

BEFORE THE CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

APPLICANT: SLAWSON EXPLORATION, INC.

RELIEF SOUGHT: DISPOSAL WELL

LEGAL DESCRIPTION: NE/4 SE/4 NE/4 NE/4 OF ) CAUSE PD NO. 201400053  
SECTION 15, TOWNSHIP 19 NORTH, RANGE )  
4 WEST, LOGAN COUNTY, OKLAHOMA )

**ORDER NO. 626120**

WELL NAME: FUXA 1-15 SWD

ORDER OF THE COMMISSION

1. Hearing Date and Place: 8:30 a.m., the 2nd day of May, 2014, Jim Thorpe Building, Oklahoma City, Oklahoma.
2. Appearances: Charles L. Helm, Attorney, appeared for the Applicant, Slawson Exploration, Inc.; and Keith Thomas, Deputy General Counsel for Conservation, appeared for the Commission.
3. Notice and Jurisdiction: Notice has been given as required and the Commission has jurisdiction of the subject and the persons.
4. Amendments: The Application filed in 1404960166, PD No. 201400053, is amended to show the packer is set at 6,914 feet and the tubing is set at 6,914 feet in the Fuxa 1-15 SWD Well and the location of the well is the NE/4 SE/4 NE/4 of Section 15, Township 19 North, Range 4 West, Logan County, Oklahoma, as provided in the published Notice for this Cause. The well has been drilled at a surface location 1,600 feet from the South line and 340 feet from the East line of Section 15, Township 19 North, Range 4 West, Logan County, Oklahoma.
5. Relief Requested: The Applicant requests authority to dispose salt water into the Fuxa 1-15 SWD Well as provided in Application No. 1404960166, PD No. 201400053. The disposal or injection zone is the Arbuckle common source of supply with the injection interval described as 6,982 feet to 8,220 feet. The proposed injection pressure and rate is 15,000 BPD at 1,500 PSI.

a. The casing and cementing program is as follows:

<u>Name of String</u>	<u>Size</u>	<u>Setting Depth</u>	<u>Sacks of Cement</u>	<u>Top of Cement</u>	<u>Determined By</u>
Surface	12.25	412	300	Surface	Circulation
Intermediate	7	6,982	250	5,000	Circulation
Tubing	4 1/2	6,914			

b. Packer Type ASX1

c. Packer Setting Depth: 6,914'

- d. Total Depth: 8,220'
  - e. Non-Commercial Use: The well will not be used for commercial disposal.
6. Special Finding: The Applicant filed this Application for administrative approval as provided by OAC 165:10-5-5. Applicant provided all of the required attachments, caused publication and provided notice as required by rule. The Underground Injection Control Department reviewed the request and found the Application was sufficient for administrative approval, however, due to recent seismicity activity in proximity to the proposed disposal well, the UIC requested this matter be placed on the docket for hearing. There are no protesting parties to the Application. In the event that the frequency or magnitude of background seismicity increases to a point requiring action regarding the potential of triggered seismic activity, the Director of Conservation or designee shall determine whether injection operations are to be temporarily limited or suspended immediately. Resumption of injection operations may resume when, and under appropriate restrictions if any, as determined by the Director of Conservation or designee. Any action by the Director of Conservation or designee to suspend or restrict operations shall be based upon the scientific analysis of all available data to determine and manage the risk of triggered seismicity. The Applicant shall be responsible for the collection of seismic data and shall supply all data to the UIC Department, which shall independently collect seismic data for review and comparison. The Applicant shall notify the UIC Manager immediately upon initiation of injection operations.
7. Evidence Presented at the Hearing: The Applicant presented John O'Dowd, Area Engineer, and the Commission presented Tim Baker, Manager of the Pollution Abatement Department of the Oklahoma Corporation Commission. Both witnesses concluded that injection into the proposed well at the maximum requested rate and pressure will not allow injection fluids to migrate through the wellbore into treatable water strata zones and it will not initiate fractures through the overlying strata which could enable fluids or deleterious formation fluid to enter treatable water strata.
- a. Mr. John O'Dowd testified that he has overseen the application process which resulted in the request to utilize the Fuxa 1-15 Well as a disposal facility to accommodate water recovered from development of the Mississippian and Woodford common sources of supply in the area. The Applicant has been developing both reservoirs in the area and has drilled four (4) horizontal wells in both the Mississippian and Woodford common sources of supply which are waiting on the disposal well before being completed. The cost of water disposal is a significant part of developing the above reservoirs and trucking the water to a commercial facility is cost prohibitive. As a result, a nearby disposal well is required to continue developing both reservoirs. The Applicant has drilled and completed the FUXA 1-15 SWD Well and the disposal lines have been laid back to the wells awaiting completion. Applicant has expended a significant amount of time and money attempting to develop both reservoirs to prevent waste. When the Applicant received a request from the UIC to place the Application on the docket for hearing, they immediately met with the OCC UIC Department to discuss any concerns the staff might have. To confirm the FUXA 1-15 SWD Well was in the Arbuckle and the top part of the Arbuckle, the Applicant ran an expensive suite of logs which are not otherwise required by OCC Rule.

