

R. INFANTA AND BREEDE

Field Note R2d. Infanta Village Shore - Geology



View to the south on the south end of Infanta Village Shore.

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The Infanta Village Shore - the rocky strip from Infanta Village to Kabeljoubank - is about 1.8 km long (Figures 1 to 3).



Figure 1. Satellite image of the Infanta Village Shore (yellow arrow points to the village). The green arrow points to the Breede River Mouth. Box is enlarged in Figure 2.



Figure 2. Aerial photograph (2005) of the Infanta Village Shore (yellow arrow). The green arrow points to the Breede River Mouth.



Figure 3. View from the south of the Infanta Village Shore.

The geology and the tectonics of the area was discussed in previous field notes in this chapter. Three rock formations are present along this short shore. They are (from old to young): a. Rietvlei (TMG, sandstone); b. Gydo (Bokkeveld Group, shales), and c. Klein Brak Formation (calcareous rocks) of the Bredasdorp Group (Figure 5).

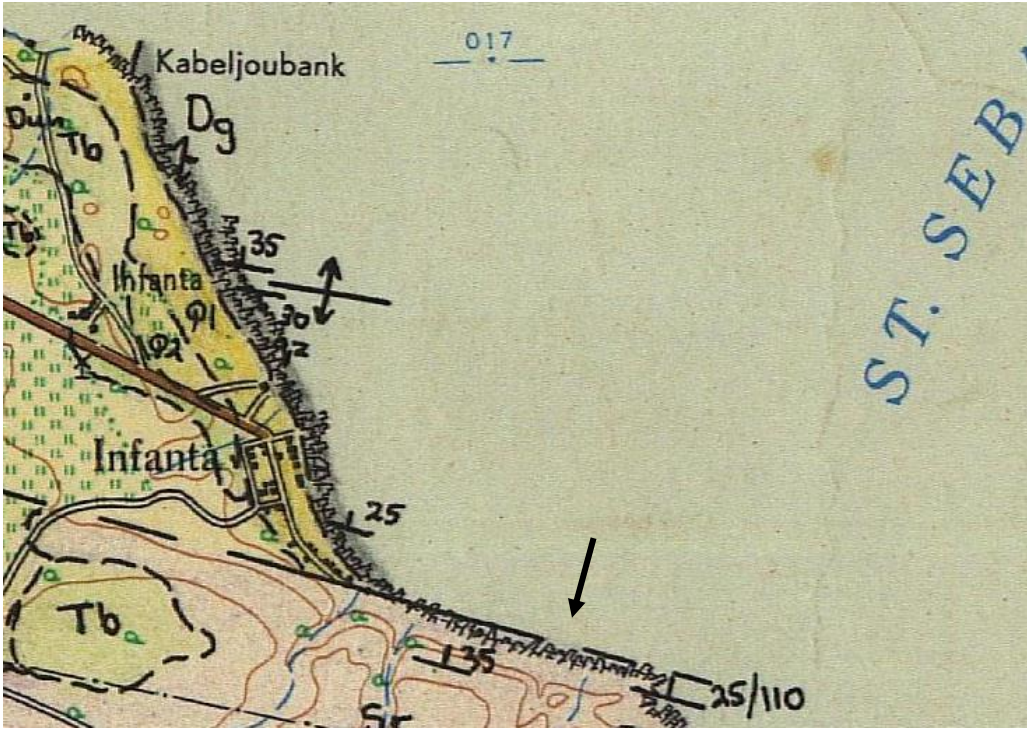
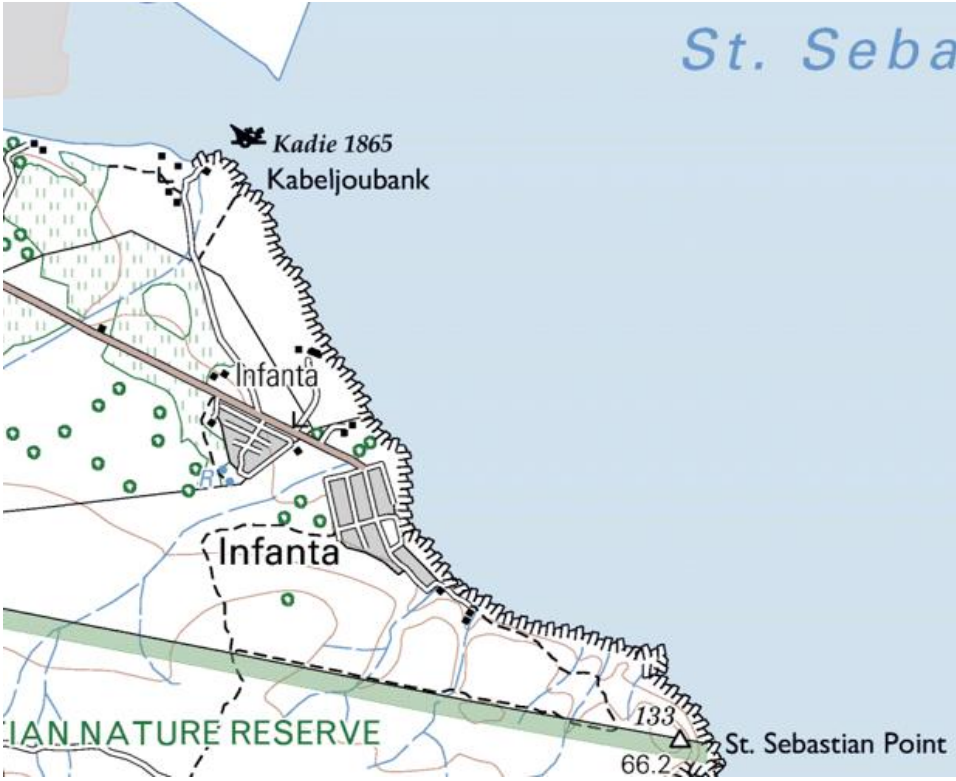


