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 and 2).

Figure 1A. 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 1B.

Figure 1B. Aerial photograph (2005) of the Infanta Village Shore (yellow arrow). The green arrow points to the Breede River Mouth.

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 (calcified sandstone) (Bredasdorp Group) (Figure 2).

Figure 2. 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 denotes Quaternary sands.

The cliffs of St Sebastian Point (Figure 3) and below the southernmost houses of the Infanta Village (Figure 4) are of the Rietvlei Formation (Table Mountain Group).

Figure 4. Top and bottom - rocks of the Rietvlei Formation comprise St Sebastian Point cliffs and the shore below the southern housed of Infanta Village. Boulders, the result of the disintegration of this formation, are also present.

Figure 5. 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 6).

Figure 6. 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 7).

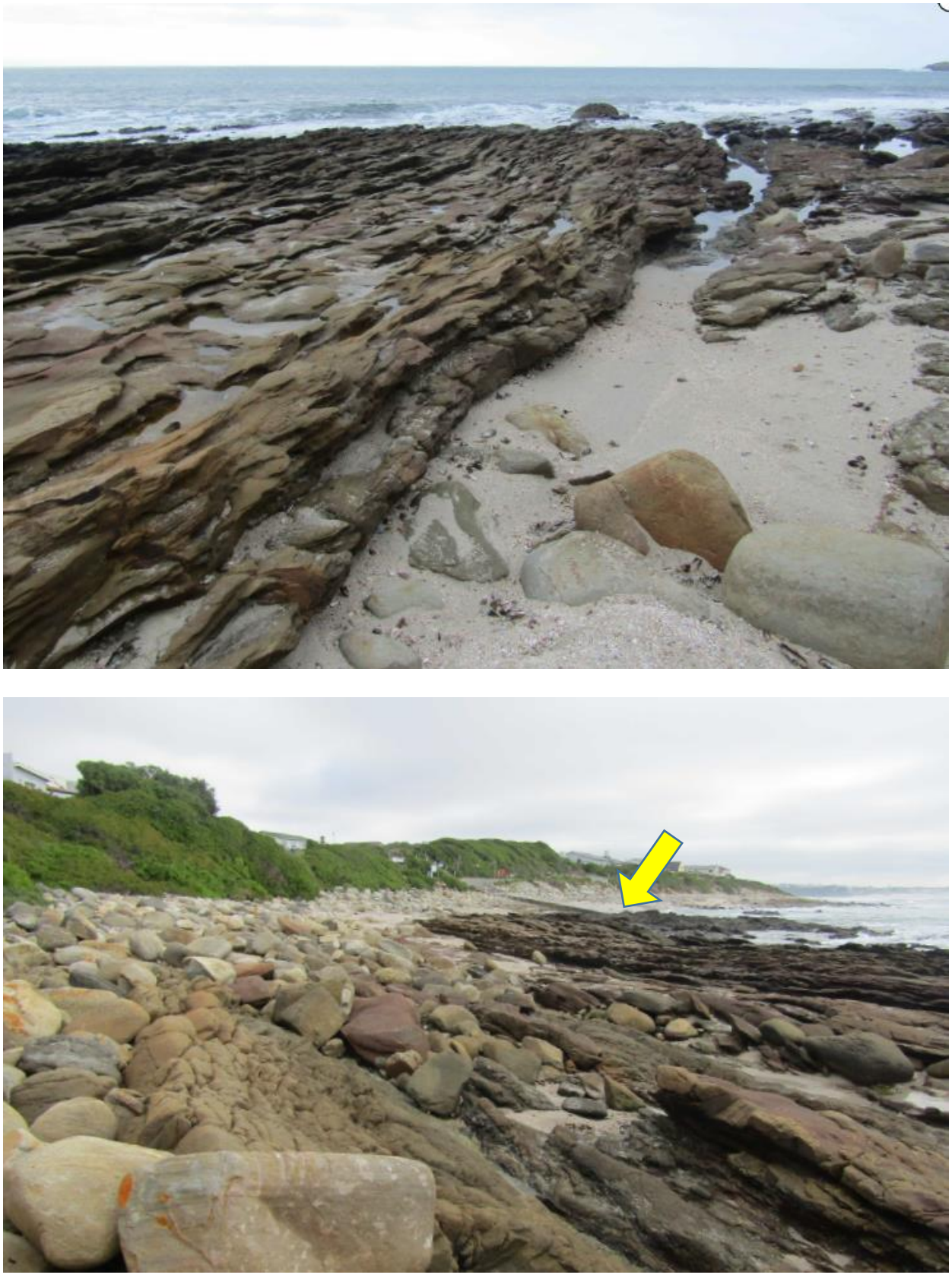

Figure 7. Top and bottom – shale strata and sandstone boulders. View to the north. Arrow points to the slipway.

