

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION COMMISSION

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

CASE NO. 8190
Order No. R-7556

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR TEMPORARY SPECIAL
SPACING RULES, UNION, HARDING, AND
QUAY COUNTIES, NEW MEXICO.

See Also Order

No. R-7556-A

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on May 15, 1984, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 19th day of June, 1984, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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, Amoco Production Company, hereinafter referred to as "Amoco", as unit operator for the Bravo Dome Carbon Dioxide Gas Unit Area, hereinafter referred to as the "Unit", seeks the promulgation of temporary spacing rules for the Unit and for a distance of one mile outside the Unit, including a provision for 640-acre spacing and proration units and specified well locations.

(3) That the Unit, the outer boundaries of which encompass some one million acres, more or less, lies within all or portions of Township 16 North, Ranges 34 and 35 East, Townships 17 and 18 North, Ranges 30 through 37 East, Township 19 North, Ranges 29 through 36 East, Townships 20 and 21 North, Ranges 29 through 35 East, and Township 24 North, Ranges 31 through 34 East, NMPM, Union, Harding, and Quay Counties, New Mexico.

(4) That with the exception of certain areas in the Western and Southwestern portion of the Unit, a high percentage of the owners have ratified the Unit Agreement, and their lands are committed to the Unit.

(5) That in the Western and Southwestern portion of the unit, specifically in Townships 17 and 18 North, Ranges 30 and 31 East, Townships 19 and 20 North, Ranges 29, 30, and 31 East, and Township 21 North, Range 29 East, NMPM, Harding County, New Mexico, a large percentage of the owners have not ratified the Unit Agreement, and their lands are not committed to the Unit.

(6) That in support of its application for 640-acre spacing, Amoco offered certain geological, engineering, and economic data relating to quantity and quality of pay, long-term flow tests, and well economics.

(7) That a large portion of the data presented was developed from analysis of wells drilled in the Eastern part of the Unit, where the Bravo Dome carbon dioxide reservoir(s) are of superior quality to the carbon dioxide reservoir(s) in the Western and Southwestern portion of the Unit.

(8) That the owners of lands in the Western and Southwestern portion of the Unit appeared at the hearing and objected to the adoption of temporary 640-acre spacing and specified well locations.

(9) That some of said owners have drilled and produced carbon dioxide wells and have built and operated carbon dioxide processing plants in the area for many years, while others of said owners are currently engaged in drilling wells and designing plants for the purpose of carbon dioxide gas production and processing in the near future.

(10) That all of the aforesaid well drilling, plant construction, and plant design has been in good faith reliance upon the 160-acre spacing rules now in existence.

(11) That to change the spacing of wells in the Western and Southwestern portion of the Unit would impair the correlative rights of those owners who have invested in and planned for the development of their properties in reliance upon the existing 160-acre spacing rules, and would force the cancellation of certain plans for the drilling and development of carbon dioxide reserves and for plant construction, thereby causing waste and imposing an unjustified economic hardship upon said owners.

(12) That the evidence presented at the hearing establishes that the quantity and quality of the pay deteriorates from East to West.

(13) That the quantity and quality of the pay is considerably better in the area in which Amoco has drilled the vast majority of its wells, and in which the interference tests and long-term flow tests were conducted.

(14) That the quantity and quality of the pay is considerably poorer in the Western and Southwestern portion of the Unit where the protestant owners have drilled wells and have built and are planning to build carbon dioxide gas processing plants.

(15) That no evidence was presented at the hearing to support Amoco's contention that one well will efficiently and economically drain 640 acres in the Western and Southwestern portion of the Unit.

(16) That while the geological, engineering, and economic evidence presented by Amoco may justify the adoption of 640-acre spacing throughout certain portions of the Unit Area on a temporary basis, said evidence does not support -- even on a temporary basis -- any geological, engineering or economic, or other valid and compelling justification within the jurisdiction of the Commission, for such spacing in the Western and Southwestern portion of the Unit Area.

(17) That the application for 640-acre spacing in the Western and Southwestern portion of the Bravo Dome Carbon Dioxide Gas Unit Area should be denied, and such denial should be applicable to those lands lying in the area in which the reservoir characteristics are not conducive to good drainage.

(18) That such lands as described in Finding No. 17 above in which the application should be denied and which should continue to be spaced in accordance with Rule 104 of the Division Rules and Regulations are those lands within the Unit Area in Townships 17 and 18 North, Ranges 30 and 31 East, Townships 19 and 20 North, Ranges 29, 30, and 31 East, NMPM, Harding County, New Mexico, and as more specifically defined in Exhibit "A" attached hereto and made a part hereof, and said lands should be known as the "Bravo Dome 160-acre Area".

(19) That the geological and engineering evidence presented at the hearing justifies the approval of 640-acre spacing on a temporary basis for those remaining lands in the Unit Area, and outside the Unit Area but within one mile

thereof and defined in Exhibit "A" attached hereto, but not within the lands described in Finding No. (18) above.

(20) That approval of the application for said lands, will prevent waste, protect correlative rights, will permit the more rapid development and evaluation of said lands, expedite evaluation of said lands, and expedite the gathering of reservoir data in the area.

(21) That the area approved for temporary 640-acre spacing should be known as the "Bravo Dome 640-acre Area," and should comprise those lands defined in Exhibit "B" attached hereto and made a part hereof, as well as those lands outside the Unit Area but within one mile thereof but not within the 160-acre area (the lands defined in Exhibit "A" attached hereto).

(22) That Special Rules and Regulations for the Bravo Dome 640-acre Area should be promulgated, and said rules should provide for 640-acre spacing with the spacing and proration units to comprise a single governmental section; further that the rules should specify that wells be located no nearer than 1,650 feet to the outer boundary of the spacing and proration unit nor nearer than 330 feet to any governmental quarter-quarter section line.

(23) That the vertical limits of the Bravo Dome 640-acre Area should be the Tubb formation (from the base of the Cimarron Anhydrite to the top of the Granite).

(24) That the Special Rules and Regulations for the Bravo Dome 640-acre Area should remain in effect for a period of three years from date of entry of this Order.

(25) That Amoco Production Company should be required to submit a plan, which plan should include extensive shut-in periods for one or more Unit wells, to demonstrate the drainage efficiency of wells located on 640-acre spacing units.

(26) That this case should be reopened at a hearing in June, 1987, at which time Amoco and other interested parties should appear and show cause why the Bravo Dome 640-acre Area should not be developed on less than 640-acre spacing and proration units.

(27) That that portion of Order No. R-6645 relating to denial of 640-acre spacing should be superseded but that portion of said Order relating to administrative approval for the reinjection of carbon dioxide gas for the purpose of testing wells and production facilities should remain in effect.

IT IS THEREFORE ORDERED:

(1) That the application of Amoco Production Company for the promulgation of temporary special spacing rules for the Bravo Dome Carbon Dioxide Gas Unit Area to provide for 640-acre spacing and specified well locations within said Unit Area and outside the Unit Area but within one mile thereof is hereby denied.

(2) That the "Bravo Dome 160-acre Area" is hereby established comprising those lands defined in Exhibit "A" attached hereto and made a part hereof.

(3) That said Bravo Dome 160-acre Area shall be spaced, drilled, and operated in accordance with the Division Rules and Regulations, particularly with respect to those rules governing 160-acre gas well spacing.

(4) That the "Bravo Dome 640-acre Area" is hereby established comprising those lands defined in Exhibit "B" attached hereto and made a part hereof.

(5) That the vertical limits of the Bravo Dome 640-acre Area shall be the Tubb formation (from the base of the Cimarron Anhydrite to the top of the Granite).

(6) That 640-acre spacing and proration units and limited well locations, being no closer than 1,650 feet to the outer boundary of the unit and no closer than 330 feet to any governmental quarter-quarter section line, are hereby established for the Bravo Dome 640-acre Area for a period not to exceed three years from date of entry of this Order.

(7) That effective July 1, 1984, special rules and regulations for the Bravo Dome 640-acre Area in Union, Harding, and Quay Counties, New Mexico, as more fully described in Exhibit "B" attached to this Order and made a part hereof, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
BRAVO DOME 640-ACRE AREA

RULE 1. Each well completed or recompleted in the Bravo Dome 640-acre Area shall be spaced, drilled, and operated in accordance with the Special Rules and Regulations hereinafter set forth, that these rules shall be applicable to the Tubb formation outside the Bravo Dome 640-acre Area but not within the Bravo Dome 160-acre Area.

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter sections in the unit.

RULE 3. The Director of the Oil Conservation Division may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

- (a) The non-standard unit consists of quarter-quarter section or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a governmental section and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning lands in the section in which the non-standard unit is situated which lands are not included in said non-standard unit.
- (d) In lieu of Paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Director has received the applications.

