

UNIT AGREEMENT

FOR THE DEVELOPMENT AND OPERATION

BEFORE EXAMINER CATANACH

OF THE

OIL CONSERVATION DIVISION

CARRACAS CANYON UNIT AREA

EXHIBIT NO. 2

COUNTY OF RIO ARriba

CASE NO. 9030

STATE OF NEW MEXICO

No. _____

THIS AGREEMENT, entered into as of the _____ day of _____, 1986, by and between the parties subscribing, ratifying, or consenting hereto, and herein referred to as the "parties hereto,"

WITNESSETH:

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

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

WHEREAS, the Oil Conservation Division of the New Mexico Energy and Minerals Department, hereinafter referred to as "Division", is authorized by an act of the Legislature (Chapter 70 and 71, New Mexico Statutes 1978 Annotated) to approve this agreement and the conservation provisions hereof; and

WHEREAS, the parties hereto hold sufficient interests in the Carracas Canyon Unit Area covering the land hereinafter described to give reasonably effective control of operations therein; and

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

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

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

2. UNIT AREA. The following described land is hereby designated and recognized as constituting the unit area:

Township 31 North, Range 5 West, N.M.P.M.

Section 1: Lots 1,2,3,4, S $\frac{1}{2}$ (A11)

Section 2: Lots 1,2,3,4, S $\frac{1}{2}$ (A11)

Township 32 North, Range 4 West, N.M.P.M.

Section 7: Lots 5,6,7,8,9, SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ (A11)

Section 8: Lots 5,6,7,8, S $\frac{1}{2}$ S $\frac{1}{2}$ (A11)

Section 9: Lots 5,6,7,8, S $\frac{1}{2}$ S $\frac{1}{2}$ (A11)

Section 10: Lots 5,6,7,8, S $\frac{1}{2}$ S $\frac{1}{2}$ (A11)

Section 11: Lots 5,6,7,8, S $\frac{1}{2}$ S $\frac{1}{2}$ (A11)

Section 12: Lots 5,6,7,8, S $\frac{1}{2}$ S $\frac{1}{2}$ (A11)

Section 13: All

Section 14: All

Section 15: All

Section 16: All

Section 17: All

Section 18: Lots 1,2,3,4, E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$ (A11)

Section 19: Lots 1,2,3,4, E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$ (A11)

Section 20: All

Section 21: All

Section 22: All

Section 23: All

Section 24: All

Section 25: All

Section 26: All

Section 27: All

Section 28: All

Section 29: All

Section 30: Lots 1,2,3,4, E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$ (A11)

Section 31: Lots 1,2,3,4, E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$ (A11)

Section 32: All

Section 33: All

Section 34: All

Section 35: All

Section 36: All

Township 32 North, Range 5 West, N.M.P.M.

Section 7: Lots 1,2,3,4 (A11)

Section 8: Lots 1,2,3,4, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$ (A11)

Section 9: Lots 1,2,3,4, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$ (A11)

Section 10: Lots 1,2,3,4, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$ (A11)

Section 11: Lots 1,2,3,4, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$ (A11)

Section 12: Lots 1,2,3,4,5,6,7, SW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ (A11)

Section 13: Lots 1,2,3,4, W $\frac{1}{2}$ E $\frac{1}{2}$, W $\frac{1}{2}$ (A11)

Section 14: All

Section 15: All

Section 16: All

Section 17: All

Section 18: Lots 1,2,3,4 (A11)

Section 21: E $\frac{1}{2}$

Section 22: All

Section 23: All

Section 24: Lots 1,2,3,4, W $\frac{1}{2}$ E $\frac{1}{2}$, W $\frac{1}{2}$

Section 25: All

Section 26: All

Section 27: All

Section 28: E $\frac{1}{2}$

Section 34: All

Section 35: All

Section 36: All

Containing 30,351.91 acres, more or less

Exhibit "A" shows, in addition to the boundary of the unit area, the boundaries and identity of tracts and leases in said area to the extent known to the Unit Operator. Exhibit "B" attached hereto is a schedule showing to the extent known to the Unit Operator, the acreage, percentage, and kind of ownership of oil and gas interests in all lands in the unit area. However, nothing herein or in Exhibits "A" and "B" shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown in the Exhibits as owned by such party. Exhibits "A" and "B" shall be revised by the Unit Operator whenever changes in the unit area or in the ownership interests in the individual tracts render such revision necessary, or when requested by the Authorized Officer, hereinafter referred to as "AO", and not less than four copies of the revised Exhibits shall be filed with the proper Bureau of Land Management office and one (1) copy with the New Mexico Oil Conservation Division of the Energy and Minerals Department, hereinafter referred to as "Division".

The above-described unit area shall when practicable be expanded to include therein any additional lands or shall be contracted to exclude lands whenever such expansion or contraction is deemed to be necessary or advisable to conform with the purposes of this agreement. Such expansion or contraction shall be effected in the following manner:

(a) Unit Operator, on its own motion (after preliminary concurrence by the AO), or on demand of the AO (after preliminary concurrence by the AO) shall prepare a notice of proposed expansion or contraction describing the contemplated changes in the boundaries of the unit area, the reasons therefore, any plans for additional drilling, and the proposed effective date of the expansion or contraction, preferably the first day of a month subsequent to the date of notice.

(b) Said notice shall be delivered to the proper Bureau of Land Management office and the Division, and copies thereof mailed to the last known address of each working interest owner, lessee and lessor whose interests are affected, advising that 30 days will be allowed for submission to the Unit Operator of any objections.

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

(d) After due consideration of all pertinent information, the expansion or contraction shall, upon approval by the AO and the Division, become effective as of the date prescribed in the notice thereof or such other appropriate date.

(e) Notwithstanding any prior elimination under the "Drilling to Discovery" section, all legal subdivisions of lands (i.e., 40 acres by Government survey or its nearest lot or tract equivalent; in instances of irregular surveys, unusually large lots or tracts shall be considered in multiples of 40 acres or the nearest aliquot equivalent thereof), no parts of which are in or entitled to be in a participating area on or before the fifth anniversary of the effective date of the first initial participating area established under this unit agreement, shall be eliminated automatically from this agreement, effective as of said fifth anniversary, and such lands shall no longer be a part of the unit area and shall no longer be subject to this agreement, unless diligent drilling operations are in progress on unitized lands not entitled to participation on said fifth anniversary, in which event all such lands shall remain subject hereto for so long as such drilling operations are continued diligently, with not more than 90 days' time elapsing between the completion of one such well and the commencement of the next such well. All legal subdivisions of lands not entitled to be in a participating area within 10 years after the effective date of the first initial participating area approved under this agreement shall be automatically eliminated from this agreement as of said tenth

anniversary. The Unit Operator shall, within 90 days after the effective date of any elimination hereunder, describe the area so eliminated to the satisfaction of the AO and promptly notify all parties in interest. All lands reasonably proved productive of unitized substances in paying quantities by diligent drilling operations after the aforesaid 5-year period shall become participating in the same manner as during said first 5-year period. However, when such diligent drilling operations cease, all non-participating lands not then entitled to be in a participating area shall be automatically eliminated effective as of the 91st day thereafter.

Any expansion of the unit area pursuant to this section which embraces lands theretofore eliminated pursuant to this subsection 2(e) shall not be considered automatic commitment or recommitment of such lands. If conditions warrant extension of the 10-year period specified in this subsection, a single extension of not to exceed 2 years may be accomplished by consent of the owners of 90% of the working interests in the current non-participating unitized lands and the owners of 60% of the basic royalty interests (exclusive of the basic royalty interests of the United States) in non-participating unitized lands with approval of the AO provided such extension application is submitted not later than 60 days prior to the expiration of said 10-year period.

3. UNITIZED LAND AND UNITIZED SUBSTANCES. All land now or hereafter committed to this agreement shall constitute land referred to herein as "unitized land" or "land subject to this agreement." All oil and gas in any and all formations of the unitized land are unitized under the terms of this agreement and herein are called "unitized substances."

4. UNIT OPERATOR. Jerome P. McHugh and Associates is hereby designated as Unit Operator and by signature hereto as Unit Operator agrees and consents to accept the duties and obligations of Unit Operator for the discovery, development, and production of unitized substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as an owner of interest in unitized substances, and the term "working interest owner" when used herein shall include or refer to Unit Operator as the owner of a working interest only when such an interest is owned by it.

5. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time prior to the establishment of a participating area or areas hereunder, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of 6 months after notice of intention to resign has been served by Unit Operator on all working interest owners and the AO and the Division, and until all wells then drilled hereunder are placed in a satisfactory condition for suspension or abandonment, whichever is required by the AO as to Federal lands and the Division as to Fee lands, unless a new Unit Operator shall have been selected and approved and shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

Unit Operator shall have the right to resign in like manner and subject to like limitations as above provided at any time after a participating area established hereunder is in existence, but in all instances of resignation or removal, until a successor Unit Operator is selected and approved as hereinafter provided, the working interest owners shall be jointly responsible for performance of the duties of Unit Operator, and shall not later than 30 days before such resignation or removal becomes effective appoint a common agent to represent them in any action to be taken hereunder.

