

April 26, 2010

RE : Class II SWD injection well application for BOPCO, L.P.'s **Poker Lake Unit Well #213**, 860' FSL & 660' FEL (Ut P) Section 18-24S-30E, Eddy County, New Mexico; API No. 3001533859. This well is located in the Secretary's Potash area. They intend to convert the Delaware producing well to a produced water injection well into the Delaware/Bone Spring, Avalon Sd (7038-7460 ft) at an average injection rate of 2000 BWPD/ 2500 BWPD maximum at an average injection pressure of 1357 psi/ 1408 psi maximum (0.20 psi/ft). They did not say for EOR purposes; but I would assume that is their intent. The source of the disposal water will be wells in the area operated by BOPCO, L.P. that produce from the Delaware formation.

Comments: The well is in Secretary's Potash, but is over a mile outside open mine workings. From an engineering standpoint the well seems to be structurally sound for conversion purposes. The well has 8-5/8 inch surface casing set at 454 ft with cement circulated to surface and 5-1/2 inch longstring casing set at 7596 ft with cement circulated to surface. All the wells (12) in the 1/2 mile area of review that penetrate the injection zone are adequately constructed. The operators well schematic shows the well with 2-7/8" J-55 Seal Tite IPC tubing with a 5-1/2" nickel plated Lokset packer set at 7370 ft. They mention that initially they intend to inject in the Avalon perms (7388-7460') and add the upper perms (7038-7289') later. This would be fine but the diagram shows existing Delaware perms from 7194-7204' and 7279-7289'. This would mean that the packer would need to be set at approximately +/- 7100 ft and at approximately +/- 7000 ft if they intend to inject starting at 7038 ft. With the packer set at 7370 ft the well would not pass a conventional MIT with open perms above the packer.