

NORTH SQUARE LAKE UNIT

NMOCD Form C-108 Sections VII thru XII

VII. Data on proposed operation.

1. Proposed average injection rate: 150 BWPD per well
Proposed maximum injection rate: 300 BWPD per well
2. The system will be a closed system.
3. Proposed average injection pressure: 500 PSI
Proposed maximum injection pressure: 600 PSI (In no instance will the pressure exceed a .2 psi/ft gradient to the upper perf or top of the openhole interval.)
4. The proposed injection fluid is produced water and Capitan Reef water. These fluids are compatible with the reservoir fluids in the proposed injection horizon. This is shown on the attached compatibility analysis.
5. A chemical analysis of the formation water in the proposed injection horizon is attached.

VII I The proposed injection interval is located in the Grayburg-San Andres formation. This Permian age horizon is nearly 1200' thick in this area. The top of the Grayburg injection interval is at a depth of about 3050' with the base of the injection interval in the San Andres at a depth of about 4250'.

There are three fresh water well in the vicinity of this proposed waterflood. They are as follows:

<u>LOCATION</u>	<u>DEPTH</u>	<u>CHLORIDES</u>
24-T-16S-R-30E	45'	156PPM
33-T-16S-R-30E	385'	3780 PPM
24-T-16S-R-31E	167'	66 PPM

There are no fresh water zones underlying the proposed injection zone.

- IX. No proposed recompletion or re-stimulations are planned at this time.
- X. Logs have previously been submitted to the OCD.
- XI. An analysis of the fresh water in the area is attached.
- XII. An examination of this area has determined there are no open faults or other hydrologic connection between the disposal zone and any underground drinking water.