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November 2, 2000

HAND DELIVERED

Michael E. Stogner
Hearing Examiner
Oil Conservation Division
New Mexico Department of Energy,
Minerals and natural Resources
2040 South Pacheco Street
Santa Fe, New Mexico 87505

NOV - 2 2000

Reference: **Oil Conservation Division Case No. 12520:**

Application of BP Amoco for establishment of a downhole commingling reference case and pre-approval of downhole commingling for formations and pools in the Gallegos Canyon Unit pursuant to Division Rule 303.C(4) and the adoption of special administrative rules therefore, San Juan county, New Mexico.

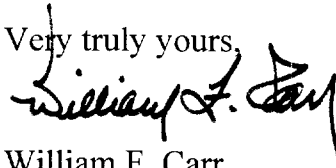
Dear Mr. Stogner:

Pursuant to your request at the conclusion of the October 19, 2000 Examiner Hearing on the above-referenced application, enclosed is BP Amoco's Proposed Order of the Division. As you will note, we have provided citations to the transcript and exhibits in support of our proposed findings.

By copy of this letter, I am sending a copy of the proposed order and transcript by Federal Express to Frank Chavez for his review and comment.

I will contact you on Monday, November 6, 2000 to arrange a time when we can meet to discuss this matter further.

Letter to Michael E. Stogner
November 2, 2000
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Very truly yours,

William F. Carr

cc: Mr. Frank Chavez-- By Federal Express
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Oil Conservation Division
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BP Amoco
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Denver, Colorado 80201

**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:**

**APPLICATION OF BP AMOCO FOR
ESTABLISHMENT OF A DOWNHOLE
COMMINGLING REFERENCE CASE
AND PRE-APPROVAL OF DOWNHOLE
COMMINGLING FOR FORMATIONS
AND POOLS IN THE GALLEGOS
CANYON UNIT PURSUANT TO DIVISION
RULE 303.C(4) AND THE ADOPTION OF
SPECIAL ADMINISTRATIVE RULES THEREFORE,
SAN JUAN COUNTY, NEW MEXICO.**

NOV - 2 2000

**CASE NO. 12520
ORDER NO. R-_____**

**BP AMOCO'S
PROPOSED ORDER OF THE DIVISION**

BY THE DIVISION:

This cause came on for hearing at 8:15 a. m. on October 19, 2000 at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this ____ day of November, 2000, 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, BP Amoco, pursuant to the provisions of Division Rule 303.C (4)(b), seeks pre-approval of downhole commingling for the Farmington, Fruitland Sand, Fruitland Coal, Pictured Cliffs, Gallup and Dakota formations in the Gallegos Canyon Unit (the Unit). BP Amoco, pursuant to the provisions of Division Rule 303.C (4) (a), also seeks to establish a downhole commingling reference case to provide for modification of notification rules on a unit-wide basis for downhole commingling of gas production within existing or future drilled wells within the Gallegos Canyon Unit, San Juan County, New Mexico.

(3) BP Amoco requested that the portion of its application which relates to the adoption of special administrative rules for the subsequent applications for approval to downhole commingle wells within the Gallegos Canyon Unit be dismissed since the rules which BP Amoco seeks are now included in Division Rule 303C (4)(b)(iii) which was adopted by Order No. R-11363, dated April 26, 2000.

(4) The applicant is the current operator of the Gallegos Canyon Unit which currently encompasses 43,146.62 acres, more or less, of Federal, Indian Alloted, State and Fee lands in San Juan County, New Mexico, as fully described on Exhibit A to this order. (BP Amoco Exhibit No. 8, Testimony of Reinert at 9)

(5) Within the Gallegos Canyon Unit, BP Amoco operates 1 well which produces from the Farmington formation, 21 wells which produce from the Fruitland Sand formation (North Pinion-Fruitland Sand Pool-Code 82920), 65 wells which produce from the Fruitland Coal formation (Basin-Fruitland Coal Gas Pool-Code 71629), 121 wells which produce from the Pictured Cliffs formation (West Kutz-Pictured Cliffs Gas Pool-Code 79660), 5 wells which produce from the Gallup formation (Pinon Gallup Pool-Code 50380, Totah-Gallup Pool-Code 59750, Meadows-Gallup Pool-Code 45450) and 195 wells which produce from the Dakota formation (Basin-Dakota Gas Pool-Code 71599). (BP Amoco Exhibits 11 through 15, Testimony of Hawkins at 28-30)

