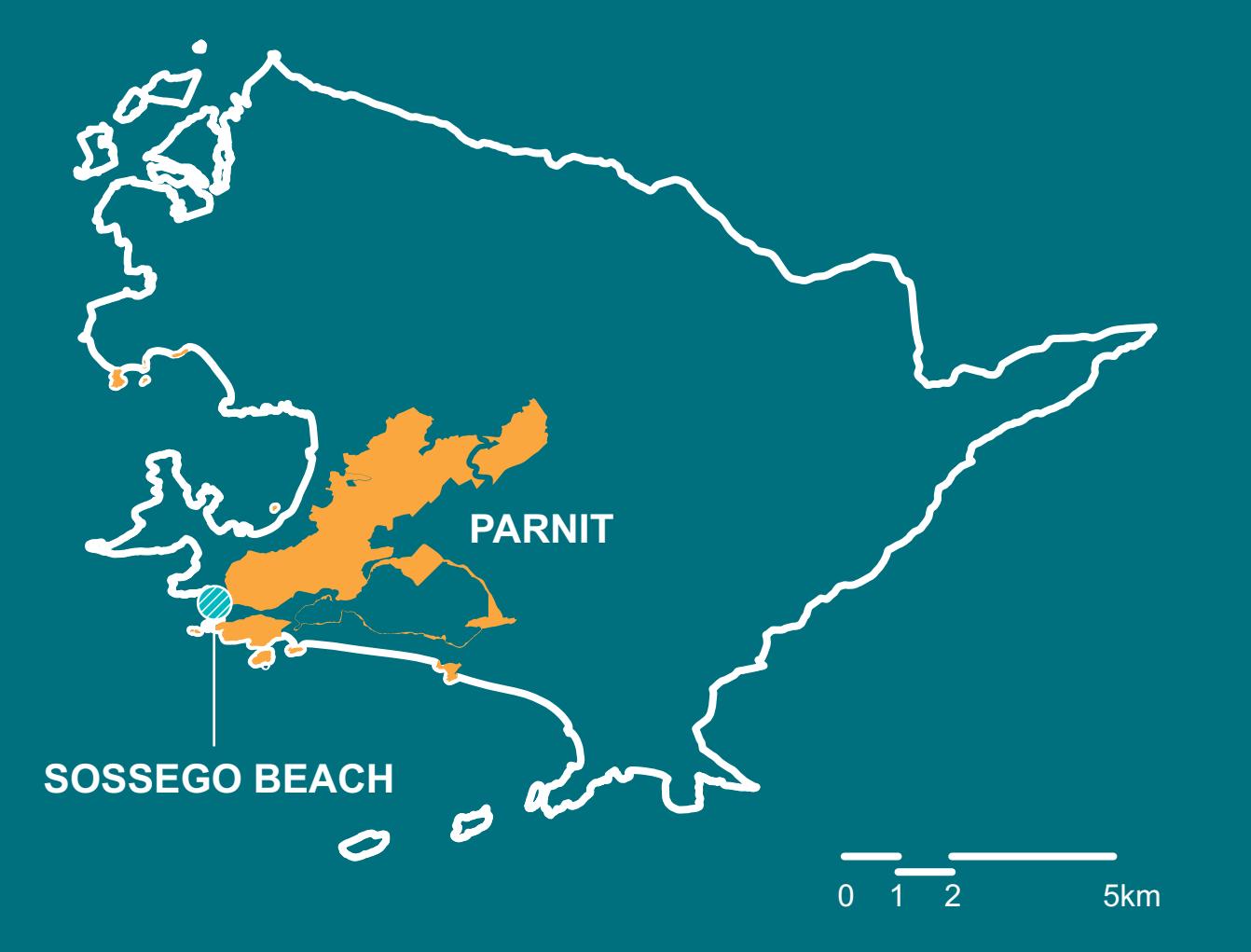


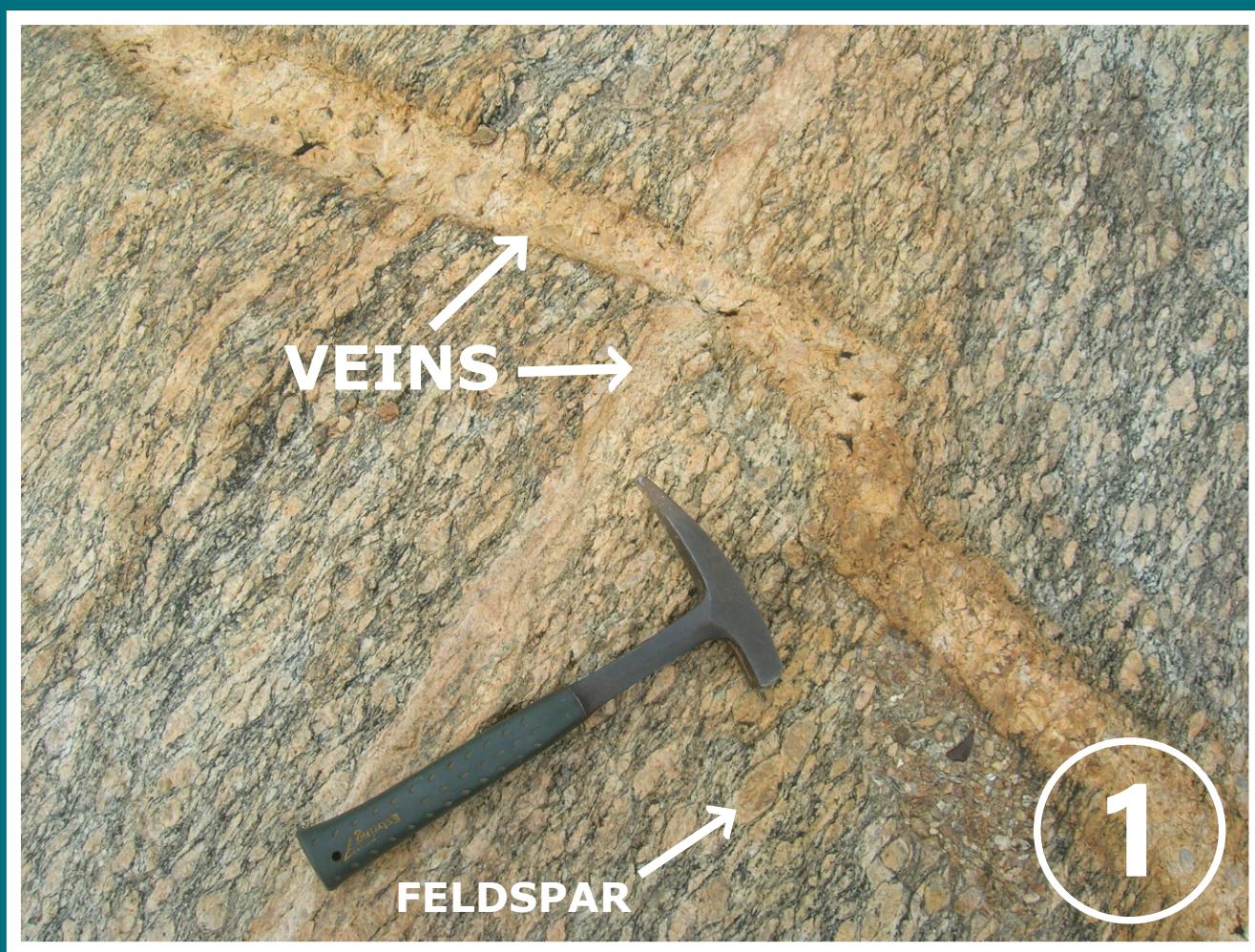


# CLIFFS & SOSSEGO BEACH

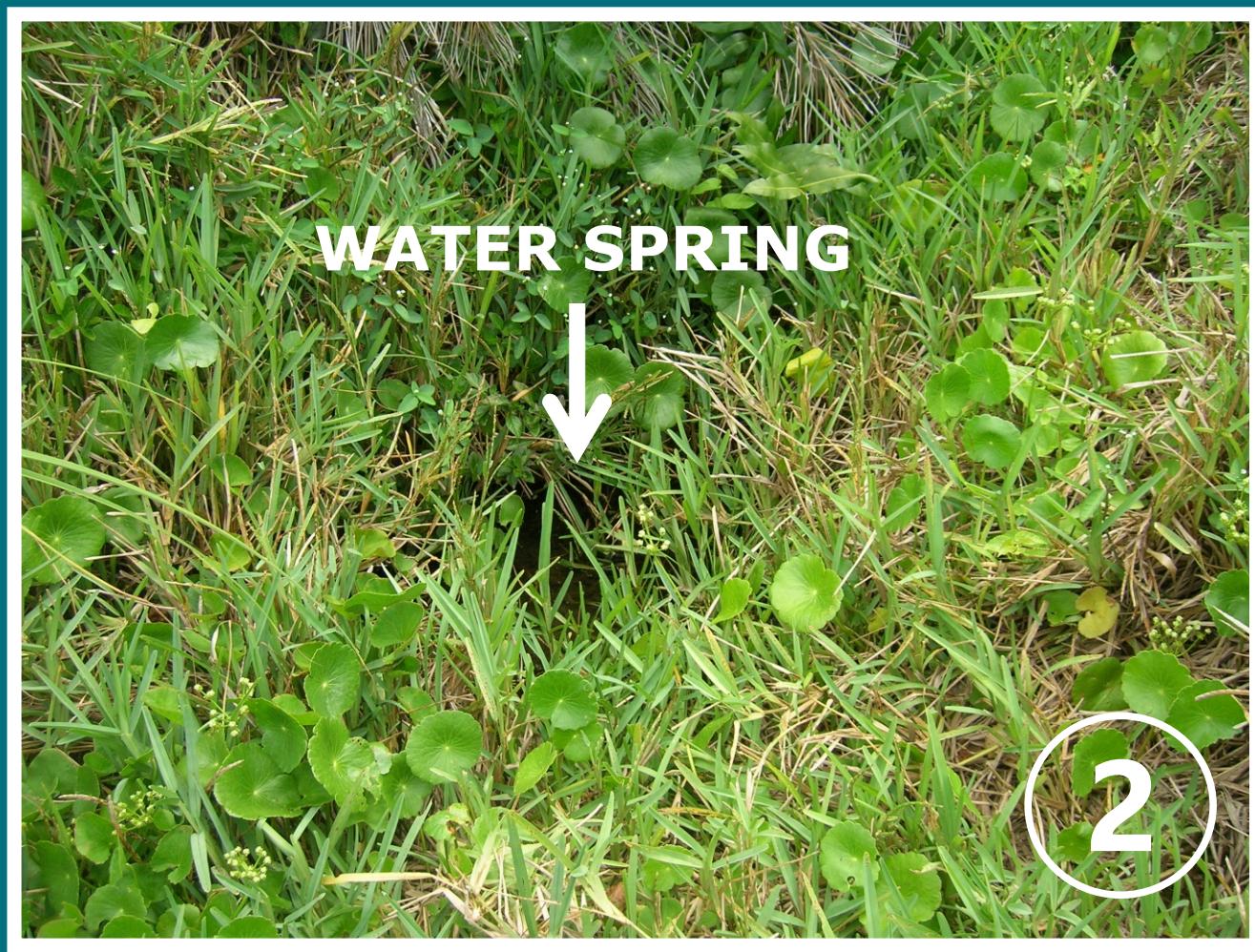
The beach is quiet, but the geology is extreme!



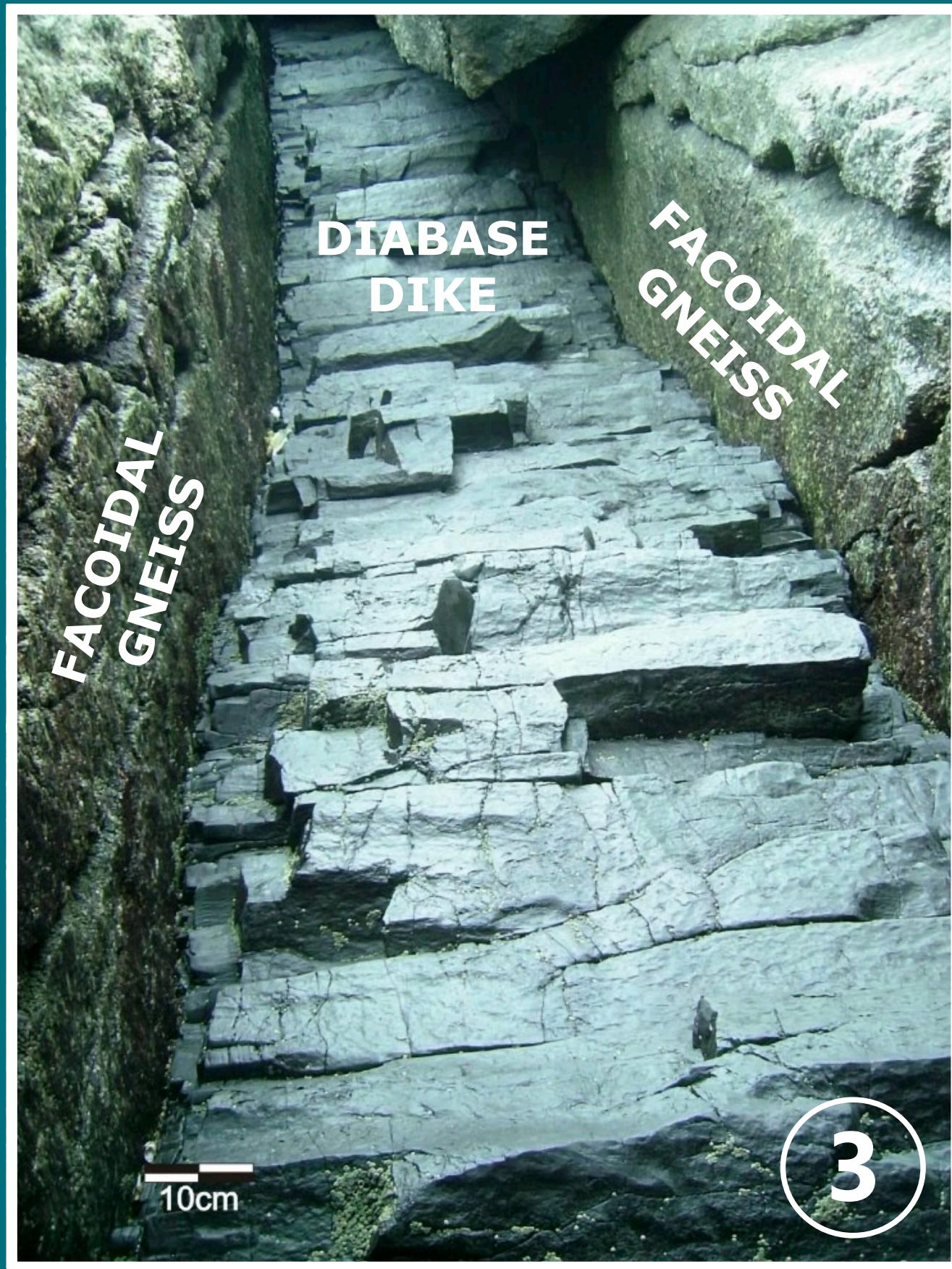
