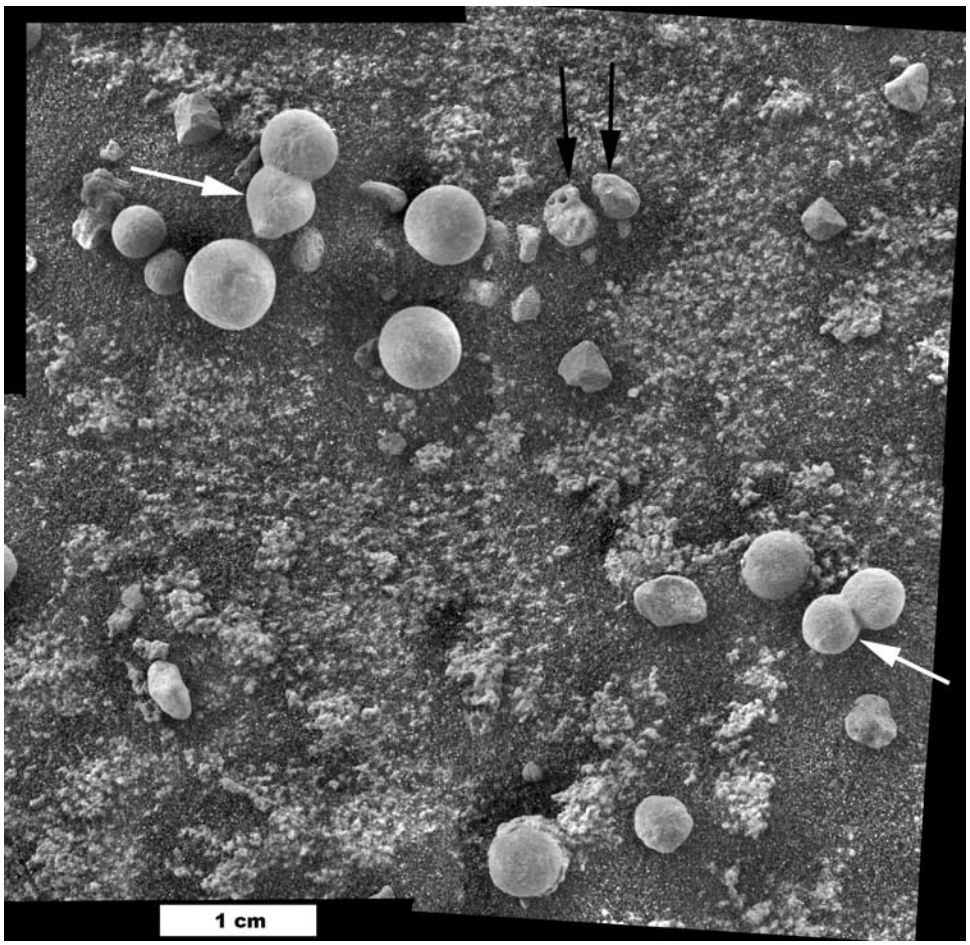

Figure 18. MI mosaic of target Campbell, taken on sol 182 when fully shadowed. The bimodality in size of larger clasts is shown in this image, including spherules and spherule doublets (white arrows; note that the example at upper left may have developed a third incipient spherule at the bottom), broken spherules, and irregular pitted clasts (black arrows).

by darker, finer-grained material. These bumps have a lower profile than the ridges of the laminar rock surfaces. The bumps show little organization or coherence when compared to laminar surfaces (e.g., at the target ''Tuktoyuktuk,'' shown in Figure 16, possibly because the target surface is parallel to bedding) but they have a similar reflectance and may be genetically related. Most bumps are irregular, but convex (the target ''Razor Cluster'' is a partial exception to this rule, displaying some sharp edges more similar to targets within the angular class). Where they exist on nodular rock surfaces, coherent ridges curve around spherules in many cases, consistent with their having been cemented in place. No cleavage planes, crystalline grains or other lithologic evidence is observable.

4.1.2.2. Texture

[35] The overall texture and surface morphology of nodular rock surfaces, as revealed in postRAT images, is bumpy (e.g., target ''Holman_3,'' Figure 17). This texture is unusual, reminiscent of cauliflower, and shows no preferred orientation. The texture could be the result of cemented grain aggregates or more resistant, larger grains supported by a cementing agent. Crystals in the cements are not resolved by the MI. In either case, these features have been interpreted to be related to diagenetic recrystallization [*McLennan et al.*, 2005].

[36] Spherules, averaging 4.2 mm in diameter, are present both within and resting on nodular rock surfaces, and are nearly perfectly spherical [*McLennan et al.*, 2005]. In addition to spherules, other loose particles, with distinct size and shapes, are also commonly found on the rock surfaces; these are interpreted to be small eroded fragments of outcrop rocks. Spherule and spherule fragments that reside on the rock surfaces are more rugged and pitted than those embedded within the rocks (e.g., the target ''Campbell,'' Figure 18). Spherule doublets, and very rarely linearly aligned triplets, also occur more frequently in these images than in those of other rock classes, but the loose spherules on the surface may not have been derived from the outcrop they lie upon. Spherules that have been broken or abraded (Figure 13) do not show any evidence of internal structure at MI resolution [*McLennan et al.*, 2005].

[37] Some spherules in the stratigraphic section examined in Endurance Crater are surrounded by a 1 to 2 mm thick layer of recrystallized isopachous cement. Deeper in the stratigraphic section, the thickness of the cements around spherules increases to up to 4 mm and they have a different