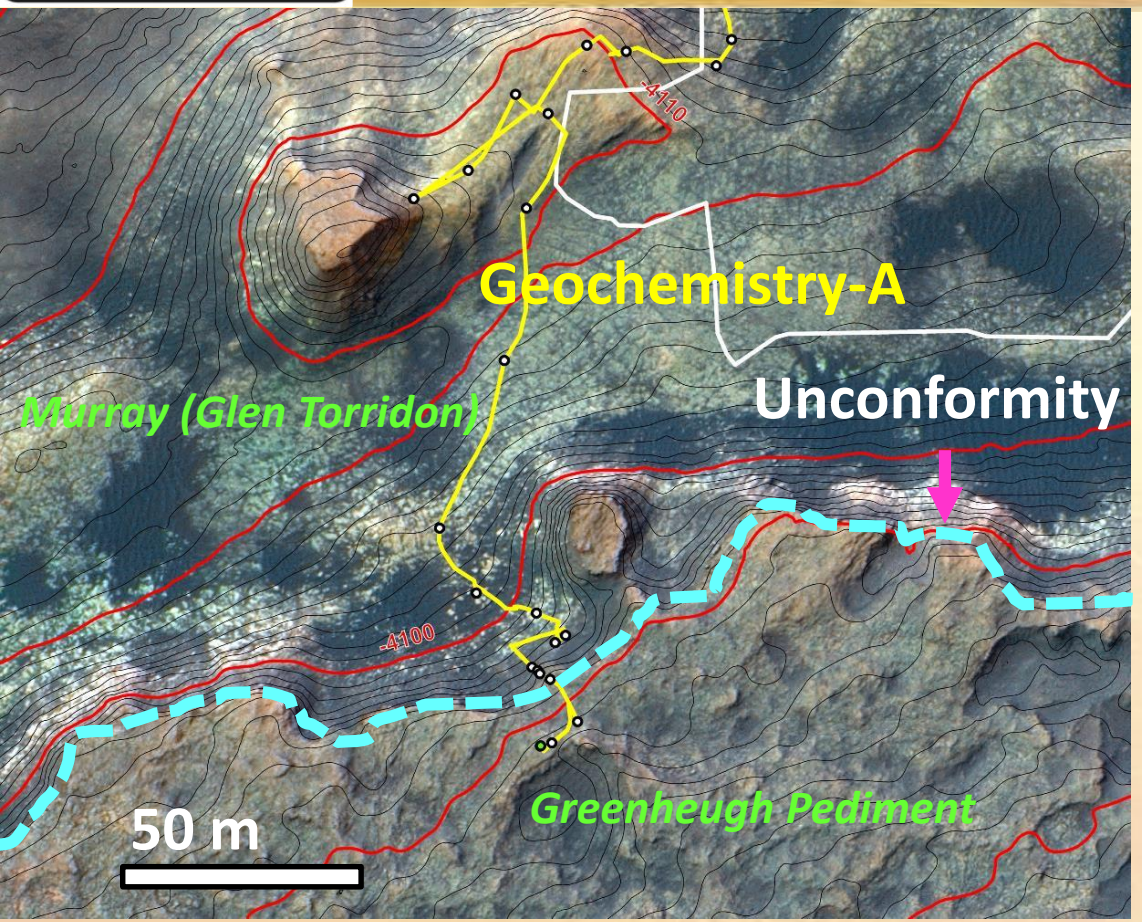
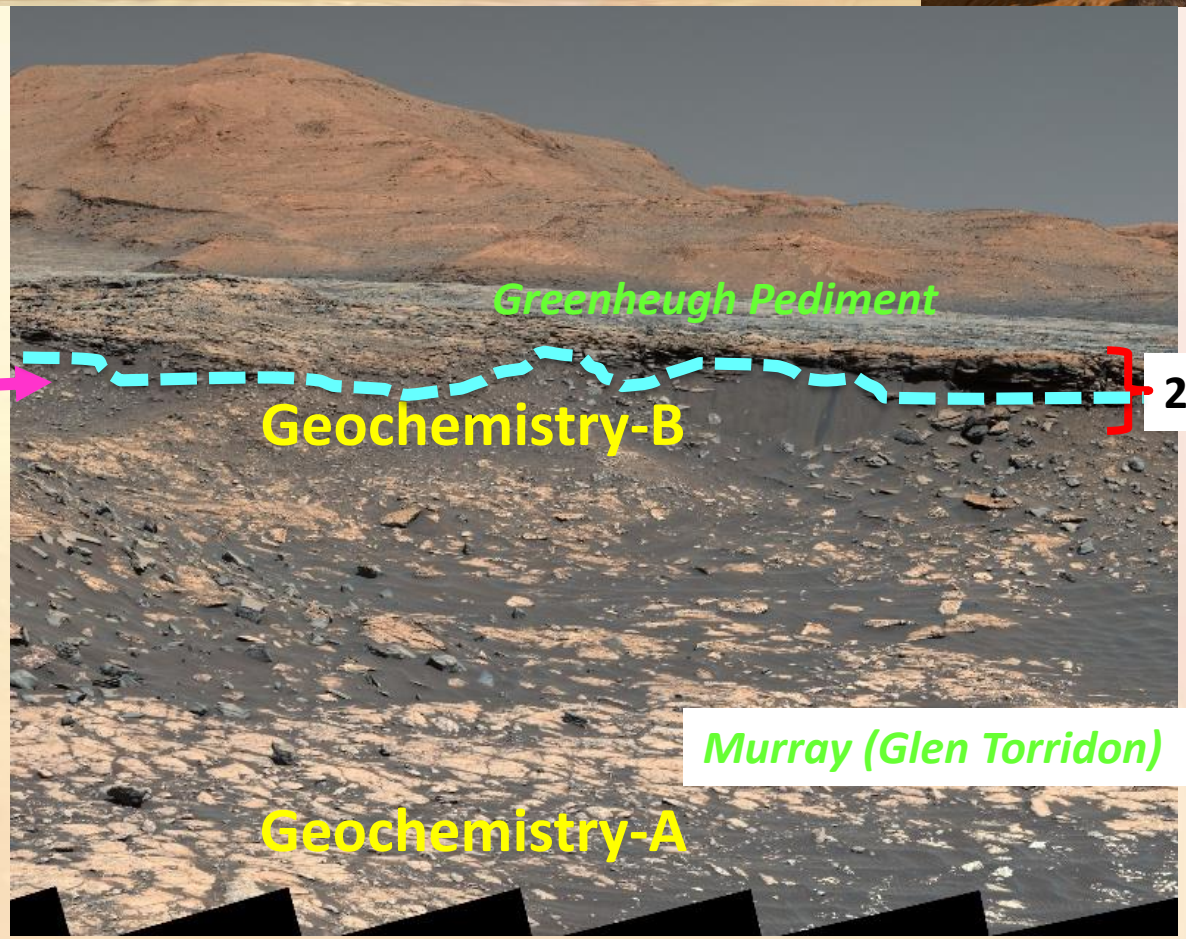
Geochemical Processes Along the Greenheugh/Glen Torridon Unconformity in Gale Crater



