEN

DATE: November 28, 1961

By

John B. Cowden, Jr.
Address: 5551 Yale Boulevard

Dallas, Texas

THE STATE OF TEXAS
COUNTY OF DALLAS

The foregoing instrument was acknowledged before me this 28th day of

November, 1961, by John B. Cowden, Jr.

Partner of Clark & Cowden

a partnership ~~corporation~~ on behalf of said ~~corporation~~ partnership.

My Commission Expires:

6-1-63

Josephine R. Calhoun
Notary Public

JOSEPHINE R. CALHOUN
NOTARY PUBLIC, DALLAS COUNTY, TEXAS

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, its successors or assigns in interest.

WITNESSETH: _____

DATE: November 28, 1961 _____

CLARK & COWDEN EXPLORATION COMPANY

By John B. Cowden, Jr. _____

Address: 5551 Yale Boulevard _____

Dallas, Texas _____

THE STATE OF TEXAS _____

COUNTY OF DALLAS _____

The foregoing instrument was acknowledged before me this 28th day of

November, 1961, by John B. Cowden, Jr. _____

Partner and Attorney-in-Fact _____ of Clark & Cowden Exploration Company _____

a partnership ~~corporation~~, on behalf of said partnership ~~corporation~~.

My Commission Expires:

6-1-63

Josephine R. Calhoun
Notary Public

JOSEPHINE R. CALHOUN
NOTARY PUBLIC, DALLAS COUNTY, TEXAS

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: 2/13/62NAME: J. Douglas Collier(Spouse) Kathryn A. CollierADDRESS: 403 Avenida La Borelana NE
Albuquerque, N. Mex.

THE STATE OF New Mexico
Bernalillo
COUNTY OF Bernalillo

The foregoing instrument was acknowledged before me this 21st day of

February, 1962, by Kathryn A. Collier
J. Douglas Collier

My Commission Expires:

8/25/65

Margaret C. Redmond
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, its successors or assigns in interest.

ATTEST:

Katherine Vaughn
Assistant Secretary

DELHI-TAYLOR OIL CORPORATION

DATE:

12-31-61

By

W.C. Smith
Vice President

Address: Fidelity Union Tower

Dallas 1, Texas

THE STATE OF TEXAS
COUNTY OF DALLAS

The foregoing instrument was acknowledged before me this 31 day ofDecember, 1961, by

Vice President

of

DELHI-TAYLOR OIL CORPORATION

a Delaware corporation, on behalf of said corporation.

My Commission Expires:

Ruth A. [Signature]
Notary Public

RUTH AVERY, Notary Public,
in and for Dallas County, Texas
My Commission Expires June 1, 1963

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

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ATTEST: _____

EL PASO NATURAL GAS PRODUCTS COMPANY

DATE: November 28, 1961

By Roland L. Hamblin
Attorney-in-Fact

Address: _____

P. O. Box 1161, El Paso, Texas

THE STATE OF TEXAS }

COUNTY OF EL PASO }

The foregoing instrument was acknowledged before me this 28th day of November, 1961, by Roland L. Hamblin,
Attorney-in-Fact of El Paso Natural Gas Products Company,
a Texas corporation, on behalf of said corporation.

My Commission Expires:

MARY T. SAXON

Notary Public in and for El Paso County, Texas
My Commission Expires June 1, 1963

Mary T. Saxon
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

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ATTEST: _____

DATE: 3-6-62

Stephen C. Helbing
By Frank W. Podpechan
Address: 418 Hinkle Bldg.
Roswell, New Mexico

THE STATE OF New Mexico }
COUNTY OF Chaves }

The foregoing instrument was acknowledged before me this 6th day of March, 1962, by Stephen C. Helbing & Frank W. Podpechan, in behalf of HELBING & PODPECHAN, a Partnership, a corporation, on behalf of said corporation

My Commission Expires:

May 4, 1965

Eleanor Alice Hall
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: February 2, 1962

NAME: J. Felix Hickman

(Spouse) Merle Hickman

ADDRESS: 4401 Constitution, NE

Albuquerque, New Mexico

THE STATE OF New Mexico }

COUNTY OF Bernalillo }

The foregoing instrument was acknowledged before me this 2nd day of

February, 196 2, by J. Felix Hickman and Merle

Hickman, his wife,

My Commission Expires:

7/12/65

[Signature]
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

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ATTEST:

J. P. Gough
Assistant Secretary

DATE:

December 13, 1961

The Hidden Splendor Mining Company

By

Address: Post Office Box 597

Salt Lake City 10, Utah

THE STATE OF Utah
COUNTY OF Salt Lake

The foregoing instrument was acknowledged before me this 13th day ofDecember, 1961, by A. P. KibbePresident

of

The Hidden Splendor Mining Company

a

Delaware

corporation, on behalf of said corporation.

My Commission Expires:

February 13, 1965

Ethella O. Berry
Notary Public

ETHELLA O. BERRY, Notary Public
Commission Expires February 13, 1965
Salt Lake City, Utah

RATIFICATION AND JOINDER

of

UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION

of the

HORSESHOE-GALLUP UNIT AREA

SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

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AIRTEL: XXXXXXXXXXXXXXXXXXXXXXX

DATE: 5-3-62

By James M. Mc Grew
Address: 1949 N. Cicero Ave
Chicago 39 Ill.

THE STATE OF ILLINOIS
COUNTY OF COOK

The foregoing instrument was acknowledged before me this 3rd day of May, 1968, by James M. McGrew

of Chicago, Illinois

~~a xxxxxxxxxxxxxxxxxxxxxxx corporation, on behalf of said corporation.~~

My Commission Expires:

My Commission Expires Nov. 16, 1962

J. E. McMahon
J. E. McMahon Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, its successors or assigns in interest.

ATTEST: *Norm. Richards*
Assistant Secretary

PETRO-ATLAS, INC.

DATE: May 7, 1962

BY *F. T. Anderson*
President
Address: 2000 Nat'l Bank of Tulsa Bldg.
Tulsa 3, Oklahoma

THE STATE OF OKLAHOMA)
)
COUNTY OF TULSA)

The foregoing instrument was acknowledged before me this 7th day of

May, 1962, by F. T. ANDERSON
PRESIDENT of PETRO-ATLAS, INC.

a DELAWARE corporation, on behalf of said corporation.

My Commission Expires:

Helen Jeanne Parks
Notary Public

8-24-65

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, its successors or assigns in interest.