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

1 The Unit Operator may, upon default or failure in the performance of its 1
2 duties or obligations hereunder, be subject to removal by the same percentage vote 2
3 of the owners of working interests as herein provided for the selection of a new 3
4 Unit Operator. Such removal shall be effective upon notice thereof to the AO. 4
5

6 The resignation or removal of Unit Operator under this agreement shall not 6
7 terminate its right, title, or interest as the owner of a working interest or other 7
8 interest in unitized substances, but upon the resignation or removal of Unit 8
9 Operator becoming effective, such Unit Operator shall deliver possession of all 9
10 wells, equipment, materials, and appurtenances used in conducting the unit opera- 10
11 tions to the new duly qualified successor Unit Operator or to the common agent, if 11
12 no such new Unit Operator is selected, elected, to be used for the purpose of 12
13 conducting unit operations hereunder. Nothing herein shall be construed as 13
14 authorizing removal of any material, equipment, or appurtenances needed for the 14
15 preservation of any wells. 15
16

17 6. SUCCESSOR UNIT OPERATOR. Whenever the Unit Operator shall tender his 17
18 or its resignation as Unit Operator or shall be removed as hereinabove 18
19 provided, or a change of Unit Operator is negotiated by the working interest 19
20 owners, the owners of the working interests according to their respective acreage 20
21 interests in all unitized land shall, pursuant to the Approval of the Parties 21
22 requirements of the unit operating agreement, select a successor Unit Operator. 22
23 Such selection shall not become effective until: 23
24

25 (a) a Unit Operator so selected shall accept in writing the duties and 25
26 responsibilities of Unit Operator, and 26
27

28 (b) the selection shall have been approved by the AO. 28
29

30 If no successor Unit Operator is selected and qualified as herein provided, 30
31 the AO, at his election may declare this unit agreement terminated. 31
32

33 7. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT. If the Unit Operator 33
34 is not the sole owner of working interests, costs and expenses incurred by Unit 34
35 Operator in conducting unit operations hereunder shall be paid and apportioned 35
36 among and borne by the owners of working interests, all in accordance with the 36
37 agreement or agreements entered into by and between the Unit Operator and the 37
38 owners of working interests, whether one or more, separately or collectively. 38
39 Any agreement or agreements entered into between the working interest owners and 39
40 the Unit Operator as provided in this section, whether one or more, are herein 40
41 referred to as the "unit operating agreement." Such unit operating agreement shall 41
42 also provide the manner in which the working interest owners shall be entitled to 42
43 receive their respective proportionate and allocated share of the benefits accruing 43
44 hereto in conformity with their underlying operating agreements, leases, or other 44
45 independent contracts, and such other rights and obligations as between Unit Oper- 45
46 ator and the working interest owners as may be agreed upon by Unit Operator and the 46
47 working interest owners; however, no such unit operating agreement shall be deemed 47
48 either to modify any of the terms and conditions of this unit agreement or to 48
49 relieve the Unit Operator of any right or obligation established under this unit 49
50 agreement, and in case of any inconsistency or conflict between this agreement 50
51 and the unit operating agreement, this agreement shall govern. Two copies of any 51
52 unit operating agreement executed pursuant to this section shall be filed in the 52
53 proper Bureau of Land Management office and one true copy with the Division prior 53
54 to approval of this unit agreement. 54
55

56 8. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR. Except as otherwise specifi- 56
57 cally provided herein, the exclusive right, privilege, and duty of exercising any 57
58 and all rights of the parties hereto which are necessary or convenient for pros- 58
59 pecting for, producing, storing, allocating, and distributing the unitized 59
60 substances are hereby delegated to and shall be exercised by the Unit Operator as 60
61 herein provided. Acceptable evidence of title to said rights shall be deposited 61
62 with Unit Operator and, together with this agreement, shall constitute and define 62
63 the rights, privileges, and obligations of Unit Operator. Nothing herein, however, 63
64 shall be construed to transfer title to any land or to any lease or operating 64
65 agreement, it being understood that under this agreement the Unit Operator, in its 65
66 capacity as Unit Operator, shall exercise the rights of possession and use vested 66
67 in the parties hereto only for the purposes herein specified. 67

1 9. DRILLING TO DISCOVERY. Within 6 months after the effective date hereof, the 1
2 Unit Operator shall commence to drill an adequate test well at a location approved 2
3 by the AO, if on Federal land, and by the Division if on Fee land, unless on such 3
4 effective date a well is being drilled in conformity with the terms hereof, and 4
5 thereafter continue such drilling diligently until the upper 200 feet of the Dakota 5
6 formation has been tested or until at a lesser depth unitized substances shall be 6
7 discovered which can be produced in paying quantities (to-wit: quantities 7
8 sufficient to repay the costs of drilling, completing, and producing operations, 8
9 with a reasonable profit) or the Unit Operator shall at any time establish to the 9
10 satisfaction of the AO if on Federal land, or the Division if located on Fee land, 10
11 that further drilling of said well would be unwarranted or impracticable, provided, 11
12 however, that Unit Operator shall not in any event be required to drill said well 12
13 to a depth in excess of 8,020 feet. Until the discovery of unitized substances 13
14 capable of being produced in paying quantities, the Unit Operator shall continue 14
15 drilling one well at a time, allowing not more than 6 months between the completion 15
16 of one well and the commencement of drilling operations for the next well, until a 16
17 well capable of producing unitized substances in paying quantities is completed to 17
18 the satisfaction of the AO if it be on Federal land, or the Division if on Fee 18
19 land, or until it is reasonably proved that the unitized land is incapable of 19
20 producing unitized substances in paying quantities in the formations drilled 20
21 hereunder. Nothing in this section shall be deemed to limit the right of the Unit 21
22 Operator to resign as provided in Section 5, hereof, or as requiring Unit Operator 22
23 to commence or continue any drilling during the period pending such resignation 23
24 becoming effective in order to comply with the requirements of this section. 24
25

26 The AO may modify any of the drilling requirements of this section by granting 26
27 reasonable extensions of time when, in his opinion, such action is warranted. 27
28

29 Notwithstanding anything in this agreement to the contrary, except Section 25, 29
30 "Unavoidable Delay", two (2) wells shall be drilled with not more than six (6) 30
31 months time elapsing between the completion of the first well and commencement of 31
32 drilling operations for the second well; regardless of whether a discovery has 32
33 been made in any well drilled under this provision. The initial test well must be 33
34 drilled in compliance with the above specified formation or depth in order to 34
35 meet the dictates of this section. The additional test well shall be diligently 35
36 drilled at a location approved by the AO to a depth of 8,020 feet, or to test the 36
37 upper 200 feet of the Dakota formation. The second well must be located a minimum 37
38 of 2½ miles from the initial well in order to be accepted by the AO as the second 38
39 test well, within the meaning of this section. Nevertheless, in the event of the 39
40 discovery of unitized substances in paying quantities by any well, this unit 40
41 agreement shall not terminate for failure to complete the two well program, but the 41
42 unit area shall be contracted automatically, effective the first day of the month 42
43 following the default, to eliminate by subdivisions (as defined in Section 2(e) 43
44 hereof) all lands not then entitled to be in a participating area. 44
45

46 Upon failure to commence any well as provided for in this section within the 46
47 time allowed, prior to the establishment of a participating area, including any 47
48 extension of time granted by the AO, this agreement will automatically terminate. 48
49 Upon failure to continue drilling diligently any well commenced hereunder, the AO 49
50 may, after 15 days notice to the Unit Operator, declare this unit agreement 50
51 terminated. The parties to this agreement may not initiate a request to voluntar- 51
52 ily terminate this agreement during the first 6 months of its term unless at least 52
53 one obligation well has been drilled in accordance with the provisions of this 53
54 section. 54
55

56 10. PLAN OF FURTHER DEVELOPMENT AND OPERATION. Within 6 months after com- 56
57 pletion of a well capable of producing unitized substances in paying quantities, 57
58 the Unit Operator shall submit for the approval of the AO and the Division, an 58
59 acceptable plan of development and operation for the unitized land which, when 59
60 approved by the AO and the Division, shall constitute the further drilling and 60
61 development obligations of the Unit Operator under this agreement for the period 61
62 specified therein. Thereafter, from time to time before the expiration of any 62
63 existing plan, the Unit Operator shall submit for the approval of the AO and the 63
64 Division a plan for an additional specified period for the development and 64
65 operation of the unitized land. Subsequent plans should normally be filed on a 65
66 calendar year basis not later than March 1 each year. Any proposed modification or 66
67 addition to the existing plan should be filed as a supplement to the plan. 67

Any plan submitted pursuant to this section shall provide for the timely exploration of the unitized area, and for the diligent drilling necessary for determination of the area or areas capable of producing unitized substances in paying quantities in each and every productive formation. This plan shall be as complete and adequate as the AO and Division may determine to be necessary for timely development and proper conservation of the oil and gas resources of the unitized area and shall:

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

(b) Provide a summary of operations and production for the previous year.

Plans shall be modified or supplemented when necessary to meet changed conditions or to protect the interests of all parties to this agreement. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of development and operation. The AO is authorized to grant a reasonable extension of the 6 month period herein prescribed for submission of an initial plan of development and on operation where such action is justified because of unusual conditions or circumstances.

After completion of a well capable of producing unitized substances in paying quantities, no further wells, except such as may be necessary to afford protection against operations not under this agreement and such as may be specifically approved by the AO and Division, shall be drilled except in accordance with an approved plan of development and operation.

11. PARTICIPATION AFTER DISCOVERY. Upon completion of a well capable of producing unitized substances in paying quantities, or as soon thereafter as required by the AO or the Division, the Unit Operator shall submit for approval by the AO and Division, a schedule, based on subdivisions of the public-land survey or aliquot parts thereof, of all land then regarded as reasonably proved to be productive of unitized substances in paying quantities. These lands shall constitute a participating area on approval of the AO and Division, effective as of the date of completion of such well or the effective date of this unit agreement, whichever is later. The acreages of both Federal and non-Federal lands shall be based upon appropriate computations from the courses and distances shown on the last approved public-land survey as of the effective date of each initial participating area. The schedule shall also set forth the percentage of unitized substances to be allocated, as provided in Section 12 to each committed tract in the participating area so established, and shall govern the allocation of production commencing with the effective date of the participating area. A different participating area shall be established for each separate pool or deposit of unitized substances or for any group thereof which is produced as a single pool or zone, and any two or more participating areas so established may be combined into one, on approval of the AO and the Division. When production from two or more participating areas is subsequently found to be from a common pool or deposit, the participating areas shall be combined into one, effective as of such appropriate date as maybe approved or prescribed by the AO and Division. The participating area or areas so established shall be revised from time to time, subject to the approval of the AO and Division to include additional lands then regarded as reasonably proved to be productive of unitized substances in paying quantities or which are necessary for unit operations, or to exclude lands then regarded as reasonably proved not to be productive of unitized substances in paying quantities, and the schedule of allocation percentages shall be revised accordingly. The effective date of any revision shall be the first of the month in which the knowledge or information is obtained on which such revision is predicated; provided, however, that a more appropriate effective date may be used if justified by the Unit Operator and approved by the AO and Division. No land shall be excluded from a participating area on account of depletion of its unitized substances, except that any participating area established under the provisions of this unit agreement shall terminate automatically whenever all completions in the formation on which the participating area is based are abandoned.

