

D. DURICRUSTS

Field Note D2a. Calcrete on the Bokkeveld Formations



Horizon of calcrete (indicated by the hammer) on Bokkeveld shales.

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Calcrete over the Ceres Formation of the Bokkeveld Group is ubiquitous on the Bradasdorp Plain (Figures 1 to 8).

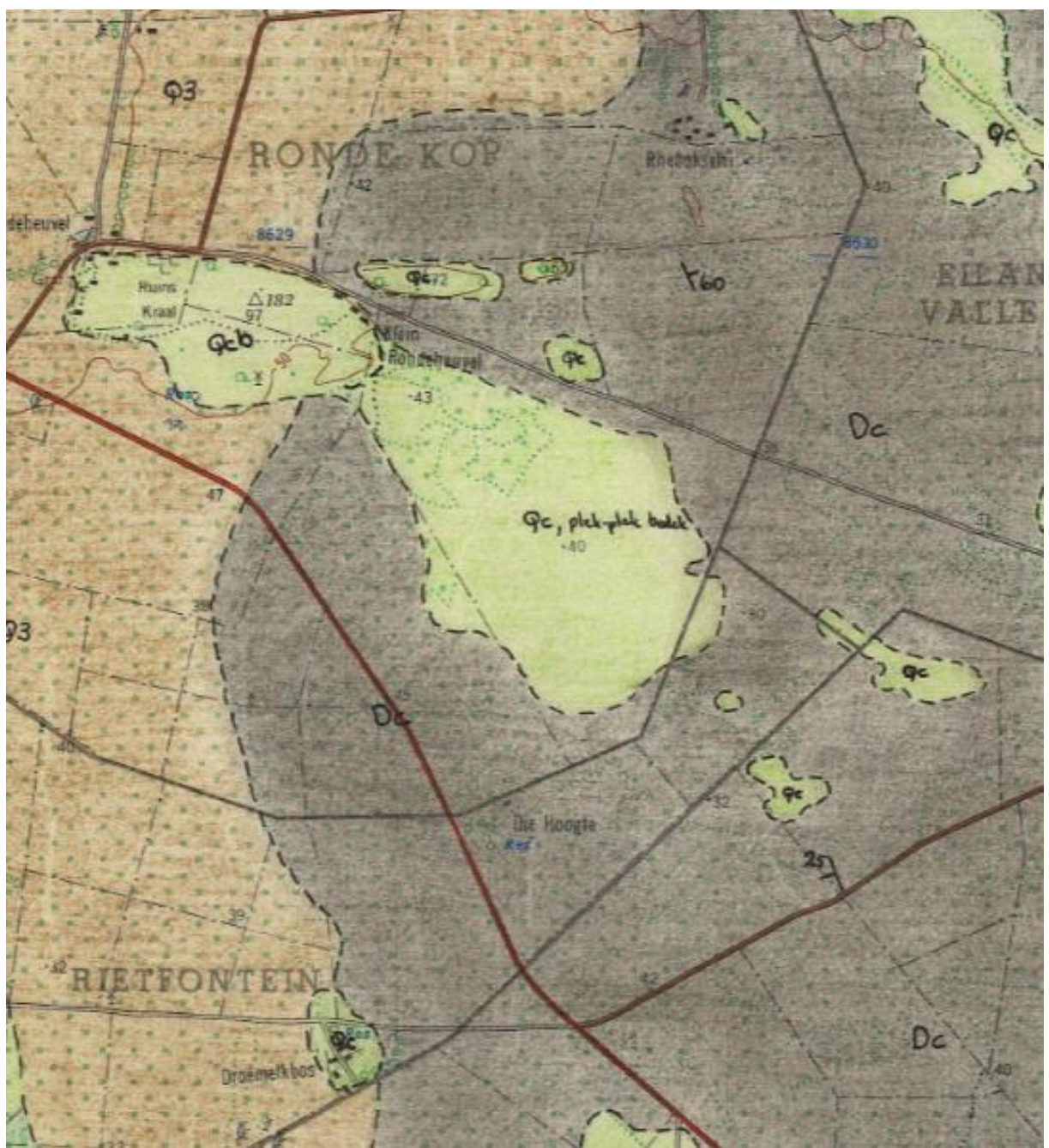


Figure 1. Geology map of a section of the Bredasdorp Plain, showing the Ceres Formation (grey; symbol Dc) of the Bokkeveld Group.



Figure 2. Satellite image of the area shown in Figure 1.