Figure 4. Topography map (top) and geology field sheet (J Malan, 1985) (bottom) of the Infanta Village Shore. ‘Dg’ denotes the shales of the Gydo Formation of the Bokkeveld Group; ‘Tb’ denotes rocks of the Bredasdorp Formations; Q1 and Q2 denote Quaternary sands. Note the fault line south of the village (arrow).

The cliffs between Sebastian Point and the village and below the southernmost houses of the Infanta Village, are of the Rietvlei Formation of the Table Mountain Group (Figures 5 and 6).



Figure 5. Top and bottom - rocks of the Rietvlei Formation comprise the cliffs (fault scarp, arrows; see Field Note about St Sebastian Point) between St Sebastian Point and the shore below the southern houses of Infanta Village. Boulders, the result of the disintegration of this formation, are also present.



Figure 6. Top (satellite image) and bottom (view to the east) – folded strata of the Rietvlei Formation comprise the rocky strip immediately north of St Sebastian Point.

Of note are the shell assemblages on this strip of the shore. Such assemblages are not common along other shores of the Study Area (Figure 7).



Figure 7. Top and bottom - shell assemblages on the Infanta Village Shore. View to the north.

With increasing distance northwards, shales of the Gydo Formation (Bokkeveld Group) and Rietvlei Formation boulders comprise the rocky strip (Figure 8).



Figure 8. Top and bottom – shale strata and sandstone boulders. View to the north. Arrow points to the slipway.

The nature of the rocky shore changes north of the slipway of Infanta Village (Figure 9).



Figure 9. Top (satellite image) and bottom – the slipway at Infanta Village (arrow). Shales overlie sandstone rocks; sandstone boulders have been deposited on the shore face.

Most of the boulders are of the Rietvlei Formation, but some of them comprise conglomerate (Figure 10).