ATTEST: _____

DATE: June 1, 1962

Reynolds Mining Corporation

By: James G. White

By: Charles J. Eskridge, Jr.
Attorneys-in-Fact

Address: 606 Melrose Building
Houston 2, Texas

THE STATE OF TEXAS
COUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 1st day of June, 1962, by James G. White & Charles J. Eskridge, Jr., as Attorneys-in-Fact of Reynolds Mining Corporation, a corporation, on behalf of said corporation.

My Commission Expires:

June 1, 1963

Addie Butler
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, its successors or assigns in interest.

ATTEST: *L. L. Faris*
Assistant Secretary
DATE: DEC 5 1961

SOCONY MOBIL OIL COMPANY, INC.
By *J. S. Russell*
Attorney in Fact
Address: 612 So. Flower Street
Los Angeles 54, Calif.

3020-1(9-61)

State of California,
COUNTY OF LOS ANGELES } ss.

On DEC 5 1961, 19____,
before me, Ruth J. Ihle, a Notary Public in and
for said County and State, personally appeared
J. S. RUSSELL known to me to be the person
whose name is subscribed to the within instrument as an attorney in fact of SOCONY
MOBIL OIL COMPANY, INC., and acknowledged to me that he subscribed the
name of SOCONY MOBIL OIL COMPANY, INC., thereto as principal and his own
name as attorney in fact.

In Witness Whereof, I have hereunto set my hand and affixed my official
seal the day and year in this certificate first above written.

My Commission Expires _____

Ruth J. Ihle
Notary Public in and for said County and State
RUTH J. IHLE
My Commission Expires Sept. 16 1965

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, its successors or assigns in interest.

ATTEST:

DATE: December 15, 1961

~~SCHIO PETROLEUM COMPANY~~

By W. H. H. H. H.
Agent and Attorney-in-Fact
Address: 970 First National Office Bldg.

Oklahoma City 2, Oklahoma

THE STATE OF OKLAHOMA
COUNTY OF OKLAHOMA

The foregoing instrument was acknowledged before me this 15th day of
December, 1961, by Cecil C. Irby,
Agent and Attorney-in-Fact of Sohio Petroleum Company,
an Ohio corporation, on behalf of said corporation.

My Commission Expires:

November 19, 1965

Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: February 13, 1962NAME: Eleanor F. Spiegel(Spouse) Arthur H. SpiegelADDRESS: Box 1042Albuquerque, N.M.THE STATE OF New MexicoCOUNTY OF BernalilloThe foregoing instrument was acknowledged before me this 13 day ofFebruary, 1962, by Eleanor F. Spiegel and Arthur H. SpiegelMy Commission Expires:
4-7-642 Lucas H. Harsell
Notary Public

RATIFICATION AND JOINDER OF UNIT AGREEMENT
AND UNIT OPERATING AGREEMENT

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO dated November 1, 1961, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned, whether one or more, hereby expressly joins said Unit Agreement and ratifies, approves, and adopts said Agreement, its terms and any modifications thereof.

This ratification and joinder shall be effective as to the undersigned's interest in any lands and leases or interests therein, and royalties presently held or which may arise under existing option agreements or other interests in unitized substances, covering any of the following described land:

Township 31 North, Range 16 West, N.M.P.M.

Section 21: All
Section 22: All

As a part and parcel of this ratification and joinder, the undersigned to the extent of his or its interest, expressly agrees:

(1) That the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement.

(2) That the drilling, development, and producing requirements of all leases and other contracts in which undersigned's rights and interest are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement.

(3) That payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

For a like consideration, the undersigned does hereby expressly ratify, approve, adopt, confirm, and join in the Unit Operating Agreement for the Development and Operation of the Horseshoe-Gallup Unit Area, County of San Juan, State of New Mexico, dated November 1, 1961, to the extent of the undersigned's leasehold interest in the above-described lands, and agrees to be governed by all the terms and provisions thereof as a working interest owner.

This Ratification and Joinder of Unit Agreement and Unit Operating Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns, or successors in interest.

RATIFICATION AND JOINDER OF UNIT AGREEMENT
AND UNIT OPERATING AGREEMENT

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO dated November 1, 1961, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned, whether one or more, hereby expressly joins said Unit Agreement and ratifies, approves, and adopts said Agreement, its terms and any modifications thereof.

This ratification and joinder shall be effective as to the undersigned's interest in any lands and leases or interests therein, and royalties presently held or which may arise under existing option agreements or other interests in unitized substances, covering any of the following described land:

Township 31 North, Range 16 West, N.M.P.M.

Section 21: All
Section 22: All

As a part and parcel of this ratification and joinder, the undersigned to the extent of his or its interest, expressly agrees:

(1) That the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement.

(2) That the drilling, development, and producing requirements of all leases and other contracts in which undersigned's rights and interest are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement.

(3) That payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made at contract rates applied to the production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

For a like consideration, the undersigned does hereby expressly ratify, approve, adopt, confirm, and join in the Unit Operating Agreement for the Development and Operation of the Horseshoe-Gallup Unit Area, County of San Juan, State of New Mexico, dated November 1, 1961, to the extent of the undersigned's leasehold interest in the above-described lands, and agrees to be governed by all the terms and provisions thereof as a working interest owner.

This Ratification and Joinder of Unit Agreement and Unit Operating Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns, or successors in interest.

EXECUTED this 16th day of January, 1962.

APPROVED:

TEXACO Inc.

Terms 1/1
Form CF
Acctg. 1/1

By _____
Attorney-in-Fact

Address P. O. Box 3109
Midland, Texas

STATE OF Texas
COUNTY OF Midland

The foregoing instrument was acknowledged before me this
15th day of Jan., 1962, by _____,
Attorney-in-Fact for TEXACO Inc., (a
Delaware Corporation), on behalf of said corporation.

Dorothy Langston
Notary Public in and for
Midland County, Texas.

My Commission Expires:

6-1-63

(177874)

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date:

March 5, 1962

NAME:

Edward Keating

(Spouse)

Bonnie S. Keating

ADDRESS:

Lester W. Vance
Opal Vance

THE STATE OF

ILLINOIS

COUNTY OF

CockThe foregoing instrument was acknowledged before me this 5 day of

March, 1962, by DAVID L. CANMANN, Edward L. Keating,
Bonnie S. Keating, Lester W. Vance, Opal Vance, David
Altman, Betty Altman

My Commission Expires:

7/15/62

Kearney B. Brown
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: December 19, 1961NAME: Hazel Abraham

(Spouse) _____

ADDRESS: 812 Parkland Circle, S.E.Albuquerque, New MexicoTHE STATE OF New MexicoCOUNTY OF BernalilloThe foregoing instrument was acknowledged before me this 19 day ofDecember, 1961, by Hazel Abraham

My Commission Expires:

NOTARY PUBLIC - NEW MEXICO

[Signature]

Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: December 19, 1961

NAME: Mary Abraham

(Spouse) _____

ADDRESS: 312 Parkland Circle S. E.