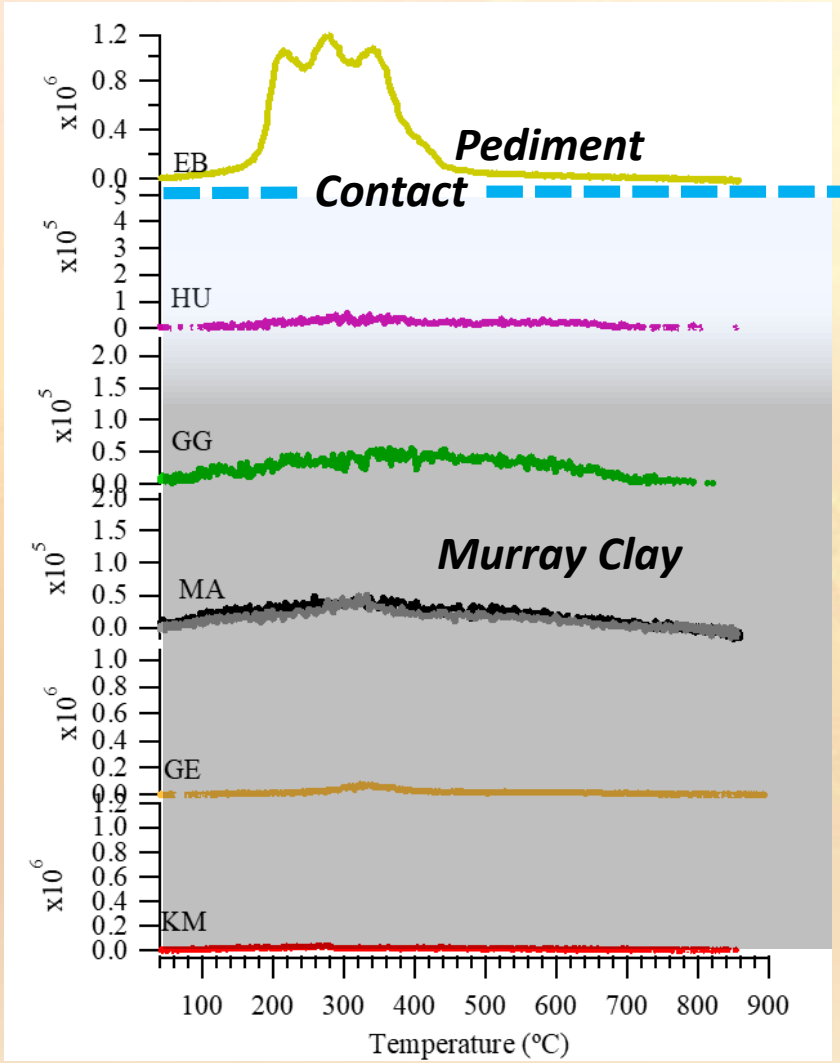


*Geochemistry-A differs from Geochemistry-B below unconformity.