1 It is the intent of this section that a participating area shall represent the 1
2 area productive of unitized substances known or reasonably proved to be productive 2
3 in paying quantities or which are necessary for unit operations; but, regardless of 3
4 any revision of the participating area, nothing herein contained shall be construed 4
5 as requiring any retroactive adjustment for production obtained prior to the 5
6 effective date of the revision of the participating area. 6
7

8 In the absence of agreement at any time between the Unit Operator and the AO 8
9 and Division, as to the proper definition or redefinition of a participating area, 9
10 or until a participating area has, or areas have, been established, the portion of 10
11 all payments affected thereby shall, except royalty due the United States, be 11
12 impounded in a manner mutually acceptable to the owners of committed working 12
13 interests and the AO. Royalties due the United States shall be determined by the AO 13
14 and the amount thereof shall be deposited, as directed by the AO until a partici- 14
15 pating area is finally approved and then adjusted in accordance with a determination 15
16 of the sum due as Federal royalty on the basis of such approved participating area. 16
17

18 Whenever it is determined, subject to the approval of the AO and Division, that 18
19 a well drilled under this agreement is not capable of production of unitized 19
20 substances in paying quantities and inclusion in a participating area of the land on 20
21 which it is situated in a participating area is unwarranted, production from such 21
22 well shall, for the purposes of settlement among all parties other than working 22
23 interest owners, be allocated to the land on which the well is located, unless such 23
24 land is already within the participating area established for the pool or deposit 24
25 from which such production is obtained. Settlement for working interest benefits 25
26 from such a nonpaying unit well shall be made as provided in the unit operating 26
27 agreement. 27
28

29 12. ALLOCATION OF PRODUCTION. All unitized substances produced from each parti- 29
30 cipating area established under this agreement, except any part thereof used in 30
31 conformity with good operating practices within the unitized area for drilling, 31
32 operating, and other production or development purposes, for repressuring or re- 32
33 cycling in accordance with a plan of development and operations which has been 33
34 approved by the AO and Division, or unavoidably lost, shall be deemed to be produced 34
35 equally on an acreage basis from the several tracts of unitized land of the partici- 35
36 pating area established for such production. For the purpose of determining any 36
37 benefits accruing under this agreement, each such tract of unitized land shall have 37
38 allocated to it such percentage of said production as the number of acres of such 38
39 tract included in said participating area bears to the total acres of unitized land 39
40 in said participating area, except that allocation of production hereunder for 40
41 purposes other than for settlement of the royalty, overriding royalty, or payment 41
42 out of production obligations of the respective working interest owners, shall be on 42
43 the basis prescribed in the unit operating agreement whether in conformity with the 43
44 basis of allocation herein set forth or otherwise. It is hereby agreed that pro- 44
45 duction of unitized substances from a participating area shall be allocated as 45
46 provided herein regardless of whether any wells are drilled on any particular part 46
47 or tract of the participating area. If any gas produced from one participating area 47
48 is used for repressuring or recycling puposes in another participating area, the 48
49 first gas withdrawn from the latter participating area for sale during the life of 49
50 this agreement, shall be considered to be the gas so transferred, until an amount 50
51 equal to that transferred shall be so produced for sale and such gas shall be 51
52 allocated to the participating area from which initially produced as such area was 52
53 defined at the time of such transferred gas was finally produced and sold. 53
54

55 13. DEVELOPMENT OR OPERATION OF NON-PARTICIPATING LAND OR FORMATIONS. Any party 55
56 hereto owning or controlling the working interest in any unitized land having there- 56
57 on a regular well location may with the approval of the AO and the Division at such 57
58 party's sole risk, costs, and expense, drill a well to test any formation provided 58
59 the well is outside any participating area established for that formation, unless 59
60 within 90 days of receipt of notice from said party of his intention to drill the 60
61 well, the Unit Operator elects and commences to drill the well in a like manner as 61
62 other wells are drilled by the Unit Operator under this agreement. 62

1 If any well drilled under this section by a working interest owner results in 1
2 production of unitized substances in paying quantities such that the land upon 2
3 which it is situated may properly be included in a participating area, such parti- 3
4 cipating area shall be established or enlarged as provided in this agreement and 4
5 the well shall thereafter be operated by the Unit Operator in accordance with the 5
6 terms of this agreement and the unit operating agreement. 6
7

8 If any well drilled under this section by a working interest owner that 8
9 obtains production in quantities insufficient to justify the inclusion of the land 9
10 upon which such well is situated in a participating area, such well may be operated 10
11 and produced by the party drilling the same, subject to the conservation 11
12 requirements of this agreement. The royalties in amount or value of production from 12
13 any such well shall be paid as specified in the underlying lease and agreements 13
14 affected. 14
15

16 14. ROYALTY SETTLEMENT. The United States and any royalty owner who is entitled 16
17 to take in kind a share of the substances now unitized hereunder shall hereafter be 17
18 entitled to the right to take in kind its share of the unitized substances, and Unit 18
19 Operator, or the working interest owner in case of the operation of a well by a 19
20 working interest owner as herein provided for in special cases, shall make 20
21 deliveries of such royalty share taken in kind in conformity with the applicable 21
22 contracts, laws, and regulations. Settlement for royalty interest not taken in kind 22
23 shall be made by working interest owners responsible therefor under existing 23
24 contracts, laws and regulations, or by the Unit Operator on or before the last day 24
25 of each month for unitized substances produced during the preceding calendar month; 25
26 provided, however, that nothing in this section shall operate to relieve the lessees 26
27 of any land from their respective lease obligations for the payment of any royalties 27
28 due under their leases. 28
29

30 If gas obtained from lands not subject to this agreement is introduced into any 30
31 participating area hereunder, for use in repressuring, stimulation of production, or 31
32 increasing ultimate recovery, in conformity with a plan of development and operation 32
33 approved by the AO and the Division, a like amount of gas, after settlement as 33
34 herein provided for any gas transferred from any other participating area and with 34
35 appropriate deduction for loss from any cause, may be withdrawn from the formation 35
36 into which the gas is introduced, royalty free as to dry gas, but not as to any 36
37 products which may be extracted therefrom; provided that such withdrawal shall be 37
38 at such time as may be provided in the approved plan of development and operation or 38
39 as may otherwise be consented to by the AO and the Division as conforming to good 39
40 petroleum engineering practice; and provided further, that such right of withdrawal 40
41 shall terminate on the termination of this unit agreement. 41
42

43 Royalty due the United States shall be computed as provided in 30 CFR Part 221 43
44 and paid in value or delivered in kind as to all unitized substances on the basis of 44
45 the amounts thereof allocated to unitized Federal land as provided in Section 12 at 45
46 the rates specified in the respective Federal leases, or at such other rate or rates 46
47 as may be authorized by law or regulation and approved by the AO; provided, that for 47
48 leases on which the royalty rate depends on the daily average production per well, 48
49 said average production shall be determined in accordance with the operating 49
50 regulations as though each participating area were a single consolidated lease. 50
51

52 15. RENTAL SETTLEMENT. Rental or minimum royalties due on leases committed 52
53 hereto shall be paid by appropriate working interest owners under existing 53
54 contracts, laws, and regulations, provided that nothing herein contained shall 54
55 operate to relieve the lessees of any land from their respective lease obligations 55
56 for the payment of any rental or minimum royalty due under their leases. Rental or 56
57 minimum royalty for lands of the United States subject to this agreement shall be 57
58 paid at the rate specified in the respective leases from the United States unless 58
59 such rental or minimum royalty is waived, suspended, or reduced by law or by 59
60 approval of the Secretary or his duly authorized representative. 60

1 With respect to any lease on non-Federal land containing provisions which would 1
2 terminate such lease unless drilling operations are commenced upon the land covered 2
3 thereby within the time therein specified or rentals are paid for the privilege of 3
4 deferring such drilling operations, the rentals required thereby shall, 4
5 notwithstanding any other provision of this agreement, be deemed to accrue and 5
6 become payable during the term thereof as extended by this agreement and until the 6
7 required drilling operations are commenced upon the land covered thereby, or until 7
8 some portion of such land is included within a participating area. 8
9

10 16. CONSERVATION. Operations hereunder and production of unitized substances 10
11 shall be conducted to provide for the most economical and efficient recovery of said 11
12 substances without waste, as defined by or pursuant to State or Federal law or 12
13 regulation. 13
14

15 17. DRAINAGE. The Unit Operator shall take such measures as the AO deems appro- 15
16 priate and adequate to prevent drainage of unitized substances from unitized land by 16
17 wells on land not subject to this agreement, which shall include the drilling of 17
18 protective wells and which may include the payment of a fair and reasonable compen- 18
19 satory royalty, as determined by the AO. 19
20

21 18. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions, and 21
22 provisions of all leases, subleases, and other contracts relating to exploration, 22
23 drilling, development, or operation for oil or gas on lands committed to this 23
24 agreement are hereby expressly modified and amended to the extent necessary to make 24
25 the same conform to the provisions hereof, but otherwise to remain in full force and 25
26 effect; and the parties hereto hereby consent that the Secretary shall and by his 26
27 approval hereof, or by the approval hereof by his duly authorized representative, 27
28 does hereby establish, alter, change, or revoke the drilling, producing, rental 28
29 minimum royalty, and royalty requirements of Federal leases committed hereto and the 29
30 regulations in respect thereto to conform said requirements to the provisions of 30
31 this agreement, and, without limiting the generality of the foregoing, all leases, 31
32 subleases, and contracts are particularly modified in accordance with the following: 32
33