Albuquerque, New Mexico

THE STATE OF New Mexico }

COUNTY OF Bernalillo }

The foregoing instrument was acknowledged before me this 19 day of

December, 1961, by Mary Abraham

My Commission Expires:

Pat Byrne

Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: 4/13/62NAME: John C. Anderson(Spouse) Georgia Fay AndersonADDRESS: 322 St. MainAztec New MexicoTHE STATE OF NEW MEXICOCOUNTY OF SAN JUANThe foregoing instrument was acknowledged before me this 13th day ofApril, 1962, by John C. AndersonGeorgia Fay Anderson

My Commission Expires:

1/14/64

Virginia L. Davis
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: 1-24-62

NAME: John Burrroughs

(Spouse) Jean Burrroughs

ADDRESS: 1505 S. Alameda
Fortale, N.M.

THE STATE OF New Mexico

COUNTY OF Roosevelt

The foregoing instrument was acknowledged before me this 24th day of January, 1962, by John Burrroughs & Jean Burrroughs.

My Commission Expires:

July 22, 1964

Thomas Miller

Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

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Date: March 12, 1962NAME: MONSANTO CHEMICAL COMPANY(Signed) [Signature]

Attorney-in-Fact

ADDRESS: 1310 Denver Club Bldg
Denver, ColoTHE STATE OF TexasCOUNTY OF Harris

The foregoing instrument was acknowledged before me this 12th day of March, 1962, by J. E. Howell as Attorney-in-Fact on behalf of Monsanto Chemical Company.

My Commission Expires:

June 1, 1963

[Signature]
Notary Public in and for
Harris County, Texas

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

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Date: January 3, 1962NAME: Louie Jim

Census 30823, Allot. 048280

(Spouse) Aka Ush Kee 1 nah yah

ADDRESS: _____

THE STATE OF Arizona }COUNTY OF Apache }The foregoing instrument was acknowledged before me this 3d day ofJanuary, 1962, by Louie Jim

My Commission Expires:

November 14, 1964Isaac E. Larkin
Notary Public

RATIFICATION AND JOINDER
of
MENT FOR THE DEVELOPMENT AND
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

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ATTEST:XX

DATE: June 8, 1962

By _____

Address: 416 Meadows Building

Dallas 6, Texas

THE STATE OF TEXAS

COUNTY OF DALLAS

The foregoing instrument was acknowledged before me this 8th day of

June, 1962, by Richard L. Jones

of _____

~~a _____ corporation, on behalf of said corporation.~~

My Commission Expires:

June 1, 1963

Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

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Date: Jan 5, 1962NAME: Richard L. Jones

(Spouse) _____

ADDRESS: 416 Meadows Bldg.
Dallas, TexasTHE STATE OF TexasCOUNTY OF DallasThe foregoing instrument was acknowledged before me this 5th day ofJanuary, 1962, by Richard L. Jones, Trustee

My Commission Expires:

June 1, 1963Mary E. White
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

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Date: December 28, 1961NAME: Ralph Lowe(Spouse) Erma LoweADDRESS: P. O. Box 832Midland, TexasTHE STATE OF TexasCOUNTY OF Midland

The foregoing instrument was acknowledged before me this 28th day of
December, 1961, by Ralph Lowe and wife, Erma Lowe

My Commission Expires:

June 1, 1963

Junelle S. Holmes
Notary Public

JUNELLE S. HOLMES - NOTARY PUBLIC
In and For Midland County, Texas
My Commission Expires June 1, 1963

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

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Date: Dec 18, 1961NAME: Berry B. Merritt

(Spouse) _____

ADDRESS: 417 Atlantic Ave.Long Beach, Calif.THE STATE OF CALIFORNIACOUNTY OF LOS ANGELESThe foregoing instrument was acknowledged before me this 18th day ofDecember, 1961, by BERRY B. MERRITT

My Commission Expires:

LOUISE OWEN CAMPBELL

My Commission Expires July 20, 1965

Louise Owen Campbell
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

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Date: Dec. 21, 1961NAME: Mrs. Cavita Mohrbacker

(Spouse) _____

ADDRESS: 216 Bennett Rd.
Long Beach 3 Calif.

THE STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES)

The foregoing instrument was acknowledged before me this 21ST day of
DECEMBER, 1961, by MRS. CAVITA MOHRBACKER, A WIDOW

My Commission Expires:

LOUISE OWEN CAMPBELL
My Commission Expires July 20, 1964

Louise Owen Campbell
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

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Date: DEC 27 1961
AHP

NAME: John A. Pierce

(Spouse) _____

ADDRESS: Aztec, NM
P.O. Box 111

THE STATE OF New Mexico)
COUNTY OF San Juan)

The foregoing instrument was acknowledged before me this 27th day of
December, 1961, by John A. Pierce

My Commission Expires:

2/17/64

Lorraine L. Edwards
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

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ATTEST:

L. B. [Signature]
Assistant Secretary

SAN JACINTO PETROLEUM CORP.

DATE:

DEC 21 1961

By

L. W. Goodrich
L. W. Goodrich, Vice President
Address: 800 San Jacinto Bldg., Houston, Texas

THE STATE OF

Texas

COUNTY OF

HarrisThe foregoing instrument was acknowledged before me this 21st day ofDecember1961, byL. W. GOODRICHVice President

of

SAN JACINTO PETROLEUM CORP.a Delaware corporation, on behalf of said corporation.

My Commission Expires:

ONIA ROGERS

Notary Public in and for Harris, County Texas

My Commission Expires June 1, 1963

[Signature]
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

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Date: Dec 18 - 1961NAME: L. W. Swarts(Spouse) Hazel SwartsADDRESS: 203 Argonne Ave
Long Beach 3, CalifTHE STATE OF CaliforniaCOUNTY OF Los AngelesThe foregoing instrument was acknowledged before me this 18th day ofDecember, 1961, by L. W. Swarts & Hazel Swarts

My Commission Expires:

Louise Owen Campbell
Notary Public

LOUISE OWEN CAMPBELL
My Commission Expires July 20, 1968

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

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Date: _____

NAME: Sherman F. Wagenseller

(Spouse) _____

ADDRESS: _____

SHERMAN F. WAGENSELLER
170 SOUTH BEVERLY DRIVE
BEVERLY HILLS, CALIF.

