Q. POTBERG AREA

Field Note Q2c. Geology – Pans

Pan between Potberg and the Breede River.

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Field Note Q2c. Geology – Pans

There are five pans at the foot of Potberg, between the mountain and the Breede River (Figures 1 to 3). Pans 1, 2 and 3 were historically used for salt production (see Field Note on salt mines in this chapter).

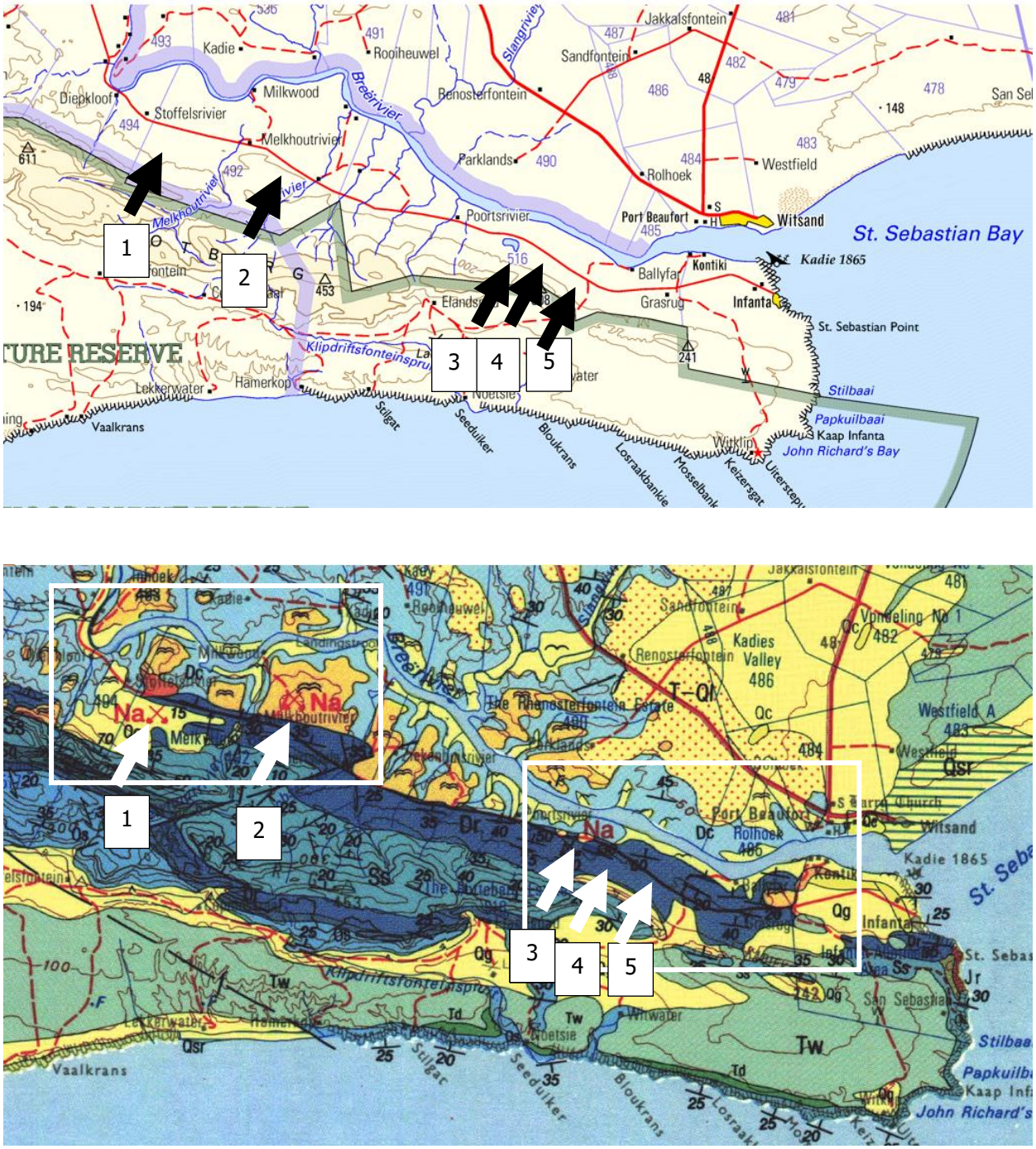

Figure 1. Topography map (3420 Riversdale Sheet, 1999, top) and geology map (3420 Riversdale Sheet, 1993, bottom) of the Potberg area showing the locations of the five pans (arrows). Boxes indicate the confines of the geology maps in Figures 2 and 3.

