

**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. 12271
ORDER NO. R-9082-A**

**APPLICATION OF TRIUMPH EXPLORATION, INC. TO AMEND DIVISION
ORDER NO. R-9082 TO AUTHORIZE A WATERFLOOD/TERTIARY RECOVERY
PROJECT BY THE INJECTION OF WATER AND MICRO-ORGANISMS, AND
QUALIFICATION FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE
"NEW MEXICO ENHANCED OIL RECOVERY ACT," EDDY COUNTY, NEW
MEXICO.**

AMENDED ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 21, 1999, at Santa Fe, New Mexico, before Examiner Mark W. Ashley.

NOW, on this 19th day of November, 1999, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.

(2) By Division Order No. R-9082 issued in Case No. 9736 on December 14, 1989, the Division authorized Wallen Production Company to institute a waterflood project on its Wallen Tonto Lease comprising the following 280 acres, more or less, of Federal lands by injection of water into the Yates and Seven Rivers formations, South Tonto-Yates Seven Rivers Pool, through its Wallen Tonto Well No. 7 (**API No. 30-025-25897**) located 1650 feet from the South line and 990 feet from the East line (Unit I) of Section 30, Township 19 South, Range 33 East, NMPM, Lea County, New Mexico:

**WALLEN TONTO LEASE WATERFLOOD PROJECT
TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM
Section 30: SW/4, N/2 SE/4, AND SE/4 SE/4.**

(3) When the Wallen Tonto Well No. 7 was originally drilled and completed, it was cased and cemented pursuant to the Special Provisions as promulgated by Division Orders No. R-4253 and R-5731 as a producing Yates-Seven Rivers formation well.

(4) Injection operations did not commence and the Wallen Tonto Lease Waterflood Project was reactivated pursuant to Division Administrative Order No. WFX-689 issued on August 6, 1996. As of the date of this hearing, injection within the Wallen Tonto Lease Waterflood Project has not commenced.

(5) Triumph Exploration, Inc. ("Triumph") is the successor operator to Wallen Production Company of the Wallen Tonto Lease Waterflood Project.

(6) The applicant seeks to:

(a) amend Division Order No. R-9082 to authorize the implementation of waterflood/tertiary recovery operations in the Wallen Tonto Lease Waterflood Project, as described above, by the injection of water and micro-organisms into the Yates and Seven Rivers formations; and

(b) expand the Wallen Tonto Lease Waterflood Project by converting two producing wells, the Tonto Well No. 2 (**API No. 30-025-25420**) located in Unit L of Section 30 and the Tonto Well No. 9Y (**API No. 30-025-27190**) located in Unit N of Section 30, into injection wells as described in Exhibit "A" attached to this order.

(7) The producing wells within the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(8) The project area is within the "Oil Potash Area" governed by the provisions of Division Order No. R-111-P.

(9) Triumph seeks to institute waterflood/tertiary recovery operations within the Wallen Tonto Lease Waterflood Project area by injecting micro-organisms along with water as the carrier fluid to remove scale, which should result in better sweep efficiency; and serve as a surfactant, which should reduce residual oil saturation. As proposed by Triumph, the initial 200,000 barrels of water to be injected into the Wallen Tonto Lease Waterflood Project will contain 1,000 gallons of these micro-organisms (125 parts per million by volume). Thereafter normal waterflood operations are to commence.

(10) Each interest owner within the Wallen Tonto Lease Waterflood Project area was provided notice of this application and at the time of the hearing no interested party entered an appearance in this matter or filed an objection to the application.

(11) Applicant testified that the proposed waterflood/tertiary recovery operation within the project area should result in the recovery of an additional 506,000 barrels of oil, which would otherwise not be recovered, thereby preventing waste.

(12) The estimated cost to implement this waterflood/tertiary recovery operation within the project area is \$1,570,000.

(13) Approval of the proposed waterflood/tertiary recovery project should result in the recovery of additional oil from the project area that may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.

(14) The injection of water and micro-organisms into the wells shown in Exhibit "A" should be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set within 100 feet of the uppermost injection perforations; the casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(15) The evidence presented by the applicant indicates that all of the wells within the "Area of Review" of the wells shown in Exhibit "A" are cased and cemented or plugged and abandoned in a manner to confine the injection fluid to the proposed injection interval.

(16) Before injection operations commence in the wells in Exhibit "A", the casing should be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.

(17) The wells in Exhibit "A" should be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to that shown on Exhibit "A."

(18) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(19) The operator should give advance notification to the supervisor of the Division's Hobbs District Office of the date and time of installation of injection equipment and performance of the mechanical integrity pressure test in order that the same may be witnessed.

(20) The proposed waterflood/tertiary recovery project should be approved and the project should be governed by the provisions of Division Rules No. 701 through 708.