THE STATE OF CalifCOUNTY OF Los AngelesThe foregoing instrument was acknowledged before me this MAY 1 1962 day of_____, 196____, by SHERMAN F. WAGENSELLER

My Commission Expires: _____

Georgia S. Carpenter
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of its ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, its successors or assigns in interest.

ATTEST: *W. B. Brandenburg*
Assistant Secretary
DATE: DEC 19 1961

WESTERN NATURAL GAS COMPANY

By *W. K. Davis*
W. K. DAVIS VICE PRESIDENT
Address: 1006 Main Street
Houston 2, Texas

THE STATE OF TEXAS
COUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 19th day of December, 196 1, by W. K. Davis
Vice President of Western Natural Gas Company
a Delaware corporation, on behalf of said corporation.

My Commission Expires:
June 1, 1963

Olive V. Harries
Notary Public in and for
Olive V. Harries Harris County, Texas

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: JAN 2 1962

ACTING

NAME: Robert W. Young
General Superintendent for undetermined heirs
of Ah Kay Na Pah (Mrs. Joe Head) Allotment
(~~8-10-61~~) No. 048277

ADDRESS: _____

THE STATE OF ArizonaCOUNTY OF ApacheThe foregoing instrument was acknowledged before me this 2 day of

January, 1962, by Robert W. Young

My Commission Expires:

November 14, 1964

Grace E. Sarlin
Notary Public

RATIFICATION AND JOINDER
of
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION
of the
HORSESHOE-GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator, in form approved on behalf of the Secretary of the Interior, the undersigned owner or owners of lands or leases, or interests therein or royalties presently held or which may arise under existing option agreements, or other interests in production covered by said Unit Agreement hereby severally, each to the extent of his ownership or interest, consent to the inclusion of said lands within the Unit Area therein defined, join, approve, ratify and adopt the terms and provisions of said Unit Agreement to the same extent as if he had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest, agree that the term of any lease given by the undersigned or under which the undersigned claims an interest herein is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement, agree that the drilling, development and producing requirements of all leases and other contracts in which their several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement, and agree that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom, shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement may be executed in any number of counterparts with the same force and effect as if all parties had signed the same document and shall become effective and be binding upon all those who execute a counterpart hereof, regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands affected hereby upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative, or otherwise as provided in the Unit Agreement for subsequent joinder, and when so executed shall be binding upon the undersigned, his heirs, devisees, assigns or successors in interest.

Date: January 10, 1962

UTE MOUNTAIN TRIBE OF THE
UTE MOUNTAIN RESERVATION

By:

Albert Wing
Chairman

APPROVED BY THE UTE MOUNTAIN TRIBAL

COUNCIL December 20, 1961
Date

THE STATE OF Colorado

COUNTY OF Montezuma

The foregoing instrument was acknowledged before me this 10th day of January, 1962, by Albert Wing, Chairman, Ute Mountain Tribal Council

My Commission Expires:

May 13, 1965

J. J. [Signature]
Notary Public

RATIFICATION AND JOINDER OF
UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE
HORSESHOE - GALLUP UNIT AREA
SAN JUAN COUNTY, NEW MEXICO

In consideration of the execution of the UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE HORSESHOE-GALLUP UNIT AREA, COUNTY OF SAN JUAN, STATE OF NEW MEXICO, by THE ATLANTIC REFINING COMPANY (a copy of which has been delivered to the undersigned), the therein designated Unit Operator; the undersigned owner of lands or leases, or interests therein or royalties presently held, or other interests in production covered by said Unit Agreement, hereby consents to the inclusion of said lands, except the east half of Section 16 (being Tract 22); the northeast quarter of Section 35 (being Tract 2), Township 31 North, Range 17 West, N.M.P.M.; and the northeast quarter of Section 1 (being Tract 14), Township 30 North, Range 17 West, N.M.P.M., within the Unit Area therein defined; joins, approves, ratifies and adopts the terms and provisions of said Unit Agreement to the same extent as if it had signed the original agreement and any modifications thereof approved by the Secretary of the Interior or his duly authorized representative as applicable to said several lands and interest; agrees that the term of any lease given by the undersigned is extended and modified to the extent necessary to make the same conform to the term of said Unit Agreement; agrees that the drilling, development and producing requirements of all leases and other contracts in which its several rights and interests are created or defined shall be deemed fully performed by performance of the provisions of said Unit Agreement; agrees that payment for or delivery of (whichever may be required under prior agreements) oil and gas duly made upon the basis of production allocated under said Unit Agreement to the particular lands to which such rights or interests do or shall apply, regardless of actual production therefrom,

shall constitute full performance of all such obligations to the undersigned existing under such leases or other contracts.

This Ratification and Joinder of Unit Agreement shall become effective and be binding upon the undersigned upon the approval of said Unit Agreement by the Secretary of the Interior, or his duly authorized representative.

THE NAVAJO TRIBE OF INDIANS

By Paul Jones
Chairman
Navajo Tribal Council

ACKNOWLEDGMENT

STATE OF ARIZONA)
) SS.
COUNTY OF APACHE)

On this, the 14th day of February, 1962, before me, a Notary Public, personally appeared PAUL JONES, who acknowledged himself to be the ~ Chairman of the Navajo Tribal Council, and that he, as such Chairman, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the Navajo Tribe of Indians by himself as such ~ Chairman of the Navajo Tribal Council.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Walter F. Woz
Notary Public

My Commission expires January 6, 1963.

CERTIFICATE OF APPROVAL

BY COMMISSIONER OF PUBLIC LANDS, STATE OF NEW MEXICO

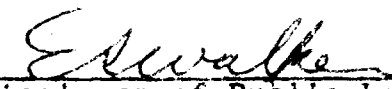
HORNED-SHOP UNIT, SAN JUAN COUNTY

There having been presented to the undersigned Commissioner of Public Lands of the State of New Mexico for examination, the attached Agreement for the development and operation of acreage which is described within the attached Agreement, dated Nov. 1, 1961, which has been executed or is to be executed by parties owning and holding oil and gas leases and royalty interests in and under the property described, and upon examination of said Agreement, the Commissioner finds:

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

NOW, THEREFORE, by virtue of the authority conferred upon me under Sections 7-11-39, 7-11-40, 7-11-41, 7-11-47, 7-11-48, New Mexico Statutes Annotated 1953 Compilation, I, the undersigned, Commissioner of Public Lands of the State of New Mexico, for the purpose of more properly conserving the oil and gas resources of the State, do hereby consent to and approve the said Agreement, and any leases embracing lands of the State of New Mexico within the area shall be and the same are hereby amended to conform with the terms thereof, and shall remain in full force and effect according to the terms and conditions of said Agreement. This approval is subject to all of the provisions of the aforesaid statutes., **State of New Mexico Acreage covered by this approval is limited to Tract 41, Lots 3 and 4, Sec. 2, T-30N, R-16W and Tract 42, S/2NW/4, Sec. 2, T-30N, R-16W.**

IN WITNESS WHEREOF, this Certificate of Approval is executed, with seal affixed, this 10th day of May 19 62.