Sossego Beach is the result of transformations that have taken place over 500 million years ago. This story began with the collision between South America and Africa to form a supercontinent, Gondwana. The collision transformed and deformed existing sediments and rocks. Volcanic events 130 million years ago boosted the breaking of Gondwana and led to the opening of the Atlantic Ocean. For at least 8,000 years, human beings have occupied this territory.



(1) **Facoidal gneiss** – metamorphic rock formed during the collision of the supercontinent Gondwana. The yellow or pink feldspar mineral stands out, in the shape of aligned eyes. It is cut by veins of younger, yellowish magmatic rock.



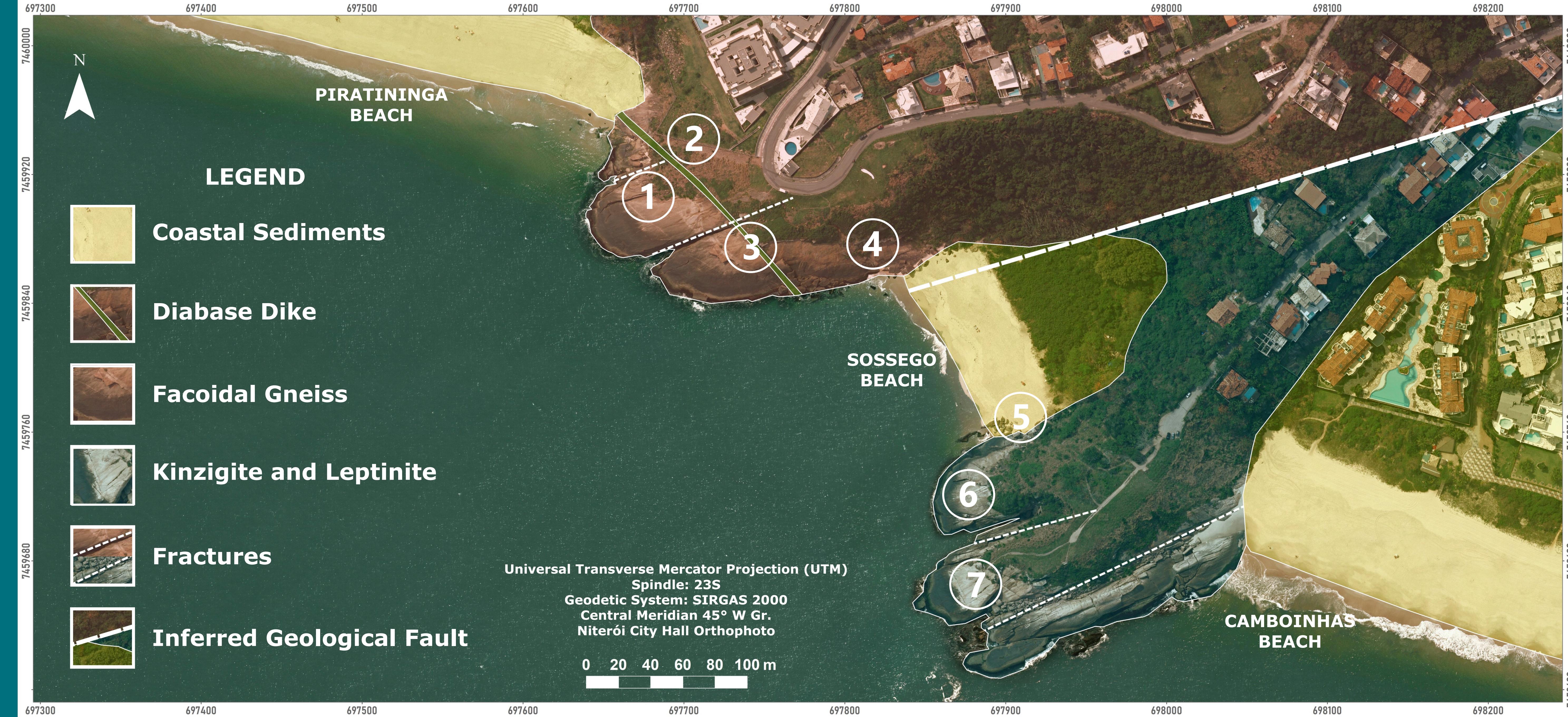
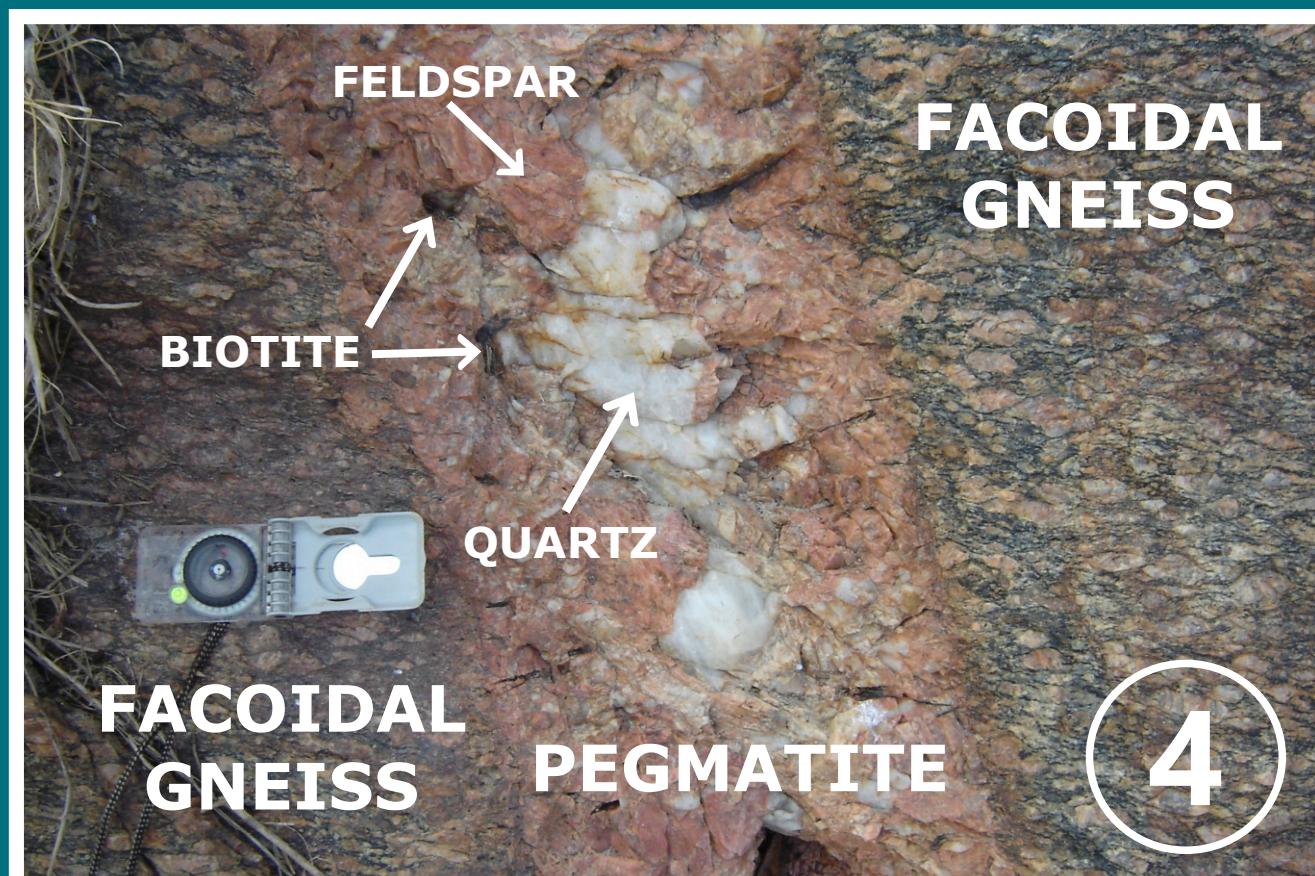
(2) **Water Spring** - rainwater that infiltrates the soil and sprouts on the surface through rock fractures. It is most evident in rainy seasons.