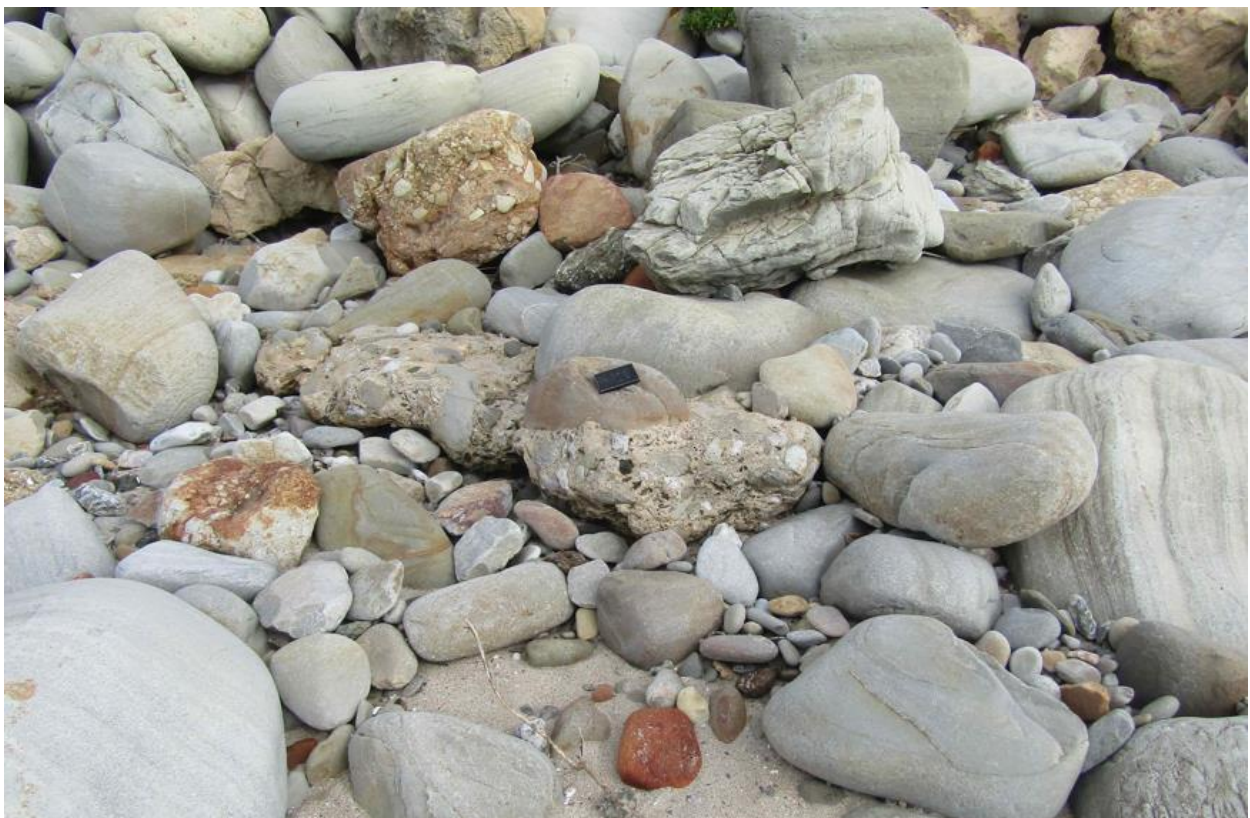


Figure 10. Top and bottom – boulders on the shore north of the slipway.

The shore north of the slipway is an abrasion table of the Gydo Formation (Figures 11 to 13).



Figure 11. View from the south of the abrasion tables north of the slipway.



Image © 2021 CNES / Airbus

Figure 12. Satellite image of the southern section of the abrasion table next to Infanta Village.



Figure 13. Top and bottom - abrasion tables of the Gydo Formation shales north of Infanta Village.

JA Malan, who studied the Bredasdorp Group and mapped many sections of the Riversdale geology sheet from 1984 to 1990, has located one of his stratotype profiles of the Klein Brak Formation about 250 m north of the slipway (Figure 14).



Fig. 15 Location of stratotype E (Infanta) of the Klein Brak Formation (in line with right-hand edge of building) with a well-exposed basal unconformity with the Bokkeveld Group (behind loose boulders).