34 (a) The development and operation of lands subject to this agreement under 34
35 the terms hereof shall be deemed full performance of all obligations for develop- 35
36 ment and operation with respect to each and every separately owned tract subject 36
37 to this agreement, regardless of whether there is any development of any particular 37
38 tract of this unit area. 38
39

40 (b) Drilling and producing operations performed hereunder upon any tract of 40
41 unitized lands will be accepted and deemed to be performed upon and for the benefit 41
42 of each and every tract of unitized land, and no lease shall be deemed to expire by 42
43 reason of failure to drill or produce wells situated on the land therein embraced. 43
44

45 (c) Suspension of drilling or producing operations on all unitized lands 45
46 pursuant to direction or consent of the AO, or his duly authorized representative, 46
47 shall be deemed to constitute such suspension pursuant to such direction or consent 47
48 as to each and every tract of unitized land. A suspension of drilling or producing 48
49 operations limited to specified lands shall be applicable only to such lands. 49
50

51 (d) Each lease, sublease or contract relating to the exploration, drilling, 51
52 development, or operation for oil or gas of lands other than those of the United 52
53 States committed to this agreement which, by its terms might expire prior to the 53
54 termination of this agreement, is hereby extended beyond any such terms so provided 54
55 therein so that it shall be continued in full force and effect for and during the 55
56 term of this agreement. 56
57

58 (e) Any Federal lease committed hereto shall continue in force beyond the term 58
59 so provided therein or by law as to the land committed so long as such lease re- 59

1 mains subject hereto, provided that production of unitized substances in paying 1
2 quantities is established in paying quantities under this unit agreement prior to 2
3 the expiration date of the term of such lease, or in the event actual drilling 3
4 operations are commenced on unitized land, in accordance with provisions of this 4
5 agreement, prior to the end of the primary term of such lease and are being 5
6 diligently prosecuted at that time, such lease shall be extended for two years, and 6
7 so long thereafter as oil or gas is produced in paying quantities in accordance with 7
8 the provisions of the Mineral Leasing Act, as amended. 8
9 9

10 (f) Each sublease or contract relating to the operation and development of 10
11 unitized substances from lands of the United States committed to this agreement, 11
12 which by its terms would expire prior to the time at which the underlying lease, as 12
13 extended by the immediately preceding paragraph, will expire, is hereby extended 13
14 beyond any such term so provided therein so that it shall be continued in full 14
15 force and effect for and during the term of the underlying lease as such term is 15
16 herein extended. 16
17 17

18 (g) The segregation of any Federal lease committed to this agreement is 18
19 governed by the following provision in the fourth paragraph of Sec. 17(j) of the 19
20 Mineral Leasing Act, as amended by the Act of September 2, 1960, (74 Stat. 781-784) 20
21 (30 U.S.C. 226 (j)): "Any (Federal) lease heretofore or hereafter committed to any 21
22 such (unit) plan embracing lands that are in part within and in part outside of the 22
23 area covered by any such plan shall be segregated into separate leases as to the 23
24 lands committed and the lands not committed as of the effective date of unitization: 24
25 Provided, however, that any such lease as to the non-unitized portion shall continue 25
26 in force and effect for the term thereof but for not less than two years from the 26
27 date of such segregation and so long thereafter as oil or gas is produced in paying 27
28 quantities." 28
29 29

30 (h) Any lease, other than a Federal lease, having only a portion of its lands 30
31 committed hereto shall be segregated as to the portion committed and the portion not 31
32 committed, and the provisions of such leases shall apply separately to such 32
33 segregated portions commencing as of the effective date hereof. In the event any 33
34 such lease provides for a lump-sum rental payment, such payment shall be prorated 34
35 between the portions so segregated in proportion to the acreage of the respective 35
36 tracts. 36
37 37

38 19. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be 38
39 covenants running with the land with respect to the interests of the parties hereto 39
40 and their successors in interest until this agreement terminates, and any grant, 40
41 transfer or conveyance of interest in land or leases subject hereto shall be and 41
42 hereby is conditioned upon the assumption of all privileges and obligations here- 42
43 under by the grantee, transferee, or other successor in interest. No assignment or 43
44 transfer of any working interest, royalty, or other interest subject hereto shall be 44
45 binding upon Unit Operator until the first day of the calendar month after Unit 45
46 Operator is furnished with the original, photostatic, or certified copy of the 46
47 instrument of transfer. 47
48 48

49 20. EFFECTIVE DATE AND TERM. This agreement shall become effective upon approval 49
50 by the AO, or his duly authorized representative, and shall automatically terminate 50
51 five (5) years from said effective date unless: 51
52 52

53 (a) Upon application by the Unit Operator such date of expiration is extended 53
54 by the AO, or 54
55 55

56 (b) it is reasonably determined prior to the expiration of the fixed term or 56
57 any extension thereof that the unitized land is incapable of production of unitized 57
58 substances in paying quantities in the formations tested hereunder, and after 58
59 notice of intention to terminate this agreement on such ground is given by the Unit 59
60 Operator to all parties in interest at their last known addresses, this agreement 60
61 is terminated with approval of the AO, or 61

(c) a valuable discovery of unitized substances in paying quantities has been made or accepted on unitized land during said initial term or any extension thereof, in which event this agreement shall remain in effect for such term and so long thereafter as unitized substances can be produced in quantities sufficient to pay for the cost of producing same from wells on unitized land within any participating area established hereunder. Should production cease and diligent drilling operations to restore production or new production are not in progress or reworking within 60 days and production is not restored or should new production not be obtained in paying quantities on committed lands within this unit area, this agreement will automatically terminate effective the last day of the month in which the last unitized production occurred, or

(d) it is voluntarily terminated as provided in this agreement. Except as noted herein this agreement may be terminated at any time prior to the discovery of unitized substances which can be produced in paying quantities by not less than 75 per centum, on an acreage basis, of the working interest owners signatory hereto, with the approval of the AO. The Unit Operator shall give notice of any such approval to all parties hereto. Voluntary termination may not occur during the first six (6) months of this agreement unless at least one obligation well shall have been drilled in conformance accordance with Section 9.

21. RATE OF PROSPECTING, DEVELOPMENT, AND PRODUCTION. The AO is hereby vested with authority to alter or modify from time to time, in his discretion, the quantity and rate of production under this agreement when such quantity and rate are not fixed pursuant to Federal or State law, or do not conform to any State-wide voluntary conservation or allocation program which is established, recognized, and generally adhered to by the majority of operators in such State. The above authority is hereby limited to alteration or modifications which are in the public interest. The public interest to be served and the purpose thereof, must be stated in the order of alteration or modification. Without regard to the foregoing, the AO is also hereby vested with authority to alter or modify from time to time, in his discretion, the rate of prospecting and development and the quantity and rate of production under this agreement when such alteration or modification is in the interest of attaining the conservation objectives stated in this agreement and is not in violation of any applicable Federal or State law.

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

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

23. NOTICES. All notices, demands, or statements required hereunder to be given or rendered to the parties hereto shall be in writing and shall be personally delivered to the party or parties, or sent by postpaid registered or certified mail, to the last known address of the party or parties.

24. NO WAIVER OF CERTAIN RIGHTS. Nothing contained in this agreement shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State where the unitized lands are located, or of the United States, or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

25. UNAVOIDABLE DELAY. All obligations under this agreement requiring the Unit Operator to commence or continue drilling, or to operate on, or produce unitized substances from any of the lands covered by this agreement, shall be suspended while

1 the Unit Operator, despite the exercise of due care and diligence, is prevented from 1
2 complying with such obligations, in whole or in part, by strikes, acts of God, 2
3 Federal, State, or municipal law or agencies, unavoidable accidents, uncontrollable 3
4 delays in transportation, inability to obtain necessary materials or equipment in 4
5 open market, or other matters beyond the reasonable control of the Unit Operator 5
6 whether similar to matters herein enumerated or not. 6
7

8 26. NONDISCRIMINATION. In connection with the performance of work under this 8
9 agreement, the Unit Operator agrees to comply with all the provisions of Section 202 9
10 (1) to (7) inclusive of Executive Order 11246 (30 F. R. 12319), as amended, which 10
11 are hereby incorporated by reference in this agreement. 11
12

13 27. LOSS OF TITLE. In the event title to any tract of unitized land shall fail 13
14 and the true owner cannot be induced to join in this unit agreement, such tract shall 14
15 be automatically regarded as not committed hereto, and there shall be such readjust- 15
16 ment of future costs and benefits as may be required on account of the loss of such 16
17 title. In the event of a dispute as to title to any royalty, working interest, or 17
18 other interests subject thereto, payment or delivery on account thereof may be with- 18
19 held without liability for interest until the dispute is finally settled; provided, 19
20 that, as to Federal lands or leases, no payments of funds due the United States shall 20
21 be withheld, but such funds shall be deposited as directed by the AO, to be held as 21
22 unearned money pending final settlement of the title dispute, and then applied as 22
23 earned or returned in accordance with such final settlement. 23
24

25 Unit Operator as such is relieved from any responsibility for any defect or failure 25
26 of any title hereunder. 26
27

28 28. NON-JOINDER AND SUBSEQUENT JOINDER. If the owner of any substantial inter- 28
29 est in a tract within the unit area fails or refuses to subscribe or consent to this 29
30 agreement, the owner of the working interest in that tract may withdraw the tract 30
31 from this agreement by written notice delivered to the proper Bureau of Land 31
32 Management office, the Division and the Unit Operator prior to the approval of this 32
33 agreement by the AO. Any oil or gas interests in lands within the unit area not 33
34 committed hereto prior to final approval may thereafter be committed hereto by the 34
35 owner or owners thereof subscribing or consenting to this agreement, and, if the 35
36 interest is a working interest, by the owner of such interest also subscribing to the 36
37 unit operating agreement. After operations are commenced hereunder, the right of 37
38 subsequent joinder, as provided in this section, by a working interest owner is 38
39 subject to such requirements or approval(s), if any, pertaining to such joinder, as 39
40 may be provided for in the unit operating agreement. After final approval hereof, 40
41 joinder by a non-working interest owner must be consented to in writing by the 41
42 working interest owner committed hereto and responsible for the payment of any 42
43 benefits that may accrue hereunder in behalf of such non-working interest. A 43
44 non-working interest may not be committed to this unit agreement unless the corre- 44
45 sponding working interest is committed hereto. Joinder to the unit agreement by a 45
46 working interest owner, at any time, must be accompanied by appropriate joinder to 46
47 the unit operating agreement, in order for the interest to be regarded as committed 47
48 to this agreement. Except as may otherwise herein be provided, subsequent joinders to 48
49 this agreement shall be effective as of the date of the filing with the AO and the 49
50 Division of duly executed counterparts of all or any papers necessary to establish 50
51 effective commitment of any interest and/or tract to this agreement. 51
52