Commissioner of Public Lands
of the State of New Mexico

CERTIFICATE OF APPROVAL

BY COMMISSIONER OF PUBLIC LANDS, STATE OF NEW MEXICO

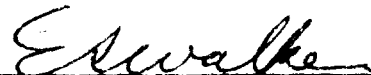
RESERVOIR-CALLED UNIT, SAN JUAN COUNTY

There having been presented to the undersigned Commissioner of Public Lands of the State of New Mexico for examination, the attached Agreement for the development and operation of acreage which is described within the attached Agreement, dated Nov. 1, 1961, which has been executed or is to be executed by parties owning and holding oil and gas leases and royalty interests in and under the property described, and upon examination of said Agreement, the Commissioner finds:

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

NOW, THEREFORE, by virtue of the authority conferred upon me under Sections 7-11-39, 7-11-40, 7-11-41, 7-11-47, 7-11-48, New Mexico Statutes Annotated 1953 Compilation, I, the undersigned, Commissioner of Public Lands of the State of New Mexico, for the purpose of more properly conserving the oil and gas resources of the State, do hereby consent to and approve the said Agreement, and any leases embracing lands of the State of New Mexico within the area shall be and the same are hereby amended to conform with the terms thereof, and shall remain in full force and effect according to the terms and conditions of said Agreement. This approval is subject to all of the provisions of the aforesaid statutes., **State of New Mexico Acreage covered by this approval is limited to Tract 41, Lots 3 and 4, Sec. 2, T-30N, R-16W and Tract 42, S/2NW/4, Sec. 2, T-30N, R-16W.**

IN WITNESS WHEREOF, this Certificate of Approval is executed, with seal affixed, this 10th day of May 19 62.


Commissioner of Public Lands
of the State of New Mexico

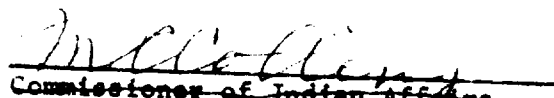
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CERTIFICATION -- DETERMINATION

Pursuant to the authority vested in the Secretary of the Interior under the Allotted Mineral Leasing Act of March 3, 1909, 35 Stat. 783, 25 U. S. C. Sec. 396, and the Tribal Land Mineral Leasing Act of May 11, 1938, 52 Stat. 347, 25 U. S. C. Secs. 396a, et seq. to certain restricted Allotted and Tribal Indian Lands and delegated to the Commissioner of Indian Affairs by Departmental Order No. 2508 of January 11, 1949, 14 F. R. 258-260, I do hereby:

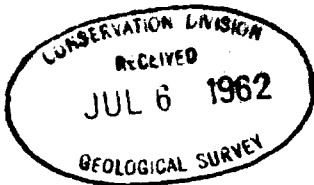
- A. Approve the attached agreement for the development and operation of the Horseshoe-Gallup Unit Area, San Juan County, New Mexico.
- B. Certify and determine that the unit plan of development and operation set forth in the attached agreement is necessary and advisable in the public interest and is for the purpose of more properly conserving the natural resources of the Unit Area.
- C. Certify and determine that the drilling, producing, minimum royalty and royalty requirements of all leases covering Tribal Indian Lands committed to said agreement are hereby established, altered, changed or revoked to conform with the terms and conditions of this agreement.

Dated JUN 26 1962


~~Commissioner of Indian Affairs~~
ACTING ASSISTANT Area Director

BUREAU OF INDIAN AFFAIRS
GALLUP AREA OFFICE
P. O. BOX 1260
GALLUP, NEW MEXICO

ILLEGIBLE



CERTIFICATION--DETERMINATION

14-08-0001 8200

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 Director of the Geological Survey pursuant to Departmental Order No. 2365 of October 8, 1947, 43 C. F. R. sec. 4.611, 12 F. R. 6784, I do hereby:

A. Approve the attached agreement for the development and operation of the Horseshoe Gallup Unit Area, 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.

Date JUL 27 1962.

A handwritten signature in dark ink, appearing to be "L. H. [unclear]", written over a horizontal line.

Acting Director, United States Geological Survey

(SQUARE LAKE (LOWER GRAYBURG AND UPPER SAN ANDRES WATERFLOOD) POOL—Cont'd.)

TOWNSHIP 16 SOUTH, RANGE 31 EAST, NMPM
EDDY COUNTY, NEW MEXICO

- Section 19: S/2 SE/4
 Section 28: W/2 SW/4
 Section 29: S/2 N/2 and S/2
 Section 30: NE/4 and E/2 SE/4
 Section 32: N/2
 Section 33: N/2, SE/4 and E/2 SW/4
 Section 34: S/2, W/2 NW/4 and SW/4 NE/4

(2) That all of the above-described acreage which was not included in the previously authorized Square Lake Waterflood Project is hereby designated a legitimate expansion of said project, and shall be exempt from the allowable provisions of Rule 701 E.

(3) That the provisions of Orders Nos. R-1110 and R-1110-A shall remain in full force and effect.

(4) That the waterflood project as expanded by this order shall be operated in accordance with the provisions of Rule 701 E of the Commission Rules and Regulations, except as provided in Paragraph 2 above.

(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.

HORSESHOE-GALLUP POOL
(Pan American Pressure Maintenance)
San Juan County, New Mexico

Order No. R-2026, Authorizing Pan American Petroleum Corporation to Institute a Pressure Maintenance Project in the Horseshoe-Gallup Pool, San Juan County, New Mexico, July 13, 1961.

Application of Pan American Petroleum Corporation for a Pressure Maintenance Project in the Horseshoe-Gallup Oil Pool, San Juan County, New Mexico, and for special rules governing the operation of said project.

CASE NO. 2317
Order No. R-2026

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on June 28, 1961, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 13th day of July, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Pan American Petroleum Corporation, proposes to institute a pressure maintenance project in the Horseshoe-Gallup Oil Pool in Township 30 North, Range 16 West, San Juan County, New Mexico, by the injection of water into the Gallup formation through 20 wells initially, all of which wells are within the proposed project area.

(3) That the proposed pressure maintenance project, to be known as the Northeast Hogback Pressure Maintenance Project, includes lands formerly designated by Order No. R-1494 as part of the Northeast Hogback Unit.