The intent behind the logs was to illustrate that the disposal interval is entirely in the Arbuckle and not in proximity of the Granite, which has been suggested as a possible link to seismicity in the State. Applicant also met with the Oklahoma Geological Survey to discuss recent seismicity. Additionally, the witness reviewed OCC data to confirm there has been no Arbuckle disposal in the area of recent seismicity activity, which has been referred to as the Marshall Area. The witness concluded that recent seismic activity in the Marshall area appears to be naturally occurring and he did not believe the proposed Arbuckle disposal in the FUXA 1-15 SWD Well would effect or trigger induced seismicity in the area. To the contrary, the witness expected the seismicity activity to continue as a result of natural causes. In an effort to help with monitoring the area, the witness recommended that the proposed disposal well record pressure and volume rates on a daily basis and run a bottom hole pressure prior to injection and every sixty (60) days thereafter for a period of six (6) months. The information will be provided to the OCC to assist in monitoring the area. Finally, the witness testified that the Applicant would use good completion techniques on the existing wells to lessen the volume of water that might be disposed on any given day.

- b. Mr. Tim Baker testified that the UIC Department was supporting the Application for disposal in the Fuxa 1-15 SWD Well. The OCC is charged with monitoring and protecting health and safety and fresh water as it might be effected by oil and gas operations in the State. The witness was aware of a significant increase in seismic activity in Oklahoma since 2010 and was familiar with seismic activity in the Marshall Area. The witness introduced an exhibit showing seismic activity in the Marshall Area and the location of the proposed disposal well which would be approximately 1.5 miles away from recent activity. The witness testified that the OCC is provided data from the OGS regarding seismic activity and the OCC has reviewed areas where there are significant new data points and compared those areas with disposal or injection wells and has concluded there is not a pattern of correlation between the same. In order to continue reviewing oil and gas activity and recent seismic activity, the Commission has implemented a "traffic light" approach to concentrate on spatial correlations between new seismicity and existing and proposed injection activities and to investigate those areas with a high priority. In areas where there may be a spatial correlation between new or recent seismicity and existing or proposed injection, the witness recommended that the Operator proceed under a "yellow light" and proceed under precaution and monitoring. Mr. Baker stated that, if background seismicity should increase to a point of concern, the Oklahoma Corporation Commission would determine how the Operator is to proceed. The witness testified that the UIC Department had numerous meetings with the Applicant and found that they were cooperative in working toward attempting to operate in a manner as to reduce the risk of injection acting as a trigger for induced seismicity in the area. The witness felt the Applicant had shown the proposed disposal would not be in contact with the Granite, which can be highly faulted. The additional monitoring and pressure data suggested by the Applicant would help the Commission in monitoring this area and provides additional comfort in supporting the Application.

8. Relief Granted: The requirements for issuance of an Order under OAC Rules 165:10-5-5 and 165:10-5-6 have been met. An Order shall issue granting the relief requested and providing that the Operator shall monitor and record, on a daily basis, volumes, the casing tubing annulus pressure and the surface injection pressure for the well. This information shall be produced upon request by an authorized representative of the Commission. Additionally, the Operator shall run a bottom hole pressure prior to injection and every sixty (60) days for a period of six (6) months. The well shall not be used for disposal/injection until it meets the testing and reporting requirements of OAC Rule 165:10-5-6. The Commission retains authority to immediately order the suspension of disposal/injection operations or take other action designed to enforce the Special Findings provisions contained in paragraph 6 of this Order.

DONE AND PERFORMED this 29th day of May, 2014.

CORPORATION COMMISSION OF OKLAHOMA  
*Bob Anthony*

BOB ANTHONY, Chairman

*Patrice Douglas*

PATRICE DOUGLAS, Vice Chairman

NOT PARTICIPATING

DANA L. MURPHY, Commissioner

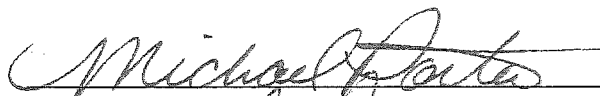
ATTEST:

*Peggy Mitchell*  
PEGGY MITCHELL, Commission Secretary

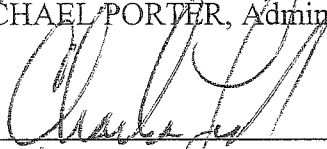
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REPORT OF THE ADMINISTRATIVE LAW JUDGE

THE FOREGOING FINDINGS AND ORDER ARE THE REPORT AND RECOMMENDATIONS OF THE ADMINISTRATIVE LAW JUDGE.


  
MICHAEL PORTER, Administrative Law Judge

22 May 2014  
Date

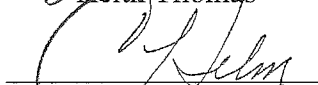
  
Mgr., Underground Injection Control

5/21/2014  
Date

Approved as to form and content:

  
Keith Thomas

Approved as to form and content:

  
Charles Helm