RULE 4. Each well shall be located no nearer than 1,650 feet to the outer boundary of the section and no nearer than 330 feet to any governmental quarter-quarter section line; provided, however, that any subsequent wells drilled on a unit shall be located no nearer than 1,320 feet from any existing well drilling to or capable of producing from the Bravo Dome 640-acre Area, and provided, further, that in the case of a 640-acre unit offset by a spacing and proration unit of 160 acres or less in an area spaced on 160 acres which has thereon a well completed in and capable of producing from the

equivalent vertical limits of the Bravo Dome 640-acre Area, the 640-acre unit well may be located equidistant from the common line between the units as the well on the lesser sized unit.

RULE 5. The Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions. All operators offsetting the spacing and proration unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all operators offsetting the spacing and proration unit or if no objection to the unorthodox location has been entered within 20 days after the Director has received the application.

IT IS FURTHER ORDERED:

(1) That within 60 days following entry of this Order, Amoco Production Company shall submit a plan, acceptable to the Director of the Oil Conservation Division, to demonstrate the drainage efficiency of wells located on 640-acre spacing units which plan should include extensive shut-in periods for one or more Unit wells.

(2) That this case shall be reopened in June, 1987, at which time the applicant herein or other interested parties may appear and show cause why the Bravo Dome 640-acre Area should not be developed on less than 640-acre spacing and proration units.

(3) That that portion of Order No. R-6645 relating to spacing is hereby superseded but that portion of said Order relating to the reinjection of gas for test purposes shall remain in full force and effect.

(4) That the locations of all wells presently drilling to or completed in the Bravo Dome 640-acre Area are hereby approved; that the operator of any well having an unorthodox location shall notify the Santa Fe District Office of the Division in writing of the name and location of the well on or before August 1, 1984.

(5) That, pursuant to Paragraph A. of Section 70-2-18, NMSA 1978, contained in Chapter 271, Laws of 1969, existing wells in the Bravo Dome 640-acre Area shall have dedicated thereto 640 acres in accordance with the foregoing pool rules, or, pursuant to Paragraph C. of said Section 70-2-18, existing

wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

(6) That failure to file new Forms C-102 with the Division dedicating 640 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this Order shall subject the well to being shut-in. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to the 60-day limitation, each well presently drilling to or completed in the Bravo Dome 640-acre Area shall receive no approved Form C-104, provided, however, that no further approval shall be required for any non-standard spacing and proration unit comprising less than 160 acres or for any 160-acre unit consisting of other than a single governmental quarter section, provided such unit has previously been approved by order of the Division.

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

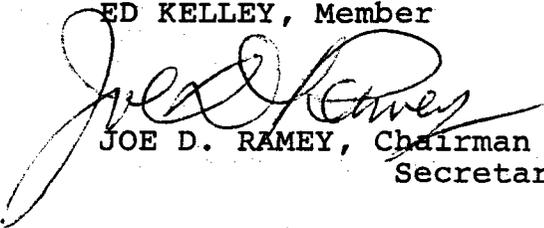
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JIM BACA, Member



ED KELLEY, Member



JOE D. RAMEY, Chairman and
Secretary

S E A L

BRAVO DOME 160-ACRE AREA

HARDING COUNTY

TOWNSHIP 17 NORTH, RANGE 30 EAST, NMPM

Section 1: N/2, SE/4 and E/2 SW/4
Section 11: SE/4 and E/2 SW/4
Section 12: E/2, SW/4 and E/2 NW/4
Section 13: All
Section 14: E/2, E/2 W/2 and SW/4 NW/4
Section 15: SE/4 NE/4
Section 22: SE/4 SE/4
Sections 23 through 25: All
Section 26: NE/4 and E/2 NW/4
Section 27: NE/4 NE/4
Section 35: SE/4
Section 36: All

TOWNSHIP 17 NORTH, RANGE 31 EAST, NMPM

Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 30 EAST, NMPM

Sections 1 and 2: All
Section 3: E/2 E/2 and SW/4 SE/4
Section 10: E/2 NE/4
Section 11: N/2
Sections 12 through 14: All
Section 23: E/2 and E/2 W/2
Section 24: All
Section 25: E/2, E/2 W/2, W/2 NW/4 and NW/4 SW/4
Section 26: NE/4, E/2 NW/4 and N/2 S/2
Section 36: All

TOWNSHIP 18 NORTH, RANGE 31 EAST, NMPM

Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 29 EAST, NMPM

Section 1: NE/4 and E/2 NW/4

TOWNSHIP 19 NORTH, RANGE 30 EAST, NMPM

Sections 1 through 4: All
Section 5: E/2
Section 6: E/2 SE/4, NW/4 SE/4 and NE/4 SW/4
Section 7: NE/4 NE/4, E/2 SE/4, SW/4 SE/4 and
SE/4 SW/4
Sections 8 through 16: All
Section 17: N/2 and SE/4
Section 18: NE/4 NE/4
Section 20: W/2 NE/4 and S/2 SE/4

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Exhibit "A"

Page 1 of 2

TOWNSHIP 19 NORTH, RANGE 30 EAST, NMPM
Sections 21 through 28: All
Section 29: NE/4
Section 32: NE/4 NE/4
Section 33: NW/4, W/2 NE/4, NE/4 NE/4,
NW/4 SE/4 and NE/4 SW/4
Section 34: N/2 and E/2 SE/4
Sections 35 and 36: All

TOWNSHIP 19 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 29 EAST, NMPM

Sections 1 and 2: All
Section 3: E/2, SW/4, S/2 NW/4 and Lot 3
Section 4: Lot 4, SE/4 NE/4 and E/2 SE/4
Section 5: SW/4 and SW/4 SE/4
Section 6: Lots 1, 2, and 3, SE/4 NW/4,
S/2 NE/4, SE/4 and NE/4 SW/4
Section 7: Lots 2 and 3, NE/4 SW/4 and N/2 SE/4
Section 8: NW/4 NW/4 and W/2 SW/4
Section 9: NE/4 NW/4, NE/4 and E/2 E/2
Sections 10 through 15: All
Section 16: E/2, NE/4 NW/4, S/2 SW/4 and
NW/4 SW/4
Section 17: S/2, SW/4 NE/4, S/2 NW/4 and
NW/4 NW/4
Section 18: Lots 1 through 4, SE/4 NW/4,
E/2 SW/4 and E/2
Section 19: Lots 1 and 2, E/2 W/2 and E/2
Section 20: All
Section 21: W/2 NW/4, NW/4 SW/4, NE/4 and
NE/4 SE/4
Sections 22 through 26: All
Section 27: N/2, SE/4, and NE/4 SW/4
Section 28: NE/4 NE/4
Section 29: N/2
Section 30: N/2 NE/4 and SE/4 NE/4
Section 34: NE/4 NE/4
Section 35: N/2 and SE/4
Section 36: All

TOWNSHIP 20 NORTH, RANGE 30 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

BRAVO DOME 640-ACRE AREA

UNION COUNTY, NEW MEXICO

TOWNSHIP 18 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 35 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 36 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 37 EAST, NMPM
Sections 6 and 7: All
Sections 18 and 19: All
Sections 30 and 31: All

TOWNSHIP 19 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 35 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 36 EAST, NMPM
Section 16: All
Section 18: S/2
Sections 19 and 20: All
Section 21: W/2, W/2 NE/4 and SE/4 NE/4
Section 26: S/2 S/2
Section 28: W/2
Sections 29 through 36: All

TOWNSHIP 20 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 35 EAST, NMPM
Section 3: W/2
Sections 4 through 10: All
Section 11: SW/4
Section 14: NW/4
Sections 15 through 22: All
Section 23: NW/4
Sections 27 through 34: All

TOWNSHIP 21 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

Sections 1 through 24: All
Section 25: N/2 and SW/4
Section 26: All
Section 27: NE/4 and N/2 NW/4
Sections 28 through 33: All

TOWNSHIP 22 NORTH, RANGE 30 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 35 EAST, NMPM
Section 5: S/2
Sections 6 through 8: All
Section 9: W/2 and SE/4
Section 10: S/2 S/2
Sections 15 through 21: All
Section 22: N/2
Section 27: SW/4
Sections 28 through 33: All
Section 34: NW/4 and N/2 SW/4
Section 36: All

TOWNSHIP 23 NORTH, RANGE 30 EAST, NMPM
Section 36: All

TOWNSHIP 23 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 23 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 23 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 23 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 23 NORTH, RANGE 35 EAST, NMPM
Section 31: All

TOWNSHIP 24 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 24 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 24 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 24 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

HARDING COUNTY, NEW MEXICO

TOWNSHIP 17 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 17 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 21 NORTH, RANGE 29 EAST, NMPM
Sections 1 through 27: All

Section 28: N/2, SE/4 and E/2 SW/4

Section 29: All

Section 30: Lots 1, 2 and 4, E/2 NW/4, NE/4,
N/2 SE/4 and SE/4 SE/4

Section 31: All

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Exhibit "B"

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Section 32: W/2, SE/4, W/2 NE/4 and SE/4 NE/4
Section 33: W/2 SW/4, NE/4 SW/4, NE/4 NW/4
and N/2 NE/4
Sections 34 through 36: All