(4) That the applicant proposes that the Special Rules and Regulations to be established for the Northeast Hogback Pressure Maintenance Project be identical with the rules established by Order No. R-1699 for The Atlantic Refining Company Horseshoe-Gallup Pressure Maintenance Project.

(5) That such identical rules should be established in order to prevent conflict in the event the two projects eventually merge.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, is hereby authorized to institute a pressure maintenance project in the Horseshoe-Gallup Oil Pool, San Juan County, New Mexico, by the injection of water into the Gallup formation through the following-described wells in Township 30 North, Range 16 West:

PAN AMERICAN PETROLEUM CORPORATION

- Northeast Hogback Unit Well No. 4, Unit J, Section 14
 Northeast Hogback Unit Well No. 6, Unit B, Section 15
 Northeast Hogback Unit Well No. 10, Unit E, Section 14
 Northeast Hogback Unit Well No. 11, Unit F, Section 14
 Northeast Hogback Unit Well No. 13, Unit E, Section 13
 Northeast Hogback Unit Well No. 14, Unit I, Section 14
 Northeast Hogback Unit Well No. 16, Unit K, Section 13
 Northeast Hogback Unit Well No. 17, Unit M, Section 13
 Northeast Hogback Unit Well No. 20, Unit B, Section 24 —
 Northeast Hogback Unit Well No. 21, Unit D, Section 15
 Northeast Hogback Unit Well No. 22, Unit G, Section 15
 Northeast Hogback Unit Well No. 23, Unit B, Section 10
 Northeast Hogback Unit Well No. 25, Unit D, Section 11
 Northeast Hogback Unit Well No. 29, Unit F, Section 11
 Northeast Hogback Unit Well No. 30, Unit L, Section 10
 Northeast Hogback Unit Well No. 32, Unit L, Section 11
 Northeast Hogback Unit Well No. 37, Unit P, Section 10

EL PASO NATURAL GAS PRODUCTS COMPANY

- Williams Well No. 2, Unit P, Section 11
 Williams Well No. 3, Unit J, Section 11

ABRAHAM

- Federal Well No. 3, Unit B, Section 14

(2) That Special Rules and Regulations governing the operation of the Northeast Hogback Pressure Maintenance Project, San Juan County, New Mexico, are hereby promulgated, as follows:

SPECIAL RULES AND REGULATIONS

FOR THE

NORTHEAST HOGBACK PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the Northeast Hogback Pressure Maintenance Project, hereinafter referred to as the Project, shall comprise the following-described acreage in San Juan County, New Mexico:

TOWNSHIP 30 NORTH, RANGE 16 WEST, NMPM

- Section 10: E/2 and SW/4
 Section 11: SW/4 NE/4, W/2 and the SE/4
 Section 12: W/2 SW/4
 Section 13: SW/4, W/2 NW/4 and the W/2 SE/4
 Section 14: N/2, N/2 SW/4 and the SE/4
 Section 15: NE/4 and the N/2 NW/4
 Section 23: NE/4 NE/4
 Section 24: NW/4 NE/4 and the N/2 NW/4

RULE 2. The allowable for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or used as injection wells. Allowables for all wells shall be determined in a manner hereinafter prescribed.

RULE 3. Allowables for injection wells may be transferred to producing wells within the project area, as may the allowables for producing wells which, in the interest of more efficient operation of the Project, are shut-in or curtailed because of high gas-oil ratio or are shut-in for any of the following reasons: pressure regulation, control of pattern or sweep efficiencies, or to observe changes in pressures or changes in characteristics of reservoir liquids or progress of sweep.

RULE 4. The allowable assigned to any well which is shut-in or which is curtailed in accordance with the provisions of Rule 3, which allowable is to be transferred to any well or

(HORSESHOE-GALLUP (PAN AMERICAN PRESSURE MAINTENANCE) POOL—Cont'd.)

wells in the project area for production, shall in no event be greater than its ability to produce during the test prescribed by Rule 6, below, or greater than the current top unit allowable for the pool during the month of transfer, whichever is less.

RULE 5. The allowable assigned to any injection well on a 40-acre proration unit shall be top unit allowable for the Horseshoe-Gallup Oil Pool.

RULE 6. The allowable assigned to any well which is shut-in or curtailed in accordance with Rule 3, shall be determined by a 24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well should be produced in the same manner and at a constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2,000 to 1) for the Horseshoe-Gallup Oil Pool shall be waived during such tests. The project operator shall notify all operators offsetting the well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire.

RULE 7. The allowable assigned to each producing well in the Project shall be equal to the well's ability to produce or to top unit allowable for the Horseshoe-Gallup Oil Pool, whichever is less, provided that any producing well in the project area which directly or diagonally offsets a well outside the project area producing from the same common source of supply shall not produce in excess of two times top unit allowable for the pool. Each producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the Horseshoe-Gallup Oil Pool, except that any well or wells within the project area producing with a gas-oil ratio in excess of 2,000 cubic feet of gas per barrel of oil may be produced on a "net" gas-oil ratio basis, which net gas-oil ratio shall be determined by applying credit for daily average gas injected, if any, into the Horseshoe-Gallup Oil Pool within the project area to such high gas-oil ratio well. The daily adjusted oil allowable for any well receiving gas injection credit shall be determined in accordance with the following formula:

$$Aadj = \frac{TUA \times Fa \times 2,000}{Pg - Ig} \times Po$$

where:

Aadj = the well's daily adjusted allowable

TUA = top unit allowable for the pool

Fa = the well's acreage factor

Pg = average daily volume of gas produced by the well during the preceding month, cubic feet

Ig = the well's allocated share of the daily average gas injected during the preceding month, cubic feet

Po = average daily volume of oil produced by the well during the preceding month, barrels

In no event shall the amount of injected gas being credited to a well be such as to cause the net gas-oil ratio, $\frac{Pg - Ig}{Po}$, to be less than 2,000 cubic feet of gas per barrel of oil produced.