The nature of the rocky shore changes north of the slipway of Infanta Village (Figure 8).

Figure 8. 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 9).

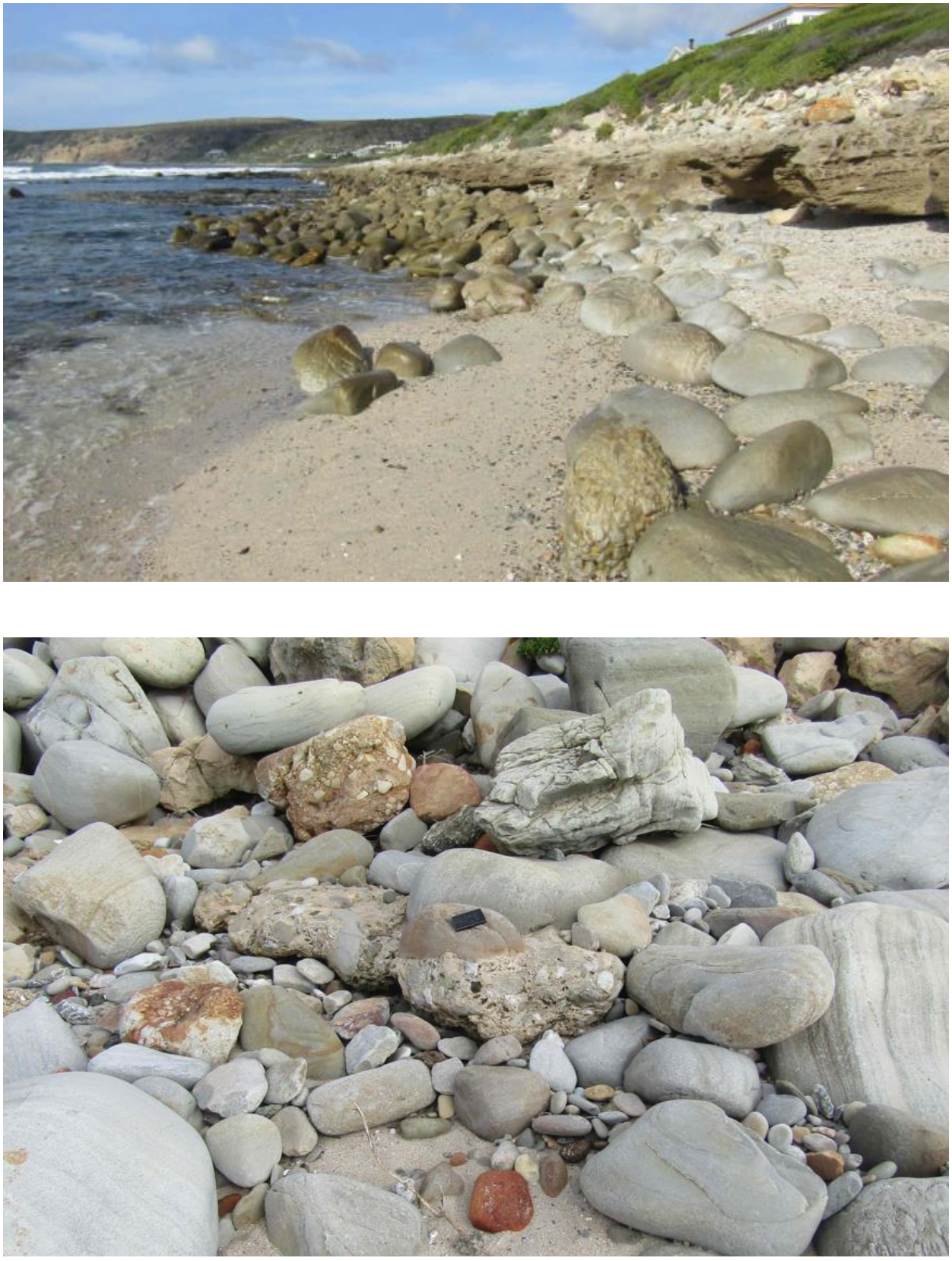

Figure 9. Top and bottom – boulders on the shore north of the slipway.

