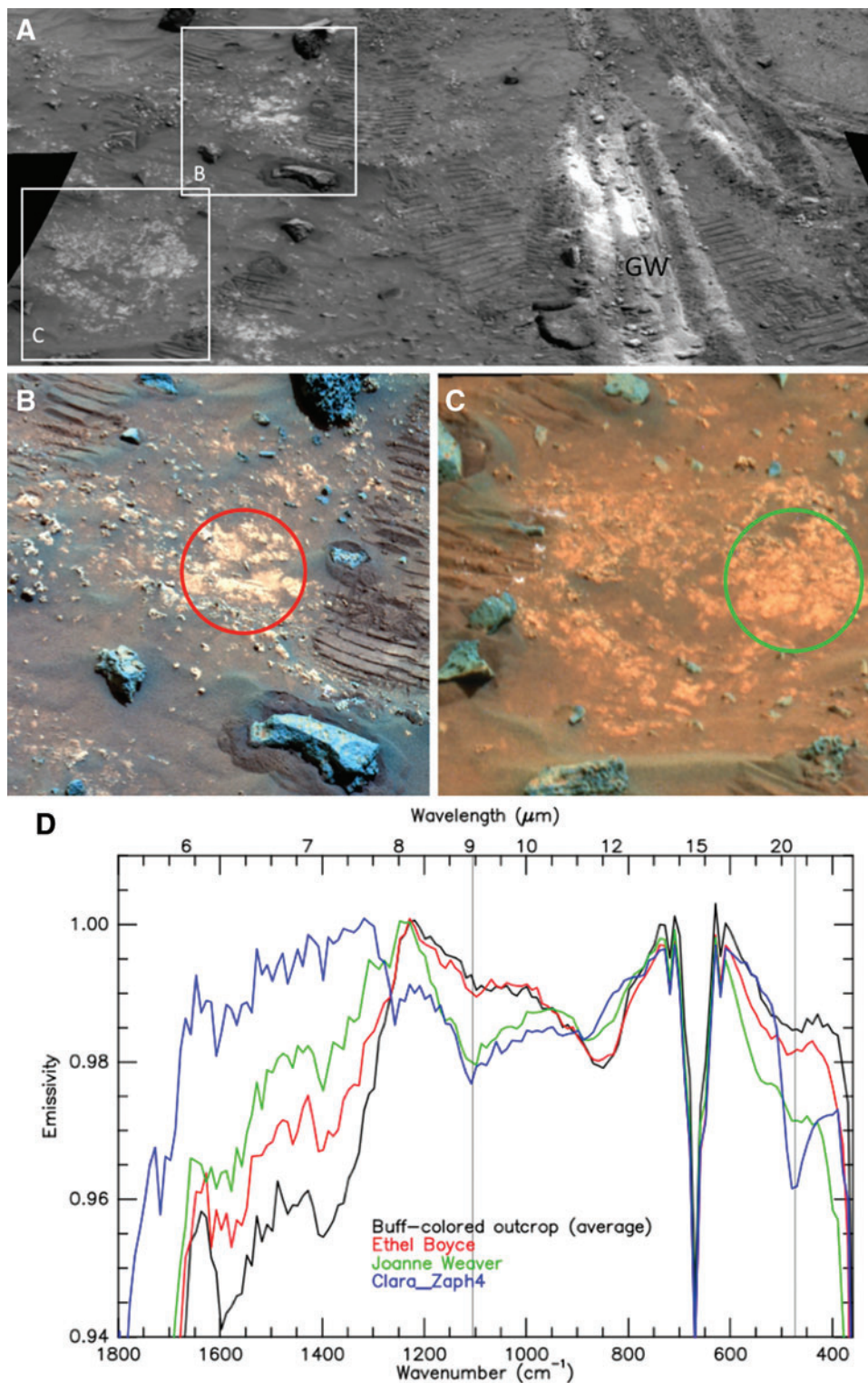
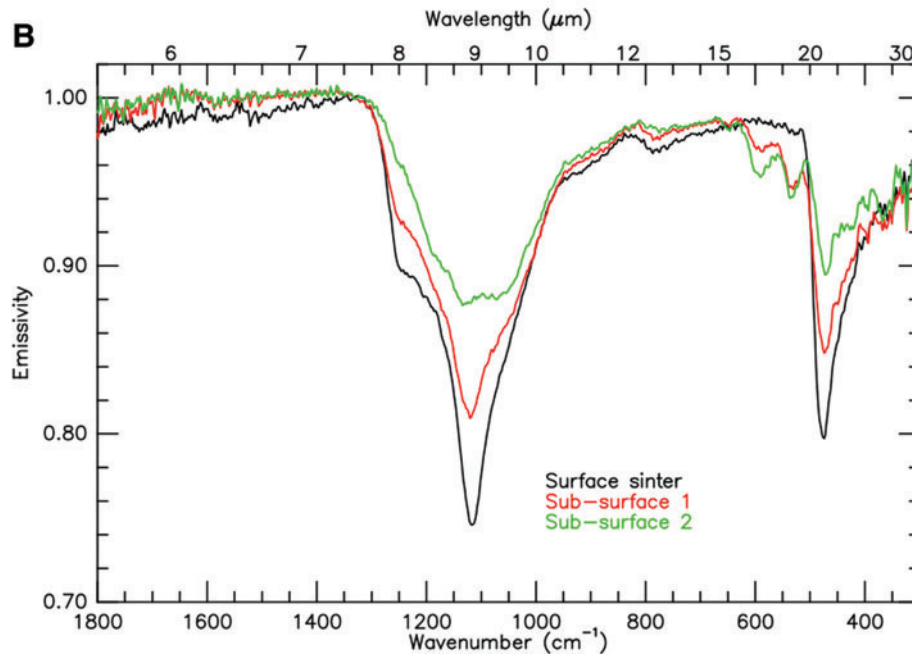


## Supplementary Data



**SUPPLEMENTARY FIG. S1.** Possible evidence for silicification of Halley class buff-colored platy outcrop. **(A)** Navcam view (sol 1196) shows Gertrude Weise silica-rich soil adjacent to Halley class outcrops and nodular silica. **(B)** Pancam false color image of Ethel Boyce (sol 1199, P2540) shows commingling of buff-colored and nodular rocks. Mini-TES target (circle, ~15 cm diameter; sol 1199, P3044) is dominated by the former. **(C)** Portion of Pancam false color mosaic “Scuff” (sol 1202) shows Mini-TES target on buff-colored outcrop Joanne Weaver (circle, ~12 cm diameter; sol 1199, P3045). **(D)** Mini-TES spectra color keyed to these targets appear to be a combination of spectral features from Halley class buff-colored outcrops from elsewhere and nodular opaline silica (Clara\_Zaph4; Fig. 12). Vertical lines highlight stretching (~1100 cm<sup>-1</sup>) and bending (~470 cm<sup>-1</sup>) modes of SiO<sub>2</sub>. Silica features are especially strong in Joanne Weaver, despite having no obvious nodular material. Modified from Ruff *et al.* (2011).



**SUPPLEMENTARY FIG. S2.** Opaline silica sinter and substrate silicification. **(A)** Silica-rich hot spring fluids at Opal Mound, Utah precipitated opaline silica sinter and silicified the underlying granitic regolith. Colored circles are locations where material was sampled and are keyed to spectra. **(B)** Thermal infrared emissivity spectra show opaline silica features decreasing with depth into silicified granitic regolith substrate.

#### Supplementary Reference

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