

EFFECT OF CONDENSATE REINJECTION ON STEAM CHEMISTRY AT THE GEYSERS FIELD

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ABSTRACT

Injection of steam condensate back into the Geysers reservoir produces shifts in the chemistry of produced steam at nearby wells. Specifically, these effects include: 1) changes in the spatial variation of non-condensable gas/steam ratio; 2) changes in the concentrations of stable isotopes ¹⁸O and deuterium; 3) shifts in the abundance of gas species Ar, N₂ and NH₃, and 4) changes in calculated gas geothermometers and steam saturation factors. This geochemical information, when combined with other reservoir data, has been used to assist in the targeting of new injection wells.

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