

Entered February 8, 1963
C. J. P.

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. 2718
Order No. R-2403

APPLICATION OF CONTINENTAL OIL COMPANY,
AS OPERATOR, FOR APPROVAL OF A SUPPLE-
MENTAL COOPERATIVE AGREEMENT UNITIZING
CERTAIN LEASES, A PLAN OF OPERATION FOR
CONTINUED GAS AND WATER INJECTION, MODI-
FICATION OF ALLOCATION METHOD FOR TRANS-
FER OF ALLOWABLES, CERTAIN ADMINISTRATIVE
PROCEDURES, AND PERMISSION TO PRODUCE MORE
THAN 16 WELLS INTO A SINGLE TANK BATTERY,
MALJAMAR COOPERATIVE AGREEMENT AREA,
MALJAMAR POOL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 6, 1962, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 31st day of December, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, 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, by Order No. 485, the Commission approved the Maljamar Cooperative Repressuring Agreement, said agreement having been entered into on August 5, 1941, by the parties signatory thereto, for pressure maintenance in the Grayburg-San Andres formations under the Maljamar Cooperative Repressuring Agreement area in the Maljamar Pool, Lea County, New Mexico, unitizing gas in the area, making provisions for gas injection wells, and the expansion thereof by administrative approval. The order further provided that the proration units within the committed area

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should not exceed the production of 44 barrels of oil daily; provided for expansion of the committed area by administrative approval; provided for the management of said project by the Operators Committee; and included other provisions for the conduct of the repressuring program.

(3) That, by Order No. 595, the Commission amended Order No. 485 and provided a method of allocation to the committed area and the reallocation to the respective proration units on a basis which included an acreage allowable up to 15 barrels per day, a maximum marginal well allowable of 20 barrels per day, and a void space allowable determined by reservoir conditions as reflected by each well's bottomhole pressure and gas-oil ratio.

(4) That numerous other orders have been entered approving additional injection wells for expansion of the repressuring program and for non-standard locations for both injection and producing wells. The order number or date of administrative approval providing for the present injection wells or non-standard locations is set out in the attached Exhibit "A".

(5) That, by Order No. R-841, the Commission approved the injection of water into the Pearl "B" Well No. 26, located 2615 feet from the South line and 25 feet from the West line of Section 30, Township 17 South, Range 33 East, NMPM, Lea County, New Mexico. By Order No. R-1075 the Commission authorized the expansion of Order No. R-841 to include the drilling and conversion of certain other wells to water injection wells, said wells also being listed on Exhibit "A" attached. The order further provided for administrative approval for expansion of the water injection program.

(6) That by adoption of Supplement No. 4 to the Maljamar Cooperative Repressuring Agreement, the applicant, Continental Oil Company, was elected Chairman of the Operators Committee and the name was changed to the Maljamar Cooperative Agreement.

(7) That the owners in the Maljamar Cooperative Agreement area have adopted Supplement No. 5 to the Maljamar Cooperative Agreement with Continental Oil Company as Operator of the Participating Area. The effect of Supplement No. 5 is to unitize all liquid hydrocarbons in the Grayburg-San Andres formations underlying the Participating Area, and to adopt a Plan of Operations for the expansion of the pressure maintenance program by gas and water injection.

(8) That the pressure maintenance program heretofore carried out has been successful and that approval of Supplement No. 5 and the Plan of Operation contemplated thereunder, and a revision of the allocation method for transferring allowables should increase the efficiency and ultimate recovery of the pressure maintenance program.

(9) That said repressuring project was instituted during the early primary life of the Maljamar Pool; that the Maljamar Pool, without the benefit of fluid injection, would be in or approaching a "stripper" state of depletion, and that any secondary recovery project instituted at the present time would in all probability be classified by the Commission as a water-flood project subject to Commission Rule 701-E governing water-flood projects.

(10) That to afford continuity of operations under the existing pressure maintenance rules, the present void space formula for the project should remain in effect, with the added privilege of allowable transfer for injection tracts, for wells shut-in for engineering reasons, and for wells incapable of making their computed share of the void space allowable. Provided however, that the maximum allowable assigned to any 40-acre proration unit should be limited to the Southeast New Mexico Waterflood Allowable Factor currently in effect or as modified by future orders of the Commission.

(11) That, by application in this case, Continental Oil Company, as Chairman for the Maljamar Cooperative Agreement area and operator of the Participating Area, seeks the consolidation of prior orders, modification of the allocation method for transfer of allowables, an administrative procedure for expansion or revision of the fluid injection program and expansion of the Participating Area within the Maljamar Cooperative Agreement boundaries; further, applicant seeks an exception to the provisions of Rule 309-A of the Commission Rules and Regulations to permit production of more than sixteen proration units into a single tank battery.

(12) That the proposed program will promote conservation and will tend to prevent waste through the production of oil which might not otherwise be recovered.

IT IS THEREFORE ORDERED:

(1) That the Maljamar Cooperative Repressuring Agreement and its supplements, including Supplement 4 which changed the name to Maljamar Cooperative Agreement and appointed Continental Oil Company as Chairman of the Operators Committee, are hereby continued in effect.

