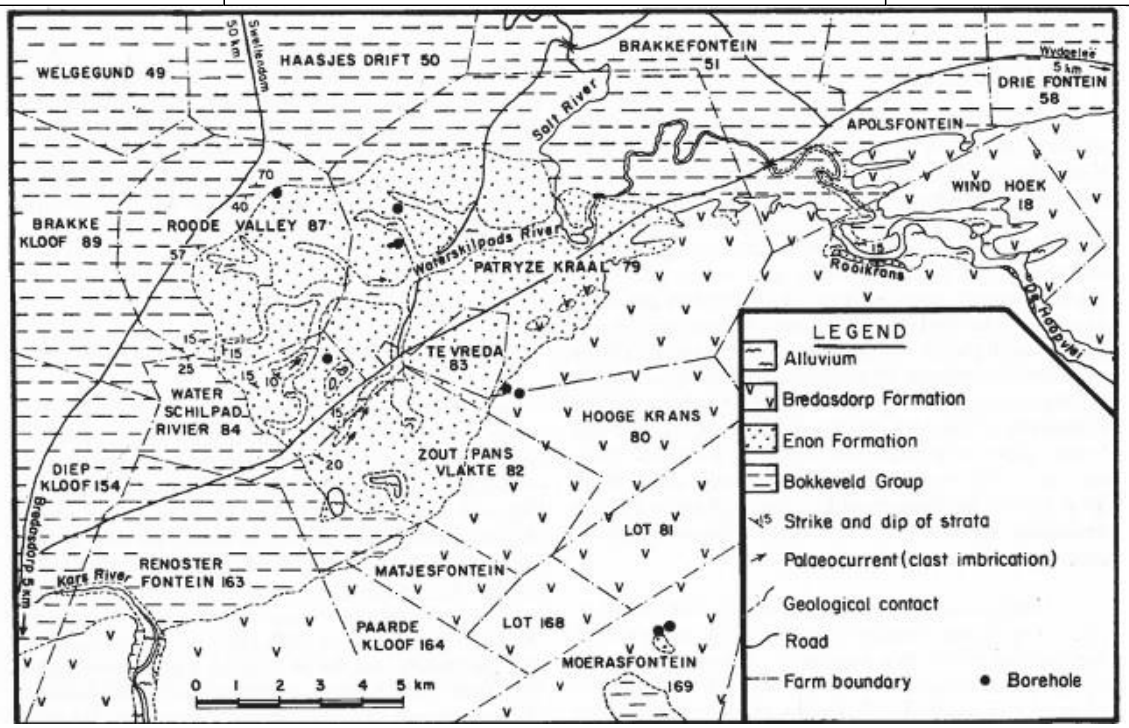
C. GEOLOGY

Field Note C6b. Enon Formation deposits

Conglomerates are the most diagnostic feature of the Enon Formation. In the past the formation was referred to as the Enon Conglomerate Formation. The conglomerates consist of large, sub-rounded to rounded clasts of sheared or unsheared quartzite and sometimes slate, shale and charcoal. Quartzite clasts are generally more rounded whereas the slate and shale clasts are angular. These are interbedded with subordinate sandstone lenses ranging from white, yellow, red and green in colour claystones and rare mudstone units. These were deposited in a high-energy alluvial environment where debris flows were common.

A large but highly eroded outcrop occurs in the Soutpansvlakte Basin (Figures 1 and 2), in the Waterskilpads River area, north east of Bredasdorp. The far western portion of this conglomerate is composed of Bokkeveld and Table Mountain sandstone clasts. The more northern parts have far more intercalated sandstone and mudstone, with clasts originating from the central Ruèns Bokkeveld deposits. The clasts of the southern parts are predominantly from the surrounding Bredasdorp Mountains and Bokkeveld rocks.

Figure 1. Geology map showing Enon Formation deposits in the Soutpansvlakte Basin (top) And in the Salt River Gorge (bottom).