(6) In support of it application for pre-approval of downhole commingling of production from all producing formations within the Gallegos Canyon Unit, the applicant presented evidence and testimony which shows:

a) The tops and bottoms of the pay sections in each of the pools to be

commingled. (BP Amoco Exhibit Nos. 9, 16, Testimony of Jeffery at 24-25)

- b) Rates of production of gas, condensate and water from the wells in each pool to be commingled. (BP Amoco Exhibits 11 through 15, Testimony of Hawkins at 28-30)
- c) Wells which produce from the pools which are the subject of this application produce only small volumes of fluids. (Testimony of Hawkins at 29-30) All produced fluids from the commingled zones are compatible and combining the fluids will not result in damage to any of the formations to be commingled. (BP Amoco Exhibits 11 through 15, Testimony of Hawkins 32, 47)
- d) Commingling will not result in shut-in or flowing wellbore pressures in excess of the fracture parting pressure of any commingled pools. (BP Amoco Exhibit 16, Testimony of Hawkins at 31-32)
- e) Commingling will not result in permanent loss of revenues due to cross-flow in the wellbore. (Testimony of Hawkins at 32-33, 46)
- f) The production allocated to any well in the Basin-Dakota Gas Pool will not exceed the top gas allowable rate set by the Division for that pool pursuant to its prorationing authority. (Testimony of Hawkins at 33)
- g) Commingling will not reduce the value of the total remaining production from the Unit. (Testimony of Hawkins at 33)

(7) Few pools have been approved for commingling within wellbores in the Gallegos Canyon Unit because of the heavy notice burden on any operator who sought to downhole commingle production in the Gallegos Canyon Unit due to the limitations on commingling authority imposed by the Division's recently abolished pressure requirements for the downhole commingling of production. (Testimony of Hawkins at 35-37)

(8) Downhole commingling of production has been pre-approved for the Basin-Dakota Pool and the West Kutz Pictured Cliffs Pool and for the Basin Fruitland Coal Gas Pool and the West Kutz-Pictured Cliffs Pool (Order No. R-12346). production has have been

approved for downhole commingling in individual wells from the North Pinion-Fruitland Sand Pool and the West Kutz Pictured Cliffs Pool (Administrative Order Nos. DHC-1367 and 1407) and from the Basin-Fruitland Coal Gas Pool and the Basin-Dakota Gas Pool (Administrative Order No. DHC-2790). (BP Amoco Exhibit 18, Testimony of Hawkins at 35)

(9) BP Amoco recommended the following allocation methods be adopted for commingled wells in the Gallegos Canyon Unit:

- a) Subtraction Method -- When a new zone is opened for flow prior to rate stabilization, production from the zones with stable production rates should be forecast using the established decline rate from that zone and the existing zone production is subtracted from the total well production.
- b) Fixed Percentage Method – When all zones have established stable production rates a fixed percentage allocation method should be used where production from each zone is calculated based its percentage of total well production.
- c) The subtraction method of allocation should be replaced with the fixed percentage method once the production from the new zone has stabilized. (BP Amoco Exhibit No. 17, Testimony of Hawkins at 35-36, 38-39)

(10) Commingling of production from all formations in the Gallegos Canyon Unit will enable the operator to open additional zones in existing wellbores in the Unit thereby increasing the volume of production recovered (Testimony of Hawkins at 38) and make current low-rate producing wells in the Unit more economically attractive zones with productive potential which are currently behind pipe thereby increasing the ultimate recovery of production from the this Unit thereby preventing waste. (Testimony of Hawkins at 45)

(11) Pre-Approval of downhole commingling of production from wells located in the Gallegos Canyon Unit will be in the best interest of conservation, will increase the volume of gas recovered from the unit thereby preventing waste, and will protect the correlative rights of all interest owners in the Unit and should be approved.

