

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. 14342  
ORDER NO. R-13183

APPLICATION OF ARMSTRONG ENERGY CORPORATION FOR APPROVAL OF A WATERFLOOD PROJECT FOR ITS ROUND TANK QUEEN WATERFLOOD UNIT AREA AND QUALIFICATION OF SAID PROJECT FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE ENHANCED OIL RECOVERY ACT, CHAVES COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing on July 23, 2009 at Santa Fe, New Mexico, before Examiner Terry Warnell.

NOW, on this 19<sup>th</sup> day of October, 2009, the Division Director, having considered 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) Division Cases No. 14341 and 14342 were consolidated at the hearing for the purpose of testimony. However, separate orders will be issued for each case.

(3) In Case No. 14342, Armstrong Energy Corporation ("Armstrong" or "applicant"), seeks approval of a waterflood project in its Round Tank Queen Unit Area (approved by Order No. R-13150) by injection of water into the Queen formation within the Round Tank-Queen Pool, through its proposed Round Tank Federal Well No. 1 to be drilled 715 feet from the North line and 825 feet from the East line in Section 30, Township 15 South, Range 29 East, NMPM. Applicant proposes to inject up to 200 barrels of San Andres produced water per day at a maximum injection pressure of 300 psi, into the Queen formation, at an approximate depth of 1,582 feet to 1,598 feet.

(4) Armstrong requests that the Division establish approval of additional injection wells within the project area without the necessity of further hearings and adoption

of such other provisions as are necessary for said waterflood operations. Applicant further seeks to qualify the project area for the Recovered Oil Tax Rate pursuant to the "New Mexico Enhanced Oil Recovery Act" (NMSA 1978 Sections 7-29-A-1 through 7-29-A-5 as amended).

(5) This waterflood project should be designated the Round Tank Queen Unit Waterflood Project and encompasses the following described 1922.72 acres, more or less, of State of New Mexico and Federal lands.

TOWNSHIP 15 SOUTH, RANGE 28 EAST, NMPM

Section 24: E/2, E/2 W/2  
Section 25: E/2

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM

Irregular Section 19: Lots 1 through 4, E/2 W/2  
(W/2 Equivalent), SE/4  
Irregular Section 30: Lots 1 through 4, E/2 W/2  
(W/2 Equivalent), E/2

Federal lands:	1,521.12 acres	79.1129%
State lands:	401.6 acres	20.8871%
Total	1,922.72 acres	100%

(6) The "Unitized Formation" as described in the Round Tank Queen Waterflood Unit Agreement, is the interval underlying the Unit Area commonly known as the "Queen Formation," the vertical limits of which extend from an upper limit of 1,510 feet to a lower limit of 1,526 feet. These geologic markers having been previously found to occur in the Christine Federal Well No. 3 (API No. 30-005-60482) located 680 feet FNL and 1980 feet FEL of Section 30, Township 15 South, Range 29 East, NMPM, Chaves County, New Mexico. [NOTE: The injection interval of 1,575 feet to 1,590 feet in the Round Tank Queen Unit Well No. 7 formerly Round Tank Federal Well No. 1 is within the Unitized Formation because the Queen formation dips to the East in Unit Area, so it is 15 feet lower at the Christine Federal Well No. 3. Further, the injection well is located on top of a hill which is 50 feet higher in elevation resulting in the Queen formation being 65 feet deeper in the injection well than in the Christine Federal Well No. 3.]

(7) Applicant appeared at the hearing through counsel and presented testimony that demonstrates that:

- (a) All working interest owners in the Unit area have been afforded an opportunity to commit their interests to the Unit Agreement and the owners representing 100% of the working interest ownership in the Unit Area have committed their interests to the Unit

Agreement;

- (b) The royalty interest ownership in the proposed Round Tank Queen Unit is owned by the Federal Government and the State of New Mexico, 79.1129% Federal land and 20.8871% State land;
- (c) The Unit consists of one State of New Mexico lease which holds 401.6 acres and five Federal leases which consist of 1521.12 acres. There are no fee leases within this unit.
- (d) The Commissioner of Public Lands has given preliminary approval for the proposed Unit;
- (e) The Bureau of Land Management has approved the Unit Area for a waterflood project;
- (f) The Federal A Well No. 1 API No. 30-005-60336 in the AOR may not be properly plugged.

(8) Applicant presented geological evidence that showed that the Queen formation is present throughout the proposed Unit Area, has a net thickness in the Unit Area of approximately 15 feet, with an estimated average porosity of 18%, an average permeability of approximately 100md and it is a good candidate for a waterflood project.

(9) The approved project area should initially comprise the entire Round Tank Queen Unit Waterflood Area; provided, however, the "project area" and/or the producing wells eligible for the enhanced oil recovery (EOR) tax rate may be contracted or reduced based upon the evidence presented by the applicant in its demonstration of a positive production response.

(10) To be eligible for the EOR tax rate, the operator should advise the Division of the date and time water injection commences within the waterflood project. At that time, the Division will certify the project to the New Mexico Taxation and Revenue Department.

(11) At such time as a positive production response occurs, and within five years from the date the project was certified to the New Mexico Taxation and Revenue Department, the applicant must apply to the Division for certification of a positive production response. This application shall identify the area benefiting from enhanced oil recovery operations and the specific wells eligible for the EOR tax rate. The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those wells that are eligible for the EOR tax rate.

(12) The injection authority granted herein for the Round Tank Federal Well No. 1 should terminate one year after the date of this order if the operator has not commenced injection operations into the project area; provided, however, the Division, upon written request by the operator, may grant an extension for good cause.

