

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 3743
Order No. R-3401

APPLICATION OF BENSON-MONTIN-GREER
DRILLING CORPORATION FOR A PRESSURE
MAINTENANCE PROJECT, RIO ARRIBA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 3, 1968,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 11th day of April, 1968, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, 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, Benson-Montin-Greer Drilling Corp-
oration, seeks authority to institute a pressure maintenance
project in its Canada Ojitos Unit Area, West Puerto Chiquito-
Mancos Oil Pool, Rio Arriba County, New Mexico, by the injection
of gas into the Niobrara member of the Mancos shale through its
Canada Ojitos Unit Well No. 2 (K-13), located in Unit K of Sec-
tion 13, Township 25 North, Range 1 West, NMPM, Rio Arriba County,
New Mexico.

(3) That initially the project area should comprise only
the following-described area in Rio Arriba County, New Mexico:

TOWNSHIP 25 NORTH, RANGE 1 WEST, NMPM

Sections 10 and 11: All

Section 13: W/2

Sections 14 and 15: All

Section 16: E/2

Section 23: N/2

Section 24: NW/4

(4) That a pressure maintenance project comprising the above-described area is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(5) That the applicant further seeks the promulgation of special rules and regulations governing said pressure maintenance project, and the establishment of an administrative procedure whereby said project area may be expanded for good cause shown and whereby additional wells in the project area may be converted to gas injection.

(6) That Special rules and regulations for the operation of the BMG West Puerto Chiquito-Mancos Pressure Maintenance Project should be promulgated and, for operational convenience, such rules should provide certain flexibility in authorizing the production of the project allowable from any well or wells in the project area in any proportion, provided that no well in the project area which directly or diagonally offsets a well outside the Canada Ojitos Unit Area producing from the same common source of supply should be allowed to produce in excess of top unit allowable for the West Puerto Chiquito-Mancos Oil Pool until such time as the well has experienced a substantial response to gas injection. When such a response has occurred, the well should be permitted to produce up to two times top unit allowable for the West Puerto Chiquito-Mancos Oil Pool. Production of such well at a higher rate should be authorized only after notice and hearing.

IT IS THEREFORE ORDERED:

(1) That the applicant, Benson-Montin-Greer Drilling Corporation, is hereby authorized to institute a pressure maintenance project in its Canada Ojitos Unit Area, West Puerto Chiquito-Mancos Oil Pool, Rio Arriba County, New Mexico, to be designated

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as the BMG West Puerto Chiquito-Mancos Pressure Maintenance Project, by the injection of gas into the Niobrara member of the Mancos shale through the following-described well in Rio Arriba County, New Mexico:

Canada Ojitos Unit Well No. 2 (K-13),
located in Unit K of Section 13, Town-
ship 25 North, Range 1 West, NMPM.

(2) That Special Rules and Regulations governing the operation of the BMG West Puerto Chiquito-Mancos Pressure Maintenance Project, Rio Arriba County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
BMG WEST PUERTO CHIQUITO-MANCOS PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the BMG West Puerto Chiquito-Mancos Pressure Maintenance Project, hereinafter referred to as the Project, shall comprise the area in Rio Arriba County, New Mexico, described as follows:

TOWNSHIP 25 NORTH, RANGE 1 WEST, NMPM

Sections 10 and 11: All
Section 13: W/2
Sections 14 and 15: All
Section 16: E/2
Section 23: N/2
Section 24: NW/4

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

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

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

RULE 5. The allowable assigned to any injection well on a 320-acre proration unit shall be top unit allowable for the West Puerto Chiquito-Mancos Oil Pool.

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

RULE 7. The allowable assigned to each producing well in the Project shall be equal to the well's ability to produce or to top unit allowable for the West Puerto Chiquito-Mancos Oil Pool, whichever is less, provided that any producing well in the project area which directly or diagonally offsets a well outside the Canada Ojitos Unit Area producing from the same common source of supply shall not produce in excess of top unit allowable for the pool until such time as the well receives a substantial response to gas injection. When such a response has occurred, the well shall be permitted to produce up to two times top unit allowable for the pool. Production of such well at a higher rate shall be authorized only after notice and hearing. Each producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the West Puerto Chiquito-Mancos Oil Pool except that any well or wells within the project area producing with a gas-oil ratio in excess of 2,000 cubic feet of gas per barrel of oil may be produced on a "net" gas-oil ratio basis, which net gas-oil ratio shall be determined by applying credit for daily average gas injected if any, into the West Puerto Chiquito-Mancos Oil Pool

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within the project area to such high gas-oil ratio well. The daily adjusted oil allowable for any well receiving gas injection credit shall be determined in accordance with the following formula:

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

where:

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

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

RULE 8. Each month the project operator shall, within three days after the normal unit allowable for Northwest New Mexico has been established, submit to the Commission a Pressure Maintenance Project Operator's Report, on a form prescribed by the Commission, outlining thereon the data required, and requesting allowables for each of the several wells in the Project as well as the total Project allowable. The aforesaid Pressure Maintenance Project Operator's Report shall be filed in lieu of Form C-120 for the Project.

RULE 9. The Commission shall, upon review of the report and after any adjustments deemed necessary, calculate the allowable for each well in the Project for the next succeeding month in accordance with these rules. The sum of the allowables so calculated shall be assigned to the Project and may be produced from the wells in the Project in any proportion except that no well in the Project which directly or diagonally offsets a well outside the Project producing from the same common source of supply shall produce in excess of two times top unit allowable for the pool.

RULE 10. The conversion of producing wells to injection, the drilling of additional wells for injection, and expansion of the project area shall be accomplished only after approval of the same by the Secretary-Director of the Commission. To obtain such approval, the project operator shall file proper application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional injection wells shall include the following:

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

(2) A schematic drawing of the proposed injection well which fully describes the casing, tubing, perforated interval, and depth showing that the injection of gas will be confined to the Niobrara member of the Mancos shale.

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

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

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

RULE 11. That the subject pressure maintenance project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations insofar as said rules are not inconsistent with the rules prescribed by this order.

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(3) That allowables to all wells in the Canada Ojitos Unit Area but outside the limits of the BMG West Puerto Chiquito-Mancos Pressure Maintenance Project Area as defined herein shall be assigned and produced in accordance with the applicable Commission Rules and Regulations.

(4) 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

DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

A. L. PORTER, Jr., Member & Secretary

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