

D. DURICRUSTS

Field Note D5f. Fault zone ferruginised shales



Quartz veins through heavily ferruginised shales along a fault line.

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Two hills in the Study Area - Rooikop and Sonderkoskop - are situated on a fault line (Figure 1). The shales in the fault zone are highly ferruginised and contain veins of quartz and manganese as well as minor quantities of other minerals.

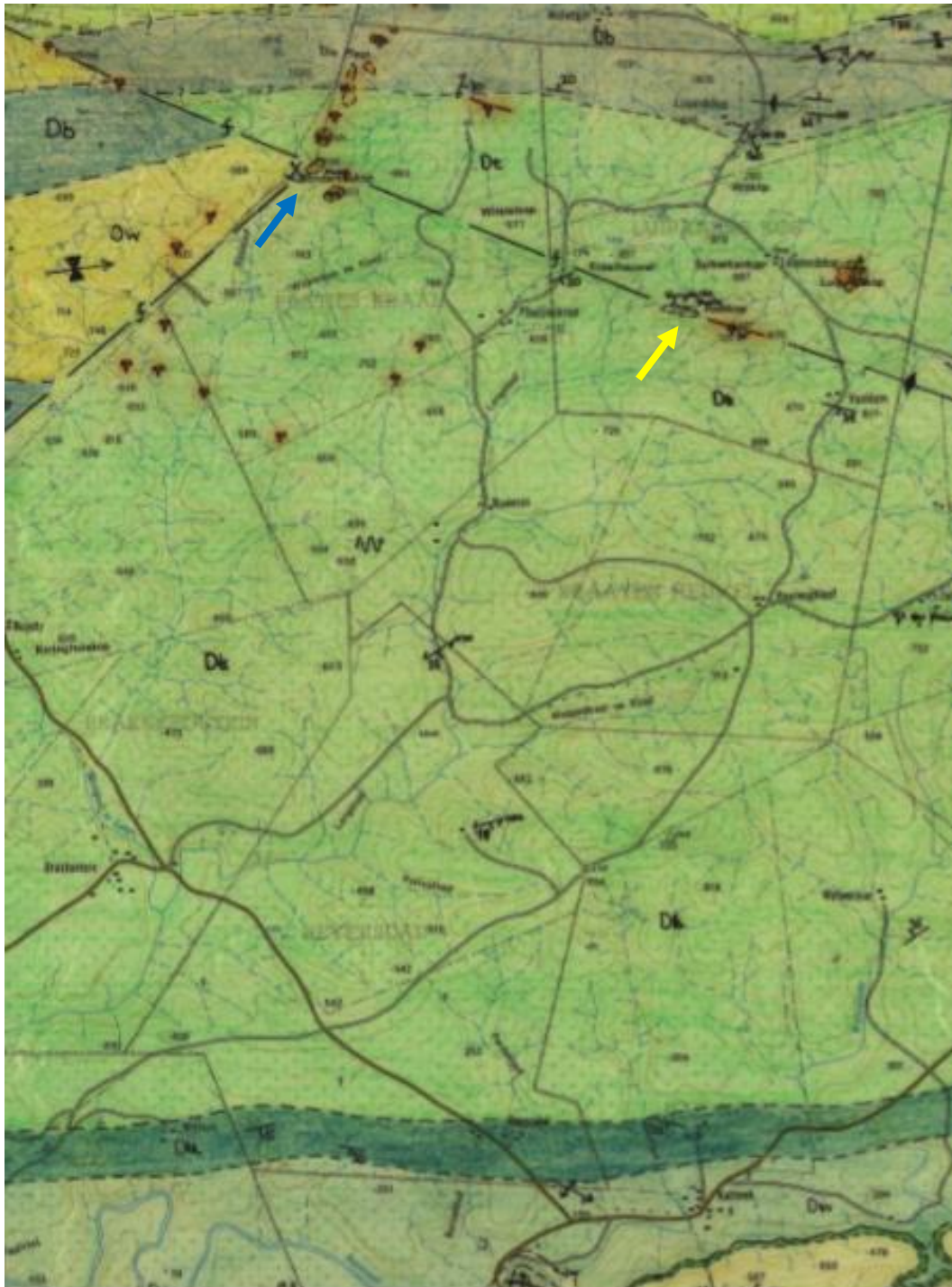


Figure 1. Geology map (JA Malan, 1984) of part of the Study Area, north of De Hoop Vlei. Yellow arrow points to Rooikop and Blue arrow points to Sonderkoskop, both located on a fault line.

1. Rooikop

The ridge at the top of Rooikop is a spectacular display of heavily ferruginised shales, quartz and manganese veins and traces of iron oxides. There are three main features on Rooikop – a quartz hill, a shale ridge and a shale hill (Figure 2).

