

**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. 15049
ORDER NO. R-13839**

**APPLICATION OF MESQUITE SWD, INC. FOR APPROVAL OF A SALT
WATER DISPOSAL WELL, EDDY COUNTY, NEW MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 2, 2013, at Santa Fe, New Mexico, before Examiners David K. Brooks and Phillip R. Goetze.

NOW, on this 4th day of June, 2014, the Division Director, having considered the testimony, the record, and the recommendations of Examiner Goetze,

FINDS THAT:

- (1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.
- (2) Mesquite SWD, Incorporated ("Applicant" or Mesquite), seeks authority to re-enter and utilize its Big Eddy Well No. 6 (API No. 30-015-10620; the "subject well"), located 1980 feet from the South line and 660 feet from the West line, Unit letter L of Section 34, Township 19 South, Range 31 East, NMPM, Eddy County, New Mexico, for commercial oil field water disposal into the Devonian and Silurian formations through an open-hole interval from approximately 13,850 feet to approximately 14,900 feet.
- (3) The Applicant appeared through counsel and presented the following testimony:
 - (a) The subject well is to be deepened to a total depth of 14,900 feet and new seven (7)-inch production casing set to the top of the injection interval at approximately 13,850 feet. The new casing is to be cemented from 13,850 feet to surface. The injection interval

will be approximately 1050 feet of open hole with the packer set in the seven (7)-inch casing at approximately 13,800 feet.

- (b) The proposed average injection rate is 18,500 barrels of water per day (BWPD) with a maximum injection rate of 25,000 BWPD.
- (c) The produced waters going into the subject well would be from horizontal and vertical production wells completed in the Bone Spring formation, Wolfcamp formation, and formations of the Delaware Mountain group.
- (d) Hydrocarbon production in this area is found above the injection interval in the Brushy Canyon, Wolfcamp and Bone Spring formations.
- (e) Historical production and testing of the hydrocarbon zones in this area have been very high in water content resulting in abandonment of oil-producing wells.
- (f) The applicant does not expect any waste of oil or gas to occur as a result of disposal into the selected interval of Silurian and Devonian formations. The casing program for the subject well is adequate to isolate potential hydrocarbon zones above and below the injection interval.
- (g) One fresh-water well was identified within a two-mile radius of the subject well. The well appears to have been used for oil and gas operations and no information was available concerning water quality of the well.
- (h) The half-mile Area of Review around the subject well contains one well but the well does not penetrate the disposal interval.

(4) BOBCO, LLC ("BOBCO") appeared at the hearing through counsel in opposition to this application and presented the following testimony:

- (a) BOBCO opposed the proposed completion design of the subject well in the C-108 application submitted for hearing.
- (b) Applicant changed the production casing size from seven (7)-inch diameter pipe to five and half (5 ½)-inch diameter pipe to address the concerns of BOBCO regarding effective cementing of the new casing.

- (c) Applicant should change the size of the production casing for the subject well to conform to agreement between BOBCO and Mesquite.

(5) The Bureau of Land Management did not oppose the approval of the subject well following the change in well casing and the resolution of an agreement between the Applicant and the operator of the Big Eddy Unit where the subject well is located.

The Division concludes as follows:

(6) The application has been duly filed under the provisions of 19.15.26.8 NMAC.

(7) Division records indicate Mesquite SWD, Incorporated (OGRID 161968) as of the date of this Order is in compliance with 19.15.5.9 NMAC.

(8) The Applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met.

(9) The Applicant has provided modification of the final well completion that satisfies the concerns of the Protestant.

(10) The application should be approved.

IT IS THEREFORE ORDERED THAT:

(1) Mesquite SWD, Incorporated ("Mesquite" or "operator"), is hereby authorized to utilize its proposed Big Eddy Well No. 6 (API No. 30-015-10620; the "subject well"), located 1980 feet from the South line and 660 feet from the West line, Unit letter L of Section 34, Township 19 South, Range 31 East, NMPM, Eddy County, New Mexico, as a commercial well for disposal of only UIC Class II fluids.

(2) Disposal shall be through open hole from approximately 13,850 feet to approximately 14,900 feet into Devonian and Silurian formations. Injection is to be through plastic-lined tubing and a packer set within 100 feet above the permitted disposal interval.

(3) The operator shall take all steps necessary to ensure that the disposed water enters only the permitted disposal interval and is not permitted to escape to other formations or onto the surface.

(4) The operator will complete the subject well with the following modifications of the proposed well design submitted as Applicant's Exhibit No. 1:

- (a) A five and a half (5 ½)-inch diameter production casing will be set

from surface to 13,850 feet using the seven and seven-eighths (7 7/8)-inch diameter borehole;

- (b) the boring for the open hole disposal interval will be reduced to four and five eighths (4 5/8)-inch diameter; and
- (c) three and a half (3 1/2)-inch diameter, internally-coated tubing will be used to connect with the packer set.

(5) The operator shall supply the Division with a copy of a mudlog over the permitted disposal interval and an estimated insitu water salinity based on open-hole logs. If significant hydrocarbon shows occur while drilling, the operator shall notify the Division's District II and the operator shall be required to receive written permission prior to commencing disposal.

(6) The operator shall provide a cement bond log (or equivalent) that demonstrates proper cementing of the new five and a half (5 1/2)-inch production casing to the Division's District II office and the Santa Fe Bureau office prior to commencing disposal.

(7) The operator shall provide a summary of depths (picks) for formation tops in the injection interval to the Division's District II office prior to commencing disposal.

(8) After installation of tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

(9) The subject well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC.

(10) The wellhead injection pressure on the well shall be limited to **no more than 2770 psi**. In addition, the subject well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

(11) The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test.

(12) The operator shall notify the supervisor of the Division's District II office of the date and time of the installation of disposal equipment and of any MIT test so that

the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's District II office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with rules 19.15.26.13 NMAC and 19.15.7.24 NMAC.

(13) Without limitation on the duties of the operator as provided in 19.15.29 NMAC and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from or around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

(14) The injection authority granted under this Order is not transferable except upon division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

(15) The Division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

(16) The Division director shall be authorized to amend this permit administratively after proper notice and opportunity for hearing.

(17) The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

(18) One year after disposal into the subject well has ceased, the well will be considered abandoned and the authority to dispose will terminate *ipso facto*.

(19) Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

(20) Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing or prior to notice and hearing in event of an emergency, terminate the disposal authority granted herein.

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



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in cursive script, reading "Jami Bailey".

JAMI BAILEY
Director