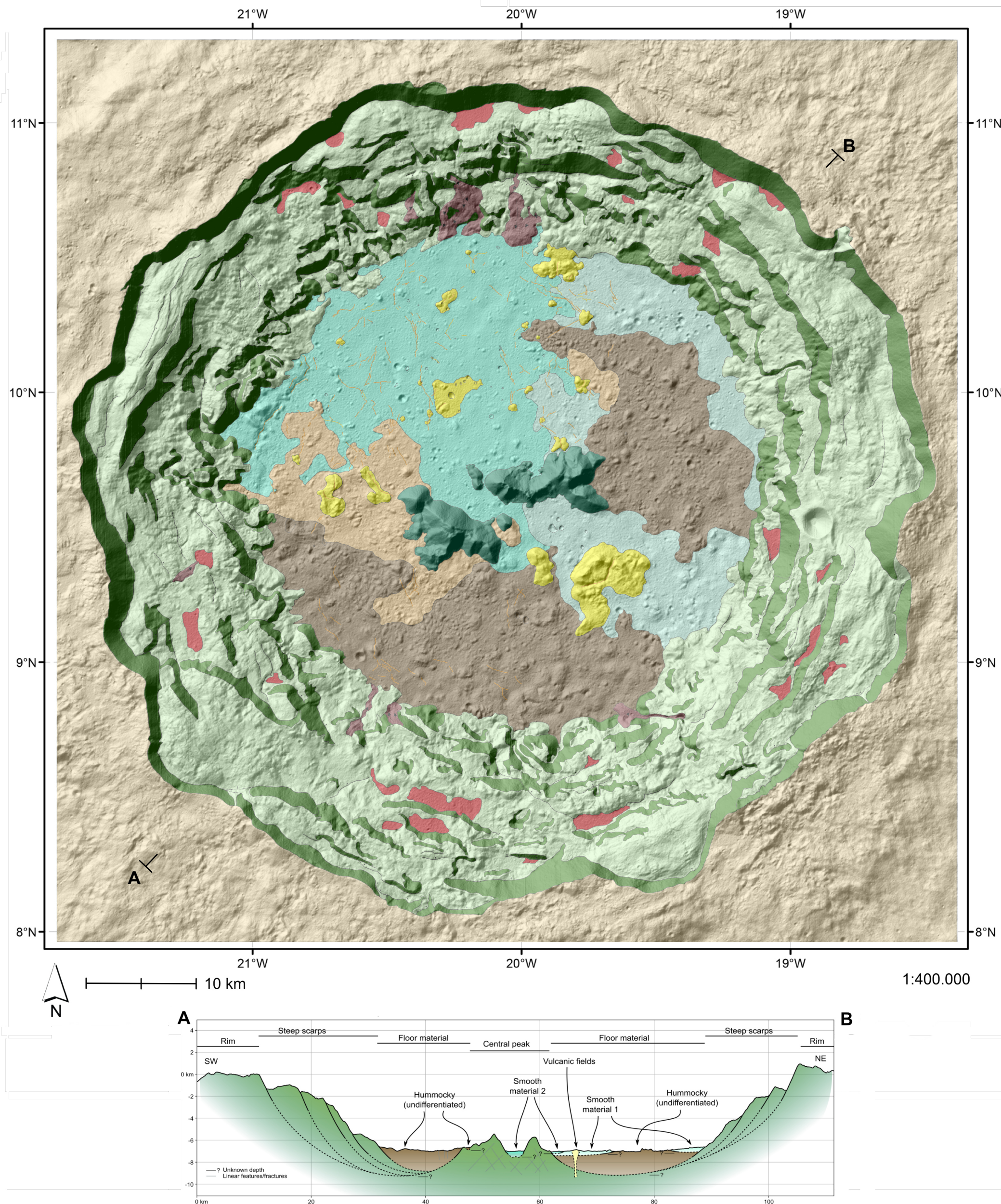


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# Geological Map of Copernicus Crater



## Geological Units

### Crater Floor Units

- Volcanic Fields:** Features possibly related to volcanic like vents and cinder cones. These features are surrounded or crossed by cracks. Not specific spectral signature on Clementine data is observed.
- Smooth Floor Material 1:** Surface characterized by low roughness and high 750/415nm ratio which can indicate low Ti and high glass contents. Presence of rare and dispersed blocks and mounds.
- Smooth Floor Material 2:** Morphological and spectral mixture of Smooth Floor Material 1 and Hummocky Floor Material 1, with prevalence of Smooth Floor Material 1. The surface is characterized by mid-low roughness and average value of 750/415 nm and 415/750 nm ratios. Presence of dispersed blocks and mounds.
- Hummocky Floor Material 2:** Morphological and spectral mixture of Hummocky Floor Material 1 and Smooth Floor Material 1, with prevalence of Hummocky Floor Material 1. Surface characterized by mid-high roughness, Average values of 750/415 nm and 415/750 nm ratios. Frequent presence of blocks and mounds.
- Hummocky Floor Material 1:** Floor material with very high roughness, high ratio 415/750 nm on Clementine data can indicate high Ti content. Characterized by continuous fields of block and mounds.
- Central Peak Material:** Evident central peak morphology, High ratio 750/1000 nm on Clementine data, can indicate high value of Fe and mafic minerals (e.g. Olivine).

### Crater Walls Units

- Gentle Scarps and Terraces:** Areas characterized by terraces and scarps. Relatively slight slope (8°- 43°).
- Steep Scarps:** scarps with a relatively high slope ( over 43°).
- Melt Pool:** Flat morphologies in rough and steep areas. Not particular spectral signatures is observed on Clementine's data. There are some melt pool on the floor too, but too small to be clearly mapped.

## Linear Features

- Open Fracture:** Irregular open fractures of the floor, often associated to volcanic features.
- Pit Chain:** Chains of open pits present on the floor often associated to volcanic features.
- Rim and Wall Fault - Certain**
- Rim and Wall Fault - Inferred**
- Open Pit:** Open pits or vents probably related to volcanic.
- Flow Channel:** Flow features formed by downhill flowage of fluid, partly molten ejecta. Some with lobate protrusion at downhill end.

## Geologic Contacts

- Approximate.**
- Certain.**
- Surrounding Terrains:** This unit represent the surrounding of the mapped area. It's characterized mainly by Copernicus' continuous ejecta.