(2) That Supplement No. 5, being a Supplemental and Amendatory Agreement to the Maljamar Cooperative Agreement, and the initial Plan of Operations pursuant thereto, are hereby approved.

(3) That all oil produced from the Grayburg-San Andres formations underlying the Participating Area, as hereinafter

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defined, is fully unitized as provided in said Supplement No. 5, and all gas produced and utilized as provided in said Supplements No. 4 and No. 5 is fully unitized as provided therein.

(4) That the Cooperative Area, heretofore approved by this Commission for pressure maintenance of the Grayburg-San Andres formations and hereinafter called MCA Unit Area, consists of the following lands:

TOWNSHIP 17 SOUTH, RANGE 32 EAST, NMPM
LEA COUNTY, NEW MEXICO

Sections 14 to 23, inclusive
Sections 25 to 35, inclusive

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
LEA COUNTY, NEW MEXICO

Section 30: W/2

containing 13,786.66 acres, more or less.

That the following-described lands lying within such Cooperative Area are hereby designated and recognized as constituting the Participating Area for the Grayburg-San Andres formations:

TOWNSHIP 17 SOUTH, RANGE 32 EAST, NMPM
LEA COUNTY, NEW MEXICO

Section 15: SW/4 SW/4
Section 16: S/2 S/2, W/2 NW/4, and
NE/4 NW/4
Section 17: E/2 E/2 and NW/4 NE/4,
SE/4 NW/4, and S/2 SW/4
Section 18: SW/4 SW/4
Section 19: All
Section 20: All
Section 21: All
Section 22: NW/4 NW/4, S/2 NW/4, S/2 NE/4,
and S/2
Section 23: W/2, S/2 NE/4, and SE/4
Section 25: N/2, N/2 SW/4, N/2 SE/4 and
SE/4 SE/4
Section 26: N/2, SW/4, and NW/4 SE/4
Section 27: All
Section 28: All
Section 29: All
Section 30: All
Section 31: NE/4 NW/4
Section 33: N/2
Section 34: W/2 NW/4, NE/4 NW/4, and
NW/4 NE/4

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TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
LEA COUNTY, NEW MEXICO
Section 30: NW/4 and N/2 SW/4

containing 8,055.16 acres, more or less.

That the Participating Area described above and the following-described lands lying outside of the Participating Area but within the Cooperative Area, are hereby designated and recognized as constituting the committed acreage to the Maljamar Cooperative Agreement:

TOWNSHIP 17 SOUTH, RANGE 32 EAST, NMPM
LEA COUNTY, NEW MEXICO

Section 14: SW/4 (156.25 acres of 160-acre tract), and E/2
Section 16: NE/4, N/2 SE/4, and SE/4 NW/4
Section 17: SW/4 NE/4, W/2 SE/4, N/2 NW/4, SW/4 NW/4, and N/2 SW/4
Section 18: E/2, E/2 W/2, and Lots 1, 2 and 3
Section 22: N/2 NE/4 and NE/4 NW/4
Section 23: N/2 NE/4
Section 25: SW/4 SE/4, and S/2 SW/4
Section 26: NE/4 SE/4, and S/2 SE/4
Section 31: E/2, SE/4 NW/4, E/2 SW/4, and Lots 1, 2, 3 and 4
Section 32: NE/4 and N/2 NW/4, below 5,000 feet only
Section 33: S/2
Section 34: N/2 SE/4 below 5,000 feet only, NE/4 NE/4, S/2 NE/4, and SE/4 NW/4
Section 35: W/2

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
LEA COUNTY, NEW MEXICO
Section 30: Lot 4, and SE/4 SW/4

(5) That the fully Unitized Area shall be those lands designated above as the Participating Area of the MCA Unit for the Grayburg-San Andres formation.

(6) That the Participating Area may be enlarged as provided in said Supplement No. 5 and additional acreage committed to the MCA Unit; provided, however, that administrative approval for the expansion of the Participating Area or the committed acreage must be obtained from the Secretary-Director of the Commission; and provided, further, that any extension of the Cooperative Area, or of the Unitized Area beyond the boundaries of the Cooperative Area as described herein, shall be made only after notice and hearing.

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(7) That the MCA Unit operator shall file with the Commission an executed original or executed counterpart of the Supplement No. 5 within thirty (30) days after the effective date thereof. In the event of subsequent joinder by any party or expansion of the Participating Area, the unit operator shall file with the Commission within thirty (30) days thereafter counterparts of the unit agreement reflecting the subscription of those interests having subsequently joined or ratified.

IT IS FURTHER ORDERED:

(1) That the applicant, Continental Oil Company, as operator, is hereby authorized to continue the gas and water injection project authorized by Orders 485, 595, and R-841, and to continue and expand the water injection project as further authorized by Order No. R-1075 and as proposed by the Plan of Operations submitted with Supplement No. 5.