RULE 8. Credit for daily average net water injected into the Horseshoe-Gallup Oil Pool through any injection well located within the project area may be converted to its gas equivalent and applied to any well producing with a gas-oil ratio in excess of two thousand cubic feet of gas per barrel of oil. Total credit for net water injected in the project area shall be the gas equivalent volume of the daily average net water injected during a one-month period. The daily average gas equivalent of net water injected shall be computed in accordance with the following formula:

$$Eg = (Vw\ inj - Vw\ prod) \times 5.61 \times \frac{Pa}{15.025} \times \frac{520^\circ}{Tr} \times \frac{1}{Z}$$

where:

Eg = Average daily gas equivalent of net water injected, cubic feet

Vw inj = Average daily volume of water injected, barrels
 Vw prod = Average daily volume of water produced, barrels
 5.61 = Cubic foot equivalent of one barrel of water
 Pa = Average reservoir pressure at mid-point of the pay-zones of Horseshoe-Gallup Oil Pool in project area, psig + 12.01, as determined from most recent survey
 15.025 = Pressure base, psi
 520° = Temperature base of 60°F expressed as absolute temperature
 Tr = Reservoir temperature of 87°F expressed as absolute temperature (547°R)
 Z = Compressibility factor from analysis of Horseshoe-Gallup gas at average reservoir pressure, Pa, interpolated from compressibility tabulation below:

Reservoir Pressure	Z	Reservoir Pressure	Z	Reservoir Pressure	Z
50	.9725	300	.8325	550	.6560
100	.9465	350	.8030	600	.6135
150	.9215	400	.7710	650	.5655
200	.8885	450	.7220	700	.5220
250	.8600	500	.6900	750	.4630
				800	.3935

RULE 9. Each month the project operator shall, within three days after the normal unit allowable for Northwest New Mexico has been established, submit to the Commission a Pressure Maintenance Project Operator's Report, on a form prescribed by the Commission, outlining thereon the data required, and requesting allowables for each of the several wells in the project as well as the total Project allowable. The aforesaid Pressure Maintenance Project Operator's Report shall be filed in lieu of Form C-120 for the Project.

RULE 10. The Commission shall, upon review of the report and after any adjustments deemed necessary, calculate the allowable for each well in the Project for the next succeeding month in accordance with these rules. The sum of the allowables so calculated shall be assigned to the Project and may be produced from the wells in the Project in any proportion except that no well in the Project which directly or diagonally offsets a well outside the Project producing from the same common source of supply shall produce in excess of two times top unit allowable for the Pool.

RULE 11. The conversion of producing wells to injection, the drilling of additional wells for injection, and expansion of the project area shall be accomplished only after approval of the same by the Secretary-Director of the Commission. To obtain such approval, the Project operator shall file proper application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional injection wells shall include the following:

(1) A plat showing the location of proposed injection well, all wells within the project area, and offset operators, locating wells which offset the project area.

(2) A schematic drawing of the proposed injection well which fully describes the casing, tubing, perforated interval, and depth showing that the injection of gas or water will be confined to the Gallup formation.

(3) A letter stating that all offset operators to the proposed injection well have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection well if, within 20 days after receiving the application, no objection to the proposal is received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

Expansion of the project area may be approved by the Secretary-Director of the Commission administratively when good cause is shown therefor.

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

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

CASINGHEAD GAS
COMPRESSIBILITY TABULATION
CHA CHA GALLUP OIL POOL

<u>Pressure</u> <u>psig</u>	<u>Z</u>
0	.986
50	.976
100	.963
150	.952
200	.943
250	.935
300	.930
350	.927
400	.923
450	.918
500	.912
550	.906
600	.902
650	.899
700	.895
750	.891
800	.886
850	.882
900	.877
950	.873
1000	.869
1050	.865
1100	.860
1150	.857
1200	.853
1250	.849
1300	.845
1350	.842
1400	.838

June 25 / 1

PROPOSED RULES AND REGULATIONS FOR THE ATLANTIC
REFINING COMPANY HORSESHOE-GALLUP UNIT PROJECT

RULE 1. The project area of The Atlantic Refining Company Horseshoe-Gallup Unit Project, hereinafter referred to as the Project, San Juan County, New Mexico shall comprise that area described as follows:

TOWNSHIP 30 NORTH, RANGE 16 WEST, NMPM

Section 2: All
Section 3: All
Section 4: All
Section 5: N/2, SE/4, N/2 SW/4, SE/4 SW/4
Section 6: N/2 NE/4, SE/4 NE/4
Section 8: N/2 NE/4, SE/4 NE/4
Section 9: N/2, SE/4, N/2 SW/4, SE/4 SW/4
Section 10: NW/4

TOWNSHIP 31 NORTH, RANGE 16 WEST, NMPM

Section 19: S/2, NW/4, S/2 NE/4
Section 20: S/2
Section 21: S/2
Section 22: S/2 SW/4
Section 26: S/2
Section 27: S/2, NW/4, S/2 NE/4, NW/4 NE/4
Section 28: All
Section 29: All
Section 30: All
Section 31: N/2, SE/4, N/2 SW/4, SE/4 SW/4
Section 32: All
Section 33: All
Section 34: All
Section 35: All
Section 36: W/2 SW/4

TOWNSHIP 31 NORTH, RANGE 17 WEST, NMPM

Section 13: SW/4, S/2 SE/4, NW/4 SE/4, SW/4 NW/4
Section 14: All
Section 15: NE/4, N/2 NW/4, SE/4 NW/4, N/2 SE/4, SE/4 SE/4
Section 23: NE/4, N/2 NW/4, SE/4 NW/4, N/2 SE/4, SE/4 SE/4
Section 24: All
Section 25: N/2, SE/4, NE/4 SW/4
Section 36: NE/4 NE/4

RULE 2. The allowable for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or used as injection wells. Allowables for all wells shall be determined in a manner hereinafter prescribed.

RULE 3. Allowables for injection wells may be transferred to producing wells within the project area, as may the allowables for producing wells which, in the interest of more efficient operation of the Project, are shut-in or curtailed because of high gas-oil ratio or are shut-in for any of the following

Exhibit "3"

reasons: pressure regulation, control of pattern or sweep efficiencies, or to observe changes in pressures or changes in characteristics of reservoir liquids or progress of sweep.

RULE 4. The allowable assigned to any well which is shut-in or which is curtailed in accordance with the provisions of Rule 3, which allowable is to be transferred to any well or wells in the project area for production, shall in no event be greater than its ability to produce during the test prescribed by Rule 6, below, or greater than the current top unit allowable for the pool during the month of transfer, whichever is less.

RULE 5. The allowable assigned to any injection well on a 40-acre proration unit shall be top unit allowable for the Horseshoe-Gallup Oil Pool.

RULE 6. The allowable assigned to any well which is shut-in or curtailed in accordance with Rule 3, shall be determined by a 24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well should be produced in the same manner and at a constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2,000 to 1) for the Horseshoe-Gallup Oil Pool shall be waived during such tests. The project operator shall notify all operators offsetting the well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire.

