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OF COUNSEL

June 26, 1990

HAND DELIVERED

Mr. Michael E. Stogner
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87504

Re: ARCO Oil & Gas Company
Application for Additional
Gas Injection Well into the
Empire Abo Unit,
NMOCD Case No. 9931

Dear Mr. Stogner:

On behalf of OXY USA, Inc. and in accordance with your directions at the conclusion of the hearing of the referenced case held on June 13, 1990, please find enclosed our proposed order for entry in this matter.

Very truly yours,

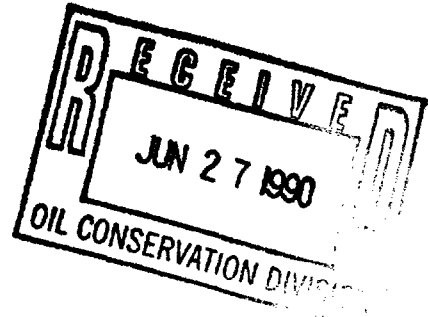


W. Thomas Kellahin

WTK/tic
Enclosure

cc: William F. Carr, Esq.
Campbell & Black, P.A.
Post Office Box 2088
Santa Fe, New Mexico 87504-2208

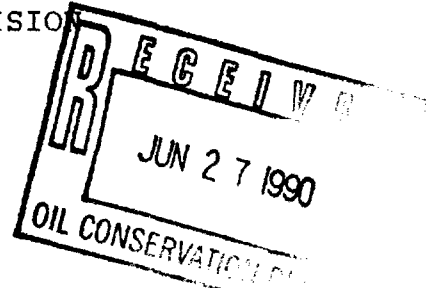
Richard E. Foppiano
OXY USA, Inc.
Post Office Box 50250
Midland, Texas 79710



*Received
6/27/90*

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. 9931
ORDER NO R-_____

APPLICATION OF ARCO OIL & GAS COMPANY
FOR PRESSURE MAINTENANCE EXPANSION
APPROVAL OF AN UNORTHODOX GAS INJECTION
WELL AND AN EXCEPTION TO RULE 7 OF DIVISION
ORDER R-4549, EDDY COUNTY, NEW MEXICO.

OXY USA, INC.'S
PROPOSED ORDER OF THE DIVISION

BY THE DIVISION:

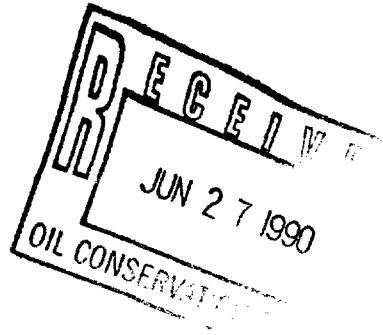
This cause came on for hearing at 8:15 a.m. on
June 13, 1990, at Santa Fe, New Mexico, before Examiner
Michael E. Stogner.

NOW, on this ____ of July, 1990, 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.

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(2) The applicant, Arco Oil & Gas Company, ("ARCO") seeks authority to expand its Empire Abo Unit Pressure Maintenance Project, authorized by and subject to Division Order R-4549, as amended, by converting its Empire Abo Unit J Well No. 10, ("J-10") 2310 feet FNL and FWL of Section 3 from a producing oil well to a gas injection well.

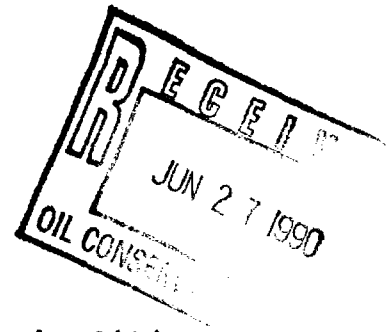
(3) ARCO further seeks authority to convert its Empire Abo Unit J Well No. 13 ("J-13") located 1980 feet FNL and 660 feet FWL of Section 2, T18S, R27E, to a gas injection well and seeks an exception for said well from Rule 7A of the Special Rules and Regulations for the Empire Abo Unit Pressure Maintenance Project promulgated by Order R-4549, as amended.

(4) Rule 7A of Order R-4549 was adopted as Rule 14 when the Division established the Special Rules for the ARCO project on June 15, 1973, and has remained unchanged for some seventeen years except to be subsequently renumbered.

(5) Rule 7A provides in part:

that no well shall be approved for gas or water injection when such well is located closer than 1650 feet to a tract which is not committed to the unit and on which is located a well producing from the same common source of supply.

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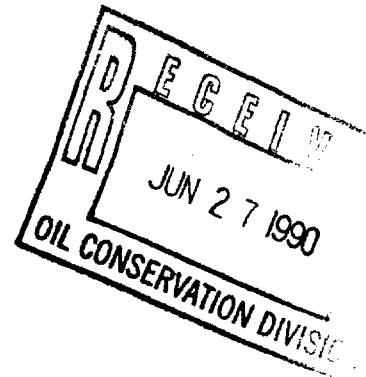
(6) OXY USA, Inc., ("OXY"), formerly Cities Service Oil Company, instituted its Citgo Empire Abo Pressure Maintenance Project approved by Division Order R-4808 entered June 11, 1974, which is located in part of Section 35, T17S, R27E and part of Section 2, T18S, R27E, N.M.P.M.

(7) The ARCO J-13 proposed new gas injector is located 990 feet from the southwest corner of the spacing unit on which OXY continues to produce oil and liquid saturated gas from its No. 5 well.

