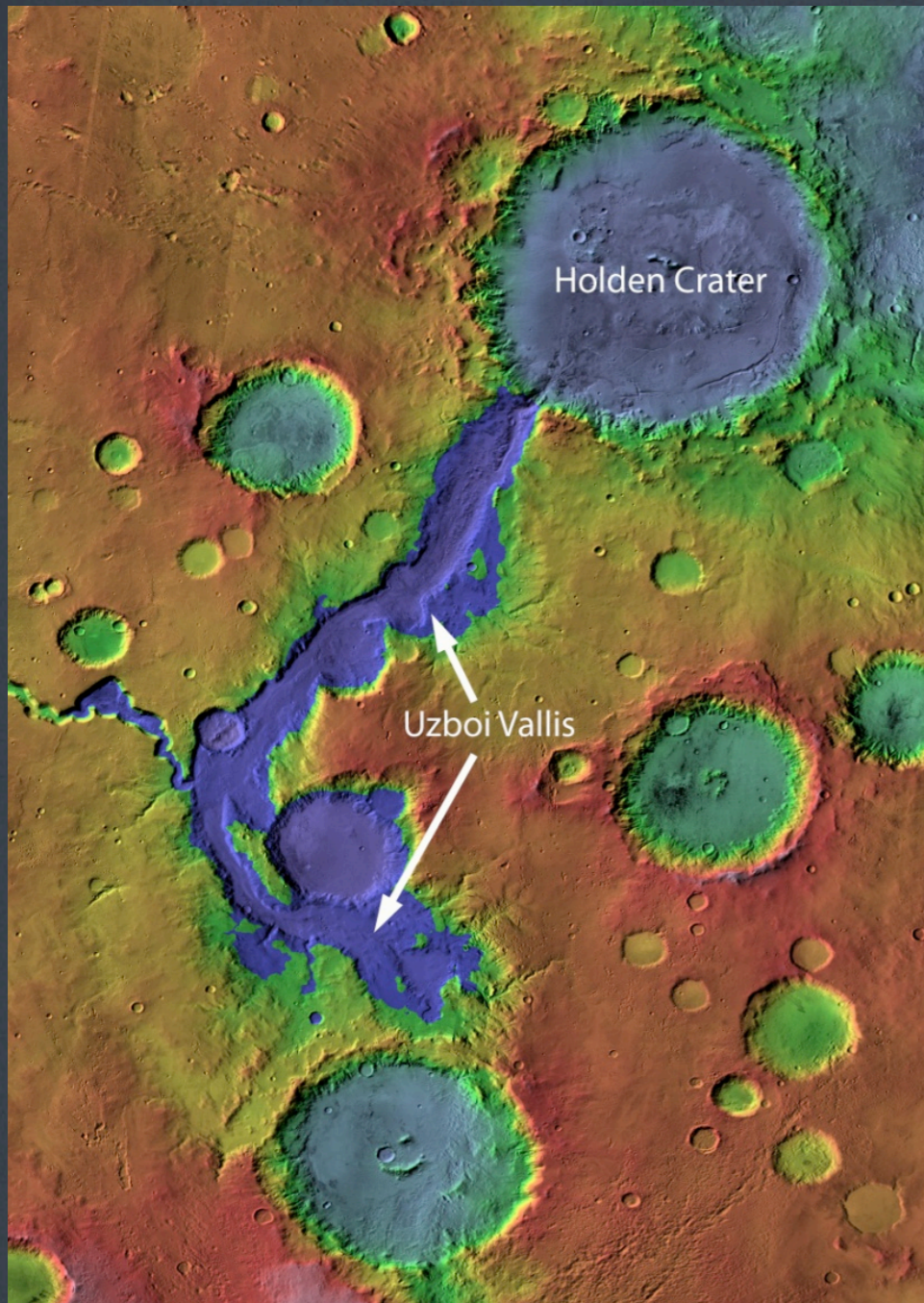
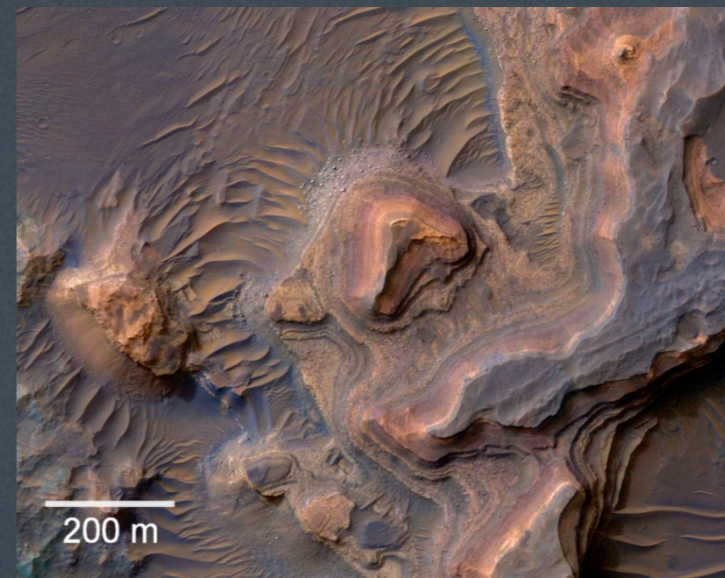


An Ancient Lake in Uzboi Vallis, Mars



- Uzboi Vallis is a ~400 km long valley in southern Margaritifer Terra on Mars that became blocked at its northern end when the ~150 km in diameter Holden crater formed.
- The resultant ancient, paleolake basin (area shaded in blue to the left) exceeded 4000 km³ (roughly twice the volume of Lake Ontario) before overtopping and breaching Holden's rim, rapidly draining, and flooding the crater
- Remnants of lake deposits incorporate clays washed in from surrounding surfaces during filling of the lake and persist in alcoves along the valley where they were protected from erosion during drainage of the lake.
- The Uzboi Vallis lake may have coincided with formation of other lakes and valleys during a late stage of water activity on early Mars.
- The image to the left is approximately 450 km across and shows data from the Thermal Emission Imaging System (THEMIS) instrument on NASA's Mars Odyssey Orbiter that is draped by colors showing the topography (red = high, blue = low) created using data from the Mars Orbiter Laser Altimeter (MOLA) on NASA's Mars Global Surveyor.



Grant, J. A., Irwin, R. P., III, Wilson, S. A., Buczkowski, D., and Siebach, K., 2010, A lake in Uzboi Vallis and implications for late Noachian-Early Hesperian climate on Mars: *Icarus*, 212, 110-122, doi:10.1016/j.icarus.2010.11.024.