D. DURICRUSTS

Field Note D6a. Elim silcretes and ferricretes

Ferricrete near Elim.

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The silcretes and ferricretes around Elim were mapping by the Geological Survey in 1955, published in the 3419C&D (Gansbaai) & 3420C (Bredasdorp) sheet, in 125,000 scale in 1963; and in J Malan's field sheet in 1:50,000 of 1984, which was published in the 3319 Worcester sheet in 1:250,000. MAG Andreoli mapping of the area in the mid-1980s was published by the Atomic Energy Corporation of SA in the Elim sheet in 1:50,000 in 1989. They were used by DL Roberts when he studied of SA silcretes of the coastal areas in 2003. (Figures 1 to

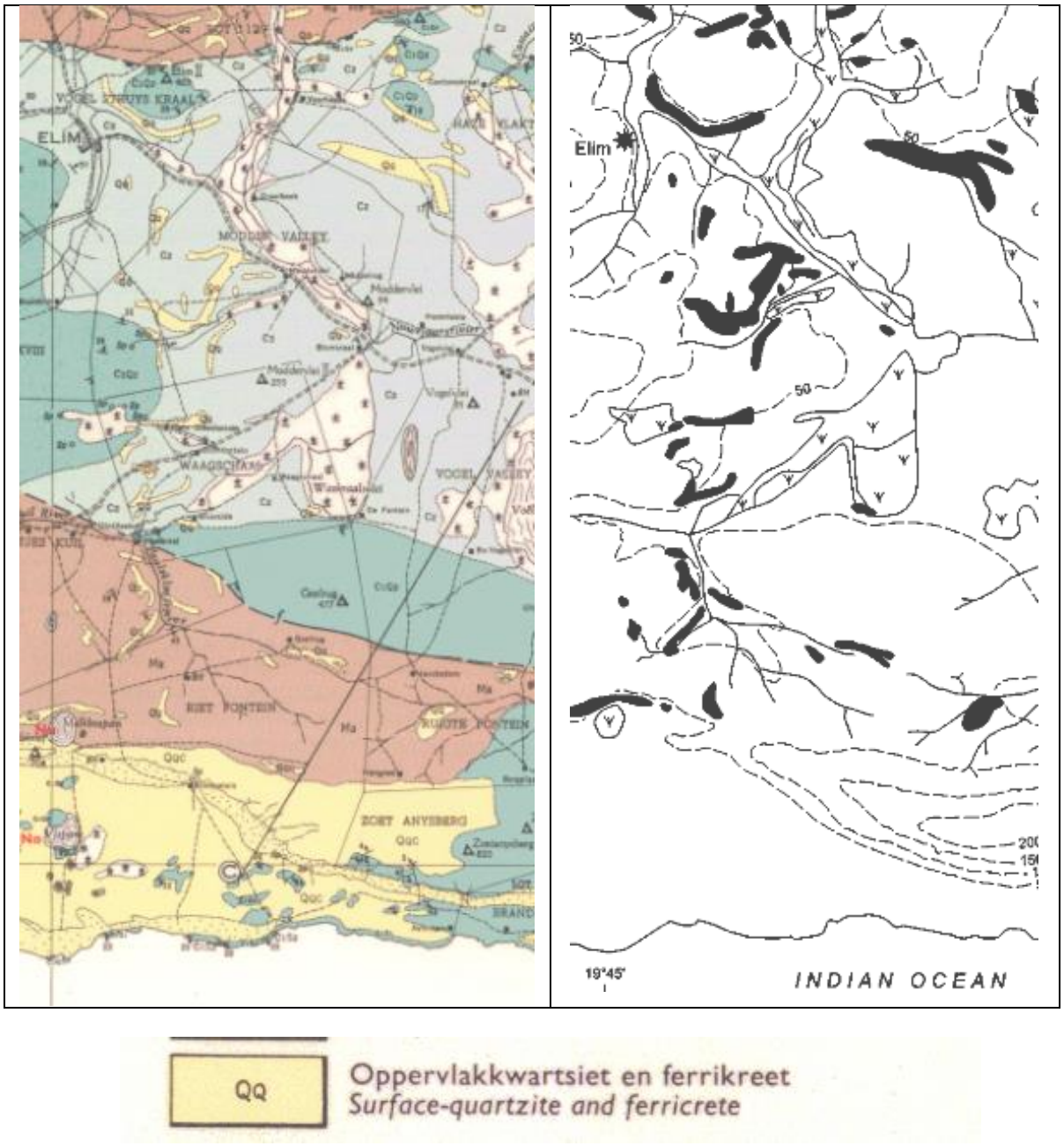

Figure 1. Left - the 1963 geology map of Elim area (3419C&D (Gansbaai) & 3420C (Bredasdorp) sheet, in 125,000 scale; the silcrete is called *'surface quartzite'*. Right – the 2003 map of silcrete outcrops in the same area (DL Roberts), based on the 1963 map.

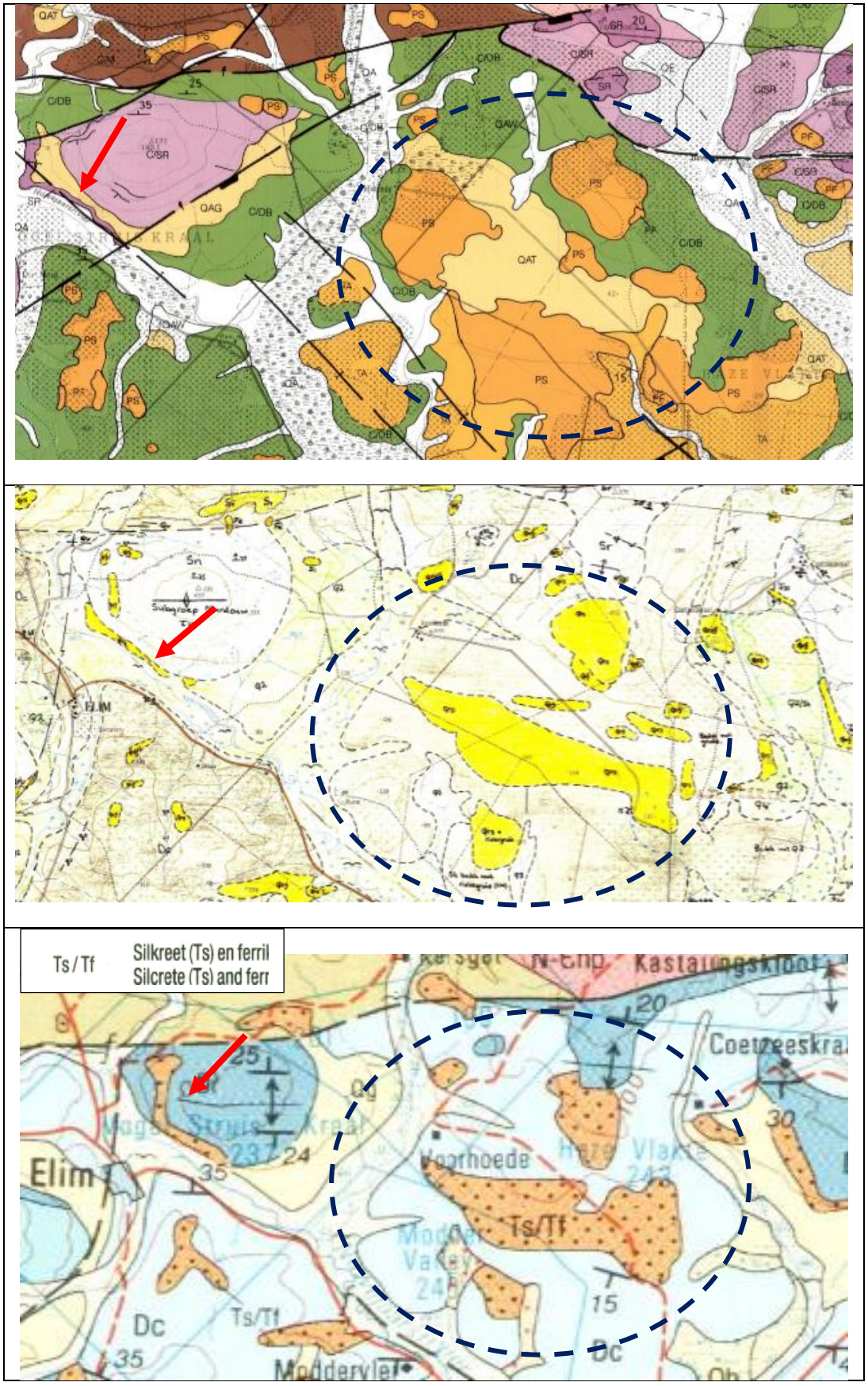

Figure 2. Top – MAG Andreoli's map. Middle – JA Malan's field sheet. Bottom – the 3319 Worcester map, based on Malan's field sheet. Circles indicate area to be compared between the three maps.

