

**Manuscript:** *The Rocklea Dome 3D Mineral Mapping Test Data Set*

**Overview comments:**

This research paper presents an open-access dataset that integrates multiple geochemical and mineralogical data collected from multiple proximal and remote sensing techniques. This publicly accessible dataset has been carried out in the Rocklea Dome located in the Hamersley Province (Western Australia).

The work is well written and illustrated with figures and tables, and their conclusions seem to be consistent with the results of data products.

General vote: manuscript may become acceptable after minor changes, which are detailed in this review (see 'Line-by-Line commentary').

**Line-by-Line commentary:**

Line 20: 2,500 nm (add the thousand comma separator).

Lines 27: Transported by fluvial streams? Please, specify.

Lines 27, 56, 117, 122 and 361: Cenozoic instead of Tertiary (indicate its precise age if possible. For example, Miocene).

Line 28: Change Archaean geology by Archaean-rock outcrops or Archaean bedrock.

Lines 68 to 72: Consider to re-write; the text is confusing.

Lines 117 to 123: Explain briefly the formation of CIDs.

Line 126: Palaeochannel instead of channel.

Line 164: ... ~1,000 nm to ~1,400 nm ...~1,800 nm to ~1,950 nm.

Line 181: 'energized' and 'diameter' are examples of American English spelling. Please, use the same style of English spelling along the manuscript (American or British English spelling). In some cases, you have used British English spelling.

Line 193: In the other parts of the text, authors do not use comma after 'e.g.' and 'i.e.'. Please, unify this style issue.

Lines 195 to 199: Consider to use the Present Simple tense in this case.

Line 196: 260°C and 425°C. The same occurs in lines 198 and 199.

Line 213: Table 1: Add spaces (~890 nm and ~910 nm). Composition instead of 'composotion'. Polynomial instead of 'Polynomila'. In addition, in many cases, the measurement unit is absent as well as the thousand comma separator such as: Relative absorption depth of the 2,200 nm absorption for which the continuum is removed between 2,120 nm and 2,245 nm, determined using a 3 band polynomial fit around the band with the lowest reflectance. 2200D.

Line 229: 6,000 – 14,500 nm

Line 230: '...and composition of various geological materials.' I suggest to modify this sentence like follows: ...and mineralogical composition of rocks and sediments.

Line 234: The advantage **of** the multiple feature extraction...

Line 235: **based** on instead on 'baised on'.

Lines 296: Consider to change 'down to circa 1 m' by ' $\leq 1$  m' or ' $\sim 1$  m'.

Line 305: **2,100** nm.

Lines 350, 351 and 428: Palaeochannel.

Line 408: Channel instead of 'chanel'.

### **Figures:**

Figures 1 and 3: Consider to change Kilometers by km.

Figure 4: Please, indicate what represents the letters from C to I in Fig. 4.