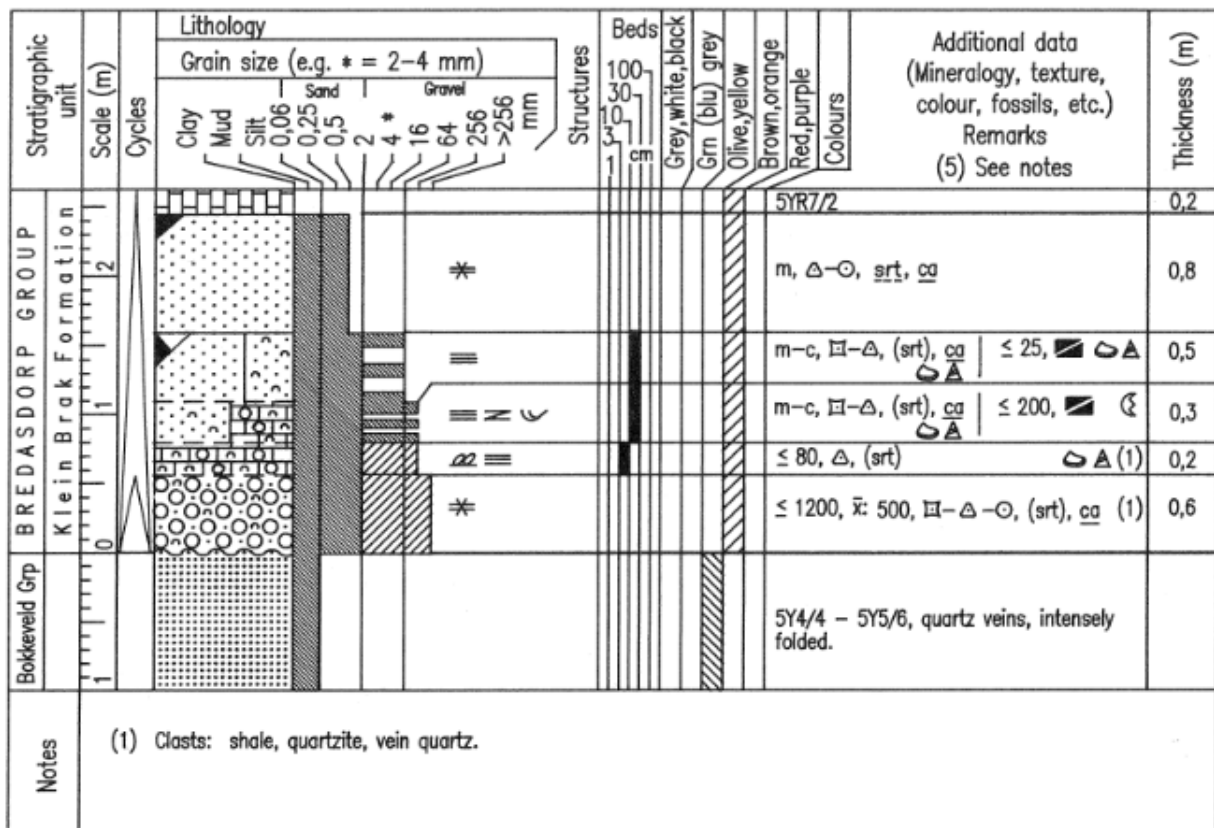


Figure 14. Top - location of stratotype E of the Klein Brak Formation, below the Infanta Village. Bottom – profile stratigraphy.

Source: JA Malan, Lithostratigraphy of the Klein Brak Formation (Bredasdorp Group), 1991.

The Klein Brak rocks are well distinguished north of the slipway (Figures 15 to 18).



Figure 15. Top and bottom – the rocks of the Klein Brak Formation (arrow) on the shore north of the slipway.



Figure 16. Top and bottom – the rocks of the Klei Brak Formation (arrow) are partly covered with boulders north of the slipway.



Figure 17. Top and bottom – the rocks of the Klein Brak Formation.



Figure 18. Top and bottom – the contact between the Bokkeveld shales and the overlying Klein Brak Formation.

From the slipway northwards a layer of calcrete is present a few meters above sealevel. The calcrete was formed on the rocks of the Klein Brak Formation (Figure 19).



Figure 19. Top and bottom – a layer of calcrete (arrow) was formed on the Klein Brak formation.

The north section of the abrasion table (Kabeljoubank) which comprise rocks of the Bokkeveld shales, is partly covered with boulders (Figures 20 to 22).



