

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

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

CASE NO. 9428
Order No. R-6446-D

IN THE MATTER OF CASE 9428 BEING CALLED BY THE
OIL CONSERVATION COMMISSION ON ITS OWN MOTION
PURSUANT TO THE PROVISIONS OF DIVISION ORDER
R-6446-B WHICH APPROVED THE BRAVO DOME CARBON
DIOXIDE GAS UNIT AGREEMENT, TO PERMIT AMOCO
PRODUCTION COMPANY, THE OPERATOR OF SAID UNIT,
TO REVIEW OPERATIONS AND DEMONSTRATE TO THE
COMMISSION THAT ITS OPERATIONS WITHIN THE UNIT ARE
RESULTING IN THE PREVENTION OF WASTE AND THE
PROTECTION OF CORRELATIVE RIGHTS ON A CONTINUING
BASIS, HARDING, UNION AND QUAY COUNTIES,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on July 14, 1988,
at Santa Fe, New Mexico, before the Oil Conservation Commission
of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 1st day of December, 1988, the
Commission, a quorum being present, having considered the
testimony, the record, and the exhibits, and being fully
advised in the premises,

FINDS THAT:

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

(2) On January 23, 1981, the Commission entered Order No.
R-6446-B which granted the application of Amoco Production
Company, hereinafter referred to as "Amoco", for approval of
the Bravo Dome Carbon Dioxide Gas Unit, hereinafter referred to
as "the unit", located in Union, Harding and Quay Counties, New
Mexico.

(3) Order R-6446-B provided, among other things:

(a) "That the operator of said unit shall be required to periodically demonstrate to the Commission that its operations within the unit are resulting in the prevention of waste and the protection of correlative rights on a continuing basis."

(b) "That such demonstration shall take place at a public hearing held at least every four years following the effective date of the unit or at such lesser intervals as the Commission may require."

(4) The unit became effective on November 1, 1980.

(5) A hearing was held on August 3, 1984, before the Commission pursuant to Order R-6446-B and the Commission entered Order R-6446-C finding that unit operations were preventing waste and protecting correlative rights, and further ordering that the case be reopened for additional evidence before or during August, 1988.

(6) Mr. Norman Libby, a royalty owner whose royalty interest has not been committed to the Bravo Dome Unit, entered an appearance in opposition to Amoco in this case and cross-examined Amoco's witnesses but did not present any evidence in support of his position.

(7) In order to gather geological data, Amoco, as unit operator, has:

- (a) shot and processed a total of 1400 miles of seismic lines at a cost of approximately 3.5 million dollars;
- (b) drilled and logged 390 wells, including nearly a hundred wells remote from the gathering system, many of which wells were drilled in order to obtain data to further evaluate the reservoir and develop plans for future expansion of production and gathering facilities;
- (c) cored 44 wells with a total core length of approximately 5,840 feet;
- (d) evaluated and correlated the data from said testing and drilling.

(8) As additional seismic work, drilling and core analysis is performed by the unit operator, the interpretation of the Tubb formation in this area is modified and refined.

(9) In order to deliver gas to market, the unit has constructed gathering facilities including two central processing facilities which include dehydration and compression equipment used to make the gas suitable for delivery into main line transmission facilities:

- (a) a Phase I central processing facility is connected to 68 wells through about 70 miles of gathering system; and
- (b) the Phase II central processing facility is connected to about 190 wells through approximately 200 miles of gathering system.

(10) The unit operator has installed on each of the producing wells a solar-powered remote telemetry installation through which data from the well is transmitted to the central plant and through which commands and activations of systems at the wellhead can be transmitted from the central plant.

(11) The unit has drilled and is currently using two salt water disposal wells.

(12) As of the date of this hearing, the unit production of Carbon Dioxide averaged 368 million cubic feet per day at a pressure base of 15.025 p.s.i.a. for 1988, which is at or very near current plant capacity.

(13) Cumulative production of CO₂ from the unit through May, 1988 is approximately 427 billion cubic feet.

(14) The present market for Bravo Dome produced CO₂ is enhanced oil recovery projects, primarily in the Permian Basin.

(15) Wells presently connected to the gathering system plants have sufficient producing capability to meet current market demand, and the unit operator does not have a specific development plan for the unit because such plan would not be practical with the current market situation in which projections for future demand are uncertain.

(16) The unit operator has evaluated various alternatives to meet possible future demand situations, including connection of already drilled wells, out-field drilling in order to load existing facilities, expansion of existing facilities, and construction of additional plants. As a result, the unit

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operator can respond affectively to develop the unit to meet future requirements.

(17) Unit operations have resulted in efficient, orderly and economical exploration of the unit area and economical production, field gathering and treatment of carbon dioxide within the unit thereby preventing surface and underground waste of carbon dioxide.

(18) For the interest owners in the unit area to derive the benefits of unitization and for their correlative rights to be protected, Amoco, as unit operator, must develop the carbon dioxide throughout the unit area in a prudent, diligent and expeditious manner.

(19) Amoco is carrying out their duties as unit operator of the Bravo Dome Carbon Dioxide Gas Unit and their actions within the unit area are resulting in the protection of the correlative rights of interest owners within the unit on a continuing basis.

(20) In accordance with ordering paragraphs (4) and (5) of said Order No. R-6446-B, this case should be reopened for additional testimony at a hearing during or before August, 1992.

IT IS THEREFORE ORDERED THAT:

(1) The operation of Amoco Production Company, as unit operator of the Bravo Dome Carbon Dioxide Gas Unit located in Harding, Union and Quay Counties, New Mexico, are hereby found to be resulting in the prevention of waste of carbon dioxide gas and the protection of correlative rights of interest owners within the unit on a continuing basis.

(2) This case shall be reopened for additional testimony at a hearing during or before August, 1992.

(3) Jurisdiction of this case is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



WILLIAM R. HUMPHRIES, Member



ERLING A. BROSTUEN, Member



WILLIAM J. LEMAY, Chairman and
Secretary

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