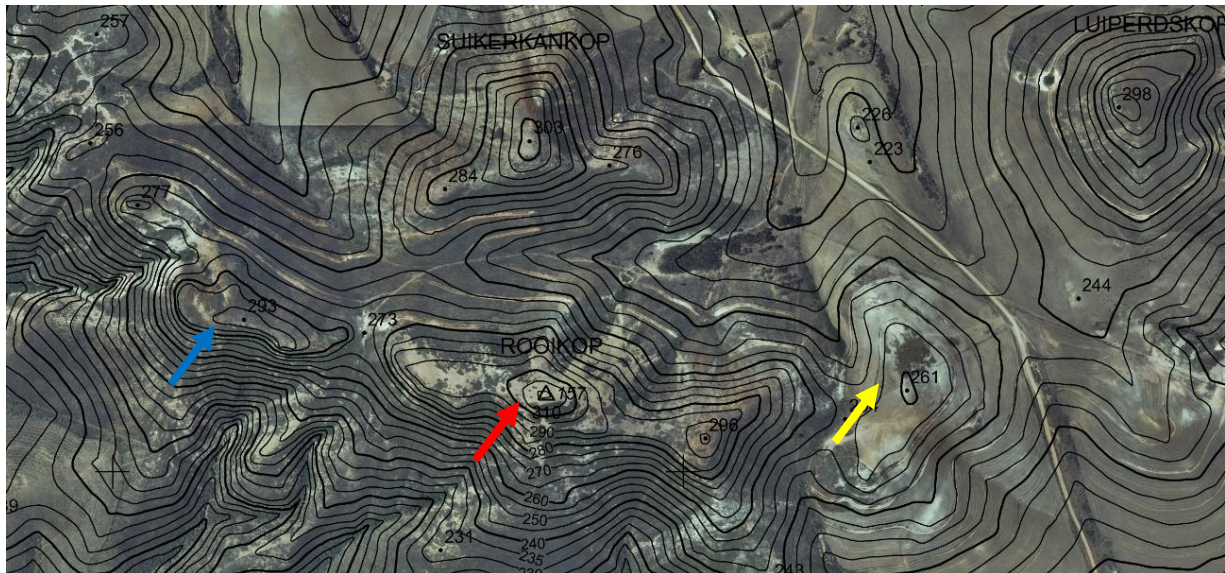
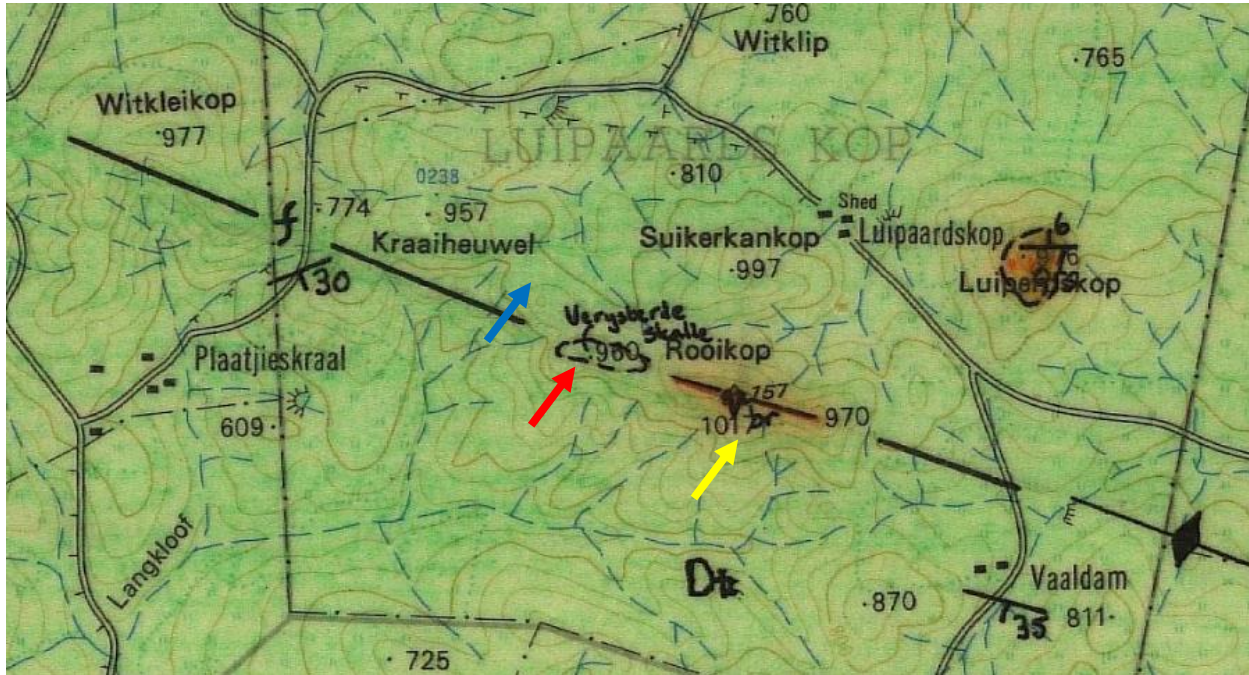


Figure 2. Rooikop. Top - geology map (JA Malan, 1984). Bottom – topography map. Arrows point to: yellow - quartz hill, red - ferruginised shale ridge and blue - ferruginised shale hill.