TOWNSHIP 21 NORTH, RANGE 30 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 21 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 21 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 21 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

QUAY COUNTY, NEW MEXICO

TOWNSHIP 16 NORTH, RANGE 34 EAST, NMPM
Section 3: Lots 3 through 6, 11 and 12
Section 4: Lots 1, 2, 5 through 12,
N/2 SE/4 and SW/4

TOWNSHIP 16 NORTH, RANGE 35 EAST, NMPM
Section 1: Lots 1 through 8, NW/4 SW/4
and S/2 SW/4
Sections 2 through 6: All
Section 7: Lots 1, 2, E/2 NW/4 and E/2
Sections 8 through 10: All
Section 11: NW/4, N/2 SW/4, N/2 S/2 SW/4,
and N/2 S/2 S/2 SW/4

TOWNSHIP 16 NORTH, RANGE 36 EAST, NMPM
Section 5: Lots 4 and 5
Section 6: Lots 1 through 8 and 10

TOWNSHIP 17 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 17 NORTH, RANGE 35 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 17 NORTH, RANGE 36 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 17 NORTH, RANGE 37 EAST, NMPM

Sections 6 and 7: All

Sections 18 and 19: All

Sections 30 and 31: All

ORDER NO. R-7556

Exhibit "B"

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 8190
Order No. R-7556-A

IN THE MATTER OF CASE 8190 BEING
REOPENED PURSUANT TO THE PROVISIONS
OF ORDER NO. R-7556, WHICH ORDER
ESTABLISHED SPECIAL RULES AND
REGULATIONS FOR THE BRAVO DOME
640-ACRE AREA, UNION, HARDING, AND
QUAY COUNTIES, NEW MEXICO, INCLUDING
A PROVISION FOR 640-ACRE PRORATION UNITS.

See Also Order No.

R7556

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 3, 1987, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 10th day of June, 1987, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) By Order No. R-7556, dated June 19, 1984, temporary special rules and regulations were promulgated by the Division for the Bravo Dome 640-Acre Area, as described on Exhibit "A" of said order, Union, Harding, and Quay Counties, New Mexico, including a provision for 640-acre spacing and proration units.
- (3) Pursuant to the provisions of Order No. R-7556, this case was reopened to allow the operators in the subject area to appear and show cause why the Bravo Dome 640-Acre Area should not be developed on less than 640-acre spacing and proration units.

(4) Amoco Production Company (Amoco), the unit operator of the Bravo Dome Carbon Dioxide Gas Unit, also known as the Bravo Dome 640-Acre Area, as well as several other operators in the area entered appearances at the hearing.

(5) Amoco presented as evidence the results of long term flow tests conducted on three wells located within the Bravo Dome 640-Acre Area.

(6) Amoco also presented as evidence predicted well performance data obtained from two models which were designed using known reservoir parameters and assuming drainage areas of 160 acres and 640 acres.

(7) The results of the flow tests indicate that the actual production data obtained from these tests closely resembles the predicted model performance of a well draining 640 acres.

(8) Amoco further presented bottomhole pressure data obtained from pressure monitor wells located within the Bravo Dome 640-Acre Area which indicates that drainage from offset producing wells is occurring and that these offset wells are draining an area of at least 640 acres.

(9) The evidence presented in this case establishes that one well in the Bravo Dome 640-Acre Area can efficiently and economically drain and develop 640 acres.

(10) The Special Rules and Regulations promulgated by Order No. R-7556 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool.

(11) In order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-7556 should be continued in full force and effect until further order of the Division.

IT IS THEREFORE ORDERED THAT:

(1) The Special Rules and Regulations governing the Bravo Dome 640-Acre Area, Union, Harding, and Quay Counties, New Mexico, promulgated by Order No. R-7556, are hereby continued in full force and effect until further order of the Division.

-3-

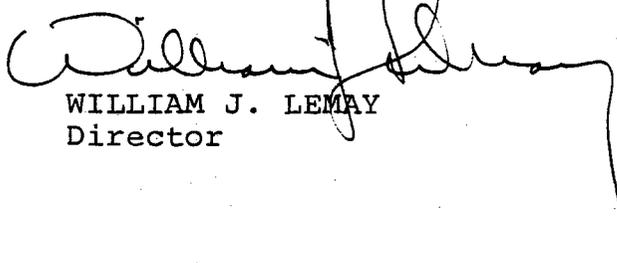
Case No. 8190

Order No. R-7556-A

(2) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

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**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**CASE NO. 11497
Order No. R-10576**

**APPLICATION OF AMOCO PRODUCTION
COMPANY FOR FOURTEEN UNORTHODOX
INFILL CARBON DIOXIDE GAS WELL
LOCATIONS, UNION COUNTY, NEW
MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 21, 1996, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 1st day of April, 1996, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

(2) The applicant, Amoco Production Company, seeks an exception to Rule No. (4) of the Special Rules and Regulations for the Bravo Dome 640-Acre Area as promulgated by Division Order No. R-7556, to allow the drilling of the following described fourteen carbon dioxide infill gas wells at unorthodox gas well locations, all located in Union County, New Mexico:

WELL NAME & NUMBER

WELL LOCATION

BDCDGU 2135 Well No. 182
BDCDGU 2234 Well No. 232
BDCDGU 1835 Well No. 082
BDCDGU 2234 Well No. 262
BDCDGU 2134 Well No. 243
BDCDGU 2234 Well No. 223

660' FNL & 660'FWL (D)-18-21N-35E
660' FSL & 660'FWL (M)-23-22N-34E
660' FSL & 1980'FWL (N)- 8-18N-35E
660' FSL & 560'FWL (M)-26-22N-34E
660' FSL & 660'FEL (P)-24-21N-34E
660' FNL & 385'FWL (D)-22-22N-34E

BDCDGU 2234 Well No. 212	660' FSL & 660'FWL (M)-21-22N-34E
BDCDGU 2134 Well No. 132	450' FSL & 450'FEL (P)-13-21N-34E
BDCDGU 1835 Well No. 072	1980' FSL & 1980'FWL (K)- 7-18N-35E
BDCDGU 2135 Well No. 183	660' FSL & 660'FEL (P)-18-21N-35E
BDCDGU 1835 Well No. 162	660' FSL & 660'FEL (P)-16-18N-35E
BDCDGU 1835 Well No. 163	660' FNL & 1980'FWL (C)-16-18N-35E
BDCDGU 2234 Well No. 213	560' FNL & 660'FWL (D)-21-22N-34E
BDCDGU 2234 Well No. 172	660' FNL & 660'FEL (A)-17-22N-34E

(3) The applicant further requests the establishment of an administrative procedure whereby additional infill wells proposed to be drilled at unorthodox locations based upon geologic and engineering considerations may be approved administratively by the Division.

(4) At the time of the hearing, it was determined that the BDCDGU 1835 Well No. 072 is located at a standard gas well location, and therefore, the unorthodox location request for this well should be dismissed.

(5) The subject wells are all located within the Amoco Production Company Bravo Dome Carbon Dioxide Gas Unit. In addition, the wells are located within the Bravo Dome 640-Acre Area as defined within Division Order No. R-7556, entered in Case No. 8190 on June 19, 1984.

(6) The Bravo Dome 640-Acre Area is currently governed by Special Rules and Regulations as contained within said Order No. R-7556 which require, in part, 640-acre standard gas spacing and proration units with wells to be located no closer than 1,650 feet from the outer boundary of the section nor closer than 330 feet from any quarter-quarter section line or subdivision inner boundary. The rules further allow the drilling of infill gas wells within a standard spacing unit (Rule No. (2)) provided that such wells are located no closer than 1,320 feet from any other well drilling to or capable of producing from the Bravo Dome 640-Acre Area.

(7) According to applicant's evidence and testimony, it has recently undertaken a study to determine the feasibility of infill drilling within the Bravo Dome 640-Acre Area. Initially, the applicant identified approximately 450 well locations which may be candidates for infill drilling. Utilizing the following described criteria, the applicant has identified the fourteen wells described in Finding No. (2) above as being the top candidates for infill drilling at this time:

- a) areas where infill drilling can maximize ultimate recovery;
- b) areas where infill drilling will result in wells with relatively high deliverabilities (2.5 + MMCFGD); and,
- c) minimize costs by locating wells near existing surface facilities.

(8) According to applicant's testimony, the proposed unorthodox locations for those wells located on its Leg 9 Gathering System, being the BDCDGU Well Nos. 2135-182, 2234-232, 2234-262, 2134-243, 2234-223, 2234-212, 2134-132, 2135-183, 2234-213, and 2234-172, are necessary due to engineering considerations (i.e. reservoir pressure, drainage, ultimate gas recovery, etc.).

(9) Applicant's evidence further indicates that the proposed unorthodox locations for those wells located on its Leg 6 and 7 Gathering System, being the BDCDGU Well Nos. 1835-082, 1835-072, 1835-162, and 1835-163, are based upon geologic as well as engineering considerations, namely the presence of a northwest to southeast trending fault which traverses each of the well's proration units.