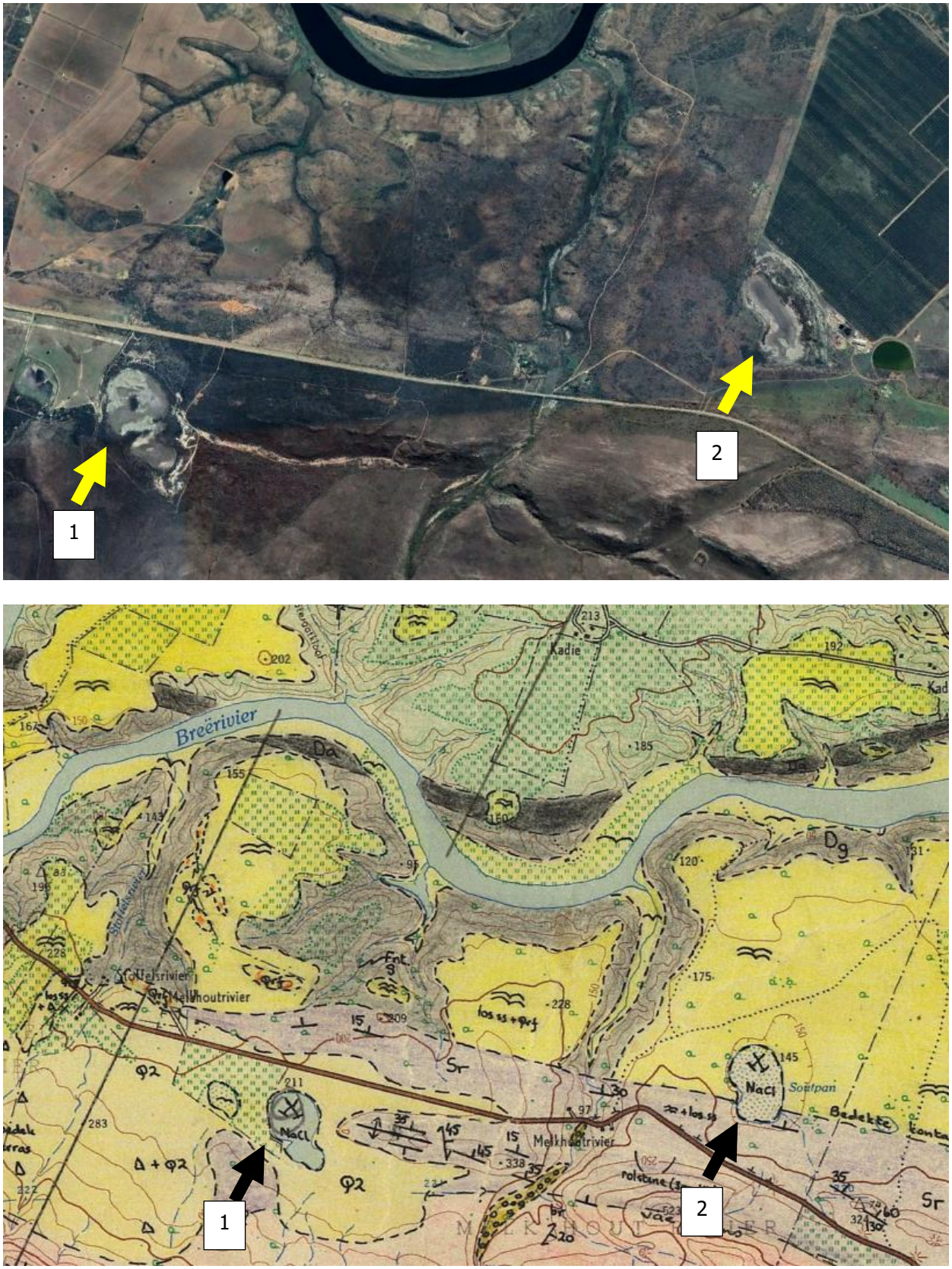

Figure 2. Satellite image (top) and geology field sheet of J Malan, 1985 (bottom) of the area between Potberg and the Breede River, showing the locations of pans #1 (on Melkhoutrivier Farm) and #2 (on Milk Wood River Farm) (arrows).

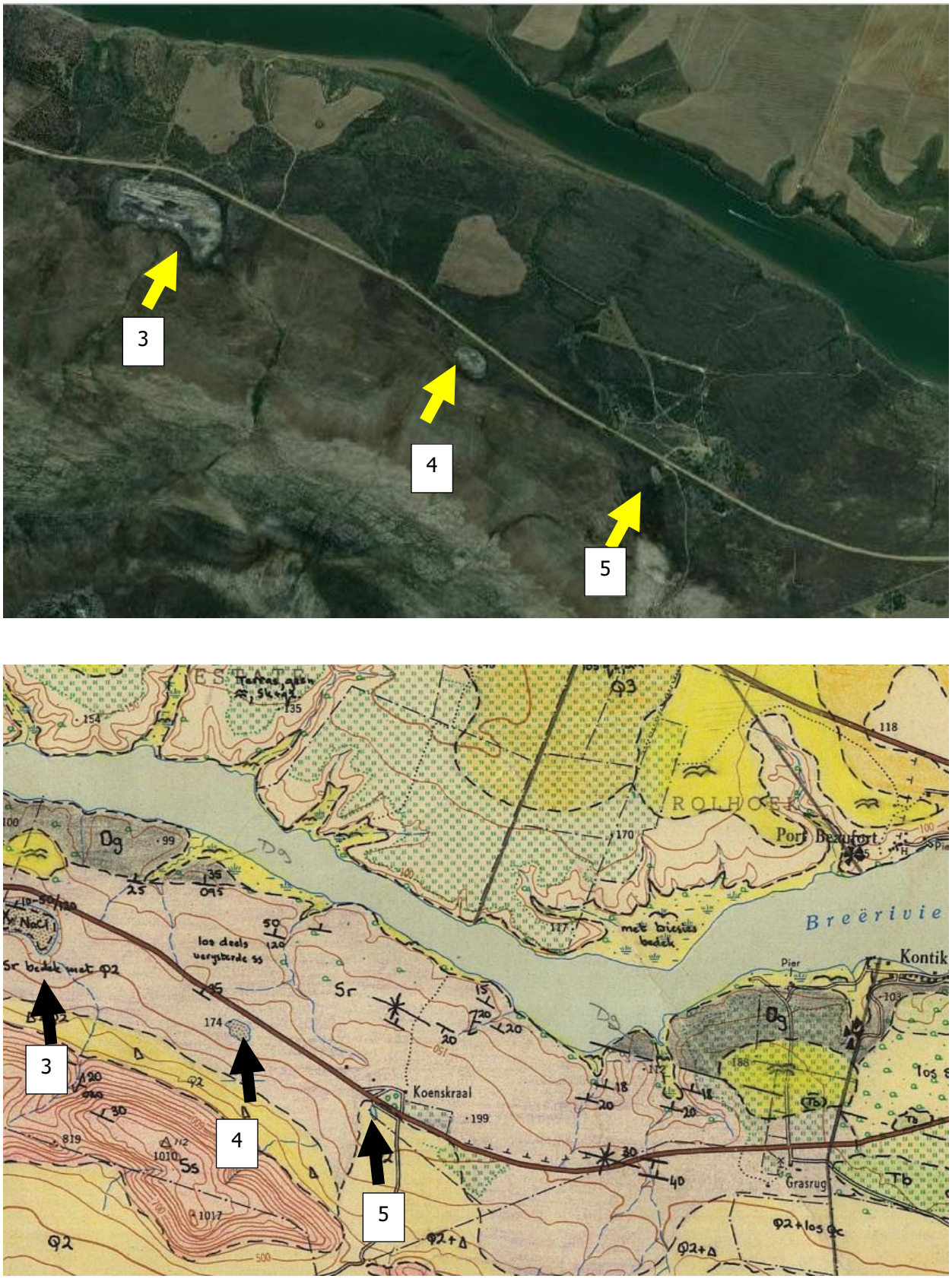

Figure 3. Satellite image (top) and geology field sheet of J Malan, 1985 (bottom) of the area between Potberg and the Breede River, showing the locations of pans #3 (on Poortrivier Farm), #4 and #5 (on Koenskraal Farm) (arrows).