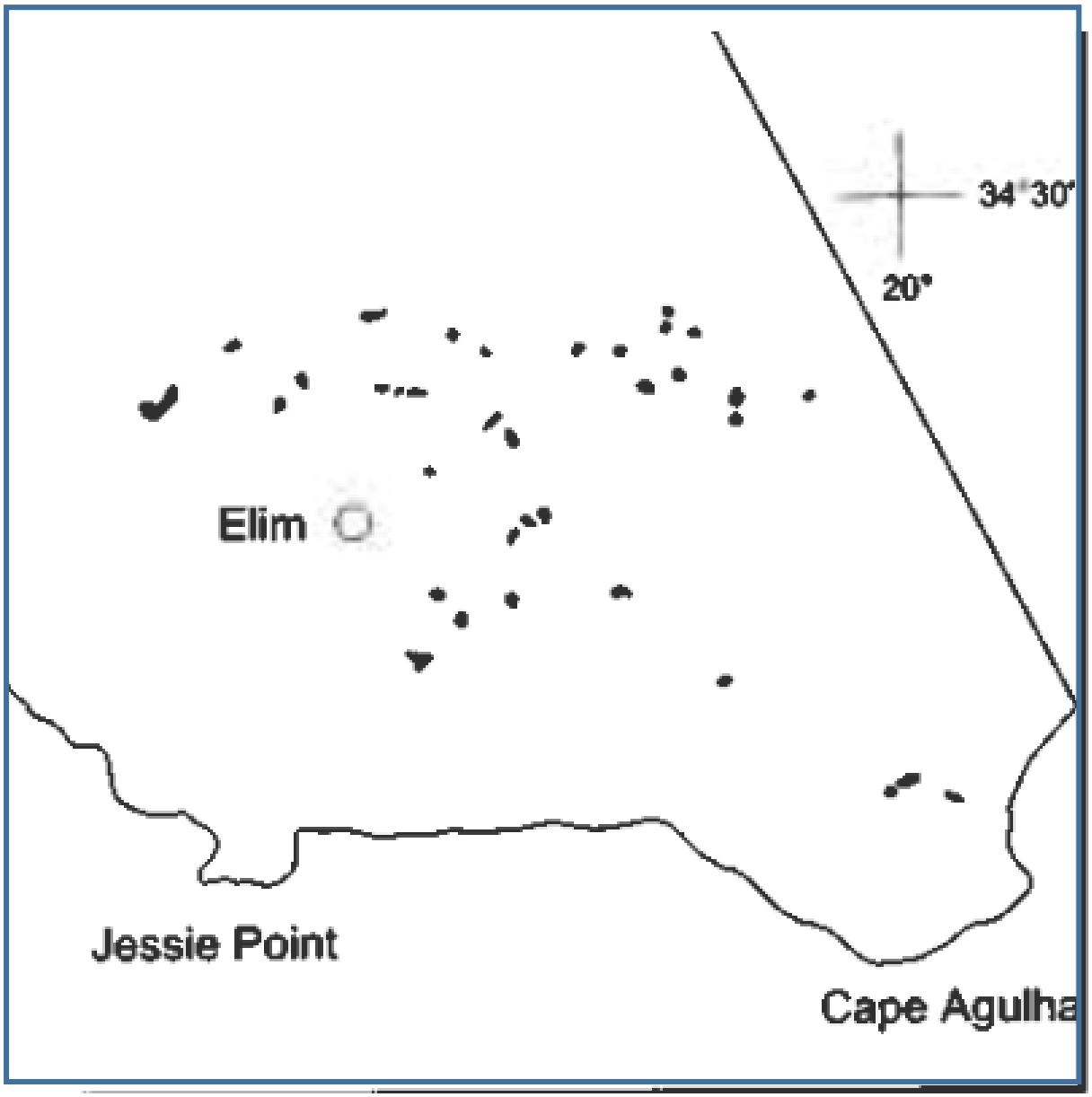

Figure 3. DL Robert's 2003 map of silcrete outcrops around Elim. Due to the scale of the map and many inaccuracies, it is impossible to identify the outcrops on the maps shown above.