Figure 3. Calcrete cover on the Ceres Formation.



Figure 4. Calcrete on the Ceres Formation. Calcrete chunks (top) are heaped on calcrete patches (middle) or on the protruding shales (bottom).

Calcrete on other formations of the Bokkeveld Group is shown in Figures 5 to 9.



Figure 5. Calcrete (arrow) at the top of a shale outcrop of the Rietfontein Formation.



Figure 6. Gravel (yellow arrow) cemented by Calcrete at the top of a shale outcrop of the Voorstehoek Formation (black arrow).



Figure 7. Very thin calcrete on a shale outcrop of the Voorstehoek Formation (black arrow). Calcrete (cutans*?) was formed also in the spaces between the shale laminae (yellow arrows).

*The term *cutans* is used in the literature in a broad group of pedological features, including so-called 'clay skins', associated with the surfaces of the skeleton grains, peds, and various kinds of voids within soil materials.

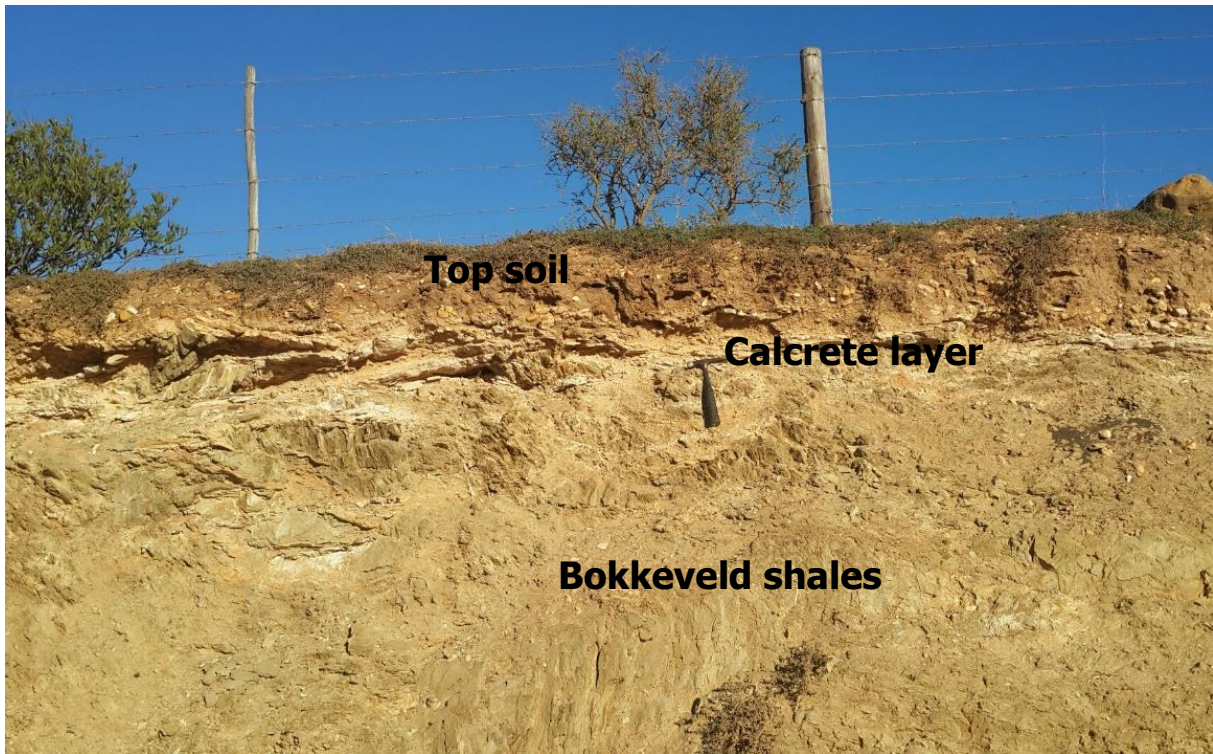


Figure 8. Thin (~0.1 to 0.2 m) calcrete layer over Bokkeveld Bidouw Formation shales along a road-cut.



Figure 9. Calcrete on the Bokkeveld Bidouw formation shales: top - satellite image of an area north of the Soutpansvlakte Basin; the light patches (arrows) are calcrete; middle – a patch of disintegrated and broken (by farming machines) calcrete (note that the crop is shorter); bottom – a chunk of the calcrete (porous, compared with the compact calcrete on the Ceres Formation).