53 29. COUNTERPARTS. This agreement may be executed in any number of counter- 53
54 parts, no one of which needs to be executed by all parties, or may be ratified or 54
55 consented to by separate instrument in writing specifically referring hereto and 55
56 shall be binding upon all those parties who have executed such a counterpart, 56
57 ratification, or consent hereto with the same force and effect as if all such parties 57
58 had signed the same document and regardless of whether or not it is executed by all 58
59 other parties owning or claiming an interest in the lands within the above-described 59
60 unit area. 60

1 30. SPECIAL SURFACE STIPULATIONS. Nothing in this agreement shall modify the 1
2 special Federal lease stipulations attached to the individual Federal oil and gas 2
3 leases. 3
4

5 IN WITNESS WHEREOF, the parties hereto have caused this agreement to be exe- 5
6 cuted and have set opposite their respective names the date of execution. 6
7
8

9 UNIT OPERATOR AND WORKING INTEREST OWNER 9

10 JEROME P. McHUGH AND ASSOCIATES 10
11
12
13
14

15 By _____ 15
16
17

18 Address: 650 S. Cherry 18
19 Suite 1225 19
20 Denver, CO 80222 20
21
22

21 Date of Execution: 21
22
23
24
25

26 STATE OF _____) 26
27) ss. 27
28 COUNTY OF _____) 28
29

30 On this _____ day of _____, 19__, before me appeared _____ 30
31 _____, to me personally known, who, being by me duly sworn, did 31
32 say that he is the _____ of Jerome P. McHugh and 32
33 Associates and that the seal affixed to said instrument is the corporate seal of 33
34 said corporation, and that said instrument was signed and sealed in behalf of said 34
35 corporation by authority of its board of directors, and said _____ 35
36 _____ acknowledged said instrument to 36
37 be the free act and deed of said corporation. 37
38

39 My Commission Expires: 39
40
41
42

42 _____ 42
43 Notary Public 43
44
45
46
47
48
49
50
51
52

53 OPERATOR SIGNATURE PAGE 53
54 CARRACAS CANYON UNIT AREA 54
55 RIO ARriba COUNTY, NEW MEXICO 55

SCHEDULE SHOWING THE PERCENTAGE AND KIND OF OWNERSHIP OF OIL AND GAS INTERESTS
EXHIBIT "B"
CARRACAS CANYON UNIT AREA
RIO ARRIBA COUNTY, NEW MEXICO

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
EXHIBIT NO. 3
CASE NO. 7030

TRACT NO.	DESCRIPTION OF LAND	NUMBER OF ACRES	SERIAL NUMBER AND EXPIRATION DATE OF LEASE	BASIC ROYALTY AND PERCENTAGE	LESSEE OF RECORD AND PERCENTAGE	OVERRIDING ROYALTY AND PERCENTAGE	WORKING INTEREST AND PERCENTAGE
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FEDERAL LANDS:

1.	T32N-R5W, N.M.P.M. Sec. 18: Lots 1 (44.48), 2(44.13), 3(44.15), 4(44.41)	177.17	NM-02850		Glen Turner et al	100% None	Glen Turner et al 100%
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2.	T32N-R4W, N.M.P.M. Sec. 8: Lots 6(28.66), 7(28.49), 8(28.32), S $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	2,525.47	NM-28277	U.S.A.-All	Mitchell Energy Corpora- tion	100% A. Lansdale 3% From the surface of the Earth to the base of Fruitland formation: Edward R. Talone 3% of 77% BPO 3% of 63.38% APO Unconventional Sources, Inc. .125% of 77% BPO .125% of 63.38% APO	As to Sec. 20: All; Sec. 29: All: From the surface to the base of the Fruitland Formation: Frontier Energy Corporation 100% Below the base of the Fruitland Formation: Mitchell Energy Corporation 100%
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As to Sec. 20: All; Sec. 29: All: From the surface to the base of the Fruitland Formation: Mitchell Energy Corporation 4.5%	As to all remaining lands, all depths: Mitchell Energy Corporation 100%
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3.	T32N-R4W, N.M.P.M.	2,522.12	NM-28812	U.S.A.-A11	Amoco Production Company	100%	Virginia S. Rutler 4.5% Kenai Oil and Gas Inc. 1% Frontier Energy Corpora- tion .15% Edward R. Talone 1.2% Unconventional Sources Inc. .05% Robco Associates .4% Jerald R. Martinez .2% Joseph R. Mazzola .5%	Amoco Production Company	100%
	Sec. 11: Lots 5(27.16), 6(27.38), 7(27.58), S ₂ SE ₄ , SE ₂ SW ₄		Effective 11-1-76						
	Sec. 14: E ₂ , E ₂ W ₂ , E ₂ SW ₄ SW ₄		BLM granted suspension of operations on						
	Sec. 23: E ₂ , E ₂ NW ₄ , NE ₂ NW ₂ NW ₄ E ₂ SE ₂ NW ₂ W ₄ , SW ₂ SW ₂ NW ₂ NW ₄ W ₂ NW ₂ SW ₂ NW ₄ , SE ₂ NW ₂ SW ₂ NW ₄ , SW ₂ SW ₂ NW ₄ , NE ₂ SW ₄ , W ₂ W ₂ SW ₄ , W ₂ NE ₂ SW ₂ SW ₄ , SE ₂ SW ₂ SW ₄ , SW ₂ SE ₂ SW ₄		10-1-86						
	Sec. 26: A11								
	Sec. 35: A11								
4.	T32N-R5W, N.M.P.M.	418.78	NM-28813	U.S.A.-A11	Southland Royalty Company	100%	Maude E. McDonald 2% Harriet S. Walsh 1.33333% Melbourne Concept, Inc. 1.66667%	Southland Royalty Company	100%
	Sec. 9: Lots 1(19.54), 2(19.60), 3(19.64), S ₂ NE ₄ , SE ₂ NW ₄ E ₂ SW ₄ , SE ₄		Effective 5-1-81						
			Expires 4-30-91						

5.	T32N-R4W, N.M.P.M. <u>Sec. 8: SE$\frac{1}{2}$SE$\frac{1}{4}$</u> Sec. 9: S $\frac{1}{2}$ S $\frac{1}{2}$ Sec. 10: S $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 15: W $\frac{1}{2}$ E $\frac{1}{2}$, SE $\frac{1}{2}$ SE $\frac{1}{4}$	520.00	NM-29339	U.S.A.-A11	Dalport Oil Corporation	None	Dalport Oil Corpor
					100%		
			Effective 4-1-77				
			Expires 3-31-87				
6.	T32N-R5W, N.M.P.M. <u>Sec. 35: E$\frac{1}{2}$</u> Sec. 36: E $\frac{1}{2}$	824.25	NM-29340	U.S.A.-A11	Amoco Production Company	A. Clark Fleehart Billie Robinson	Amoco Production C
			Effective 2-1-77		100%	1.25% 1.25%	
	T31N-R5W, N.M.P.M. <u>Sec. 1: Lots 3(12.09), 4(12.16), SW$\frac{1}{4}$</u>		Expires 1-31-87				
7.	T32N-R5W, N.M.P.M. <u>Sec. 10: SE$\frac{1}{4}$</u> Sec. 15: W $\frac{1}{2}$ Sec. 22: E $\frac{1}{2}$	800.00	NM-29341	U.S.A.-A11	Amoco Production Company	Dell K. Hatch Edward R. Talone Kenai Oil and Gas Inc. Joseph R. Mazzola Robco Associates Jerald R. Martinez Frontier Energy Corpora- tion Unconventional Sources Inc.	Amoco Production C
			Effective 2-1-77		100%	4% 1.2% 1% .5% .4% .2% .15% .05%	
			Expires 1-31-87				

8.	T32N-R5W, N.M.P.M. Sec. 12: Lots 1(17.76), 2(18.50), 3(18.57), 4(18.64), 5(38.74), 6(38.96), 7(39.19), SW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 25: N $\frac{1}{2}$, SW $\frac{1}{4}$ Sec. 26: W $\frac{1}{2}$	1,350.36	NM-29342	U.S.A.-A11	Celeste C. Grynberg	100%	Celeste C. Grynberg and Dean G. Smernoff as Co- Trustees for Rachel Susan Grynberg benefi- ciary under the "Rachel Susan Trust" 1.66667% Celeste C. Grynberg and Dean G. Smernoff as Co- Trustees for Stephen Mark Grynberg benefi- ciary under the "Stephen Mark Trust" 1.66666% Celeste C. Grynberg and Dean G. Smernoff as Co- Trustees for Miriam Zela Grynberg beneficiary under the "Miriam Zela Trust" 1.66666%
9.	T32N-R5W, N.M.P.M. Sec. 27: W $\frac{1}{2}$ Sec. 34: NE $\frac{1}{4}$	480.00	NM-29343	U.S.A.-A11	Kindermac Partners, a Colorado general partnership	100%	William C. Armor Jr. 2.5% Chevron U.S.A. Inc. 2.5% Joan Chorney 2.5%
							Expires 3-31-87