(21) The injection authority granted herein for any well in Exhibit "A" should terminate one year after the effective date of this order if the operator has not commenced injection operations into the wells, provided however the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(22) The approved project area should be redesignated the Wallen Tonto Lease Waterflood/Tertiary Recovery Project and is to comprise the 280 acres described in Finding Paragraph No. (2).

(23) This order shall supersede Division Order R-9082 and such order shall be placed in abeyance.

(24) The applicant further requested that the proposed waterflood project be approved by the Division as a qualified "Enhanced Oil Recovery Project" pursuant to the "New Mexico Enhanced Oil Recovery Act," Sections 7-29A-1 through 7-29A-5, NMSA 1978.

(25) The evidence presented indicates that the proposed waterflood project meets all the criteria for approval.

(26) The approved project area should comprise the following acreage in Lea County, New Mexico:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM
Section 30: SW/4, N/2 SE/4, AND SE/4 SE/4.

(27) To be eligible for the recovered oil tax rate, the operator should advise the Division of the date and time water injection commences. At such time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

(28) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for

certification of positive production response. The application shall identify the area actually benefiting from enhanced recovery operations and the specific wells the operator believes are eligible for the recovered oil tax rate. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells that are eligible for the recovered oil tax rate.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Triumph Exploration, Inc., is hereby authorized to institute a waterflood/tertiary recovery project on its Wallen Tonto Lease Waterflood Project comprising the following described 280 acres, more or less, of Federal lands by the injection of water and micro-organisms into the Yates and Seven Rivers formations, South Tonto-Yates Seven Rivers Pool, through the injection wells described in the attached Exhibit "A."

(2) The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(3) The injection of water and micro-organisms into the wells shown in Exhibit "A" shall be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set within 100 feet of the uppermost injection perforations. The casing-tubing annulus shall be filled with an inert fluid and a gauge or approved leak-detection device shall be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(4) Before injection operations commence in the wells shown in Exhibit "A", the casing shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.

(5) The wells in Exhibit "A" shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to that shown on Exhibit "A."

(6) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(7) The operator shall give advance notification to the supervisor of the Division's Hobbs District Office of the date and time of installation of injection equipment

and performance of the mechanical integrity pressure test in order that the same may be witnessed.

(8) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in any injection well, the leakage of water, oil or gas from or around any producing well, or the leakage of water, oil or gas from any plugged and abandoned well within the project area, and shall take such steps as may be timely and necessary to correct such failure or leakage.

(9) The project is hereby redesignated the Wallen Tonto Lease Waterflood/Tertiary Recovery Project.

(10) The operator shall conduct injection operations in accordance with Division Rules No. 701 through 708 and shall submit monthly progress reports in accordance with Division Rules No. 706 and 1115.

(11) This order shall supersede Division Order R-9082 and such order shall be placed in abeyance.

(12) The Wallen Tonto Lease Waterflood/Tertiary Recovery Project is hereby approved as an "Enhanced Oil Recovery Project" pursuant to the "New Mexico Enhanced Oil Recovery Act," Sections 7-29A-1 through 7-29A-5, NMSA 1978.

(13) The approved project area shall comprise the following acreage in Lea County, New Mexico:

WALLEN TONTO LEASE WATERFLOOD/TERTIARY RECOVERY
PROJECT

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM

Section 30: SW/4, N/2 SE/4, AND SE/4 SE/4.

(14) To be eligible for the recovered oil tax rate, the operator shall advise the Division of the date and time water injection commences. At such time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

(15) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response. The application shall identify the area actually benefiting from enhanced recovery operations and the specific wells the operator believes are eligible for the recovered oil tax rate. The Division may review the application

administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells that are eligible for the recovered oil tax rate.

(16) The injection authority granted herein for any well in Exhibit "A" shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(17) Jurisdiction of this case 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.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



LORI WROTENBERY
Director

EXHIBIT "A"
DIVISION ORDER NO. R-9082-A
APPROVED INJECTION WELLS
WALLEN TONTO LEASE WATERFLOOD/TERTIARY RECOVERY PROJECT

Well Name & Number	Location	Injection Interval	Packer Setting Depth	Max. Surface Inj. Pressure
Tonto No. 2	1925 FSL & 330 FWL, Unit L, Section 30, Township 19 South, Range 33 East	2,900' - 3,113'	2,800'	580 PSIG
Tonto No. 7	1650 FSL & 990 FEL, Unit I, Section 30, Township 19 South, Range 33 East	2,900' - 3,113'	2,800'	580 PSIG
Tonto No. 9Y	660 FSL & 2300 FWL, Unit N, Section 30, Township 19 South, Range 33 East	2,900' - 3,113'	2,800'	580 PSIG