(10) To aid in its determination of those areas within the Bravo Dome 640-Acre Area where infill drilling can maximize recovery, the applicant has built a field-wide computer simulation model which is composed of a reservoir model component and a surface facility model component.

(11) The evidence presented indicates that the applicant has obtained a good history match between the computer simulation and past production within the model area. This indicates that applicant's computer simulation should be capable of accurately predicting future field performance.

(12) The computer simulation was utilized by the applicant to select those infill well locations where incremental gas recovery would be maximized.

(13) The results of the reservoir simulation indicate that drilling the infill wells at the proposed unorthodox locations instead of standard well locations within the subject proration units should result in the recovery of an additional 13 BCF of carbon dioxide gas which would otherwise not be recovered, thereby preventing waste.

(14) All of the affected offset acreage is located within the Amoco Production Company Bravo Dome Carbon Dioxide Gas Unit.

(15) The applicant testified that it has examined the affected offset acreage to determine whether or not there are royalty interest owners who have not ratified the Unit Agreement, and therefore may be affected by the proposed unorthodox locations. Applicant determined that there are such interest owners, however, applicant testified that it has historically been unsuccessful in locating these interest owners.

(16) No other offset operator and/or interest owner appeared at the hearing in opposition to the application.

(17) Approval of the subject application will afford the applicant the opportunity to recover additional gas reserves from each of the subject proration units which may otherwise not be recovered, thereby preventing waste, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and will not violate correlative rights.

(18) Pursuant to Division Rule No. 104.F., which was recently amended by Division Order No. R-10533, future unorthodox gas well locations within the Bravo Dome 640-Acre Area based upon geologic or engineering considerations should qualify for administrative approval, provided however, that the supervisor of the Division's Santa Fe District Office should have the authority to require additional notice by the applicant to those offset interest owners deemed to be affected by any proposed unorthodox location.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Amoco Production Company, is hereby authorized to drill the following described thirteen infill carbon dioxide gas wells within the Bravo Dome 640-Acre Area at unorthodox gas well locations, all located in Union County, New Mexico:

<u>WELL NAME & NUMBER</u>	<u>WELL LOCATION</u>
BDCDGU 2135 Well No. 182	660' FNL & 660'FWL (D)-18-21N-35E
BDCDGU 2234 Well No. 232	660' FSL & 660'FWL (M)-23-22N-34E
BDCDGU 1835 Well No. 082	660' FSL & 1980'FWL (N)- 8-18N-35E
BDCDGU 2234 Well No. 262	660' FSL & 560'FWL (M)-26-22N-34E
BDCDGU 2134 Well No. 243	660' FSL & 660'FEL (P)-24-21N-34E
BDCDGU 2234 Well No. 223	660' FNL & 385'FWL (D)-22-22N-34E
BDCDGU 2234 Well No. 212	660' FSL & 660'FWL (M)-21-22N-34E
BDCDGU 2134 Well No. 132	450' FSL & 450'FEL (P)-13-21N-34E
BDCDGU 2135 Well No. 183	660' FSL & 660'FEL (P)-18-21N-35E
BDCDGU 1835 Well No. 162	660' FSL & 660'FEL (P)-16-18N-35E
BDCDGU 1835 Well No. 163	660' FNL & 1980'FWL (C)-16-18N-35E

BDCDGU 2234 Well No. 213
BDCDGU 2234 Well No. 172

560' FNL & 660'FWL (D)-21-22N-34E
660' FNL & 660'FEL (A)-17-22N-34E

(2) Each of the subject wells shall be dedicated to the existing 640-acre standard gas spacing and proration unit on which it is located.

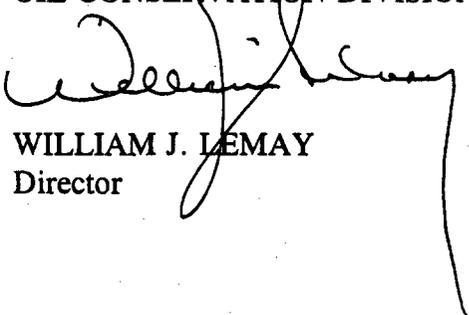
(3) Applicant's request for an unorthodox location approval for its BDCDGU 1835 Well No. 072 is hereby dismissed.

(4) Pursuant to Division Rule No. 104.F., future unorthodox gas well locations within the Bravo Dome 640-Acre Area based upon geologic or engineering considerations shall qualify for administrative approval, provided however, that the supervisor of the Division's Santa Fe District Office shall have the authority to require additional notice by the applicant to those offset interest owners deemed to be affected by any proposed unorthodox location.

(5) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

S E A L



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON

Governor

BETTY RIVERA

Cabinet Secretary

Lori Wrotenbery

Director

Oil Conservation Division

July 24, 2002

OXY USA Inc.
P. O. Box 50250
Midland, Texas 79710-0250
Attention: David Stewart

Administrative Order NSL-4762

Dear Mr. Stewart:

Reference is made to your application dated July 11, 2002 for fifteen unorthodox "infill" Bravo Dome carbon dioxide gas (CO₂) well locations all within existing standard 640-acre, more or less, gas spacing and proration units for said Bravo Dome Carbon Dioxide (640-acre) Gas Pool in its Bravo Dome Carbon Dioxide Gas Unit (BDCDGU), Union County, New Mexico:

(a) all of Section 28, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 281 (API No. 30-059-20252), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of said Section 28, is to be simultaneously dedicated to said Well No. 281 and to the proposed BDCDGU "1934" Well No. 282 (API No. 30-059-20386) to be drilled at an unorthodox CO₂ gas well location 1672 feet from the South line and 2314 feet from the East line (Unit J) of said Section 28;

(b) all of Section 22, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 221 (API No. 30-059-20059), located at a standard CO₂ gas well location 1650 feet from the North line and 1652 feet from the West line (Unit F) of said Section 22, is to be simultaneously dedicated to said Well No. 221 and to the proposed BDCDGU "1934" Well No. 222 (API No. 30-059-20384) to be drilled at an unorthodox CO₂ gas well location 1673 feet from the South line and 1641 feet from the East line (Unit J) of said Section 22;

(c) all of Section 14, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the

BDCDGU "1934" Well No. 141 (API No. 30-059-20055), located at a standard CO₂ gas well location 1980 feet from the North line and 1976 feet from the East line (Unit G) of said Section 14, is to be simultaneously dedicated to said Well No. 141 and to the proposed BDCDGU "1934" Well No. 142 (API No. 30-059-20383) to be drilled at an unorthodox CO₂ gas well location 703 feet from the South line and 2466 feet from the West line (Unit N) of said Section 14;

(d) all of Section 9, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 091 (API No. 30-059-20063), located at a standard CO₂ gas well location 1650 feet from the South line and 1994 feet from the West line (Unit K) of said Section 9, is to be simultaneously dedicated to said Well No. 091 and to the proposed BDCDGU "1934" Well No. 092 (API No. 30-059-20382) to be drilled at an unorthodox CO₂ gas well location 173 feet from the North line and 2281 feet from the West line (Unit C) of said Section 9;

(e) all of Section 8, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 081 (API No. 30-059-20080), located at a standard CO₂ gas well location 1650 feet from the North line and 1980 feet from the West line (Unit F) of said Section 8, is to be simultaneously dedicated to said Well No. 081 and to the proposed BDCDGU "1934" Well No. 082 (API No. 30-059-20381) to be drilled at an unorthodox CO₂ gas well location 644 feet from the South line and 2439 feet from the West line (Unit N) of said Section 8;

(f) all of Section 23, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 231 (API No. 30-059-20027), located at a standard CO₂ gas well location 1980 feet from the South and West lines (Unit K) of said Section 23, is to be simultaneously dedicated to said Well No. 231 and to the proposed BDCDGU "1934" Well No. 232 (API No. 30-059-20385) to be drilled at an unorthodox CO₂ gas well location 2347 feet from the South line and 1267 feet from the East line (Unit I) of said Section 23;

(g) all of Section 5, Township 19 North, Range 35 East, NMPM,

comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 051 (API No. 30-059-20121), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of said Section 5, is to be simultaneously dedicated to said Well No. 051 and to the proposed BDCDGU "1935" Well No. 052 (API No. 30-059-20387) to be drilled at an unorthodox CO₂ gas well location 584 feet from the South line and 1963 feet from the East line (Unit O) of said Section 5;

(b) all of Section 7, Township 19 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 071 (API No. 30-059-20065), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of said Section 7, is to be simultaneously dedicated to said Well No. 071 and to the proposed BDCDGU "1935" Well No. 072 (API No. 30-059-20388) to be drilled at an unorthodox CO₂ gas well location 660 feet from the South line and 2005 feet from the East line (Unit O) of said Section 7;