10.	T32N-R5W, N.M.P.M. <u>Sec. 11: SE$\frac{1}{4}$</u> Sec. 13: W $\frac{1}{2}$ Sec. 14: W $\frac{1}{2}$ Sec. 23: E $\frac{1}{2}$ Sec. 24: Lots 1(40.33), 2(40.29), 3(40.19), 4(40.00), W $\frac{1}{2}$ E $\frac{1}{2}$	1,440.81	NM-29760 Effective 5-1-77 Expires 4-30-87	U.S.A.-A11	Amoco Production Company 100%	Edward A. Talone 1.2% Kenai Oil and Gas Inc. 1% Ronald H. Hatch .875% Rodney Hatch and Teresa Hatch .875% Catherine D. Hatch .875% Dell K. Hatch .875% Cecil C. Ram and/or Judith F. Ram, joint tenants .5% Joseph R. Mazzola .5% Robco Associates .4% Jerald R. Martinez .2% Frontier Energy Corpora- tion .15% Unconventional Sources Inc. .05%	Amoco Produ
11.	T32N-R4W, N.M.P.M. <u>Sec. 16: A11</u> Sec. 21: A11 Sec. 28: A11 Sec. 33: N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$, S $\frac{1}{2}$ SW $\frac{1}{4}$	2,480.00	NM-30014 Effective 5-1-77 Expires 4-30-87	U.S.A.-A11	Kindermac Partners, a Colorado general partnership 100%	Chevron U.S.A. Inc. 2.5% Maurice W. Brown 2% Joan Chrney 2% Jack Loyd 1%	Kindermac P Colorado g partnershi

12.	T32N-R4W, N.M.P.M.	2,482.20	NM-30015	U.S.A.-All	Kindermac Partners, a Colorado general partnership	100%	Chevron U.S.A. Inc. 4.5% Kelley Everette 3%	Kindermac Partners, a Colorado general partnership	100%
	Sec. 18: Lots 1(34.83), 2(34.90), 3(34.96), 4(35.03), E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$		Effective 6-1-77						
	Sec. 19: Lots 1(35.08), 2(35.11), 3(35.15), 4(35.18), E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$		Expires 5-31-87						
	Sec. 30: Lots 1(35.21), 2(35.24), 3(35.26), 4(35.29), E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$								
	Sec. 31: Lots 1(35.29), 2(35.25), 3(35.23), 4(35.19), E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$								
13.	T32N-R5W, N.M.P.M.	480.00	NM-30016	U.S.A.-All	Kindermac Partners, a Colorado general partnership	100%	Chevron U.S.A. Inc. 2.5% Maurice W. Brown 3% Joan Chorney 2%	Kindermac Partners, a Colorado general partnership	100%
	Sec. 27: E $\frac{1}{2}$		Effective 5-1-77						
	Sec. 34: NW $\frac{1}{4}$		Expires 4-30-87						
14.	T32N-R5W, N.M.P.M.	1,280.00	NM-30351	U.S.A.-All	Kindermac Partners, a Colorado general partnership	100%	Richard F. Gessler 3% Chevron U.S.A. Inc. 4.5%	Kindermac Partners, a Colorado general partnership	100%
	Sec. 10: SW $\frac{1}{4}$		Effective 6-1-77						
	Sec. 15: E $\frac{1}{2}$								
	Sec. 16: E $\frac{1}{2}$ W $\frac{1}{2}$								
	Sec. 21: E $\frac{1}{2}$		Expires 5-31-87						
	Sec. 22: W $\frac{1}{2}$								

15.	T32N-R4W, N.M.P.M.	774.72	NM-30584	U.S.A.-A11	Kindermac Partners, a Colorado general partnership	100%	Chevron U.S.A. Inc. Republic Properties	2.5% 5%	Kindermac Partners, a Colorado general partnership	100%
	Sec. 10: Lot 5(28.17)									
	Sec. 12: Lots 5(26.29)		Effective 8-1-77							
	6(26.46), 7(26.82), 8(26.98), S $\frac{1}{2}$ S $\frac{1}{2}$									
	Sec. 13: N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$		Expires 7-31-87							
16.	T32N-R4W, N.M.P.M.	2,080.00	NM-30585	U.S.A.-A11	Kindermac Partners, a Colorado general partnership	100%	Chevron U.S.A. Inc. Joan Chorney R.K. Cramer Joseph S. Sprinkle Caroline Rowland	2.5% 2% 1.5% 1% .5%	Kindermac Partners, a Colorado general partnership	100%
	Sec. 13: S $\frac{1}{2}$ S $\frac{1}{2}$									
	Sec. 24: A11		Effective 4-1-77							
	Sec. 25: A11									
	Sec. 36: A11		Expires 3-31-87							
17.	T32N-R5W, N.M.P.M.	639.16	NM-30586	U.S.A.-A11	Kindermac Partners, a Colorado general partnership	100%	Chevron U.S.A. Inc. Genevieve A. Shields	4.5% 3%	Kindermac Partners, a Colorado general partnership	100%
	Sec. 13: Lots 1(39.42), 2(39.67), 3(39.91), 4(40.16), W $\frac{1}{2}$ E $\frac{1}{2}$		Effective 8-1-77							
	Sec. 24: W $\frac{1}{2}$		Expires 7-31-87							

18.	<u>T32N-R5W, N.M.P.M.</u> Sec. 28: $E\frac{1}{2}$	320.00	NM-54974	U.S.A.-A11	Dugan Production Corpora- tion	100%	None	Dugan Production Corpora- tion	100%
			Effective 3-1-78						
			Expires 2-28-88						
19.	<u>T32N-R4W, N.M.P.M.</u> Sec. 15: $W\frac{1}{2}$ Sec. 22: A11 Sec. 27: $N\frac{1}{2}$ Sec. 34: A11	1,920.00	NM-59696	U.S.A.-A11	Amoco Production Company	100%	A.G. Andrikopoulos	7.5%	Amoco Production Company 100%
			Effective 4-1-85						
			Expires 3-31-95						
20.	<u>T32N-R5W, N.M.P.M.</u> Sec. 11: $SW\frac{1}{4}$ Sec. 14: $E\frac{1}{2}$ Sec. 23: $W\frac{1}{2}$ Sec. 25: $SE\frac{1}{4}$ Sec. 26: $E\frac{1}{2}$ Sec. 35: $NW\frac{1}{4}$ Sec. 36: $W\frac{1}{2}$	1,760.00	NM-59704	U.S.A.-A11	Jerome P. McHugh	100%	F. L. Shogrin M. W. Casagrande	3% 2%	Jerome P. McHugh 100%
			Effective 2-1-86						
			Expires 1-31-96						

21.	<u>T32N-R4W, N.M.P.M.</u> Sec. 7: Lots 6(28.16), 7(27.99), 8(27.78)	83.93	NM-61909	U.S.A.-A11	M. J. Harvey Jr.	100%	None	M. J. Harvey Jr.	100%
			Effective 9-1-85						
			Expires 8-31-95						
22.	<u>T32N-R4W, N.M.P.M.</u> Sec. 27: S $\frac{1}{2}$	320.00	NM-66864	U.S.A.-A11	Michael R. Diefenderfer	100%	None	Michael R. Diefenderfer	100%
			(Not yet issued)						
23.	<u>T32N-R4W, N.M.P.M.</u> Sec. 7: Lots 5(34.63), 9(23.98), SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 32: S $\frac{1}{2}$	2,969.90	Unleased	U.S.A.-A11	Unleased		None	Unleased	
	<u>T31N-R5W, N.M.P.M.</u> Sec. 1: Lots 1(11.94), 2(12.01), SE $\frac{1}{4}$								
	<u>T32N-R5W, N.M.P.M.</u> Sec. 7: Lots 1(22.48), 2(44.29), 3(44.44), 4(44.59)								
	Sec. 8: Lots 1(19.79), 2(19.95), 3(20.09), 4(20.25), S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$								
	Sec. 9: Lot 4(19.70), SW $\frac{1}{2}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$								

23. Cont'd
 Sec. 10: Lots 1(18.92), 2(19.10),
 3(19.26), 4(19.44), S $\frac{1}{2}$ N $\frac{1}{2}$
 Sec. 11: Lots 1(18.70), 2(18.74),
 3(18.78), 4(18.82), S $\frac{1}{2}$ N $\frac{1}{2}$
 Sec. 16: E $\frac{1}{2}$
 Sec. 17: All

24. T31N-R5W, N.M.P.M. 848.60 Unleased U.S.A.-All Unleased None Unleased
 Sec. 2: Lots
 1(12.19), (KGS)
 2(12.16),
 4(12.11), S $\frac{1}{2}$

T32N-R5W, N.M.P.M.
 Sec. 34: S $\frac{1}{2}$
 Sec. 35: SW $\frac{1}{4}$

25. T32N-R5W, N.M.P.M. 160.00 Unleased U.S.A.-All Unleased None Unleased
 Sec. 16: W $\frac{1}{2}$ W $\frac{1}{2}$ (NOL)

25	FEDERAL	TRACTS	TOTALING	29,657.47	ACRES	OR	97.71%	OF	UNIT	AREA
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PATENTED LANDS:

26.	T32N-R4W, N.M.P.M. Sec. 10: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 11: Lot 8(27.80), SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 14: NW $\frac{1}{4}$ NW $\frac{1}{4}$	147.80	10-15-86	Eduvigen M. Gallegos Jose Roque Gallegos 16.66667% (.125)	50% (.125)	Jerome P. McHugh 100%	None	Jerome P. McHugh
			10-16-86	Sarah Gallegos Romero and Dan Romero 16.66667% (.125)				
			10-27-86	Aurelio Gallegos Jr. and Della M. Gallegos 16.66667% (.125)				
			10-27-86					
27.	T32N-R4W, N.M.P.M. Sec. 14: SW $\frac{1}{4}$ NW $\frac{1}{4}$	40.00	10-21-86	Maybelle Taylor Diane R. Wynne and John C. Wynne Trust, dated 6-21-82 20% (.1875)	50% (.1875)	H.B.A. Oil Company 100%	None	H.B.A. Oil Comp
			10-21-86					
			10-21-86	J. Bryce Wynne and Mary Ann Wynne, Co-Trustees (.1875)				
28.	T32N-R4W, N.M.P.M. Sec. 14: NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 15: E $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	160.00	10-10-86	Viola H. Armenta and Tomas Armenta 16.66667% (.125)		H.B.A. Oil Company 100%	None	H.B.A. Oil Comp