There are many discrepancies between the various maps. More detailed mapping is required. Such mapping is outside the scope of this study. The outcrops are defined as 'high-level silcretes and ferricrete'. The author desputes this definition, not only because these outcrops are at low-level, but because they are entirely different to the Grahamstown Formation outcrops east of Bredasdorp, The author contends that many of the silcretes and ferricretes in the Elim area are not pedogenic.

Some silcrete outcrops have been documented by the author (Figures 4 and 5).

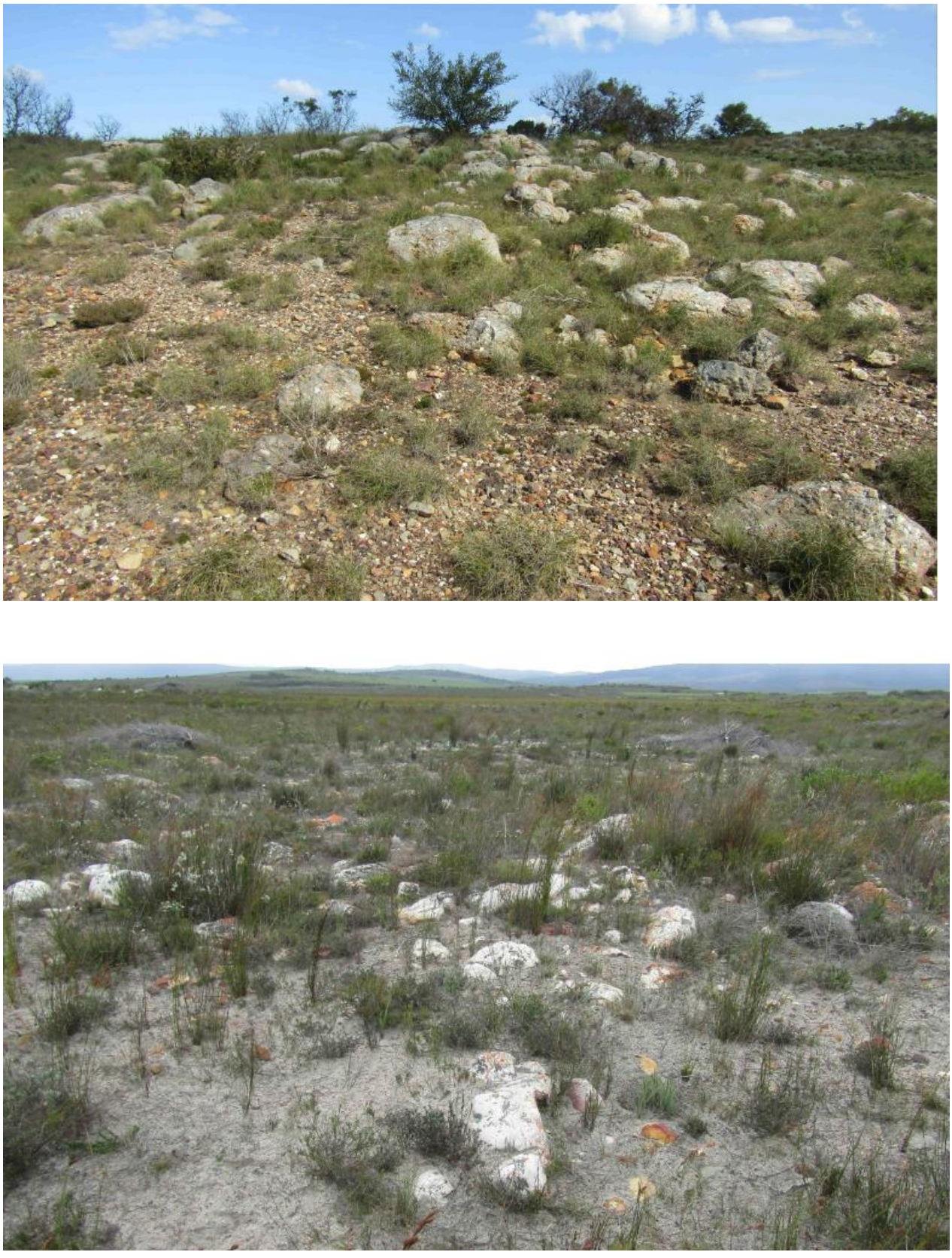

Figure 4. Silcretes around Elim. Top – pillowy; bottom – mushroomy.

Figure 5. Top and bottom – silcrete slabs near Elim.

Ferricretes are abundant around Elim (Figures 6 and 7).

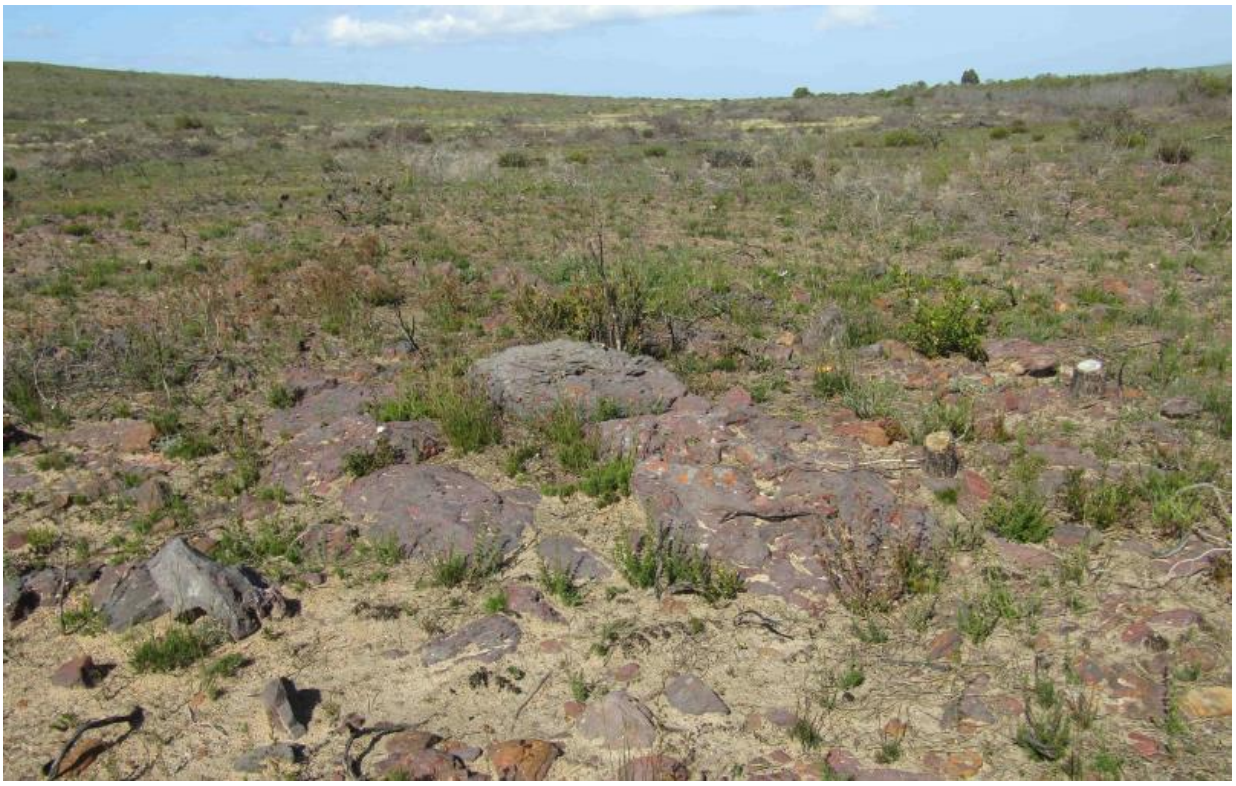

Figure 6. Ferricrete near Elim. Top – platy; bottom – pillowy.

Figure 7. Top and bottom - Ferricrete near Elim.