(i) all of Section 8, Township 19 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 081X (API No. 30-059-20145), located at a standard CO₂ gas well location 1980 feet from the North line and 1880 feet from the West line (Unit G) of said Section 8, is to be simultaneously dedicated to said Well No. 081X and to the proposed BDCDGU "1935" Well No. 082 (API No. 30-059-20389) to be drilled at an unorthodox CO₂ gas well location 1635 feet from the North line and 1659 feet from the West line (Unit F) of said Section 8;

(j) all of Section 17, Township 19 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 171 (API No. 30-059-20288), located at a standard CO₂ gas well location 1650 feet from the South and West lines (Unit K) of said Section 17, is to be simultaneously dedicated to said Well No. 171 and to the proposed BDCDGU "1935" Well No. 172 (API No. 30-059-20390) to be drilled at an unorthodox CO₂ gas well location 481 feet from the North line and 475 feet from the West line (Unit D) of said Section 17;

(k) all of Section 20, Township 20 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 201 (API No. 30-059-20141), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of said Section 20, is to be simultaneously dedicated to said Well No. 201 and to the proposed BDCDGU "2034" Well No. 202 (API No. 30-059-20391) to be drilled at an unorthodox CO₂ gas well location 320 feet from the South line and 996 feet from the East line (Unit P) of said Section 20;

(l) all of Section 21, Township 20 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 211 (API No. 30-059-20177), located at a standard CO₂ gas well location 1980 feet from the South line and 660 feet from the East line (Unit L) of said Section 21, is to be simultaneously dedicated to said Well No. 211 and to the proposed BDCDGU "2034" Well No. 212 (API No. 30-059-20392) to be drilled at an unorthodox CO₂ gas well location 1819 feet from the North line and 2332 feet from the West line (Unit F) of said Section 21;

(m) all of Section 28, Township 20 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 281 (API No. 30-059-20137), located at a standard CO₂ gas well location 1980 feet from the South and East lines (Unit J) of said Section 28, is to be simultaneously dedicated to said Well No. 281 and to the proposed BDCDGU "2034" Well No. 282 (API No. 30-059-20393) to be drilled at an unorthodox CO₂ gas well location 2491 feet from the North line and 238 feet from the West line (Unit E) of said Section 28.

(n) all of Section 32, Township 20 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 321 (API No. 30-059-20278), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of said Section 32, is to be simultaneously dedicated to said Well No. 321 and to the proposed BDCDGU "2034" Well No. 322 (API No. 30-059-20394) to be drilled at an unorthodox CO₂ gas well location 1027 feet from the South line and 264 feet from the West line (Unit M) of said Section 32.

Administrative Order NSL-4762

OXY USA Inc.

July 24, 2002

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(o) all of Section 35, Township 20 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 351 (API No. 30-059-20070), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of said Section 35, is to be simultaneously dedicated to said Well No. 351 and to the proposed BDCDGU "2034" Well No. 352 (API No. 30-059-20395) to be drilled at an unorthodox CO₂ gas well location 671 feet from the South line and 2356 feet from the East line (Unit O) of said Section 35.

From the information provided by the applicant, the royalty interests in all of the affected off-setting acreage to the proposed unorthodox locations have either been notified by certified mail or have ratified the Bravo Dome Carbon Dioxide Gas Unit (BDCDGU) Agreement.

By authority granted me under the provisions of Rule 5 of the "*Special Rules and Regulations for the Bravo dome 640-Acre Area*," as promulgated by Division Order No. R-7556, dated June 19, 1984, Decretory Paragraph No. (4) of said Order No. R-10576, and Division General Rule 104.F(2) the above-described BDCDGU "1934" Well Nos. 082, 092, 142, 222, 232, 282, and BDCDGU "1935" Well Nos. 052, 072, 082, 172, and BDCDGU "2034" Well Nos. 202, 212, 282, 322, and 352, all to be drilled at unorthodox "infill" CO₂ gas well locations are hereby approved.

Sincerely,



Lori Wrotenbery
Director

LW/MES/kv

cc: Roy Johnson, District Supervisor - Santa Fe
New Mexico State Land Office - Santa Fe
Danny J. Holcomb, Operations Manager (OXY) - Amistad, New Mexico



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

Bill Richardson
Governor
Joanna Prukop
Cabinet Secretary

May 6, 2003

Lori Wrotenbery
Director
Oil Conservation Division

OXY USA Inc.
P. O. Box 50250
Midland, Texas 79710-0250
Attention: David Stewart
david_stewart@oxy.com

Administrative Order NSL-4873 (SD)

Dear Mr. Stewart:

Reference is made to the following: (i) your application submitted to the New Mexico Oil Conservation Division ("Division") on April 11, 2003 (*administrative application reference No. pKRV0-310427662*); and (ii) the records of the Division in Santa Fe, including the files in Division Cases No. 8190 and 11497 and Division Administrative Orders NSL-3966 (SD), as amended, NSL-3688 (SD), and NSL-4762: all concerning OXY USA, Inc.'s ("OXY") request for twenty-six (26) unorthodox "infill" Bravo Dome carbon dioxide gas (CO₂) well locations all within existing standard 640-acre, more or less, gas spacing units for the Bravo Dome Carbon Dioxide (640-acre) Gas Pool (96010) within its Bravo Dome Carbon Dioxide Gas Unit (BDCDGU), Union and Harding Counties, New Mexico:

(a) all of Section 5, Township 18 North, Range 35 East, NMPM, Union County, New Mexico, comprising 642.00 acres, which is currently dedicated to the BDCDGU "1835" Well No. 051 (API No. 30-059-20186), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of Section 5, is to be simultaneously dedicated to Well No. 051 and to the proposed BDCDGU "1835" Well No. 052 (API No. 30-059-20396) to be drilled at an unorthodox infill CO₂ gas well location 1621 feet from the North line and 941 feet from the West line (Unit E) of Section 5;

(b) all of Section 11, Township 19 North, Range 33 East, NMPM, Harding County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1933" Well No. 111 (API No. 30-021-20113), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of Section 11, is to be simultaneously dedicated to Well No. 111 and to the proposed BDCDGU "1933" Well No. 112 (API No. 30-021-323) to be drilled at an unorthodox infill CO₂ gas well location 1414 feet from the South line and 532 feet from the East line (Unit I) of Section 11;

(c) all of Section 12, Township 19 North, Range 33 East, NMPM, Harding County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1933" Well No. 121 (API No. 30-021-20066), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of Section 12, is to be simultaneously dedicated to Well No. 121 and to the

proposed BDCDGU "1933" Well No. 122 (API No. 30-021-20324) to be drilled at an unorthodox infill CO₂ gas well location 1000 feet from the South line and 1980 feet from the West line (Unit N) of Section 12;

(d) all of Section 13, Township 19 North, Range 33 East, NMPM, Harding County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1933" Well No. 131 (API No. 30-021-20067), located at a standard CO₂ gas well location 1980 feet from the South and East lines (Unit J) of Section 13, is to be simultaneously dedicated to Well No. 131 and to the proposed BDCDGU "1933" Well No. 132 (API No. 30-021-20325) to be drilled at an unorthodox infill CO₂ gas well location 1980 feet from the South line and 676 feet from the West line (Unit L) of Section 13;

(e) all of Section 14, Township 19 North, Range 33 East, NMPM, Harding County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1933" Well No. 141 (API No. 30-021-20068), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of Section 14, is to be simultaneously dedicated to Well No. 141 and to the proposed BDCDGU "1933" Well No. 142 (API No. 30-021-20326) to be drilled at an unorthodox infill CO₂ gas well location 624 feet from the South line and 1975 feet from the East line (Unit O) of Section 14;

(f) all of Section 2, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 637.96 acres, which is currently dedicated to the BDCDGU "1934" Well No. 021X (API No. 30-059-20074), located at a standard CO₂ gas well location 1980 feet from the South line and 2055 feet from the West line (Unit K) of Section 2, is to be simultaneously dedicated to Well No. 021X and to the proposed BDCDGU "1934" Well No. 022 (API No. 30-059-20397) to be drilled at an unorthodox infill CO₂ gas well location 660 feet from the North line and 990 feet from the East line (Lot 1/Unit A) of Section 2;

(g) all of Section 3, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 637.00 acres, which is currently dedicated to the BDCDGU "1934" Well No. 031 (API No. 30-059-20049), located at a standard CO₂ gas well location 1958 feet from the North line and 1980 feet from the East line (Unit G) of Section 3, is to be simultaneously dedicated to Well No. 031 and to the proposed BDCDGU "1934" Well No. 032 (API No. 30-059-20398) to be drilled at an unorthodox infill CO₂ gas well location 660 feet from the South and East lines (Unit P) of Section 3;

(h) all of Section 4, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 637.60 acres, which is currently dedicated to the BDCDGU "1934" Well No. 041 (API No. 30-059-20079), located at a

standard CO₂ gas well location 1980 feet from the South and West lines (Unit K) of Section 4, is to be simultaneously dedicated to Well No. 041 and to the proposed BDCDGU "1934" Well No. 042 (API No. 30-059-20399) to be drilled at an unorthodox infill CO₂ gas well location 983 feet from the South line and 858 feet from the East line (Unit P) of Section 4;

