

D. DURICRUSTS

Field Note D2a. Calcrete on the Bokkeveld Formations

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

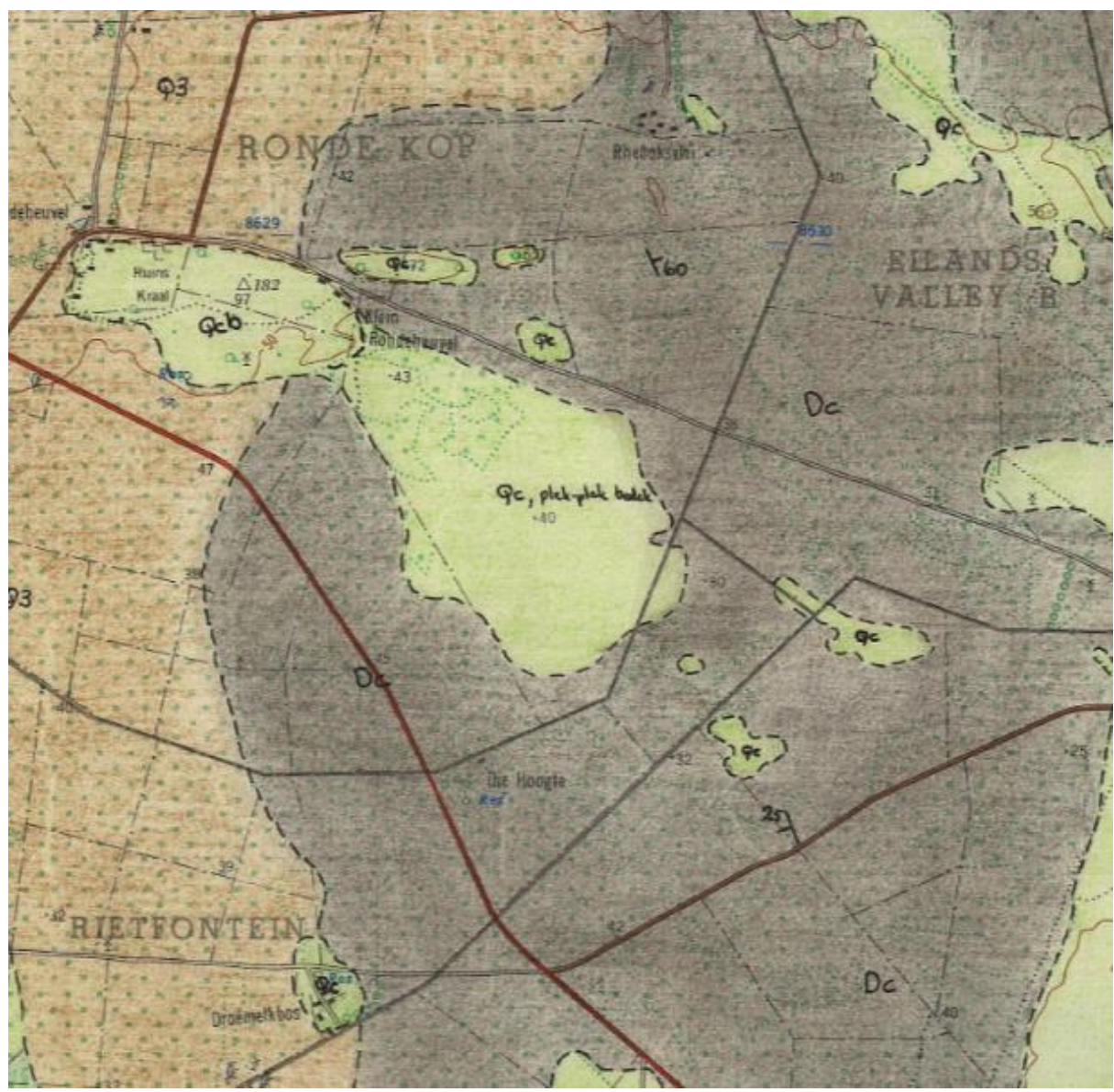


Figure 1. Geology map of a section of the Bredasdorp Plain, showing the Ceres Formation (grey) of the Bokkeveld Group.



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. Compact calcrete chunks (top) are heaped on calcrete patches (middle) or on the protruding shales (bottom).

Calcrete on the 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 Rietfontein Formation (black arrow).



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

*The term cutans is used for 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.

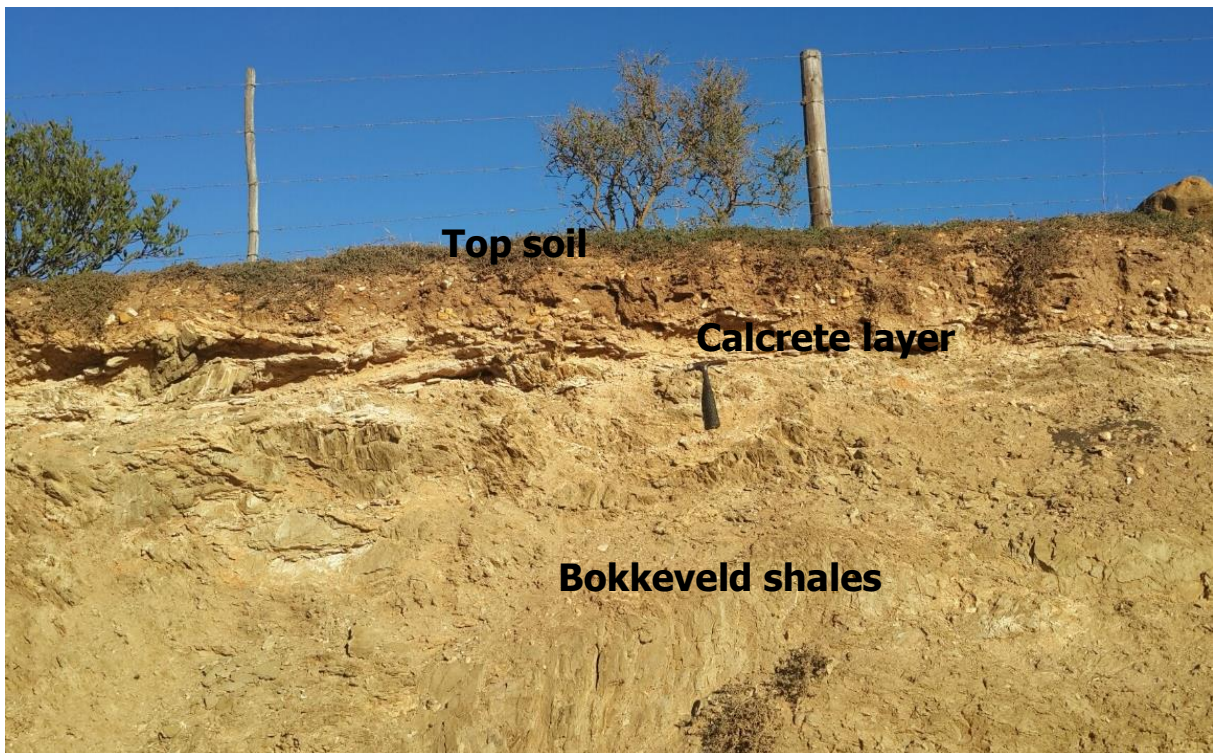


Figure 8. Thin (~0.1 to 0.2 m) calcrete layer over Bokkeveld Bidouw Formation shales along a road-cut.



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 (brittle, compared with the compact calcrete on the Ceres Formation).