The production of salt stopped in 1970 [the landowners claim that the pans were filled with salt from springs, which stop yielding salt after the 1969 Tulbagh earthquake; this echoes a claim by De Hoop farmers, that several fountains around De Hoop Vlei stopped yielding water after that event; read more in Chapter N]. Nowadays there are no signs of salt production from these three salt mines.

The pans are, nevertheless, interesting in terms of their geology. The author visited these depressions for the first time in August 2021, after a few months of very good rainfall, resulting in nearly full pans, and their floors nearly totally submerged. The second visit was in January 2023, when the pans were totally dry.

The five depressions are described below from west to east (Figure 4).

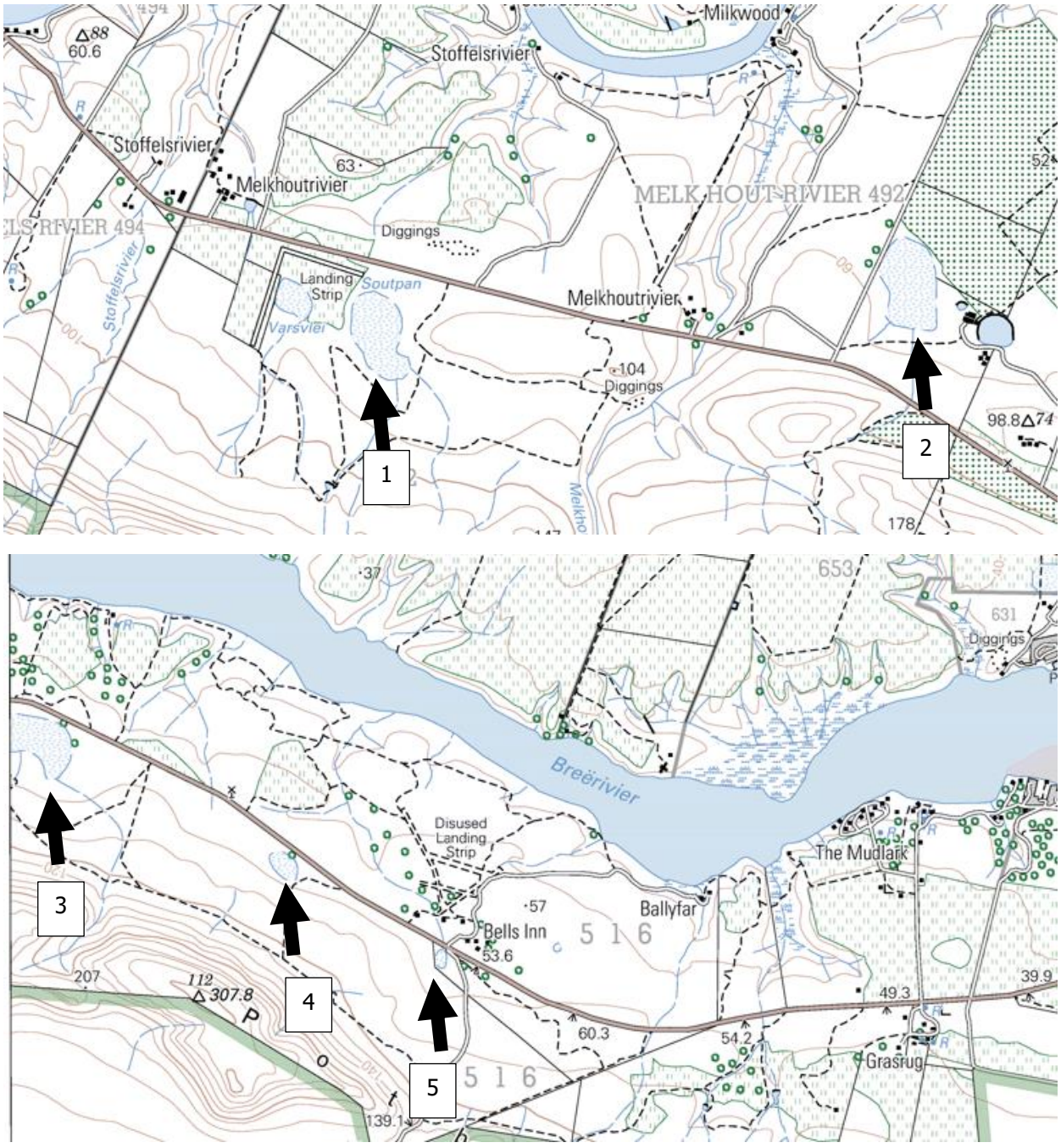

Figure 4. Top and bottom: topography maps showing the locations of the five pans in question (arrows).

Pan #1, situated south of the road to Infanta on the farm **Melkhoutrivier** underlain by Quaternary soil with gravel, is ~600 m long. The adjacent pan to the west is ~250 m long (Figures 5 to 8).