(i) all of Section 5, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 637.88 acres, which is currently dedicated to the BDCDGU "1934" Well No. 051 (API No. 30-059-20050), located at a standard CO₂ gas well location 1980 feet from the South line and 1969 feet from the East line (Unit J) of Section 5, is to be simultaneously dedicated to Well No. 051 and to the proposed BDCDGU "1934" Well No. 052 (API No. 30-059-20400) to be drilled at an unorthodox infill CO₂ gas well location 1980 feet from the South line and 660 feet from the West line (Unit L) of Section 5;

(j) all of Section 7, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 636.44 acres, which is currently dedicated to the BDCDGU "1934" Well No. 071 (API No. 30-059-20072), located at a standard CO₂ gas well location 1980 feet from the North and West lines (Unit F) of Section 7, is to be simultaneously dedicated to Well No. 071 and to the proposed BDCDGU "1934" Well No. 072 (API No. 30-059-204-1) to be drilled at an unorthodox infill CO₂ gas well location 330 feet from the South line and 1650 feet from the West line (Unit N) of Section 7;

(k) all of Section 10, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 101 (API No. 30-059-20054), located at a standard CO₂ gas well location 1980 feet from the South and East lines (Unit J) of Section 10, is to be simultaneously dedicated to Well No. 101 and to the proposed BDCDGU "1934" Well No. 102 (API No. 30-059-20402) to be drilled at an unorthodox infill CO₂ gas well location 990 feet from the North line and 660 feet from the West line (Unit D) of Section 10;

(l) all of Section 11, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 111 (API No. 30-059-20051), located at a standard CO₂ gas well location 1980 feet from the North line and 1984 feet from the East line (Unit G) of Section 11, is to be simultaneously dedicated to Well No. 111 and to the proposed BDCDGU "1934" Well No. 112 (API No. 30-059-20403) to be drilled at an unorthodox infill CO₂ gas well location 990 feet from the South line and 2190 feet from the West line (Unit N) of Section 11;

(m) all of Section 12, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the

BDCDGU "1934" Well No. 121 (API No. 30-059-20052), located at a standard CO₂ gas well location 1980 feet from the South line and 1972 feet from the West line (Unit K) of Section 12, is to be simultaneously dedicated to Well No. 121 and to the proposed BDCDGU "1934" Well No. 122 (API No. 30-059-20404) to be drilled at an unorthodox infill CO₂ gas well location 825 feet from the North line and 435 feet from the West line (Unit D) of Section 12;

(n) all of Section 15, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 151 (API No. 30-059-20056), located at a standard CO₂ gas well location 1980 feet from the South line and 1985 feet from the East line (Unit J) of Section 15, is to be simultaneously dedicated to Well No. 151 and to the proposed BDCDGU "1934" Well No. 152 (API No. 30-059-20405) to be drilled at an unorthodox infill CO₂ gas well location 990 feet from the South line and 330 feet from the West line (Unit M) of Section 15;

(o) all of Section 18, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 635.60 acres, which is currently dedicated to the BDCDGU "1934" Well No. 181X (API No. 30-059-20101), located at a standard CO₂ gas well location 2080 feet from the South line and 1980 feet from the East line (Unit J) of Section 18, is to be simultaneously dedicated to Well No. 181X and to the proposed BDCDGU "1934" Well No. 182 (API No. 30-059-20406) to be drilled at an unorthodox infill CO₂ gas well location 1988 feet from the South line and 460 feet from the West line (Lot 3/Unit L) of Section 18;

(p) all of Section 19, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 635.16 acres, which is currently dedicated to the BDCDGU "1934" Well No. 191 (API No. 30-059-20078), located at a standard CO₂ gas well location 1980 feet from the South line and 1880 feet from the West line (Unit K) of Section 19, is to be simultaneously dedicated to Well No. 191 and to the proposed BDCDGU "1934" Well No. 192 (API No. 30-059-20407) to be drilled at an unorthodox infill CO₂ gas well location 990 feet from the North and East lines (Unit A) of Section 19;

(q) all of Section 20, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 201 (API No. 30-059-20057), located at a standard CO₂ gas well location 1980 feet from the North line and 1986 feet from the East line (Unit G) of Section 20, is to be simultaneously dedicated to Well No. 201 and to the proposed BDCDGU "1934" Well No. 202 (API No. 30-059-20408) to be drilled at an unorthodox infill CO₂ gas well location 2310 feet from the South line and 330 feet from the West line (Unit L) of Section 20;

(r) all of Section 21, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 211X (API No. 30-059-20102), located at a standard CO₂ gas well location 1980 feet from the North line and 1874 feet from the East line (Unit G) of Section 21, is to be simultaneously dedicated to Well No. 211X and to the proposed BDCDGU "1934" Well No. 212 (API No. 30-059-20409) to be drilled at an unorthodox infill CO₂ gas well location 1289 feet from the South line and 170 feet from the East line (Unit P) of Section 21;

(s) all of Section 22, Township 19 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 221 (API No. 30-059-20059), located at a standard CO₂ gas well location 1650 feet from the North line and 1652 feet from the West line (Unit F) of Section 22, is to be simultaneously dedicated to Well No. 221 and to the proposed BDCDGU "1934" Well No. 223 (API No. 30-059-20410) to be drilled at an unorthodox infill CO₂ gas well location 1673 feet from the South line and 1441 feet from the East line (Unit J) of Section 22 [This well will be a replacement well to OXY's BDCDGU "1934" Well No. 222 (API No. 30-059-20384), located at an unorthodox infill CO₂ gas well location 1673 feet from the South line and 1641 feet from the East line (Unit J) of Section 22, which well was the subject of Division Administrative Order NSL-4762, dated July 24, 2002. From the Division's records, OXY encountered drilling problems and the Well No. 222 was plugged and abandoned in August, 2002];

(t) all of Section 4, Township 19 North, Range 35 East, NMPM, Union County, New Mexico, comprising 645.96 acres, which is currently dedicated to the BDCDGU "1935" Well No. 041 (API No. 30-059-20094), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of Section 4, is to be simultaneously dedicated to Well No. 041 and to the proposed BDCDGU "1935" Well No. 042 (API No. 30-059-20412) to be drilled at an unorthodox infill CO₂ gas well location 2310 feet from the South line and 330 feet from the West line (Unit L) of Section 4;

(u) all of Section 32, Township 19 North, Range 35 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 321 (API No. 30-059-20200), located at a standard CO₂ gas well location 1980 feet from the North line and 1650 from the East line (Unit G) of Section 32, is to be simultaneously dedicated to Well No. 321 and to the proposed BDCDGU "1935" Well No. 322 (API No. 30-059-20414) to be drilled at an unorthodox infill CO₂ gas well location 1760 feet from the South line and 391 feet from the West line (Unit L) of Section 32;

(v) all of Section 15, Township 20 North, Range 34 East, NMPM, Union

County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 151 (API No. 30-059-20098), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of Section 15, is to be simultaneously dedicated to Well No. 151 and to the proposed BDCDGU "2034" Well No. 152 (API No. 30-059-20415) to be drilled at an unorthodox infill CO₂ gas well location 660 feet from the South line and 1980 feet from the West line (Unit N) of Section 15;

(w) all of Section 16, Township 20 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 161 (API No. 30-059-20168), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of Section 16, is to be simultaneously dedicated to Well No. 161 and to the proposed BDCDGU "2034" Well No. 162 (API No. 30-059-20416) to be drilled at an unorthodox infill CO₂ gas well location 990 feet from the South and East lines (Unit P) of Section 16;

(x) all of Section 22, Township 20 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 221 (API No. 30-059-20104), located at a standard CO₂ gas well location 1980 feet from the South and West lines (Unit K) of Section 22, is to be simultaneously dedicated to Well No. 221 and to the proposed BDCDGU "2034" Well No. 222 (API No. 30-059-20417) to be drilled at an unorthodox infill CO₂ gas well location 990 feet from the North line and 1650 from the West line (Unit C) of Section 22;

(y) all of Section 27, Township 20 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 271 (API No. 30-059-20069), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of Section 27, is to be simultaneously dedicated to Well No. 271 and to the proposed BDCDGU "2034" Well No. 272 (API No. 30-059-20419) to be drilled at an unorthodox infill CO₂ gas well location 684 feet from the South line and 1980 feet from the East line (Unit O) of Section 27; and

(z) all of Section 34, Township 20 North, Range 34 East, NMPM, Union County, New Mexico, comprising 640 acres, which is currently dedicated to the BDCDGU "2034" Well No. 341 (API No. 30-059-20053), located at a standard CO₂ gas well location 1980 feet from the South and East lines (Unit J) of Section 34, is to be simultaneously dedicated to Well No. 341 and to the proposed BDCDGU "2034" Well No. 342 (API No. 30-059-20421) to be drilled at an unorthodox infill CO₂ gas well location 660 feet from the South and 1650 from the West line (Unit N) of Section 34.