(8) Both the ARCO project and the OXY project involved a similar plan of operations where the reservoir voidage was controlled, the gas and liquids were produced by production wells located downstructure and the produced gas stripped of natural gas liquids ("NGL") and then the "dry" gas reinjected into gas injection wells located high on the structure.

(9) During the life of its project ARCO has used some fourteen gas injection wells located at various points in its unit and now proposes to add two additional gas injectors of which the J-13 is one.

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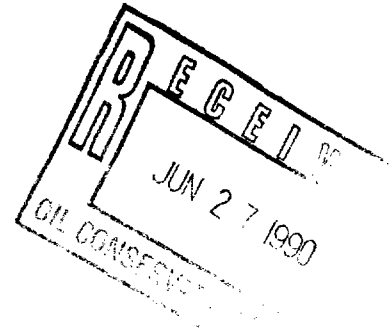
(10) OXY objected to the conversion of the J-13 to gas injection and sought the enforcement of Rule 7A in order to protect its correlative rights and prevent the waste of its NGL and oil production.

(11) ARCO provided expert engineering opinion that the purpose of Rule 7A was to locate gas injection wells far enough away from non-unit tracts so the correlative rights of non-unit owners would be protected.

(12) OXY provided expert engineering evidence (OXY Exhibit 10) that gas injected into the J-13 well would very likely channel through the natural fracture system and cause the premature loss of NGL and oil production from the OXY No. 305 well. Located less than 1500' west of OXY's #305 well is the ARCO I-13 well, which experienced a dramatic GOR increase after injection was commenced into ARCO's J-12 well in 1979. The I-13 well is also the NE offset to the J-12 gas injection well and, except for the period between mid-1982 to mid-1983, has been temporarily abandoned.

(13) ARCO's own opinion, as expressed in their C-108 filing (ARCO Exhibit 3) and the ARCO 1985 Blowdown Study (OXY Exhibit 9), confirms the presence of natural fractures, which are oriented in a NE-SW direction, and

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provide excellent pressure communication in this reservoir. (OXY's well #305 is the NE offset to ARCO's proposed J-13 gas injection well.)

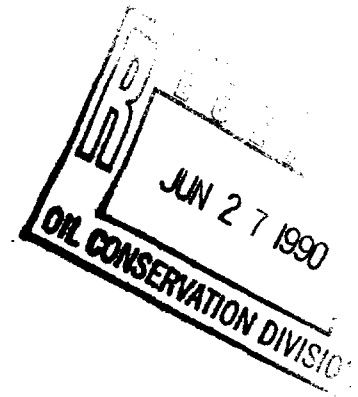
(14) OXY further provided engineering evidence that it ceased gas injection into its G1-11 injector because it was adversely affecting the NGL and oil recovery from the OXY #305 producer.

(15) OXY demonstrated that if the ARCO J-13 was approved as an injector the adverse impact on OXY's correlative rights would be an estimated 30% reduction in OXY's rate of NGL production and the loss of over half of their oil production from the #305 well.

(16) ARCO's project currently re-injects some 48 MMCFPD of residue gas into this reservoir. Approval of the J-13 as an injector would give ARCO the approval to inject some 60% of this residue gas into the area immediately adjacent to OXY's unit.

(17) ARCO's criteria for selecting an injector, including the J-13, was to find wells which could be recompleted lower in the reef for injection and which were in areas where the NGL yield was 5 gpm or more. The ARCO unit average NGL yield was 3.8 gpm.

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(18) OXY proposed that by applying the ARCO criteria, the ARCO K-12 (the diagonal southwest offset to the J-13) could be converted to injection, satisfy the needs of ARCO, comply with Rule 7A and avoid adversely affecting OXY.

(19) ARCO failed to provide evidence that there was no other well available which could be substituted as an injector in the target area if the Division denied the use of J-13 as an injector.

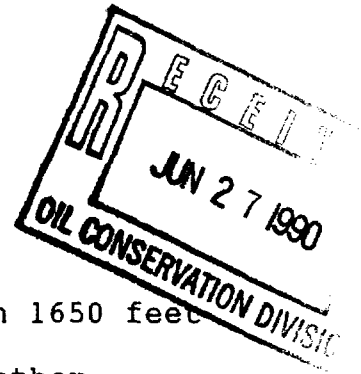
(20) ARCO failed to provide any evidence that any volume of NGL would be ultimately lost to the unit if the J-13 was denied as an injector.

(21) ARCO failed to provide evidence that it would not be able to reinject the current 48 MMCFPD for the unit if the J-13 was not approved for injection.

(22) ARCO failed to provide any evidence that reinjecting dry gas into the J-13 well was necessary in order to prevent waste of hydrocarbons in the ARCO unit.

(23) ARCO continues to use its 1985 Blowdown Study (OXY Exhibit 9) for making operational decisions for its Unit which at page 22 (figure 11) shows that by applying a conservative discount rate, it is no longer economic to continue the reinjection of gas into the unit.

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(24) The ARCO J-10 injector is more than 1650 feet from the OXY unit, complies with Rule 7A, and no other non-unit owner has objected to the approval of the J-10 as an injector.

(25) ARCO has failed to provide substantial evidence to support its application for the approval of J-13 as an injector.

(26) ARCO's application for the use of the J-10 as an injector should be approved, but the use of J-13 as an injector should be DENIED in order to prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, ARCO, is hereby authorized to convert the J-10 well to a gas injection well for the injection of gas up to but not to exceed 6 MMCFPD subject to the Special Rules and Regulations governing the Empire Abo Unit Pressure Maintenance Unit.

(2) The application to convert the J-13 well to gas injection is hereby DENIED.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