(13) No other interested party appeared or otherwise objected to the proposed unit agreement or to the waterflood application in this case.

(14) All of the acreage proposed for inclusion in the Unit Area appears prospective for recovery of oil or gas from the target formation under the concept proposed by Applicant. These areas should be unitized and should equally share in the benefits from future oil and gas production.

(15) The approval of the proposed waterflood project will serve to prevent waste and protect correlative rights within the lands assigned to the unit area.

IT IS THEREFORE ORDERED THAT:

(1) Armstrong Energy Corporation is hereby authorized to institute a waterflood project within its Round Tank Queen Unit Area, described as follows, by the injection of water into the Queen formation, Round Tank-Queen Pool, in its proposed Round Tank Queen Unit Well No. 7 formerly Round Tank Federal Well No. 1 (API No. 30-005-64112) to be drilled 715 feet from the North line and 825 feet from the East line of Section 30, Township 15 South, Range 29 East, NMPM, Chaves County, New Mexico:

TOWNSHIP 15 SOUTH, RANGE 28 EAST, NMPM

Section 24: E/2, E/2 W/2  
Section 25: SE/4

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM

Irregular Section 19: Lots 1 through 4, E/2 W/2  
(W/2 Equivalent), SE/4  
Irregular Section 30: Lots 1 through 4, E/2 W/2  
(W/2 Equivalent), E/2

Federal lands:	1,521.12 acres	79.1129%
State lands:	401.6 acres	20.8871%
Total	1,922.72 acres	100%

(2) The unitized interval in the Round Tank-Queen Waterflood Unit Agreement is the interval underlying the Unit Area commonly known as the "Queen Formation," the vertical limits of which extend from an upper limit of 1,510 feet to a lower limit of 1,526 feet. These geologic makers having been previously found to occur in the Christine Federal Well No. 3 (API No. 30-005-60482) located 680 feet FNL and 1980 feet FEL of Section 30, Township 15 South, Range 29 East, NMPM, Chaves County, New Mexico.

Pursuant to the NOTE in Findings Paragraph 6 above, the vertical limits of the Queen formation in the Unitized interval in the injection well is between 1,582 feet to 1,598 feet.

(3) The waterflood project is hereby designated the Round Tank Queen Unit Waterflood Project, and the operator shall conduct injection operations in accordance with Division Rules 19.15.26.1 through 19.15.26.15 NMAC, and shall submit monthly progress reports in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

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

(5) Injection shall be accomplished through 2-3/8 inch internally plastic-lined tubing installed in a packer set within 100 feet of the uppermost injection perforation. 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.

(6) The injection wells or pressurization system shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressures to no more than 315 psig.

(7) The Division Director may administratively authorize a pressure limitation in excess of the above upon a proper showing that such higher pressure will not result in the fracturing of the injection formation or confining strata. Such showing shall consist of a valid step-rate test run in accordance with procedures acceptable to the Division.

(8) Prior to commencing injection operations, the casing in each well shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.

(9) Prior to commencing injection operations into the proposed injection well, the Federal A Well No. 1, API No. 30-005-60336 shall be properly plugged and abandoned.

(10) The operator should give advance notice to the supervisor of the Artesia District Office of the date and time (i) injection equipment will be installed, (ii) the mechanical integrity pressure tests will be conducted on the proposed injection well.

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

(12) The Round Tank Queen Waterflood Unit is hereby certified by the Division as an "Enhanced Oil Recovery Project" pursuant to the Enhanced Oil Recovery Act, NMSA 1978 Section 7-29A-1 as amended. The project area shall comprise the entire Unit Area; provided that the area and/or the producing wells eligible for the

recovered oil tax rate may be contracted and reduced dependent upon the evidence presented by the operator of the Unit Area in its demonstration of the occurrence of a positive production response.

(13) To be eligible for the Enhanced Oil Recovery tax rate, the unit operator shall advise the Division of the date and time water injection commences in the project area, and at such time request the Division to certify the project to the New Mexico Taxation and Revenue Department.

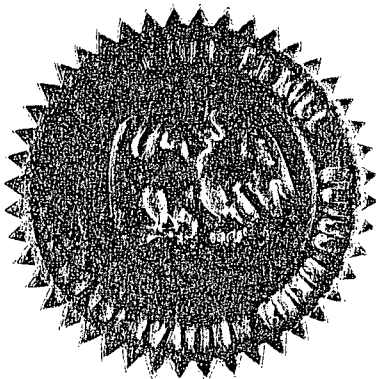
(14) At such time as a positive production response occurs, and within five years from the date the project was certified to the New Mexico Taxation and Revenue Department, the unit operator shall apply to the Division for certification of a positive production response. The application shall identify the area benefiting from enhanced oil recovery operations and the specific wells eligible for the Enhanced Oil Recovery tax rate. The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those wells that are eligible for the Enhanced Oil Recovery tax rate.

(15) This order does not relieve the unit operator of responsibility should its operations cause any damage or threat of damage to fresh water, human health or the environment, nor does it relieve the operator of responsibility for complying with applicable Division rules or other applicable federal, state, or local laws or regulations.

(16) The injection authority granted herein shall terminate one year after the date of this order if the operator has not commenced injection operations into the project area; provided, however, the Division, upon written request by the operator, may grant an extension for good cause.

(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.



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "Mark E. Fesmire".

MARK E. FESMIRE, P. E.  
Director