From the information provided by the applicant, the royalty interests in all of the affected offsetting

Administrative Order NSL-4873 (SD)
OXY USA Inc.
May 6, 2003
Page 7

acreage to the proposed unorthodox locations have either been notified by certified mail or have ratified the Bravo Dome Carbon Dioxide Gas Unit (BDCDGU) Agreement.

By authority granted me under the provisions of Rule 5 of the "*Special Rules and Regulations for the Bravo dome 640-Acre Area*," as promulgated by Division Order No. R-7556, dated June 19, 1984, as amended by Division Order No. R-7556-A, dated June 10, 1987, Decretory Paragraph No. (4) of Division Order No. R-10576, and Division Rule 104.F (2), the above-described BDCDGU "1835" Well No. 052, BDCDGU "1933" Well Nos. 112, 122, 132, and 142, BDCDGU "1934" Well Nos. 022, 032, 042, 052, 072, 102, 112, 122, 152, 182, 192, 202, 212, and 223, BDCDGU "1935" Well Nos. 042 and 322, and BDCDGU "2034" Well Nos. 152, 162, 222, 272, and 342, all to be drilled at unorthodox "infill" CO₂ gas well locations, are hereby approved.

Further, that portion of Division Administrative Order No. NSL-4762 [subparagraph (b)] pertaining to the above-described BDCDGU "1934" Well No. 222 (API No. 30-059-20384), as referenced in subparagraph (s) above, is hereby placed in abeyance until further notice.

Jurisdiction of this matter shall be further retained for the entry of any such subsequent orders, as the Division may deem necessary.

Sincerely,



Lori Wrotenbery
Director

LW/MES/kv

cc: Roy Johnson, District Supervisor - NMOCD, Santa Fe
New Mexico State Land Office - Santa Fe
Danny J. Holcomb, Operations Manager (OXY) - Amistad, New Mexico
File: NSL-4762 /



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

July 2, 1996

Amoco Production Company
Permian Basin Business Unit
P. O. Box 4891
Houston, Texas 77210
Attention: Perry Jarrell

Administrative Order NSL-3688(SD)

Dear Mr. Jarrell:

Reference is made to your applications dated May 17, 1996 for seven unorthodox "infill" Bravo Dome carbon dioxide gas (CO₂) well locations all within existing standard 640-acre, more or less, gas spacing and proration units for said Bravo Dome Carbon Dioxide (640-acre) Gas Pool in its Bravo Dome Carbon Dioxide Gas Unit (BDCDGU), Union County, New Mexico:

(a) all of Section 30, Township 21 North, Range 35 East, NMPM, comprising 634.56 acres, which is currently dedicated to the BDCDGU "2135" Well No. 301 (API No. 30-059-20321), located at a standard CO₂ gas well location 2022 feet from the North line and 1964 feet from the West line (Unit F) of said Section 30, is to be simultaneously dedicated to said Well No. 301 and to the proposed BDCDGU "2135" Well No. 302 (API No. 30-059-20363) to be drilled at an unorthodox CO₂ gas well location 482 feet from the South line and 255 feet from the West line (Lot 4/Unit M) of said Section 30;

(b) all of Section 28, Township 22 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "2234" Well No. 281 (API No. 30-059-20334), located at a standard CO₂ gas well location 1700 feet from the North line and 1924 feet from the East line (Unit G) of said Section 28, is to be simultaneously dedicated to said Well No. 281 and to the proposed BDCDGU "2234" Well No. 282 (API No. 30-059-20364) to be drilled at an unorthodox CO₂ gas well location 862 feet from the South line and 372 feet from the East line (Unit P) of said Section 28;

(c) all of Section 23, Township 18 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1835" Well No. 231 (API No. 30-059-20281), located at a standard CO₂ gas well location 1650 feet from the South and East lines (Unit J) of said Section 23, is to be simultaneously dedicated to said Well No. 231 and to the proposed BDCDGU "1835" Well No. 232 (API No. 30-059-20359)

to be drilled at an unorthodox CO₂ gas well location 204 feet from the North line and 1195 feet from the West line (Unit D) of said Section 23;

(d) all of Section 20, Township 21 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "2135" Well No. 201 (API No. 30-059-20320), located at a standard CO₂ gas well location 1985 feet from the North line and 1942 feet from the West line (Unit F) of said Section 20, is to be simultaneously dedicated to said Well No. 201 and to the proposed BDCDGU "2135" Well No. 202 (API No. 30-059-20362) to be drilled at an unorthodox CO₂ gas well location 1173 feet from the South line and 176 feet from the West line (Unit M) of said Section 20;

(e) all of Section 34, Township 22 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "2234" Well No. 341 (API No. 30-059-20341), located at a standard CO₂ gas well location 2120 feet from the North line and 2206 feet from the East line (Unit G) of said Section 34, is to be simultaneously dedicated to said Well No. 341 and to the proposed BDCDGU "2234" Well No. 342 (API No. 30-059-20365) to be drilled at an unorthodox CO₂ gas well location 500 feet from the South line and 200 feet from the East line (Unit P) of said Section 34;

(f) all of Section 13, Township 21 North, Range 34 East, NMPM, comprising 640 acres, which is currently simultaneously dedicated to the BDCDGU "2134" Well No. 131 (API No. 30-059-20313), located at a standard CO₂ gas well location 1981 feet from the North line and 2015 feet from the East line (Unit G) of said Section 13 and to the BDCDGU "2134" Well No. 132 (API No. 30-059-20349), located at a previously approved unorthodox "infill" CO₂ gas well location (approved by Division Order No. R-10576 issued in Case No. 11497 and dated April 1, 1996) 660 feet from the South and East lines (Unit P) of said Section 13, is to be simultaneously dedicated to said Well Nos. 131 and 132 and to the proposed BDCDGU "2134" Well No. 133 (API No. 30-059-20360) to be drilled at an unorthodox CO₂ gas well location 1158 feet from the South line and 515 feet from the West line (Unit M) of said Section 13; and,

(g) all of Section 24, Township 21 North, Range 34 East, NMPM, comprising 640 acres, which is currently simultaneously dedicated to the BDCDGU "2134" Well No. 241 (API No. 30-059-20314), located at a standard CO₂ gas well location 2018 feet from the North line and 1962 feet from the West line (Unit F) of said Section 24 and to the BDCDGU "2134" Well No. 242 (API No. 30-059-20350), located at a previously approved unorthodox "infill" CO₂ gas well location (approved by said

Administrative Order NSL-3688(SD)

Amoco Production Company

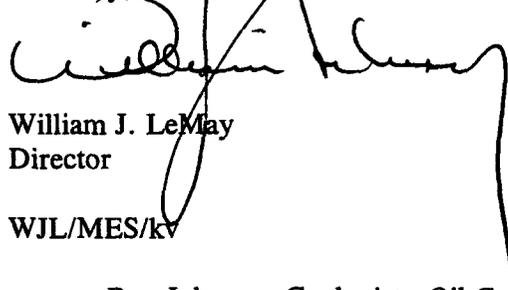
July 2, 1996

Page 3

Order No. R-10576) 660 feet from the South and East lines (Unit P) of said Section 24, is to be simultaneously dedicated to said Well Nos. 241 and 242 and to the proposed BDCDGU "2134" Well No. 243 (API No. 30-059-20361) to be drilled at an unorthodox CO₂ gas well location 600 feet from the South line and 250 feet from the West line (Unit M) of said Section 24.

By authority granted me under the provisions of Rule 5 of the "*Special Rules and Regulations for the Bravo dome 640-Acre Area*", as promulgated by Division Order No. R-7556, dated June 19, 1984, Decretory Paragraph No. (4) of said Order No. R-10576, and Division General Rule 104.F(2) the above-described (a) BDCDGU "2135" Well No. 302, (b) BDCDGU "2234" Well No. 282, (c) BDCDGU "1835" Well No. 232, (d) BDCDGU "2135" Well No. 202, (e) BDCDGU "2234" Well No. 342, (f) BDCDGU "2134" Well No. 133, and (g) BDCDGU "2134" Well No. 243, all to be drilled at unorthodox "infill" CO₂ gas well locations are hereby approved.