28.	Cont'd		10-10-86	Frances Cordova, a/k/a Maria F. Cordova and A. B. Cordova	16.66667% (.125)				
			10-10-86	Rebecca Garcia	16.66667% (.125)				
			Unleased	Felipe Madrid Estate	50%	Unleased	100%	None	
29.	<u>T32N-R4W, N.M.P.M.</u>	84.91	Unleased	Manuelita Madrid Estate	100%	Unleased	100%	None	Unleased 100%
	<u>Sec. 10: Lots</u>								
	6(28.37),								
	7(28.26),								
	8(28.28)								
30.	<u>T32N-R4W, N.M.P.M.</u>	85.82	Unleased	Roque Gallegos Estate	100%	Unleased	100%	None	Unleased 100%
	<u>Sec. 8: Lot</u>								
	5(28.61),								
	<u>Sec. 9: Lots</u>								
	7(28.56),								
	8(28.65)								
31.	<u>T32N-R4W, N.M.P.M.</u>	55.91	Unleased	James W. Troxell and Wanda Troxell, joint tenants	100%	Unleased	100%	None	Unleased 100%
	<u>Sec. 9: Lots</u>								
	5(27.96),								
	6(27.95)								

32.	T32N-R4W, N.M.P.M.	65.00	Unleased	J. C. Montoya, a/k/a Carlos Montoya and Lou Deane Montoya	100%	Unleased	None	Unleased		
	Sec. 14: W $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$									
	Sec. 23: NW $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$, NW $\frac{1}{2}$ SW $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$									
	E $\frac{1}{2}$ SW $\frac{1}{2}$ NW $\frac{1}{2}$ NW $\frac{1}{4}$									
	NE $\frac{1}{2}$ NW $\frac{1}{2}$ SW $\frac{1}{2}$ NW $\frac{1}{4}$									
	E $\frac{1}{2}$ SW $\frac{1}{2}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{2}$ NW $\frac{1}{2}$ NW $\frac{1}{4}$									
33.	T32N-R4W, N.M.P.M.	55.00	Unleased	James A. West and Mary Lou West, joint tenants	50%	Unleased	None	Unleased		
	Sec. 23: E $\frac{1}{2}$ NW $\frac{1}{2}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{2}$ SW $\frac{1}{2}$ SW $\frac{1}{4}$									
	N $\frac{1}{2}$ SE $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{2}$ SE $\frac{1}{2}$ SW $\frac{1}{4}$		Unleased	W. W. West and Lucille S. West, joint tenants	50%					
8	PATENTED	TRACTS	TOTALING	694.44	ACRES	OR	2.29%	OF	UNIT	AREA
33	TRACTS	TOTALING	30,351.92	ACRES	IN	UNIT	AREA			

November 17, 1986

To: All Leasehold and Working Interest Owners
(See Addressee List Attached)

Re: Carracus Canyon Unit
T32N-R4 & 5W
T31N-R5W
Rio Arriba County, New Mexico

Gentlemen:

Jerome P. McHugh is in process of forming a Federal exploratory unit covering approximately 30,720.31 acres in the captioned lands for the drilling of an approximate 8000' Dakota test.

In compliance with the notice requirements of the New Mexico Oil Conservation Division, we have filed an application with said Commission which is scheduled to be heard on December 17, 1986 in Santa Fe. A copy of our application is enclosed.

Very Truly Yours,


Kent C. Craig

KCC/rm

enclosure

Jerome P. McHugh & Associates
Operating Affiliate: Nassau Resources, Inc.
650 South Cherry, Suite 1225
Denver, Colorado 80222
(303) 321-2111

BEFORE EXAMINER CATANACH	
OIL CONSERVATION DIVISION	
<u>McHugh</u>	EXHIBIT NO. <u>4</u>
CASE NO: <u>9030</u>	

ADDRESSEE LIST

Mitchell Energy Corporation
Box 4000
The Woodlands, Texas 77380

Meridian Oil Inc.
P. O. Box 4289
Farmington, New Mexico 87499

Amoco Production Company
1670 Broadway
P. O. Box 800
Denver, Colorado 80201

Dalport Oil Corporation
3471 First National Bank Building
Dallas, Texas 75202

Celeste C. Grynberg
1050 17th Street, Suite 1950
Denver, Colorado 80265

Chevron USA Inc.
P. O. Box 1150
Midland, Texas 79702

Frontier Energy Corporation
1360 Post Oak, Suite 790
Houston, Texas 77056

Dugan Production Corporation
P. O. Box 208
Farmington, New Mexico 87499

M. J. Harvey, Jr.
P. O. Box 12705
Dallas, Texas 75225

Michael R. Diefenderfer
44 Inverness Dr., Bldg. D
Englewood, Colorado 80112

Abelino Gallegos and
Amalia C. Gallegos
Pagosa Junction, Colorado 81147

Mario J. Cordova and
Annie R. Cordova
P. O. Box 2874
Farmington, New Mexico 87499

Jose Nemecio Gallegos
Pagosa Junction, Colorado 81147

Eduvigen Gallegos
P. O. Box 425
Ignacio, Colorado 81137

Jose Roque Gallegos
P. O. Box 425
Ignacio, Colorado 81137

Sara Gallegos Romero
4989 Farnham Dr.
Newark, California 94560

Aurelio Gallegos, Jr.
1208 Fairview Pl.
Farmington, New Mexico 87401

Luz M. Gallegos
General Delivery
Tierra Amarilla, New Mexico 87575

Tonita G. Cordova and
Mike T. Cordova
Box 83
Lumberton, New Mexico 87547

James Troxell and
Wanda Troxell
Carracas, Colorado 81147

Sophia Martinez
Star Route, Box 33
Pagosa Springs, Colorado 81147

Estate of Pablita Martinez
c/o District Court, Case #RA 81-23(P)
Santa Fe, New Mexico

Addressee List
Page Two

Edward Gallegos, Jr.
6468 W. Arbor Drive
Littleton, Colorado 80123

Albert Gallegos
1692 S. Yukon
Lakewood, Colorado 80215

J. C. Montoya and
Lou Deane Montoya
2258 21st Avenue
San Francisco, California 94116

James A. West
c/o West Properties
401 N. Colorado, Suite 103
Midland, Texas 79701

W. W. West Estate
c/o West Properties
401 N. Colorado, Suite 103
Midland, Texas 79701

December 15, 1986

TO: The Director
Bureau of Land Management
Washington, D.C. 20025

THROUGH: District Manager
Bureau of Land Management
435 Mantano N.E.
Albuquerque, NM 87107
Attn: Fluid Minerals

Re: Application for Designation of
Proposed Unit Area and Determination
of Depth of Test Well for the
Carracas Canyon Unit Area
Rio Arriba County, New Mexico

Dear Sir:

Attached hereto is a map, marked Exhibit "A", on which the proposed Carracas Canyon Unit is outlined. We request that 30,351.91 acres, more or less, of Federal and Patented lands within the outline be designated as a logical Unit Area pursuant to the unitization provisions of the Mineral Leasing Act, as amended. The proposed Unit Area of 30,351.91 acres, more or less, is composed of 29,657.47 acres (97.71%) of Federal lands and 694.44 acres (2.29%) of Patented lands.

For the lands within the proposed Unit Area, we refer you to the attached Exhibit "A", which shows, in addition to the proposed Unit boundary, the boundaries and identity of the various tracts and leases in the proposed Unit Area to the extent of our present knowledge. The serial numbers of all Federal leases within the proposed Unit are listed on Exhibit "B", hereto attached.

It is requested that two test wells, drilled to a depth of 8,020 feet, or to test the upper 200 feet of the Dakota formation, whichever is the lesser depth, unless commercial production in paying quantities, as defined in the Unit Agreement, is encountered at a lesser depth, be approved as the required test wells.

Jerome P. McHugh & Associates
Operating Affiliate: Nassau Resources, Inc.
Suite 1225, 650 South Cherry
No. 1074
P.O. Box 22557
Denver, Colorado 80222
(303) 321-2111

BEFORE EXAMINER CATANACH	
OIL CONSERVATION DIVISION	
<i>McHugh</i>	EXHIBIT NO. <u>5</u>
CASE NO. <u>9030</u>	

Carracas Canyon Unit Area
Page 2

Jerome P. McHugh and Associates anticipates submitting, at a later date, a standard form Unit Agreement (1983 reprint) which will deviate from the standard form as follows:

1. Add provisions required by the Oil Conservation Division of the New Mexico Energy and Minerals Department.
2. Preface Subsection 2(e) with "Notwithstanding any prior elimination under the Drilling to Discovery Section...."
3. Insert the following as a new third paragraph of Section 9:

Notwithstanding anything in this agreement to the contrary, except Section 25, "Unavoidable Delay", two (2) wells shall be drilled with not more than six (6) months time elapsing between the completion of the first well and commencement of drilling operations for the second well; regardless of whether a discovery has been made in any well drilled under this provision. The initial test well must be drilled in compliance with the above specified formation or depth in order to meet the dictates of this section. The additional test well shall be diligently drilled at a location approved by the AO to a depth of 8,020 feet, or to test the upper 200 feet of the Dakota formation. The second well must be located a minimum of $2\frac{1}{2}$ miles from the initial well in order to be accepted by the AO as the second unit test well, within the meaning of this section. Nevertheless, in the event of the discovery of unitized substances in paying quantities by any well, this unit agreement shall not terminate for failure to complete the two well program, but the Unit Area shall be contracted automatically, effective the first day of the month following the default, to eliminate by subdivisions (as defined in Section 2(e) hereof) all lands not then entitled to be in a participating area.

4. Add the following as a new first sentence to the first paragraph of Section 11:

PARTICIPATION AFTER DISCOVERY. Determination as to whether a well completed within the Unit Area prior to the effective date of this agreement is capable of producing unitized substances in paying quantities shall be deferred until an initial Participating Area is established as the result of the completion of a well for production in paying quantities, in accordance with Section 9 hereof.