Figure 20. Satellite image of the northern section of the abrasion table (Kabeljoubank), north of the Infanta Village.



Figure 21. Satellite image of the northern section of the abrasion table (Kabeljoubank). Note the folded shale strata.

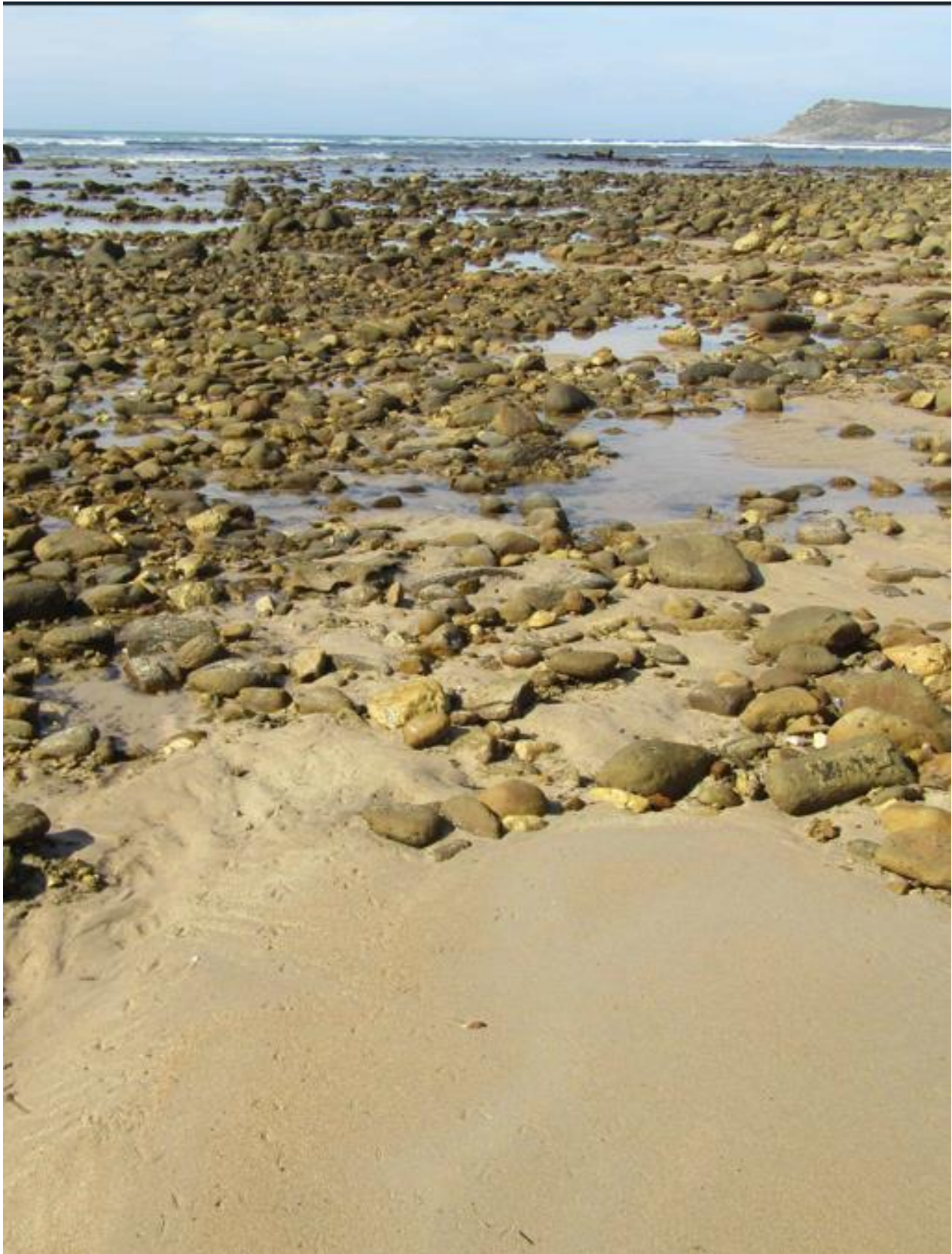


Figure 22. View to the south on Kabeljoubank. Some of the boulders and the pebbles have been cemented to the underlying shales.