Sincerely,



William J. LeMay
Director

WJL/MES/kv

cc: Roy Johnson, Geologist - Oil Conservation Division, Santa Fe
New Mexico State Land Office - Santa Fe
File: Case 11497
Billy E. Prichard, Field Foreman (Amoco) - Clayton, New Mexico



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

March 9, 1998

Amoco Exploration and Production Company
Central Business Unit - Bravo Dome JOMT
P. O. Box 3092, MC 8.104
Houston, Texas 77210
Attention: Sam Culpepper, CPL

Administrative Order NSL-3966(SD)

Dear Mr. Culpepper:

Reference is made to your application dated February 20, 1998 for thirteen unorthodox "infill" Bravo Dome carbon dioxide gas (CO₂) well locations all within existing standard 640-acre, more or less, gas spacing and proration units for said Bravo Dome Carbon Dioxide (640-acre) Gas Pool in its Bravo Dome Carbon Dioxide Gas Unit (BDCDGU), Union County, New Mexico:

- (a) all of Section 25, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 251 (API No. 30-059-20093), located at a standard CO₂ gas well location 1680 feet from the South line and 1980 feet from the East line (Unit J) of said Section 25, is to be simultaneously dedicated to said Well No. 251 and to the proposed BDCDGU "1934" Well No. 252 (API No. 30-059-20366) to be drilled at an unorthodox CO₂ gas well location 2397 feet from the South line and 1407 feet from the West line (Unit K) of said Section 25;
- (b) all of Section 26, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 262 (API No. 30-059-20196), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of said Section 26, is to be simultaneously dedicated to said Well No. 262 and to the proposed BDCDGU "1934" Well No. 263 (API No. 30-059-20367) to be drilled at an unorthodox CO₂ gas well location 2441 feet from the South line and 990 feet from the West line (Unit L) of said Section 26;
- (c) all of Section 27, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 271 (API No. 30-059-20238), located at a standard CO₂ gas well location 1980 feet from the North line and 1650 feet from the East line (Unit G) of said Section 27, is to be simultaneously dedicated to said Well No. 271 and to the proposed BDCDGU "1934" Well No. 272 (API No. 30-059-20368) to be drilled at an unorthodox CO₂ gas well location 2479 feet from the South line and 1011 feet from the West line (Unit L) of said Section 27;

(d) all of Section 34, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 341 (API No. 30-059-20226), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of said Section 34, is to be simultaneously dedicated to said Well No. 341 and to the proposed BDCDGU "1934" Well No. 342 (API No. 30-059-20369) to be drilled at an unorthodox CO₂ gas well location 1775 feet from the North line and 828 feet from the West line (Unit E) of said Section 34;

(e) all of Section 35, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 351 (API No. 30-059-20229), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of said Section 35, is to be simultaneously dedicated to said Well No. 351 and to the proposed BDCDGU "1934" Well No. 352 (API No. 30-059-20370) to be drilled at an unorthodox CO₂ gas well location 1650 feet from the North line and 994 feet from the West line (Unit E) of said Section 35;

(f) all of Section 36, Township 19 North, Range 34 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1934" Well No. 361 (API No. 30-059-20203), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of said Section 36, is to be simultaneously dedicated to said Well No. 361 and to the proposed BDCDGU "1934" Well No. 362 (API No. 30-059-20371) to be drilled at an unorthodox CO₂ gas well location 1641 feet from the North line and 988 feet from the West line (Unit E) of said Section 36;

(g) all of Section 19, Township 19 North, Range 35 East, NMPM, comprising 623.12 acres, which is currently dedicated to the BDCDGU "1935" Well No. 191 (API No. 30-059-20140), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of said Section 19, is to be simultaneously dedicated to said Well No. 191 and to the proposed BDCDGU "1935" Well No. 192 (API No. 30-059-20372) to be drilled at an unorthodox CO₂ gas well location 2474 feet from the South line and 678 feet from the West line (Unit L) of said Section 19;

(h) all of Section 20, Township 19 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 201 (API No. 30-059-20144), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of said Section 20, is to be simultaneously dedicated to said Well No. 201 and to the proposed BDCDGU "1935" Well No. 202 (API No. 30-059-20373) to be drilled at an unorthodox CO₂ gas well location 1747 feet from the North

line and 518 feet from the West line (Unit E) of said Section 20;

(i) all of Section 21, Township 19 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 211 (API No. 30-059-20115), located at a standard CO₂ gas well location 1980 feet from the South and West lines (Unit K) of said Section 21, is to be simultaneously dedicated to said Well No. 211 and to the proposed BDCDGU "1935" Well No. 212 (API No. 30-059-20374) to be drilled at an unorthodox CO₂ gas well location 2424 feet from the North line and 235 feet from the East line (Unit H) of said Section 21;

(j) all of Section 27, Township 19 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 271 (API No. 30-059-20197), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of said Section 27, is to be simultaneously dedicated to said Well No. 271 and to the proposed BDCDGU "1935" Well No. 272 (API No. 30-059-20375) to be drilled at an unorthodox CO₂ gas well location 1679 feet from the North line and 957 feet from the West line (Unit E) of said Section 27;

(k) all of Section 28, Township 19 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 281 (API No. 30-059-20198), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of said Section 28, is to be simultaneously dedicated to said Well No. 281 and to the proposed BDCDGU "1935" Well No. 282 (API No. 30-059-20376) to be drilled at an unorthodox CO₂ gas well location 1674 feet from the North line and 994 feet from the West line (Unit E) of said Section 28;

(l) all of Section 29, Township 19 North, Range 35 East, NMPM, comprising 640 acres, which is currently dedicated to the BDCDGU "1935" Well No. 291 (API No. 30-059-20199), located at a standard CO₂ gas well location 1650 feet from the North and East lines (Unit G) of said Section 29, is to be simultaneously dedicated to said Well No. 291 and to the proposed BDCDGU "1935" Well No. 292 (API No. 30-059-20377) to be drilled at an unorthodox CO₂ gas well location 2017 feet from the North line and 848 feet from the West line (Unit E) of said Section 29; and,

(m) all of Section 30, Township 19 North, Range 35 East, NMPM, comprising 623.88 acres, which is currently dedicated to the BDCDGU "1935" Well No. 301 (API No. 30-059-20095), located at a standard CO₂ gas well location 1980 feet from the North and East lines (Unit G) of said Section 30, is to be simultaneously dedicated to said Well No. 301 and to the proposed BDCDGU "1935" Well No. 302 (API No. 30-059-20378) to

Administrative Order NSL-3966(SD)
Amoco Exploration and Production Company
March 9, 1998
Page 4

be drilled at an unorthodox CO₂ gas well location 2408 feet from the North line and 722 feet from the West line (Unit E) of said Section 30.

From the information provided by the applicant, the royalty interests in all of the affected off-setting acreage to the proposed unorthodox locations have ratified the Bravo Dome Carbon Dioxide Gas Unit (BDCDGU) Agreement.

By authority granted me under the provisions of Rule 5 of the "*Special Rules and Regulations for the Bravo dome 640-Acre Area*," as promulgated by Division Order No. R-7556, dated June 19, 1984, Decretory Paragraph No. (4) of said Order No. R-10576, and Division General Rule 104.F(2) the above-described BDCDGU "1934" Well Nos. 252, 263, 272, 342, 352, and 362 and BDCDGU "1935" Well Nos. 192, 202, 212, 272, 282, 292, and 302, all to be drilled at unorthodox "infill" CO₂ gas well locations are hereby approved.

Sincerely,


Lori Wrotenberg
Director

LW/MES/kv

cc: Roy Johnson, Geologist - New Mexico Oil Conservation Division, Santa Fe
New Mexico State Land Office - Santa Fe
Danny J. Holcomb, Operations Foreman (Amoco) - Amistad, New Mexico



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

June 1, 1998

Amoco Exploration and Production Company
P. O. Box 303
Amistad, New Mexico 88410
Attention: Danny J. Holcomb

AMENDED
Administrative Order NSL-3966(SD)

Dear Mr. Holcomb:

Reference is made to your letter to Mr. Roy Johnson, District Supervisor New Mexico Oil Conservation Division ("Division"), dated May 5, 1998. Division Administrative Order NSL-3966(SD), dated March 9, 1998, authorized, in part, Amoco Exploration and Production Company to drill its proposed BDCDGU "1935" Well No. 272 (API No. 30-059-20375) at an unorthodox CO₂ gas well location 1679 feet from the North line and 957 feet from the West line (Unit E) of Section 27, Township 19 North, Range 35 East, NMPM, Bravo Dome Carbon Dioxide (640-acre) Gas Pool, Bravo Dome Carbon Dioxide Gas Unit (BDCDGU), Union County, New Mexico.

It is the Division's understanding that a location change is necessary due to a survey staking error.

By authority granted me under the provisions of Rule 5 of the "*Special Rules and Regulations for the Bravo Dome 640-Acre Area*," as promulgated by Division Order No. R-7556, dated June 19, 1984, Decretory Paragraph No. (4) of said Order No. R-10576, and Division General Rule 104.F(2), said Division Administrative Order NSL-3966(SD) is hereby amended to reflect a location change for the BDCDGU "1935" Well No. 272 that is 1664 feet from the North line and 958 feet from the West line (Unit E) of said Section 27.

All other provisions of said Order NSL-3966(SD) shall remain in full force and effect until further notice.

Sincerely,



Lori Wrotenbery
Director

LW/MES/kv

cc: Roy Johnson, Geologist - New Mexico Oil Conservation Division, Santa Fe
New Mexico State Land Office - Santa Fe
Sam Culpepper, CPL (Amoco) - Houston, Texas
William F. Carr, Legal Counsel for Amoco - Santa Fe
File: NSL-3966(SD)