The shore north of the slipway is an abrasion table of the Gydo Formation (Figures 10 and 11).

Figure 10. Satellite image of the southern section of the abrasion table next to Infanta Village.

Figure 11. 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 12).

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).

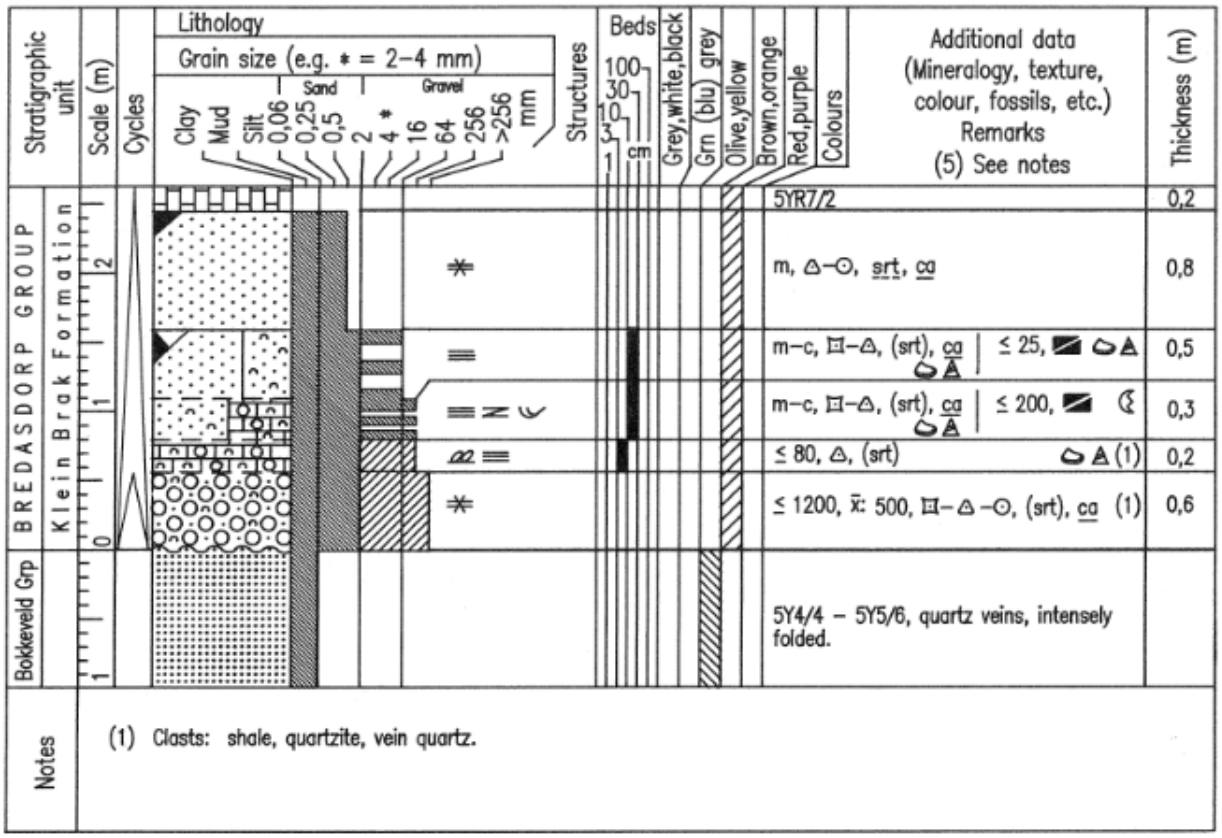

Figure 12. Top - location of startotype E of the Klein Brak Formation, below the Infanta Village. Bottom – profile stratigraphy.
Source: JA Malan, Lithostratigraphy of the Klein Brak Formation (Bredasdorp Group), 1991.

The Klein Brak rocks are well distinguished north of the slipway (Figures 13 to 16).

Figure 13. Top and bottom – the rocks of the Klein Brak Formation (arrow) on the shore north of the slipway.

Figure 14. Top and bottom – the rocks of the Klei Brak Formation (arrow) are partly covered with boulders north of the slipway.

Figure 15. Top and bottom – the rocks of the Klein Brak Formation.