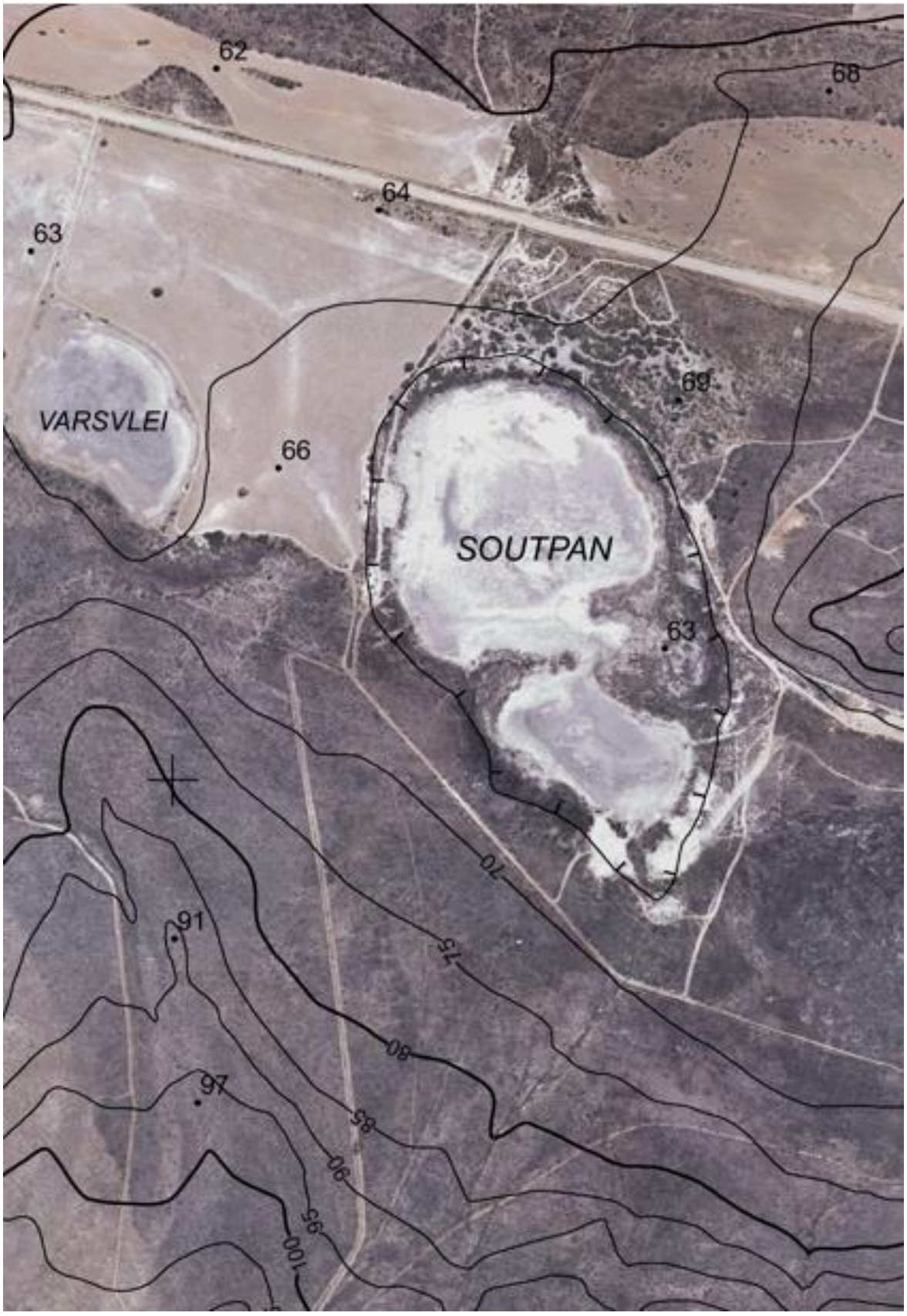

Figure 5. Topography map of the Melkhoutrivier Salt Pan and Freshwater Pan.