Carracas Canyon Unit Area

Page 3

To the best of our knowledge, there are no Federal lands within the proposed Unit Area requiring the inclusion of special provisions in the Unit Agreement other than those set forth above.

In support of this Application, we are submitting separately, in duplicate, a geological report with a map showing the geologic conditions within the proposed Unit Area. It is requested that this information be held confidential.

Please transmit all correspondence regarding this Application to Edmundson & Associates, P. O. Box 1707, Denver, Colorado 80201.

Very truly yours,

JEROME P. McHUGH AND ASSOCIATES

By _____

/lfg

Enclosures

EXHIBIT "B"
AREA AND DEPTH APPLICATION
CARRACAS CANYON UNIT AREA
RIO ARriba COUNTY, NEW MEXICO

<u>TRACT NUMBER</u>	<u>FEDERAL SERIAL NUMBER</u>	<u>EXPIRATION DATE</u>
1	NM-02850	HBP
2	NM-28277	HBP
3	NM-28812	10-31-86 (in suspense)
4	NM-28813	4-30-91
5	NM-29339	3-31-87
6	NM-29340	1-31-87
7	NM-29341	1-31-87
8	NM-29342	1-31-87
9	NM-29343	3-31-87
10	NM-29760	4-30-87
11	NM-30014	4-30-87
12	NM-30015	5-31-87
13	NM-30016	4-30-87
14	NM-30351	5-31-87
15	NM-30584	7-31-87
16	NM-30585	3-31-87
17	NM-30586	7-31-87
18	NM-54974	2-28-88
19	NM-59696	3-31-95
20	NM-59704	1-31-95
21	NM-61909	7-31-95
22	NM-66864	Not issued yet
23	Unleased	Unleased
24	Unleased (KGS)	Unleased (KGS)
25	Unleased (NOL)	Unleased (NOL)

**PROPOSED CARRACAS CANYON FEDERAL
EXPLORATORY UNIT
RIO ARRIBA COUNTY, NEW MEXICO**

PROPOSAL

Jerome P. McHugh & Associates proposes the formation of a federal exploratory unit comprising approximately 30,340 acres in Township 32 North, Ranges 4 and 5 West, Rio Arriba County, New Mexico (see figure 1). The proposed initial well is a 8,020-foot Dakota test in the NW/4NW/4 of Section 14, T32N-R4W (1,100 feet from north line, 1,100 feet from west line, at an approximate ground elevation of 6,250 feet - see figure 2).

LOCATION, PHYSIOGRAPHY, AND ACCESS

The proposed Carracas Canyon Unit comprises approximately 30,340 acres in the Carson National Forest, and is bounded to the north by the Colorado-New Mexico State line, to the east by the Jicarilla Apache Indian Reservation, to the west by BLM-administered lands adjacent to the San Juan fork of the Navajo Reservoir, and to the south by the Amoco-operated Rosa Unit.

Physiographically, the proposed Unit area is characterized by deeply incised canyon and mesa topography with relief up to 1,400 feet. Elevations range from 6,200 feet along the San Juan River on the northern boundary to 7,600 feet along the Carracas Rim. Approximately 90% of the lands within the proposed Unit outline are forested by juniper, small pine, and pinyon, with assorted native shrubs and grasses.

Access is limited to the Carracas Mesa Road (USFS No. 218), an improved dirt road which transects the Unit area from northwest to southeast, the Buzzard Canyon-American Mesa Road (USFS No. 310), an improved dirt road providing access from New Mexico 64 (24 miles south), the Cañon Banco-Laguna Seca Road (USFS No. 308-309), an improved dirt road servicing producing gas wells southwest of the proposed Unit, and several primitive roads used in the drilling of early test holes in the area.

With the exception of the isolated homestead fee tracts situated in Carracas Canyon proper (northeast portion of the proposed Unit area), nearly all (approximately 95%) of the surface and minerals are administered and owned by the U. S. Government.

BEFORE EXAMINER CATANACH	
OIL CONSERVATION DIVISION	
<i>McHugh</i>	EXHIBIT NO. <u>6</u>
CASE NO.	<u>9030</u>

TECHNICAL JUSTIFICATION

INTRODUCTION

The proposed Carracas Canyon Unit is designed to develop, produce, and market gas reserves from four primary producing intervals as a single operational entity. To achieve operational efficiency and economies of scale, consideration has been given to numerous factors, the most notable of which, and the subject of the following discussion, is the geology of the proposed Unit area. Additional factors considered in developing the proposed Unit area include proximity to market outlets (pipeline hookups), access, topography, geologic risk, and project economics.

GEOLOGY

REGIONAL SUMMARY

The Carracas Canyon area is situated on the northeast flank of the San Juan Basin, adjacent to and on the west flank of the northwest-southeast trending Archuleta Anticlinorium. The proposed Unit area lies along the northeast boundary of the Blanco Mesaverde gas pool, east of the South Los Pinos (T32N-R6-7W) Pictured Cliffs gas pool, and northeast of the Rosa Gallup gas pool.

STRATIGRAPHY

The primary objectives of exploratory drilling in the proposed Unit area are gas-productive sand reservoirs in the (Cretaceous) Pictured Cliffs, Mesaverde, and Dakota formations. Fractured shales and silts of the Niobrara (Gallup) interval are also of interest.

A stratigraphic cross-section (Figure 3), traversing the proposed Unit from west to east (see Figure 4), has been prepared to depict the prospective nature of the four objective intervals. The low-permeability, nearshore marine sandstones of the Upper Cretaceous Pictured Cliffs range from approximately 2,300 to 4,200 feet in depth. Thickness of the unit varies, but actual sand development will range from 40 to 80 feet. The Pictured Cliffs interval is expected to be encountered at a depth of approximately 2,920 feet in the proposed initial well. Based on the existing control, the Pictured Cliffs should be uniformly prospective throughout the proposed Unit area, although the threshold for economic production, from basin-wide production figures, occurs from Pictured Cliffs depths in excess of 2,500 feet.

The Upper Cretaceous Mesaverde Group consists of three basic units, all of which are potentially productive in the proposed Unit area: the basal regressive Point Lookout Sandstone, the fluvial sands and coals of the Menefee formation, and the transgressive marine sandstone units of the Cliffhouse Formation. In general, permeabilities are quite low (.2-2 millidarcies) in productive Mesaverde sands; differences in productivity are therefore attributable primarily to degree and frequency of natural fracturing. Because of its greater continuity and thickness, the Point Lookout formation is the more likely candidate for significant gas reserves in the Unit area. The range in depth across the area is expected to be 5,000 to 7,000 feet, and the top of the Mesaverde group in the proposed initial well is expected to be 5,370 feet. Correlations of the individual units, because of lack of control, are problematic within the proposed Unit area, and await resolution by the drill. The Mesaverde group produces economic volumes of dry gas along the southwest boundaries of the proposed Unit, and is expected to be uniformly prospective across the area.

The Niobrara (Gallup) formation, of Upper Cretaceous age, consists of marine shales and siltstones with minor (thin) limestone beds, bentonites, and offshore sand bodies. Although the interval is oil productive along the south and east flanks of the Basin, the Niobrara is indicated to be gas productive in the proposed Unit area. Minor Niobrara gas production occurs along the southwest boundaries. The range of depths across the area is expected to be 6,200-8,500 feet. Commercial gas production in the Niobrara interval, for the expected depths, will be coincident with the development of adequate natural and induced fracture permeability. The proposed Unit outline encompasses an area with optimum fracture potential, combining as it does a prominent flexure (anticline-syncline-anticline sequence) with brittle, fracture-prone lithologies encased in plastic shales.

The Upper Cretaceous Dakota formation is a series of sand units that become progressively more marine upwards due to transgression of epeiric seas. The upper Dakota ("A" and "B") sands provide the majority of oil and gas production from the interval. As with all of the sand reservoirs in the Cretaceous system, permeabilities are generally quite low. The range in drilling depths to Dakota is 7,000 to 9,000 feet, with sand thicknesses ranging from 25 to 70 feet. The expected drilling depth in the initial well is 7,770 feet. The interval produces commercial quantities of gas along the southwest boundary of the proposed Unit area, and is expected to be uniformly prospective throughout the area.

Although sand reservoirs in the Pictured Cliffs, Mesaverde, and Dakota formations are generally discontinuous on a regional scale, the nature of the trapping mechanisms responsible for gas production is not well understood, particularly in the Carracas Canyon area. Local changes in permeability are most often suggested as a trapping mechanism, although hydrodynamic forces almost certainly have an effect along the Basin flanks. At any rate, all three units are prospective in the proposed Unit area, and there is no evidence to suggest the current limits of gas production along the southwest boundary are related to either of these mechanisms.

A secondary objective that bears consideration during drilling is the overpressured sands and associated coal intervals of the Upper Cretaceous Fruitland formation. Although the low gas volumes and water disposal problems mitigate its attractiveness, completion technology and a solid reserve base developed in the primary objectives certainly enhance its potential.

STRUCTURE

The regional structural "strike" is generally northwest-southeast along the Archuleta Arch. Numerous flank anticlines, such as Barella Dome east of the proposed Unit area (T32N-R3W), create minor anomalies in the regional strike. One such anomaly is the anticline-syncline pair suggested by the subsurface control in the area (Figure 4). Although derived from limited control, such a feature could be quite significant in terms of potential enhanced natural fracturing of the objective intervals, as alluded to above. The proposed Unit area encompasses substantially all of this structural entity, and is a primary justification for the prediction of uniform potential in the four primary objectives.

SUMMARY

The geologic attributes are the primary criteria by which the proposed Unit area was selected. The initial well (NW/4NW/4 of Section 14, T32N-R4W), an 8,020-foot Dakota test, is intended as a test of the four units most likely to yield the quantities of gas necessary to justify the capital expenditure for a pipeline project. Furthermore, this well, as a significant exploratory venture six miles from the nearest market outlet (and, under current product prices, far below economic thresholds), is designed to "prove up" a substantial portion of the Unit acreage and provide the basis for refining both project economics and future development of Unit acreage.