Figure 16. 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 17).

Figure 17. 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 18 to 20).

Figure 18. Satellite image of the northern section of the abrasion table (Kabeljoubank), north of the Infanta Village.

Figure 19. Satellite image of the northern section of the abrasion table (Kabeljoubank). Note the folded shale strata.

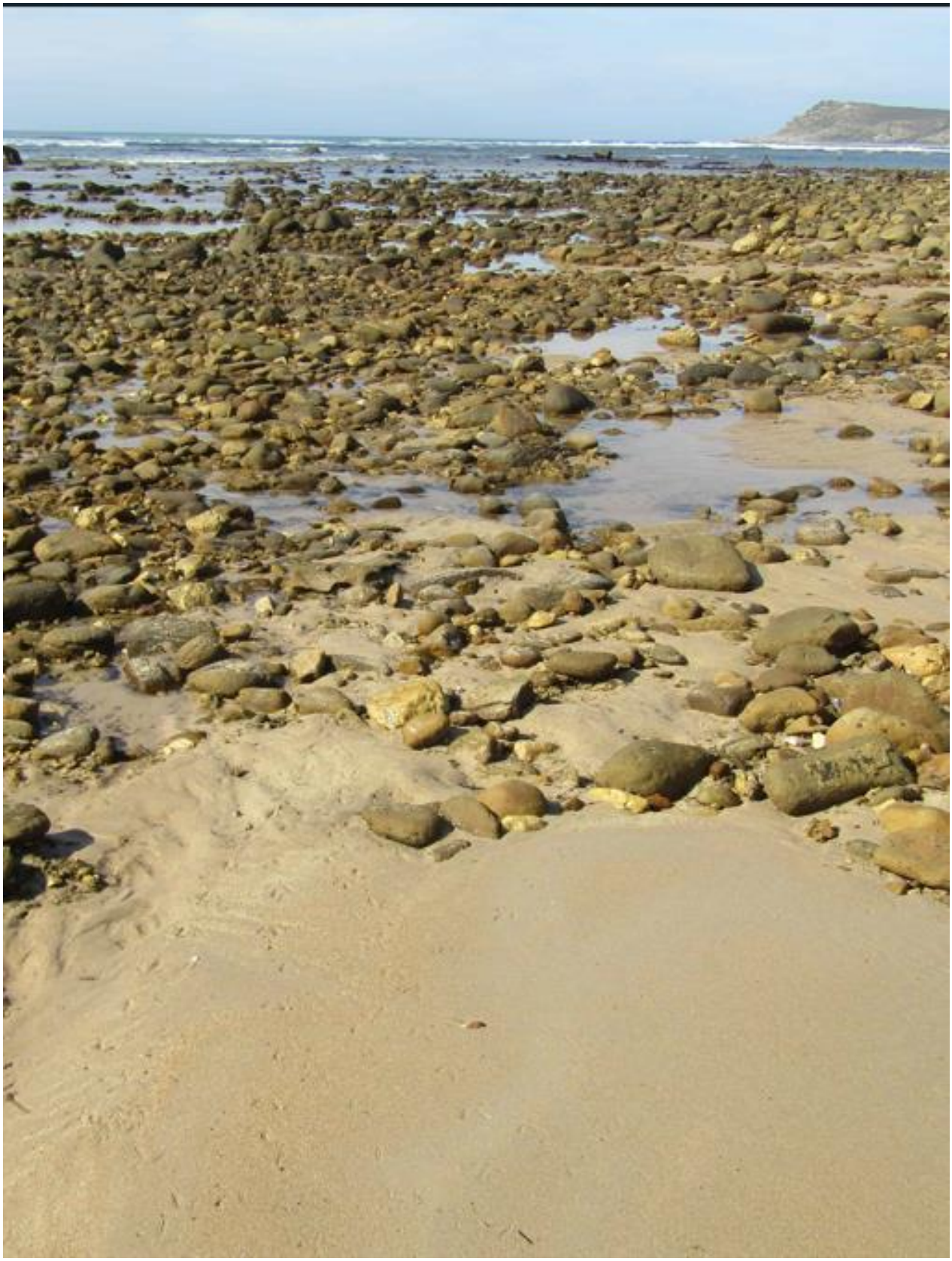

Figure 20. View to the south on Kabeljoubank. Some of the boulders and the pebbles have been cemented to the underlying shales.