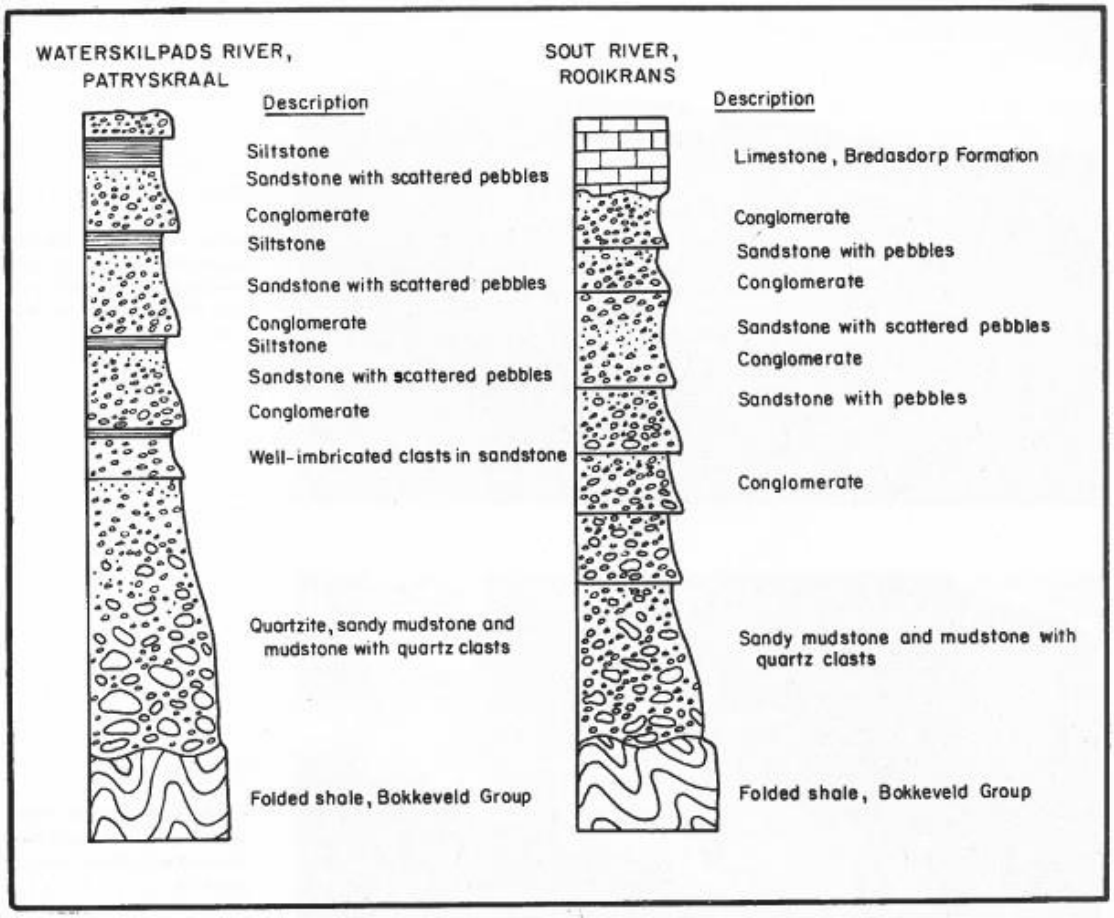


Figure 2. Top: map of the Soutpansvlakte Basin. Bottom: generalised profiles of the Enon Formation. The profile at Rooikrans (Salt River Gorge) is shown below (Figures 3 to 5).
Source: J Malan and J Theron, 1987.