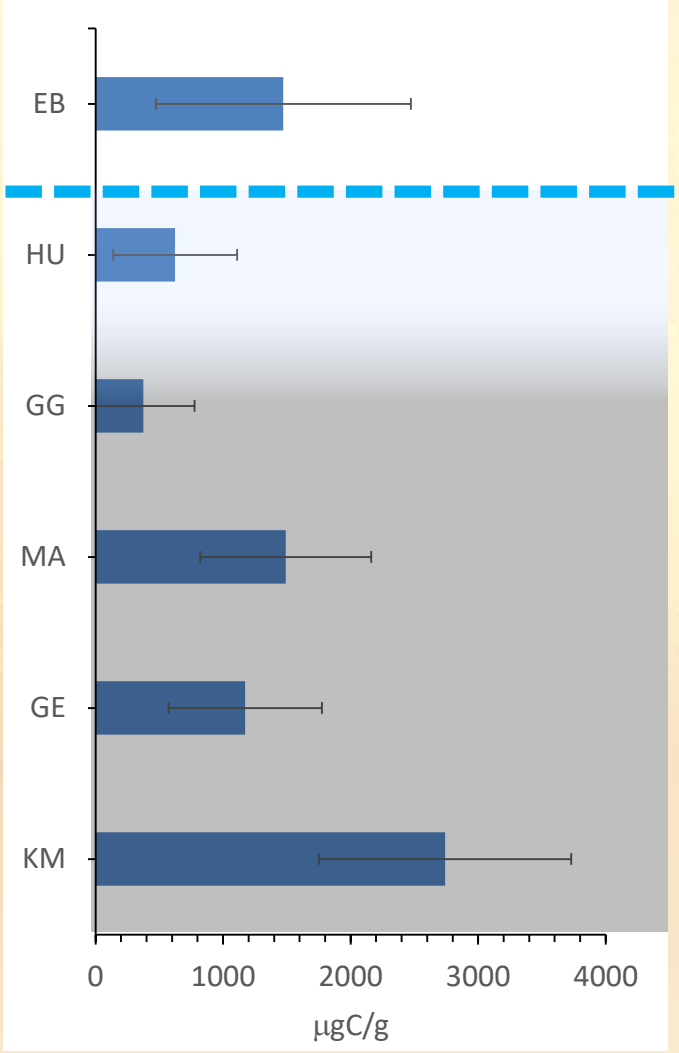
*What processes caused this geochemical variation?

Geochemical differences consistent with past diagenetic conduit alteration or subaerial alteration processes.

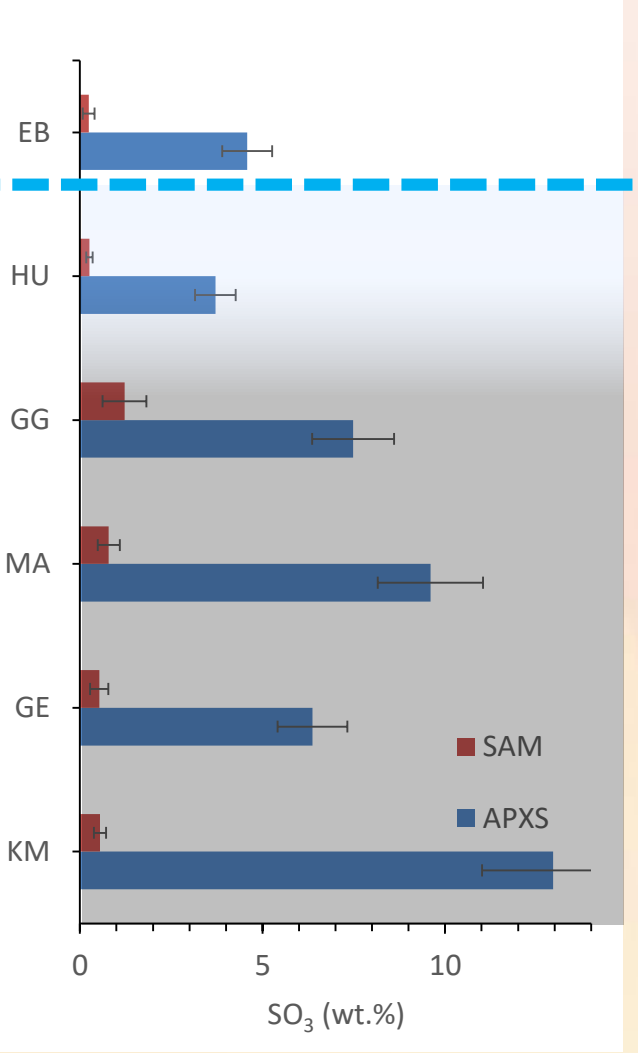
No pediment nitrate infiltration below contact



Loss of carbon below contact



Loss of sulfate below contact



Broader Implications

- Results are consistent with aqueous conditions being active after truncation of the Murray material or Pediment deposition.
  - Conditions well into the late Hesperian could have supported microbial habitability.

- Detection of limited microbial essential nitrogen below contact; however, could have limited microbial populations in the Murray material.

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