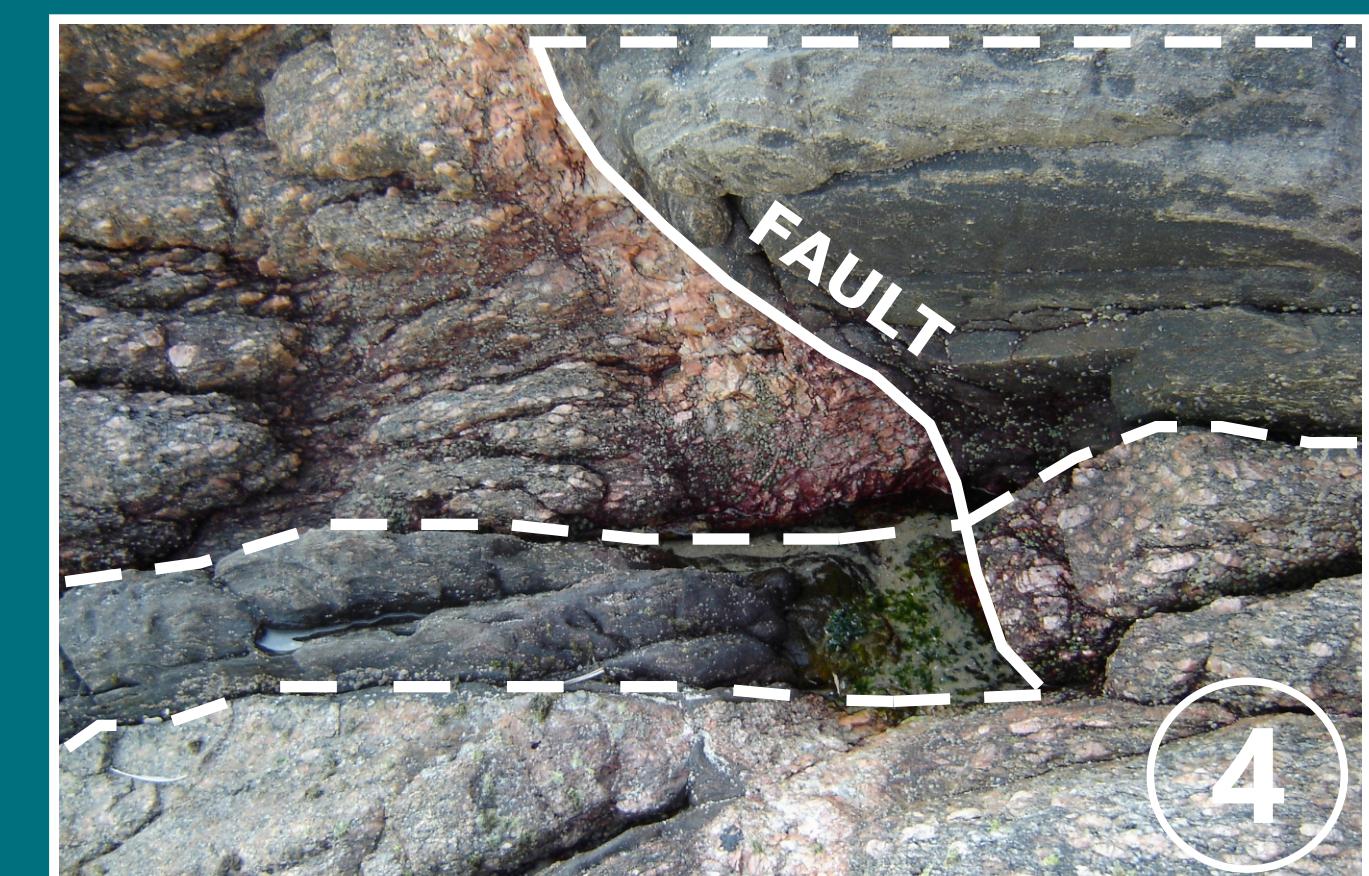
(3) **Diabase dike** - subvolcanic rock, tabular in shape and dark gray, which cuts through the **facoidal gneiss**. This rock represents the breaking of Gondwana.