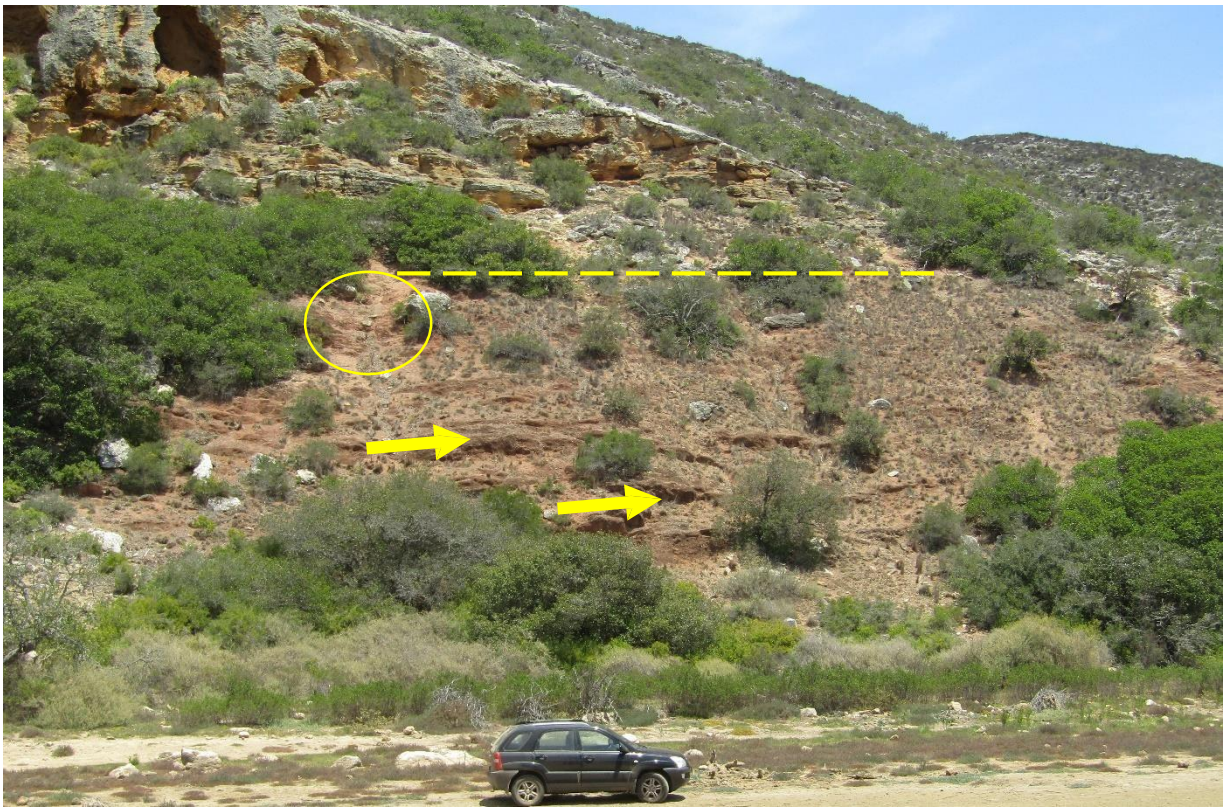


Figure 3. The Enon Formation below the Rooikrans (in the Salt River Gorge). The yellow, dashed line marks the contact between the Enon (below the line) and the Bredasdorp Formations. The yellow circle indicates the area shown in Figure 4.

Figure 4. Enon Formation conglomerate with a high content of angular shale fragments below Rooikrans in the Salt River Gorge.

Figure 5. Enon Formation conglomerate with a high content of angular shale fragments below Rooikrans in the Salt River Gorge.

Figure 6. Block of ferricrete breccia at the top of the Enon Formation below the Rooikrans, in the Salt River Gorge.

The Enon Formation deposits range from clays to gravel to pebbles and to boulders of all sizes (Figures 7 to 16).

Figure 7. Enon sediments on the floor of the Soutpansvlakte Basin.

Figure 8. Satellite image of Enon sediments (the north reaches of the Soutpansvlakte Basin; the white patches are areas, which are partially covered with calcrete.

Figure 9. Enon Formation deposit (arrow).

Figure 10. Conglomerate of the Enon Formation.

Figure 11. Conglomerate of the Enon Formation.

Figure 12. Conglomerate of the Enon Formation.

Figure 13. Conglomerate of the Enon Formation.

Figure 14. Conglomerate of the Enon Formation.

Figure 15. Conglomerate of the Enon Formation.

Figure 16. Conglomerate of the Enon Formation.

The various clasts of the Enon Formation are the subject of Field Note C6e.