(12) According to its evidence, BP Amoco seeks to establish a “reference case” for an administrative procedure for authorizing the downhole commingling of existing and future drilled wells in the Gallegos Canyon Unit without additional notice to each affected interest owner as required by Division Rule No. 303.D.

(13) In support of its request to establish a “reference case” for providing notice within the Gallegos Canyon Unit the applicant presented evidence and testimony which indicates that:

- a) The interest ownership between zones within a given wellbore in the Gallegos Canyon Unit generally is not common.(See, BP Amoco Exhibits 2 through 8, Testimony of Reinert at 9)
- b) Pursuant to Division Rule 303.D, the applicant is currently required to notify all interest owners within the Gallegos Canyon Unit every time an Application for Downhole Commingling (Form C-107) is submitted to the Division. There are a numerous interest owners in this unit and, in this case, over 750 interest owners had to be notified by certified mail of this application. (BP Amoco Exhibit No. 19, Testimony of Reinert at 9-10)
- c) Providing notice to each interest owner within the Gallegos Canyon Unit of subsequent downhole commingling applications is unnecessary and imposes an excessive burden on the applicant. (Testimony of Hawkins at 37)
- d) The downhole commingling of production in wellbores within the Gallegos Canyon Unit will benefit working, royalty, and overriding royalty interest owners and should not violate the correlative rights of any interest owner in the Unit. (Testimony of Hawkins at 38)
- e) No interest owner appeared at the hearing in opposition to the establishment of a “reference case” for notice.

(14) Approval of a reference case for obtaining approval for subsequent applications for the downhole commingling of production in wellbores within the Gallegos Canyon Unit without notice to the Unit interest owners should be approved.

IT IS THEREFORE ORDERED THAT:

(1) The application of BP Amoco for pre-approval of downhole commingling of production from the Farmington, Fruitland Sand, Fruitland Coal, Pictured Cliffs, Gallup and Dakota gas production in within existing and future drilled wells in the Gallegos Canyon Unit, San Juan County, New Mexico is hereby approved.

(2) The application of BP Amoco to establish a “reference case” for modification of notice rules on a unit-wide basis for downhole commingling of Farmington, Fruitland Sand, Fruitland Coal, Pictured Cliffs, Gallup and Dakota gas production within existing and future drilled wells within the Gallegos Canyon Unit, San Juan County, New Mexico, is hereby approved.

(3) In order to obtain Division authorization to downhole commingle production in wellbores within the Gallegos Canyon Unit, the applicant shall file Division Form C-107-A with the Santa Fe and Aztec Offices of the Division. Such application shall contain all the information required under Division Rule 303.C., provided however, the applicant shall not be required to provide notice to the other interest owners within the unit of such commingling.

(4) 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

LORI WROTENBERY
Director

S E A L

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EXHIBIT A

GALLEGOS CANYON FEDERAL EXPLORATORY UNIT
SAN JUAN COUNTY, NEW MEXICO.

TOWNSHIP 29 NORTH, RANGE 13 WEST, NMPM

Section 13: All
Sections 23-26: All
Sections 34-36: All

TOWNSHIP 29 NORTH, RANGE 12 WEST, NMPM

Section 16: SW/4
Sections 17-21: All
Section 22: W/2, SE/4
Section 25: W/2, SE/4
Sections 26-36: All

TOWNSHIP 28 NORTH, RANGE 11 WEST, NMPM

Section 7: All
Sections 18 and 19: All
Section 31: S/2

TOWNSHIP 28 NORTH, RANGE 12 WEST, NMPM

Sections 7-36: All
(All Township)

TOWNSHIP 28 NORTH, RANGE 13 WEST, NMPM

Sections 11-14: All
Sections 23-26: All

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Sections 35 and 36: All

TOWNSHIP 27 NORTH, RANGE 12 WEST, NMPM

Sections 4-6: All

Section 9: N/2