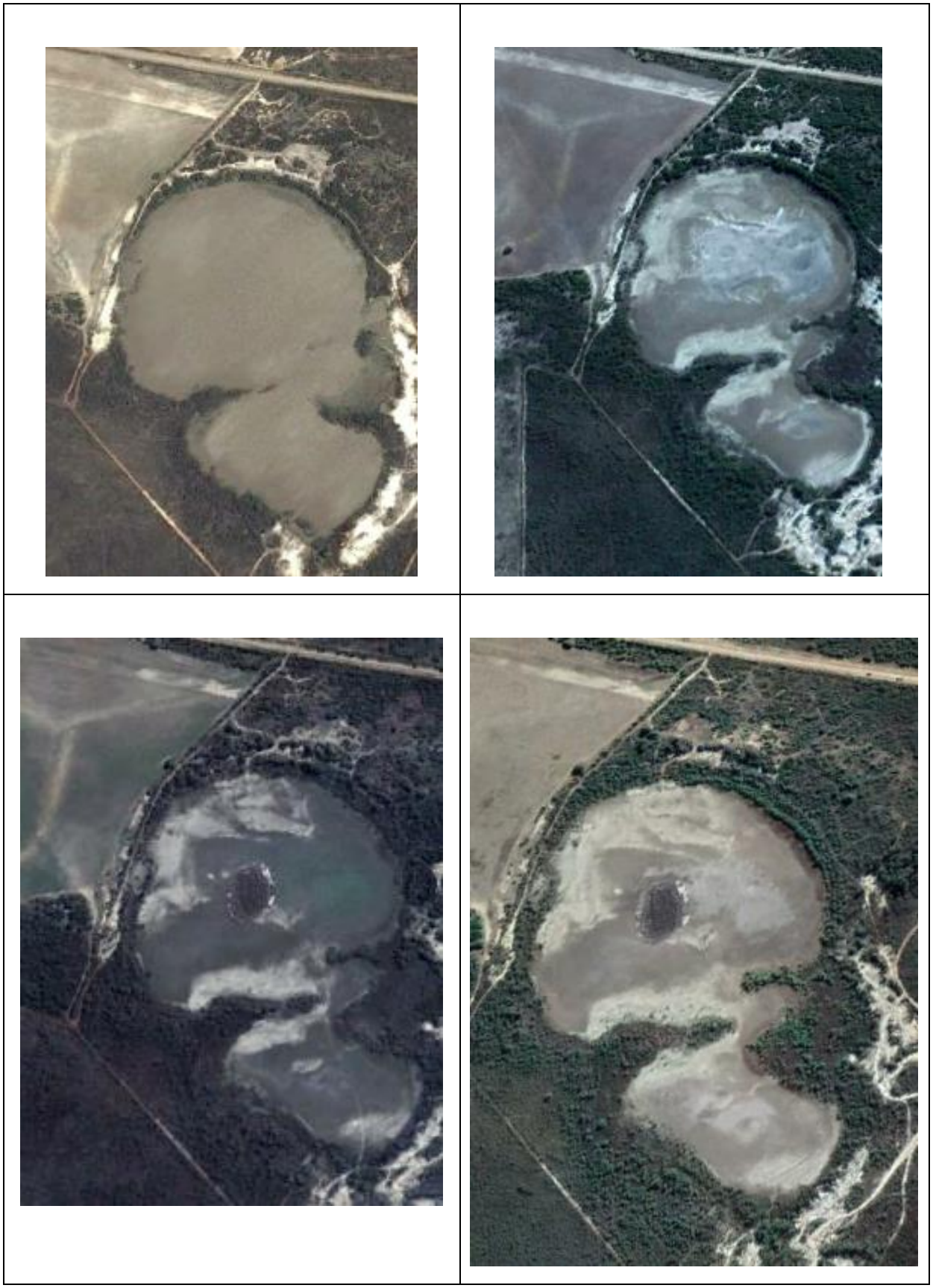

Figure 6. Satellite images of the Melkhoutrivier Salt Pan at various water level.

Figure 7. Views of the Melkhoutrivier Salt Pan when it was full. Top – from the north. Bottom – from the south.

Figure 8. Views from the west shore of the Melkhoutrivier Salt Pan when it was full. Note the myriads of tiny quartz pieces on the ground.

Further studies of the floor of this pan are required, which may explain the unusual presence of the quartz shards.

Pan #2, situated north of the road to Infanta on the farm **Milk Wood River**, underlain by gravel and soil, is ~470 m long (Figures 9 to 13).

Figure 9. Topography map (1:10,000) of the Milk Wood River Pan.

Figure 10. Satellite images of the Milk Wood River Pan at various water levels.

Figure 11. Views to the north of the Milk Wood River Pan, when it was nearly full (top) and dry (bottom).

Figure 12. Views to the north on the east shore of the Milk Wood River Pan, when it was nearly full (top) and dry (bottom).

Figure 13. The Rietvlei Formation ridge (arrow) at the south of the Milk Wood River Pan. Top - view to the SE. Bottom – view to the SW.

Figure 14. Top and bottom – rocks of the TMG Rietvlei Fm on the floor of the Milk Wood River Pan, at the foot of the ridge. Views to the west.

Figure 15. Top and bottom – rocks of the TMG Rietvlei Fm on the floor of the Milk Wood River Pan. The reeding (top photo) is an unusual appearance of these rocks.

Figure 16. Top and bottom – rocks of the TMG Rietvlei Formation (with burrowing marks) on the floor of the Milk Wood River Pan.

Figure 16. Rocks of the TMG Rietvlei Formation (top) and sand with pebbles (bottom) on the floor of the Milk Wood River Pan.

Figure 15. Sand with pebbles (top) and quartz shards (bottom) on the floor of the Milk Wood River Pan.

Further studies of the floor of this pan are required, to understand the unusual appearance (reeding) of the TMG rocks and the presence of the quartz shards.

Pan #3, situated south of the road to Infanta on the farm **Poortrivier**, underlain by the Table Mountain Rietfontein Formation rocks, is ~580 m long (Figures 16 to 20).

