

**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. 10712
Order No. R-2178-F**

**APPLICATION OF YATES PETROLEUM CORPORATION
FOR AMENDMENT OF DIVISION ORDER NO. R-2178,
AS AMENDED, WHICH APPROVED A CARBON DIOXIDE/WATER
INJECTION PROJECT KNOWN AS THE YATES PETROLEUM
CORPORATION LOCO HILLS CO₂/WATER INJECTION
PILOT PROJECT IN THE FOURTH SAND MEMBER OF THE
GRAYBURG FORMATION, EDDY COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on April 8, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 27th day of April, 1993, 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-2178-D issued in Case No. 10476 on July 9, 1992, the Division authorized Yates Petroleum Corporation to initiate its Loco Hills CO₂/Water Injection Pilot Project by injecting carbon dioxide and water into the Fourth Sand Member of the Grayburg formation underlying portions of the SE/4 NE/4 and NE/4 SE/4 (Units H and I, respectively) of Section 12, Township 18 South, Range 29 East, NMPM, and Lots 2 and 3, (SW/4 NW/4 and NW/4 SW/4 equivalent, Units E and L, respectively) of Section 7, Township 18 South, Range 30 East, NMPM, both portions of said Sections located in the Loco Hills Queen-Grayburg-San Andres Pool, West Loco Hills Grayburg No. 4 Sand Unit, Eddy County, New Mexico.

(3) By Division Order No. R-2178-E, issued in Case No. 10564 on October 14, 1992, the application of Yates Petroleum Corporation to qualify its Loco Hills CO₂/Water Injection Pilot Project as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5) was approved and carbon dioxide injection commenced in December, 1992.

(4) According to applicant's evidence and testimony, data obtained from the injection of carbon dioxide into the project area has shown that the original injection/production pattern in the pilot area should be amended to maximize the recovery of oil from the project area.

(5) Order No. R-2178-D originally authorized Yates to utilize its West Loco Hills G4S Sand Unit Tract 1 Well No. 9, located 1980 feet from the North line and 40 feet from the West line (Unit E), and its West Loco Hills G4S Sand Unit Tract 1 Well No. 10, located 2455 feet from the South line and 50 feet from the West line (Unit L), both in Section 7, Township 18 South, Range 30 East, NMPM, as injection wells within the pilot project area.

(6) Yates proposes to amend the development plan for this pilot project by utilizing for injection of carbon dioxide and water the above-described West Loco Hills G4S Unit Tract 1 Well No. 9, and the West Loco Hills G4S Tract 13 Well No. 12 to be drilled at a location 2408 feet from the North line and 440 feet from the East line (Unit H) of Section 12.

(7) The proposed amended development plan calls for utilizing the following described wells as producing wells within the pilot project area:

West Loco Hills G4S Tract 13A Well No. 4
1650' FNL - 330' FEL (Unit H) of Section 12;

West Loco Hills G4S Tract 13 Well No. 11
2310' FNL - 1175' FEL (Unit H) of Section 12;

West Loco Hills G4S Tract 6 Well No. 1
1980' FSL - 660' FEL (Unit I) of Section 12;

West Loco Hills G4S Tract 1 Well No. 10
2455' FSL - 50' FWL (Unit L) of Section 7;

West Loco Hills G4S Tract 1 Well No. 8
2310' FNL - 330' FWL (Unit E) of Section 7; and

West Loco Hills G4S Tract 1 Well No. 2
1650' FNL - 330' FWL (Unit E) of Section 7.

(8) The boundaries of the Yates Petroleum Corporation Loco Hills CO₂/Water Injection Pilot Project are not altered by this proposed amendment and, other than the proposed relocation of the injection and producing wells within the project boundaries, all other provisions of Order No. R-2178-D which approved this carbon dioxide/water injection pilot project and the provisions of Order No. R-2178-E which approved this project for the Recovered Oil Tax Rate should remain in full force and effect.

(9) Approval of the relocation of injection and producing wells in this pilot project should improve the efficiency of this pilot project and maximize the production of otherwise unrecoverable oil therefrom, thereby preventing waste.

(10) Since this pilot project is operated within the boundaries of the West Loco Hills Grayburg No. 4 Sand Unit Area, the proposed relocation of injection and producing wells will not impair correlative rights.

(11) The proposed relocation of injection and producing wells as described in Finding Paragraph Nos. (6) and (7) above should be approved.

IT IS THEREFORE ORDERED THAT:

(1) The application of Yates Petroleum Corporation to amend Division Order No. R-2178, as amended, is hereby granted.

(2) The applicant is hereby authorized to develop its Loco Hills CO₂/Water Injection Pilot Project in the Fourth Sand Member of the Grayburg formation underlying portions of the SE/4 NE/4 and NE/4 SE/4 (Units H and I, respectively) of Section 12, Township 18 South, Range 29 East, NMPM, and Lots 2 and 3 (SW/4 NW/4 and NW/4 SW/4 equivalents, Units E and L, respectively) of Section 7, Township 18 South, Range 30 East, NMPM, by utilizing for injection of carbon dioxide and water the West Loco Hills G4S Tract 1 Well No. 9 located 1980 feet from the North line and 40 feet from the West line (Unit E) of Section 7, and the West Loco Hills G4S Tract 13 Well No. 12 to be drilled at a location 2408 feet from the North line and 440 feet from the East line (Unit H) of Section 12.

(3) The following existing wells are hereby approved as production wells within the pilot project area:

West Loco Hills G4S Tract 13A Well No. 4
1650' FNL - 330' FEL (Unit H) of Section 12;

West Loco Hills G4S Tract 13 Well No. 11
2310' FNL - 1175' FEL (Unit H) of Section 12;

West Loco Hills G4S Tract 6 Well No. 1
1980' FSL - 660' FEL (Unit I) of Section 12;

West Loco Hills G4S Tract 1 Well No. 10
2455' FSL - 50' FWL (Unit L) of Section 7;

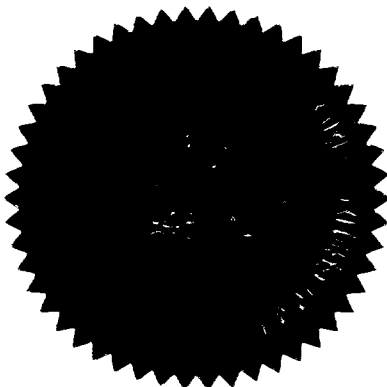
West Loco Hills G4S Tract 1 Well No. 8
2310' FNL - 330' FWL (Unit E) of Section 7; and

West Loco Hills G4S Tract 1 Well No. 2
1650' FNL - 330' FWL (Unit E) of Section 7.

(4) Except for the new locations for injection and producing wells authorized by this Order, all provisions of Division Order Nos. R-2178-D and R-2178-E shall remain in full force and effect.

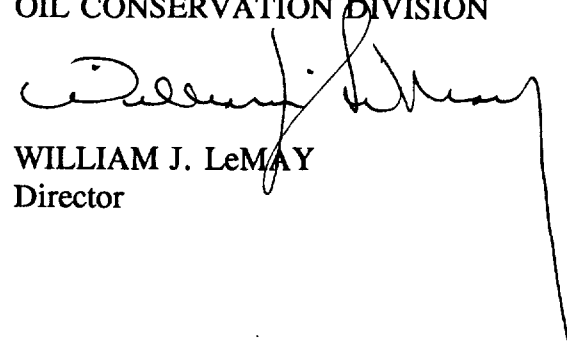
(5) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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



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STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LeMAY
Director