(2) That the MCA Unit approved gas and water injection wells shall be those wells listed in Exhibit "A" attached hereto. Additional wells may be drilled for gas or water injection, gas injection wells may be converted to water injection, water injection wells may be converted to gas injection wells, and producing wells may be converted to injection wells and injection wells to producing wells within the boundaries of the Maljamar Cooperative Agreement Area upon administrative approval of the Secretary-Director of the Commission without notice or hearing; provided, however, that all information required by Rule 701-B of the Commission Rules and Regulations shall be included in the application for administrative approval; and provided, further, that all offset operators to the well, if any there be, whose acreage is not included within the Participating Area, and the State Engineer shall also be notified by registered or certified mail of such request for administrative approval. The Secretary-Director may approve the application if no such offset operator or the State Engineer has objected within 20 days. The Secretary-Director may grant immediate approval of the application upon receipt of written waivers of objection from all such offset operators and the State Engineer.

(3) That the allocation to the Participating Area and other committed leases within the MCA Unit Area and the reallocation to the respective proration units therein shall be made upon the following plan:

(a) The unit operator shall submit to the Commission for approval the nomination in total barrels daily and schedule of reallocation to the respective proration units. Said nomination and schedule shall be submitted to the Commission and a duplicate shall be supplied to the Hobbs District Office of

the Commission not later than the twentieth day of each month preceding the next proration month.

- (b) Each proration unit shall be assigned an acreage allowable in whatsoever amount it is capable of producing up to but not exceeding fifteen (15) barrels daily, unless the unit operator nominates a lesser amount per proration unit.
- (c) Each proration unit capable of producing the acreage allowable but incapable of producing the acreage allowable plus the allowable assignable through the application of the void space formula hereinafter provided shall be assigned an allowable equal to that volume of oil shown on its production test.
- (d) All proration units capable of producing said acreage allowable plus the allowable allocated through the application of the void space formula shall be assigned a proportionate part of the total void space allowable so that each said proration unit will share in the void space allocation in inverse proportion to the amount of reservoir space voided as reflected by its production tests in strict accordance with the following formula:

$$\frac{\text{Proration Unit Reciprocal Void Space Factor}}{\text{Summation of MCA Unit Reciprocal Void Space Factors}} \times \text{Void Space Allowable} = \text{Number of Barrels}$$

The reciprocal void space factors to be determined from the attached Exhibit "B", being a table of "BARRELS OF RESERVOIR SPACE VOIDED IN PRODUCING ONE BARREL OF STOCK TANK OIL, AND THE RECIPROCAL FACTOR THERETO, AT GIVEN GAS-OIL RATIOS AND RESERVOIR PRESSURES."

- (e) A proration unit upon which is located a newly completed or reconditioned well shall be assigned an allowable in accordance with its acreage and void space allowable from the first day of production of new oil.

- (f) The proration units within the MCA Unit Area shall have a top daily oil allowable equal to the Southeast New Mexico Waterflood Allowable Factor currently in effect or as modified by future orders of the Commission, subject to the acreage and void space allowable allocations. A proration unit must have either a producing well, an injection well or a shut-in well capable of production before it can receive an allowable assignment.
- (g) Bottomhole pressure surveys and gas-oil ratio tests shall be taken and filed with the Commission in accordance with the Commission Rules and Regulations every six (6) months or at such periods as the Commission in its discretion may prescribe from time to time. All bottomhole pressures shall be computed to a common datum of sea level.
- (h) In no event shall any well producing from horizons other than the Grayburg-San Andres formations be prorated under this plan of allocation.

(4) That the operator is hereby authorized to transfer the top unit allowable from any proration unit containing only an injection well, or a well shut-in for engineering reasons and approved by the Commission, to any well or wells assigned a top unit allowable under the void space formula and capable of making the transferred allowable or portion thereof. Where a well is incapable of producing its calculated void space allowable, the difference between its capability and that allowable assigned by the void space formula may likewise be transferred to any well or wells assigned a top unit allowable under the void space formula capable of making the transferred allowable or a portion thereof. Provided however, that no allowable shall be transferred across the boundary of the Participating Area or across the boundary of any lease outside the Participating Area without notice and hearing.

(5) That an exception is hereby granted to the provisions of Rule 309-A of the Commission Rules and Regulations to permit the production of more than sixteen wells into a single tank battery. Operator shall notify the Commission of the location of any central tank battery at the time of its installation.

(6) That no well in the MCA Unit Area that is within the Participating Area and is closer than 1000 feet to the boundary thereof or that is outside the Participating Area and is closer than 1000 feet to the Participating Area or to another lease shall produce in excess of two times the top unit allowable for the MCA Unit Area. The Secretary-Director may, upon application

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filed in due form, approve production in excess of two times the top unit allowable if all offset operators have been notified of the application and no objection has been received within ten days. The Secretary-Director may grant immediate approval of such application upon receipt of written waivers of objection from all such offset operators.

(7) That all previous orders pertaining to the MCA Unit are hereby superseded insofar as they are inconsistent with this order.


(8) 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


TOM BOLACK, Chairman


E. S. WALKER, Member


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

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