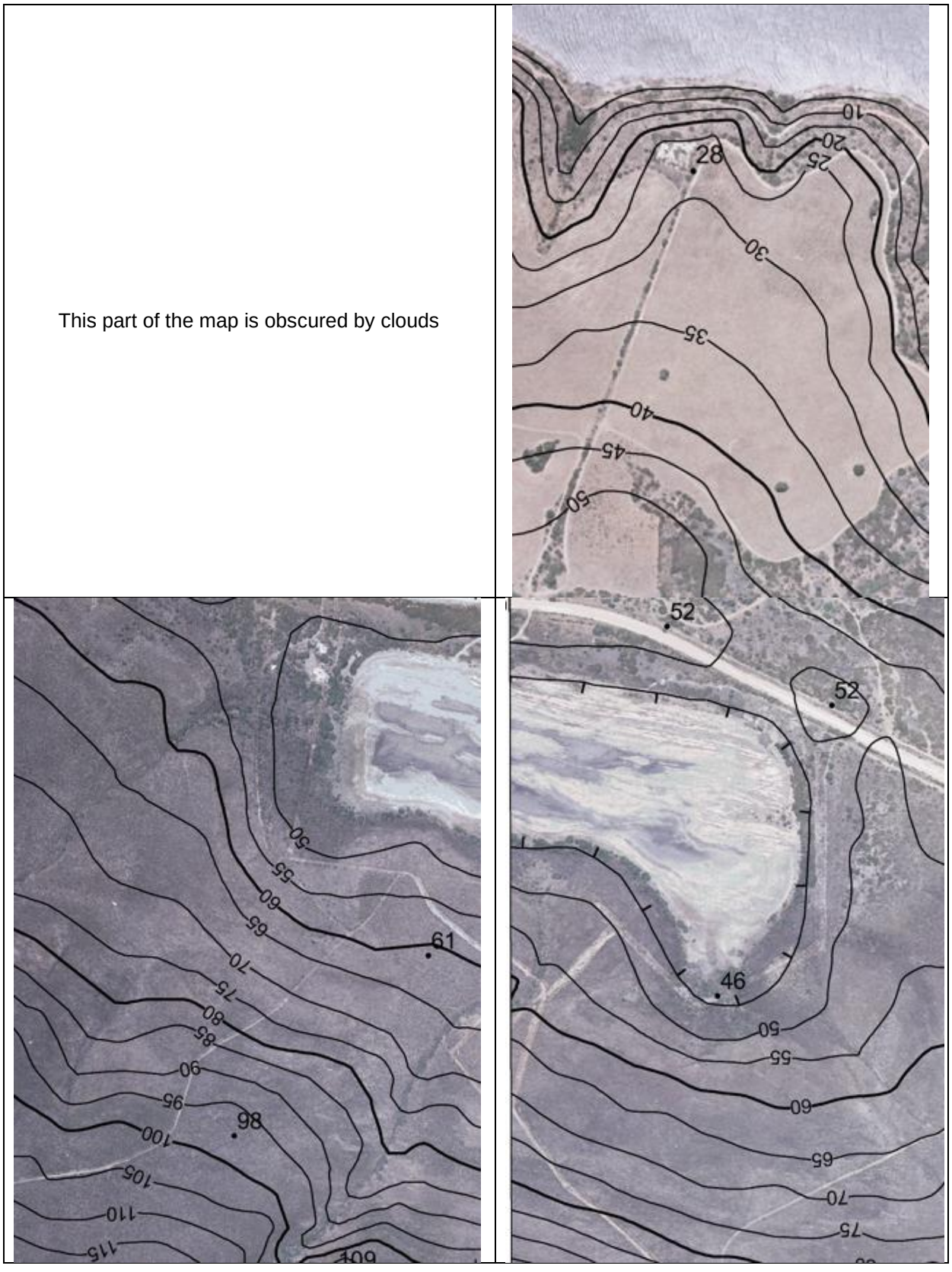

Figure 16. Topography map (a mosaic of four maps at 1:10,000) of the Poortrivier Pan.

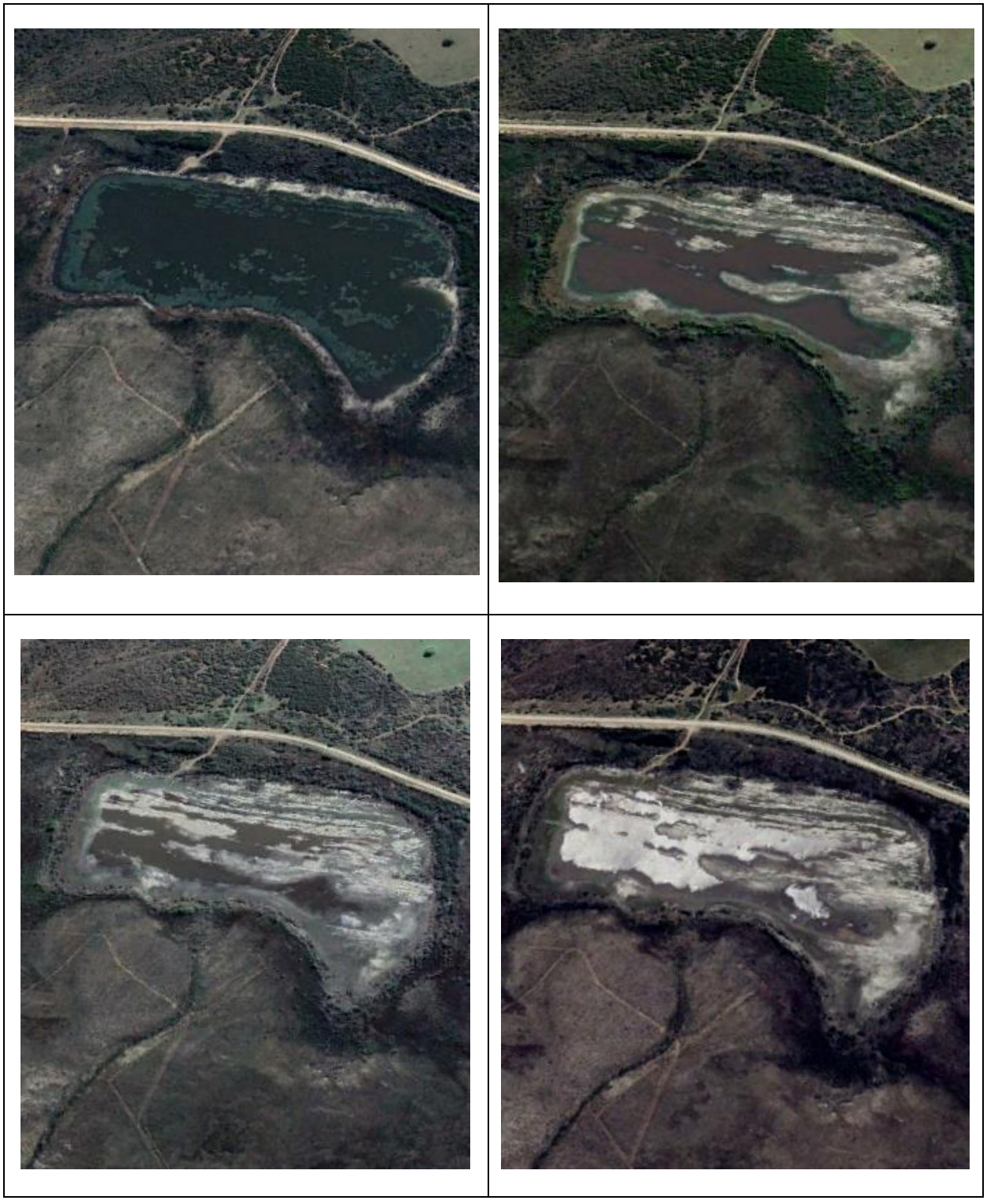

Figure 17. Satellite images of the Poortrivier Pan at various water levels.

Figure 18. Views of the Poortrivier Pan when it was full (top) and when it was dry (bottom).

Figure 19. Views of the TMG Rietvlei Formation rocks on the north side of the Poortrivier Pan when it was full (top) and when it was dry (bottom).

Figure 20. Top and bottom – the rocks of the TMG Reitvlei Formation on the Poortrivier Pan floor. The dissolution (top photo) is an unusual appearance of these rocks.

Further studies of the rocks on the floor of this pan are required, to understand their unusual appearance (karst?).

Pan #4, situated south of the road to Infanta on the farm **Koenskraal** is ~200 m long (Figures 21 to 23).

Figure 21. Topography map of the West Koenskraal Pan (pan # 4).

