the east and Valles Marineris to the west, so evaporite deposits in these regions should show similarities to the deposits in Aram Chaos. Analysis of sulfate deposits in Meridiani [*Wiseman et al.*, 2010] shows that monohydrated and polyhydrated sulfate species in the northern valley are likely separated from the main Meridiani sequence by erosion, indicating a pause between depositional events in this area too. The sequence of polyhydrated sulfates overlying monohydrated sulfates is mimicked to the west in Candor Chasma, where *Murchie et al.* [2009] found that polyhydrated materials in Candor Chasma are younger than the monohydrated sulfates and occupy topographic lows. Both the sequence of polyhydrated materials overlying intercalated ferric hydroxysulfate and monohydrated sulfates and the unconformable contact between them signifying a period of erosion between depositional events in multiple locations throughout this region indicate that a plausible formation method is a series of groundwater upwelling events fed by groundwater recharge, as modeled by *Andrews-Hanna et al.* [2007].

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