

Saint Helena island

ST HELENA IS located in the South Atlantic, roughly 2 200 km from southern Angola/northern Namibia. In the past, getting to the island has been restricted to travel by ship. However, that is about to change. Basil Read is making impressive progress with its R4 billion contract to build an international airport on the island.

The airport is being built on Prosperous Bay Plain, on the east side of St Helena. It will have a concrete runway of 1 550 m with taxiway and apron. Approximately 8 million m³ of rockfill embankment, through which a 750 m long reinforced concrete culvert runs, has been built. It boasts an airport terminal building of some 3 500 m², with support infrastructure, air traffic control, safety, a bulk fuel installation for 6 million litres of diesel

and aviation fuel, and a 14 km access road from Rupert's Bay to the airport.

What does this mean for mining and mineral exploration? In geological terms, St Helena is a very young island. It is an isolated, broadly conical volcanic structure, rising more than 3 000 m above the ocean floor; the island itself being just the top of the volcano, with only a small amount of it exposed above the sea. The island may be small but its supporting structure is immense: the base on the sea floor measures some 130 km in diameter and the volume of the cone is estimated to be twenty times that of the largest European volcano, Mount Etna. Despite its volcanic origin, volcanic activity is no longer a threat to St Helena. Tectonic movement since the last eruption has carried the island east and it is now some way

from the active part of the ridge, on the African side.

The lavas of the island are of mantle origin and tend to contain no quartz. There are unusually high concentrations of sodium and potassium, and there is a characteristic pattern of radioactive and trace element abundance. While St Helena has always been said to lack natural resources, this may change once the airport development has been completed. With gravity gradiometry and LiDAR, who knows what will be discovered. And, where there are volcanoes, one usually finds diamonds. **35**