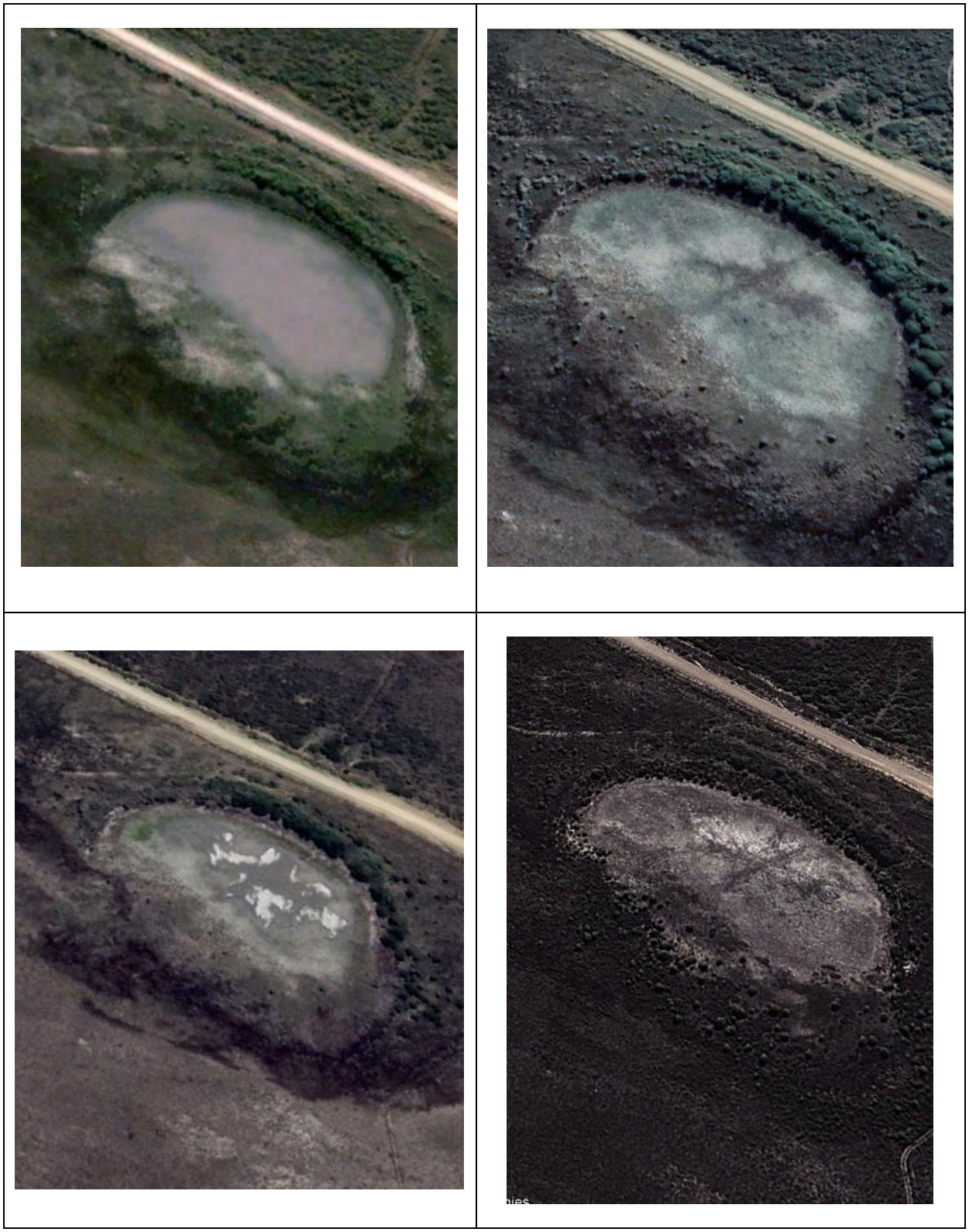

Figure 22. Satellite images of the West Koenskraal Pan (pan #4) at various water levels.

Figure 23. Top and bottom – the West Koenskraal Pan (pan #4).

Pan #5, situated south of the road to Infanta on the farm **Koenskraal**, underlain by Quaternary soil, is ~100 m long (Figures 24 and 25).