(4) **Pegmatite** is a magmatic rock that cuts through the **facoidal gneiss**. Formed by large crystals of feldspar (pink), quartz (white) and biotite (black).



Can you find the numbered points of the Geological Map on the cliffs of Sossego Beach?



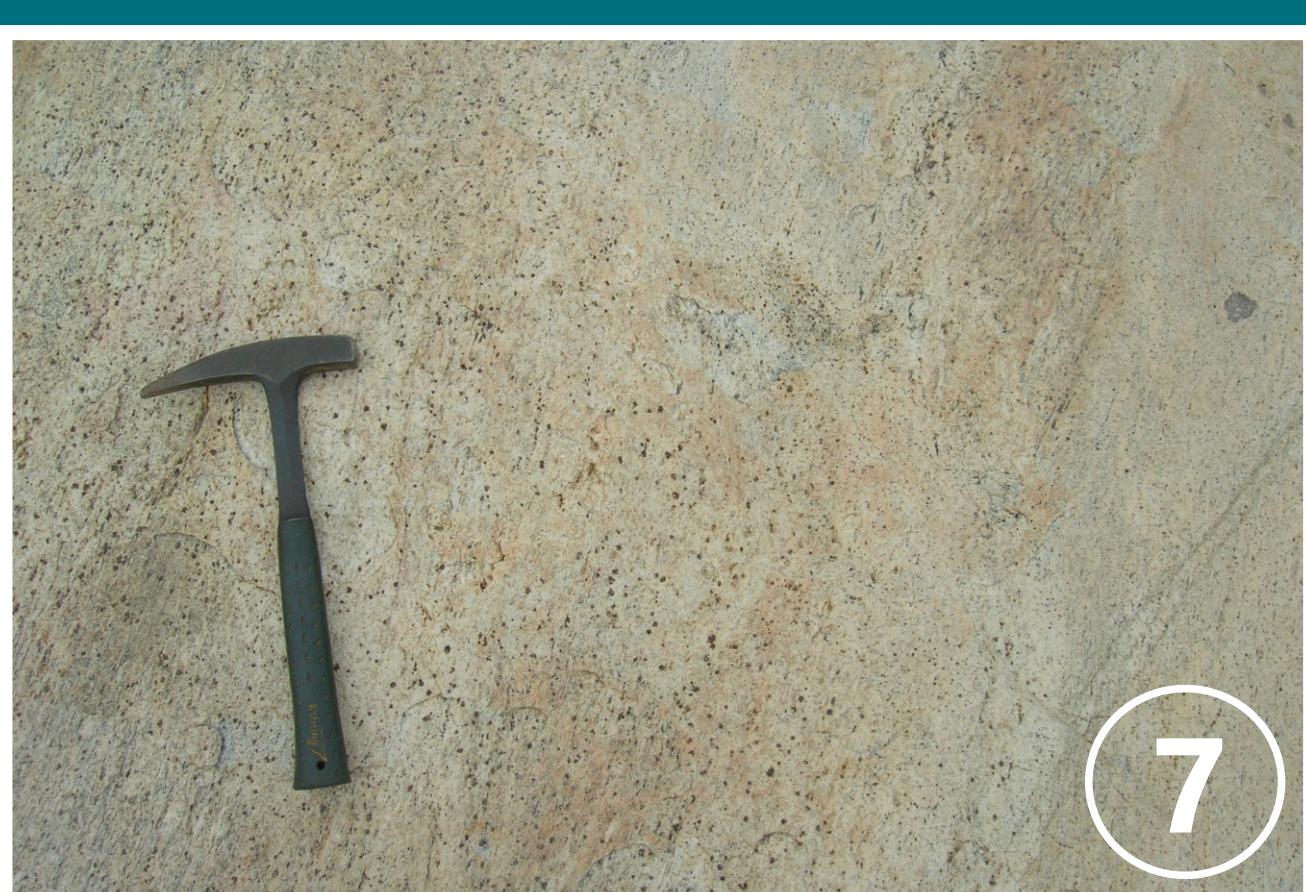
(4) The dark rock (dotted) beside is displaced. This discontinuity occurred millions of years ago and is called a **geological fault**, caused by movement within the planet.