Figure 3. Rooikop. Top – view from the northwest; middle and bottom – views from the northeast. Yellow arrow points to the quartz hill, red arrow to the ferruginised shale ridge and blue arrow points to the ferruginised shale hill.



Figure 4. Top and bottom – views of the cliffs, at the edge of the north part of Rookop Ridge, facing southwest. The grey colour is due to lichens.



Figure 5. Top and bottom – views of the outcrops, at the edge of the south part of Rooikop Ridge.

The ferruginised shale ridge is veined by quartz and manganese (Figures 6 to 8).



Figure 6. Top and bottom – views of the outcrops, at the edge of the south part of Rooikop Ridge. Arrows point to quartz veins.



Figure 7. Top and Bottom. The heavily ferruginised shales of Rooikop. Arrows point to manganese veins (top) and quartz veins (bottom). The grey colour is due to lichen.



Figure 8. Top and Bottom. The heavily ferruginised shales of Rooikop. Note the thicker quartz veins (arrows). The grey colour is due to lichens.

The south side of the ridge is steep with cliffs at the edge; the north side slopes gently, with a few 'clouds' on it (Figures 9 and 10). (For silicified shale 'clouds' see Field Notes on silcrete).



Figure 9. Top and bottom – 'clouds' of ferruginised shales (arrows) on Rooikop. The grey colour is due to lichens. Note a very thick quartz vein (between the dashed lines).



Figure 10. Top and bottom – ‘clouds’ of ferruginised, silicified shales (arrows) on Rooikop. The grey colour is due to lichens.

2. Sonderkoskop

Two faults cross each other at Sonderkoskop (Figure 11).

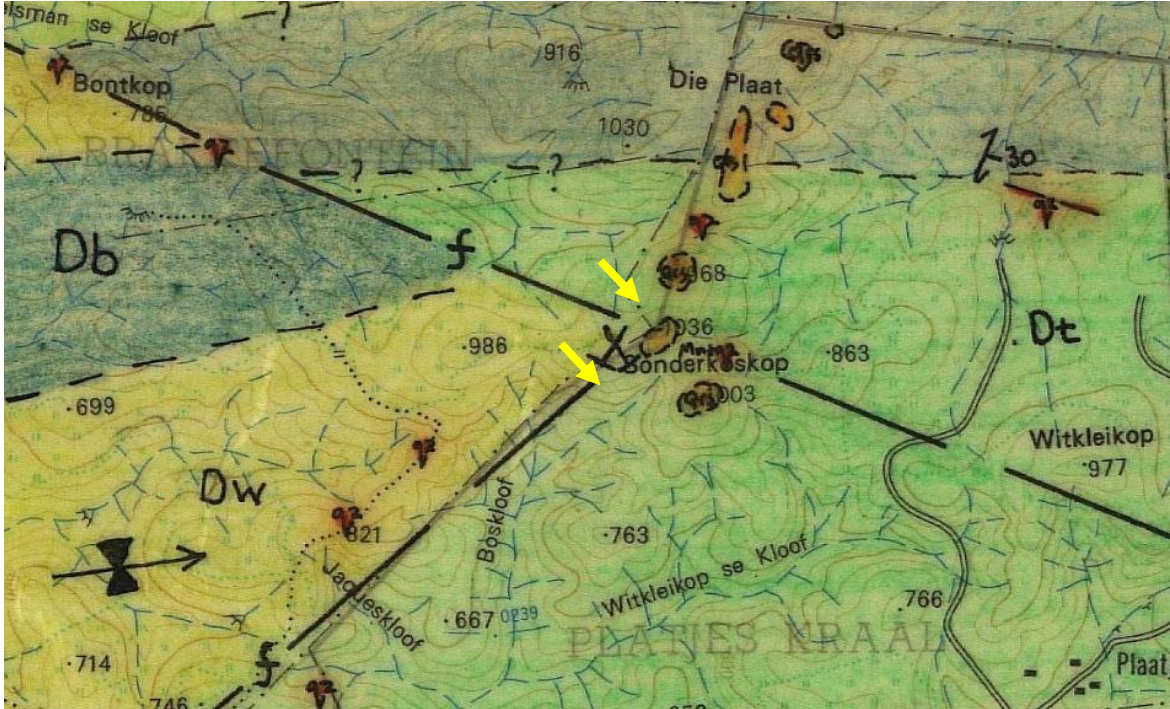


Figure 11. Sondrekoskop. Top - geology map (JA Malan, 1984). Bottom - topography map. Arrows point to 'clouds' of ferruginised shale: red – the north 'clouds'; yellow – the south 'clouds'.

At least two 'clouds' are located on or very close to the fault lines. They appear to consist both of ferruginised and silcretised shales (Figures 12 and 13).



Figure 12. Top and bottom: the north 'cloud', north of Sondrekoskop peak.



Figure 13. Top and bottom: the south 'cloud', south of Sondrekoskop peak.

The 'clouds' on Sonderkoskop should be revisited and thoroughly investigated, mainly the silcrete / fricrete contents.