RULE 7. The allowable assigned to each producing well in the Project shall be equal to the well's ability to produce or to top unit allowable for the Horseshoe-Gallup Oil Pool, whichever is less, provided that any producing well in the project area which directly or diagonally offsets a well outside the project area producing from the same common source of supply shall not produce in excess of two times top unit allowable for the pool. Each producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the Horseshoe-Gallup Oil Pool, except that any well or wells within the project area producing with a gas-oil ratio in excess of 2,000 cubic feet of gas per barrel of oil may be produced on a "net" gas-oil ratio basis, which net gas-oil ratio shall be determined by applying credit for daily average gas injected, if any, into the Horseshoe-Gallup Oil Pool within the project area to such high gas-oil ratio well. The daily adjusted oil allowable for any well receiving gas injection credit shall be determined in accordance with the following formula:

$$A_{adj} = \frac{TUA \times F_a \times 2,000}{\frac{P_g - I_g}{P_o}}$$

where:

A_{adj} = the well's daily adjusted allowable

- TUA = top unit allowable for the pool
- F_a = the well's acreage factor
- P_g = average daily volume of gas produced by the well during the preceding month, cubic feet
- I_g = the well's allocated share of the daily average gas injected during the preceding month, cubic feet
- P_o = average daily volume of oil produced by the well during the preceding month, barrels

In no event shall the amount of injected gas being credited to a well be such as to cause the net gas-oil ratio, $\frac{P_g - I_g}{P_o}$, to be less than 2,000

cubic feet of gas per barrel of oil produced.

RULE 8. Credit for daily average net water injected into the Horseshoe-Gallup Oil Pool through any injection well located within the project area may be converted to its gas equivalent and applied to any well producing with a gas-oil ratio in excess of two thousand cubic feet of gas per barrel of oil. Total credit for net water injected in the project area shall be the gas equivalent volume of the daily average net water injected during a one-month period. The daily average gas equivalent of net water injected shall be computed in accordance with the following formula:

$$E_g = (V_{w \text{ inj}} - V_{w \text{ prod}}) \times 5.61 \times \frac{P_a}{15.025} \times \frac{520^\circ}{T_r} \times \frac{1}{Z}$$

where:

- E_g = Average daily gas equivalent of net water injected, cubic feet
- V_{w inj} = Average daily volume of water injected, barrels
- V_{w prod} = Average daily volume of water produced, barrels
- 5.61 = Cubic foot equivalent of one barrel of water
- P_a = Average reservoir pressure at mid-point of the pay-zones of Horseshoe-Gallup Oil Pool in project area, psig + 12.01, as determined from most recent survey
- 15.025 = Pressure base, psi
- 520° = Temperature base of 60°F expressed as absolute temperature

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NAMES AND ADDRESSES OF ALL INTERESTED
PARTIES IN HORSESHOE GALLUP HEARING

The Following Have Interests in the Proposed Unit Area:

Mr. J.R. Abraham
814 Mercantile Bank Building
Dallas, Texas

Arizona Explorations, Incorporated
Attention: Mr. C.W. Josey, Jr.
418 Meadows Building
Dallas, Texas

Banner Drilling Company
602 Gladview
Farmington, New Mexico

Mrs. Hazel Bolack
% Mr. Tom Bolack
1010 North Dustin
Farmington, New Mexico

Mr. W.P. Carr
6700 Forest Lane
Dallas 30, Texas

Clark and Cowden
5543 Yale Boulevard
Dallas, Texas

Clark and Cowden Exploration Company
5543 Yale Boulevard
Dallas, Texas

Mr. J.D. Collister
4203 Avenida LaResolana NE
Albuquerque, New Mexico

Continental Oil Company
1755 Glenarm Place
Denver 1, Colorado

Mr. R.W. Dammann
380 Madison Avenue
New York, New York

El Paso Natural Gas Products Company
Post Office Box 1161
El Paso, Texas

EPROC Associates
Attention: Mr. W.E. Carr
Post Office Box 1710
Durango, Colorado

Helbing and Podpechan
Attention: Mr. Frank Podpechan
418 Hinkle Building
Roswell, New Mexico

Mr. J. Felix Hickman
4401 Constitution NE
Albuquerque, New Mexico

The Hidden Splendor Mining Company
Attention: Mr. F.T. Anderson
2000 National Bank of Tulsa Building
Tulsa 3, Oklahoma

Mobil Oil Company
612 South Flower Street
Los Angeles 54, California

Northwest Production Corporation
Attention: Mr. R.H. Nordhausen
520 Simms Building
Albuquerque, New Mexico

Pan American Petroleum Corporation
Post Office Box 1410
Fort Worth, Texas

Pubco Petroleum Corporation
2500 Central SE
Post Office Box 1419
Albuquerque, New Mexico

Reynolds Mining Company
609 Melrose Building
Houston 2, Texas

Sohio Petroleum Company
970 First National Office Building
Oklahoma City, Oklahoma

Three States Natural Gas Company
17th Floor, Corrigan Towers
Dallas 11, Texas

Mrs. Eleanor F. Spiegel
Post Office Box 1042
Albuquerque, New Mexico

Parties Having Interests in Proposed Unit Area - Page 2

Texaco, Incorporated
Post Office Box 3109
Midland, Texas

Mr. Lester Vance
Post Office Box 1710
Durango, Colorado

Vack Ventures
Attention: Mr. David L. Carmann
1949 North Cicero Avenue
Chicago 39, Illinois

The Following Have Interests Offsetting the Proposed Unit Area:

Brookhaven Oil Company
Attention: Mr. Tom Scott
Scottsdale, Arizona

Colorado Oil and Gas Corporation
Post Office Box 749
1000 Denver Club Building
Denver 3, Colorado

Compass Exploration, Incorporated
1645 Court Place
Denver 3, Colorado

Delhi-Taylor Oil Corporation
Fidelity Union Tower Building
Dallas, Texas

Gulf Oil Corporation
Post Office Box 2097
Denver, Colorado

Humble Oil and Refining Company
Post Office Box 120
Denver, Colorado

R. L. Bayless
Box 1541
Farmington, N.M.

King Drilling Company
Suite B, 3431 Anderson, SE
Albuquerque, New Mexico

The Navajo Tribe of Indians
Window Rock, Arizona

Roy Owens
Petroleum Club Plaza
Farmington, New Mexico

P.M. Petroleum Corporation
1825 Applewood Drive
Denver, Colorado

Rutledge Drilling Company
Post Office Box 2239
Santa Fe, New Mexico

Standard Oil Company of Texas
Post Office Box 1249
Houston, Texas

Tenneco Oil Company
1655 Grant
Post Office Box 2410
Denver, Colorado