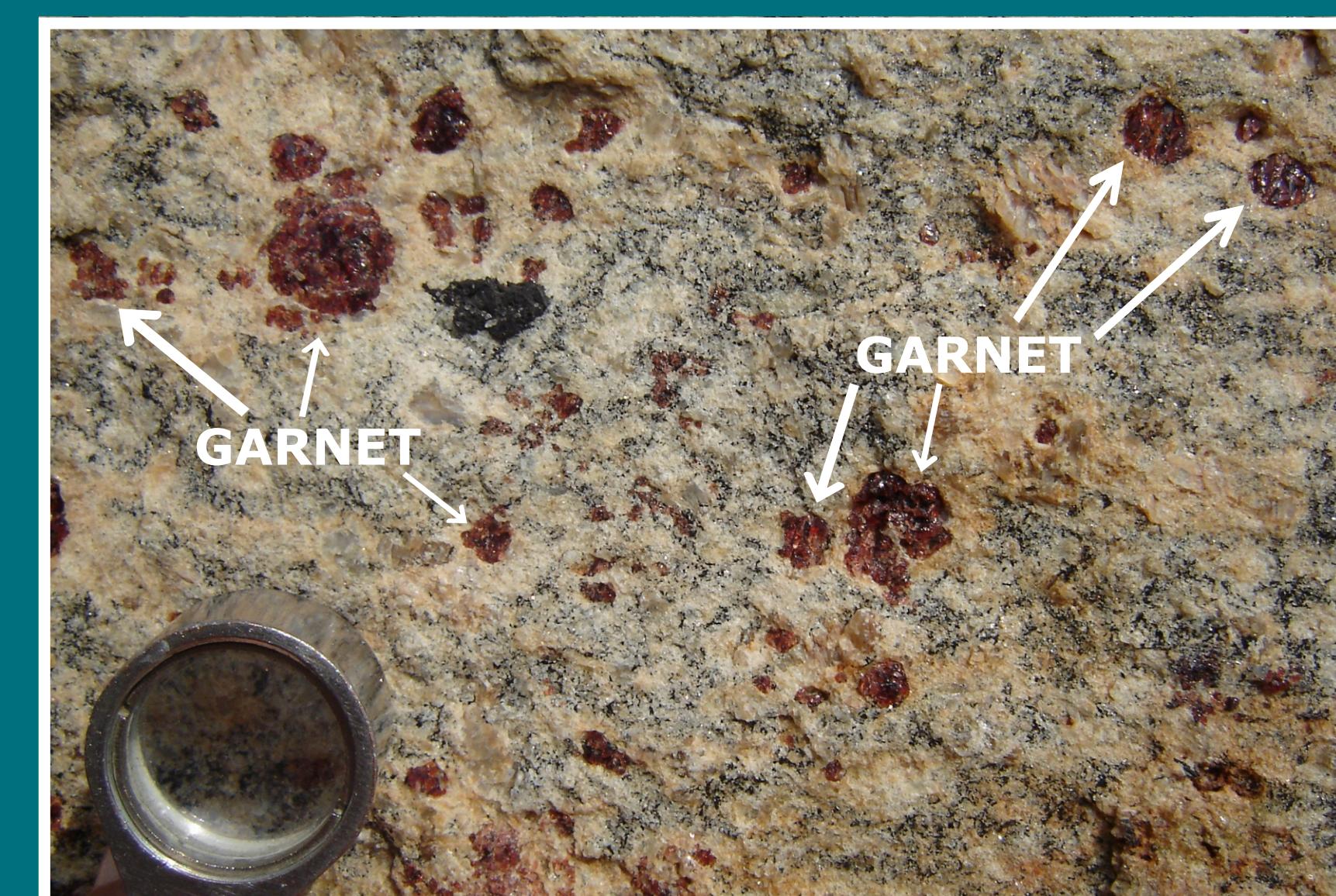
(5) The **beach sand** is formed by minerals, which were broken down from the rocks by the incessant erosive action of the sea, climate and living beings. The **rock blocks** on the beach were separated from the rocky massif. Note that in these blocks there are rounded red minerals, called **garnet**.



(6) **Kinzigite** and (7) **leptinite** are metamorphic rocks. Both have the mineral **garnet**.



**Kinzigite** has a lot of biotite (black plate-shaped mineral), while **leptinite** is much lighter due to the incipient presence of this mineral.



"Earth has taken some billion years to build rocks, minerals, mountains and oceans.  
Protect this masterpiece!"