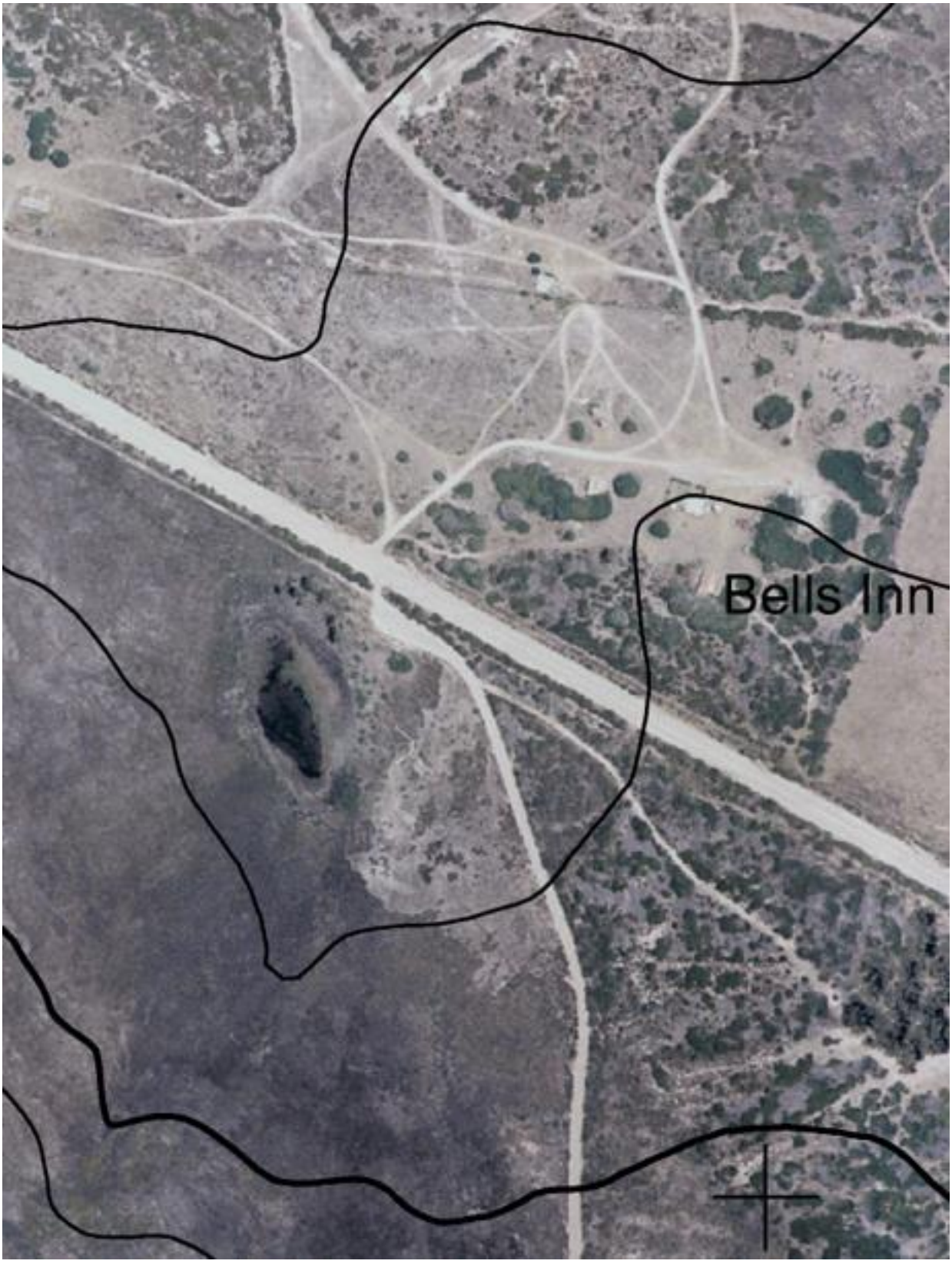

Figure 24. Topography map of the East Koenskraal Pan (pan #5).

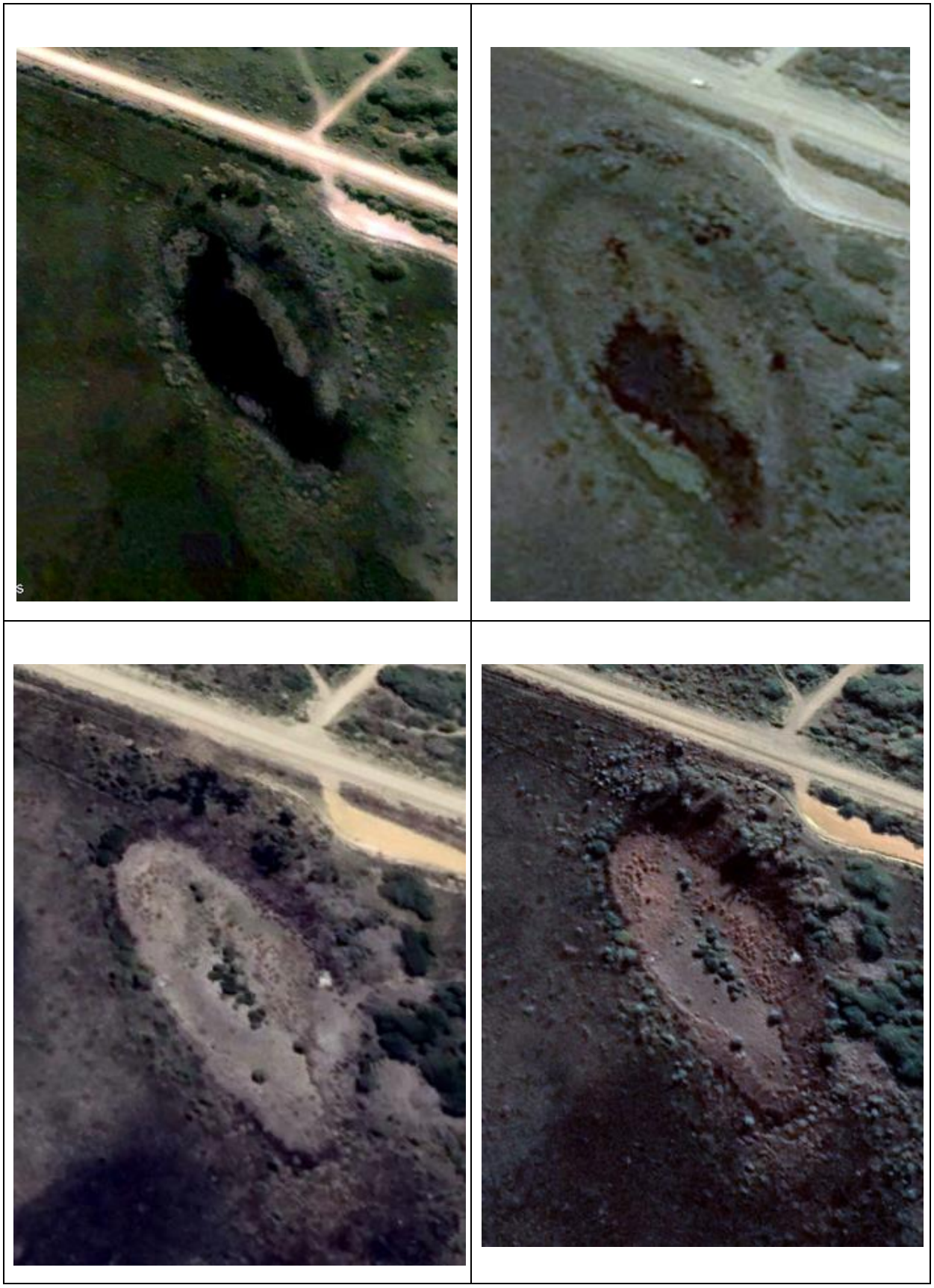

Figure 25. Satellite image of the East Koenskraal Pan (pan #5) various water levels.

