

These formations represent the well-known Grand Canyon sequence. The crater occurs in an area that is variously capped by Moenkopi and Kaibab formations (Figure 1). For more details of the target lithologies, see *Kring* [2007].

[9] Drilling studies that penetrated the ejecta blanket indicate the preimpact ground surface of Moenkopi was nearly flat and similar to present-day topography [*Roddy et al.*, 1975]. The rock formations also have near-horizontal bedding planes. However, in some places these rock for-

mations have been affected by gentle folding in the form of N-S to NNW-SSE oriented very broad open folds (Figure 1). It has also been suggested that the crater was emplaced on an anticlinal axis of a gentle monoclinial fold [*Shoemaker*, 1960]. However, according to *Roddy et al.* [1975], local dips of the strata are only on the order of a degree or less. *Shoemaker* [1960] observed two mutually perpendicular sets of preimpact vertical joints of uniform strike (NE-SW and NW-SE). Furthermore, *Roddy* [1978] reported two

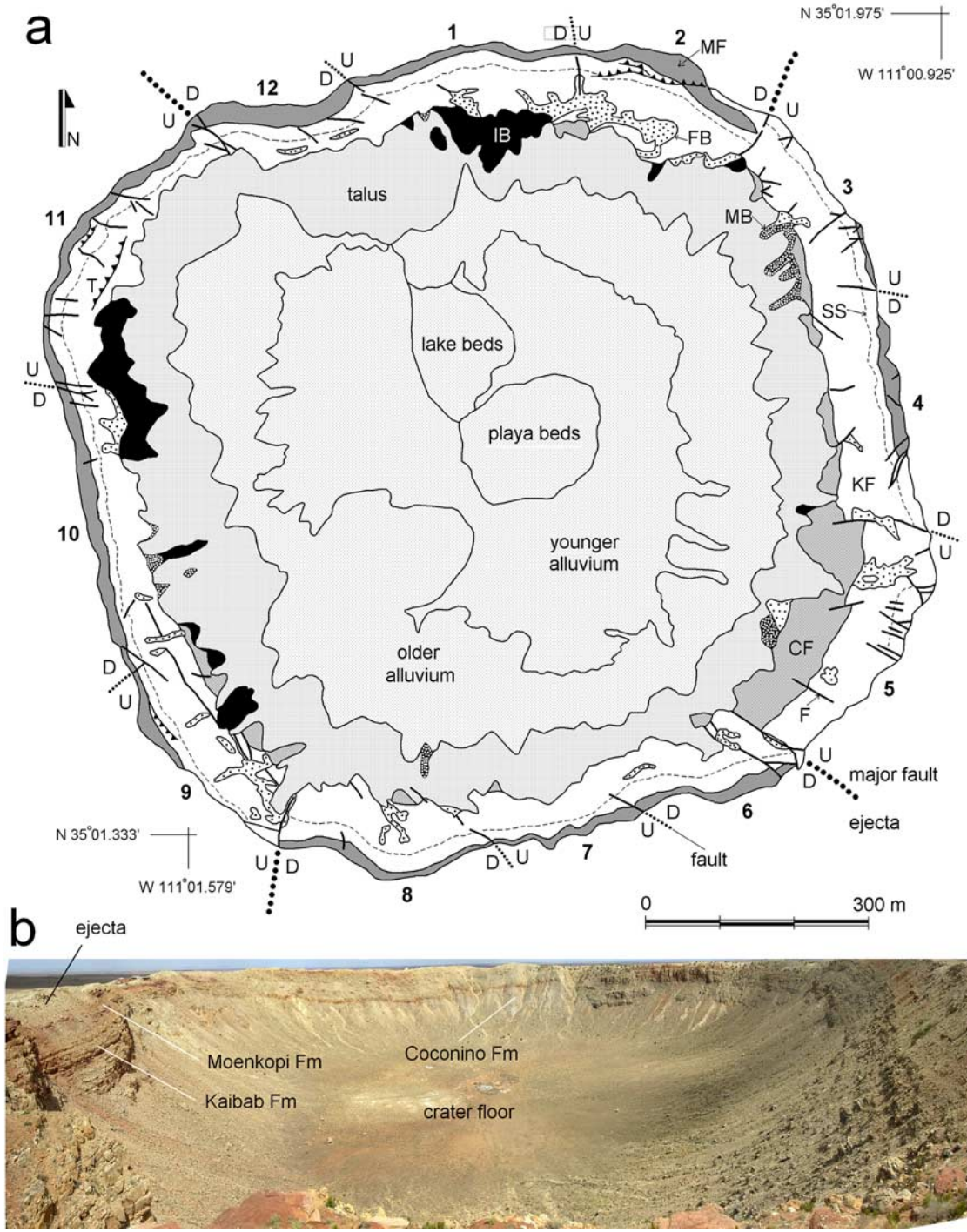


Figure 2