

**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. 14874
ORDER NO. R-13612**

**APPLICATION OF STAR OIL AND GAS COMPANY FOR
AUTHORIZATION TO INJECT, LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on June 25, 2012, at Santa Fe, New Mexico, before Examiner David K. Brooks.

NOW, on this 31st day of July, 2012, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

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

(2) By this application, Star Oil and Gas Company ("Applicant") seeks authorization to convert the following existing oil well (the "subject well") to a commercial disposal well in the Wolfcamp formation (SWD-Wolfcamp Pool):

New Mex A Well No. 1
API No. 30-025-01268
1983 feet FSL & 2313 feet FWL
Unit K, Section 25, Twsp 16 South, Range 33 East, NMPM
Lea County, New Mexico

(3) Applicant proposes to inject produced water from various neighboring wells into the Wolfcamp formation through the existing perforations in the subject well at a depth interval from 10,720 to 10,808 feet below the surface.

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(4) At the hearing, Applicant appeared through counsel and presented testimony and exhibits to the effect that:

(a) The subject well is an existing Wolfcamp producer that has become marginal. Current production is less than two barrels of oil and less than three mcf of gas per day.

(b) There is an existing disposal well injecting into the Wolfcamp in the immediate vicinity, which is Kenmore's New Mex A Well No. 2, located in Unit O of Section 25.

(c) There is a need for additional disposal capacity for produced water generated by producing wells in the geographical vicinity of the subject well.

(d) There are no active fresh water wells in the vicinity. Fresh water is encountered at 150 to 200 feet below the surface.

(e) The subject well has 13 3/8-inch surface casing set at 374 feet, with cement circulated to surface, 9 5/8-inch intermediate casing set at 4,547 feet, with cement circulated to surface, and 5 1/2-inch production casing set at 11,579 feet with top of cement identified by temperature survey at 4,500 feet.

(f) Injection will be accomplished through 2 7/8-inch internally plastic coated tubing, set in a packer inside the existing production casing. Applicant expects that the formation will take the expected volumes of water without injection pressure, but nevertheless seeks authorization to inject at pressures up to 2,200 psig surface injection pressure.

(g) The injected fluids will consist of produced water from various formations produced from wells in the vicinity. No fluid compatibility problems are anticipated.

(h) There are 23 wells producing from the Wolfcamp within two miles from the subject well. Two of these wells are within the one-half mile area of review. These wells evidence substantial depletion, and currently produce a total of approximately 55 barrels of oil per day and small amounts of casinghead gas. The wells within one-half mile of the subject well are producing 3 to 4 barrels of oil per day.

(i) Based upon the location of the subject well in the extreme West/Southwest (structurally low) portion of the pool, the depleted nature of this pool and a geological report admitted in evidence, injection into the subject wells will not adversely affect production from the existing Wolfcamp wells in the vicinity, and might, sometime in the indeterminate future, improve that production.

(j) There have been no secondary recovery efforts undertaken in this pool, and the operator of the existing Wolfcamp wells has specifically indicated that it has no intention of attempting secondary recovery. However, conversion of the subject well to injection, if it improved production from existing wells, could provide an indication whether or not there is potential for secondary recovery.

(k) In addition to the two producing wells, in the half-mile area of review (AOR) surrounding the subject well there is one disposal well (described in Finding paragraph 4(b) above) and two plugged and abandoned wells. The plugged wells appear to be properly plugged so that neither will serve as a conduit to allow injected fluids to flow out of zone or the surface.

(5) No other party appeared at the hearing or otherwise opposed the application. MGM Oil & Gas Company, the operator of all the producing Wolfcamp wells within two miles from the subject well, filed a letter expressly stating that it has no objection to the granting of the application.

The Division concludes that:

(6) Granting of this application will provide additional capacity for disposal of produced water, facilitating production of oil and gas from reservoirs in the vicinity of the subject well and thereby preventing waste, and will not impair correlative rights.

(7) The wells in the AOR appear to be adequately cased and cemented, so that none of them will become a conduit for the escape of injected fluid from the permitted injection formation. Accordingly no remedial work on wells in the AOR need be required.

(8) Applicant has certified in the Form C-108 filed in this case that available geologic and engineering data have been examined, and no evidence of open faults or hydrological connection between the disposal zone and any underground sources of drinking water has been found.

(9) Based on the foregoing, it appears that the granting of the application will not be harmful to human health or the environment.

(10) Accordingly, the application should be approved, and Applicant should be authorized to inject fluids at a surface injection pressure not to exceed 2,144 psi (.2 psi per foot of depth to the shallowest perforation). The Applicant may apply to the Division for a higher injection pressure upon satisfactorily demonstrating that an increase in injection pressure will not result in fracturing of the injection formation or confining strata.

IT IS THEREFORE ORDERED THAT:

(1) Star Oil and Gas Company ("Star" or "Operator") is hereby authorized to inject produced water for the purpose of disposal into the Wolfcamp formation (SWD-Wolfcamp Pool), at an injection interval from approximately 10,720 to 10,808 feet below the surface, through its New Mex A Well No. 1 (API No. 30-025-01268), located 1983 feet from the South line and 2313 feet from the West line (Unit K) of Section 25, Township 16 South, Range 33 East, NMPM, in Lea County, New Mexico.

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

(3) Injection shall be accomplished through internally plastic-lined steel tubing installed in a packer set in the casing below the top of the injection formation and 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 detect leakage in the casing, tubing or packer.

(4) The well shall pass a mechanical integrity test prior to initial commencement of disposal and prior to resumption of disposal each time the disposal packer is unseated. All testing procedures and schedules shall conform to the requirements of Division Rule 19.15.26.11.A NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths.

(5) The injection well shall be initially equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 2,144 psi.

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

(7) The operator shall give at least 72 hours advance notice to the supervisor of the Division's Hobbs District Office of the date and time (i) injection equipment will be installed, and (ii) the mechanical integrity pressure tests will be conducted, so these operations may be witnessed.

(8) The operator shall provide written notice of the date of commencement of injection into each well to the Hobbs District Office of the Division.

(9) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in the subject well, or the leakage of water, oil, gas or other fluid from or around any producing or abandoned well within one-half mile of the injection well, and shall take all steps as may be timely and necessary to correct such failure or leakage.

(10) The Project shall be governed by applicable provisions of Division Rules 19.15.26.1 through 19.15.26.15 NMAC. The operator shall submit monthly reports of the injection operations on Division Form C-115, in accordance with Division Rule 19.15.7.24 NMAC.

(11) In accordance with Division Rule 19.15.26.12(C), the injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations; provided, however, the Division, upon written request by the Operator, may grant an extension for good cause.

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

(13) Upon failure of the operator to conduct operations (1) in such manner as will protect fresh water or (2) in a manner consistent with the requirements in this Order, the Division may, after notice and hearing, (or without notice and hearing in event of an emergency, subject to the provisions of NMSA 1978 Section 70-2-23), terminate the injection authority granted herein.

(14) 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

A handwritten signature in black ink, appearing to read "Jami Bailey".

JAMI BAILEY
Director