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Utilisation of Geology and Geomorphology by Early Hominids and the Indigenous People of Southern Africa

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From the earliest hominids to indigenous people in recent historic times, geological and landscape features have been appreciated and used by the people of Africa. Some of the oldest hominids thrived on the ancient lake shores formed within valley grabens as well as on the flanks of the Great Rift Valley system of east and northeast Africa. The shores of a once more extensive Lake Chad created a habitat for hominids dating back to 7 million years ago. Australopithecines and similar hominid species that were prevalent on the high interior plateau of South Africa between about 1 million to 3 million years ago, made use of natural dolomitic cave systems as shelters such as in the Cradle of Humankind World Heritage site near Johannesburg. Many wave cut caves and middens along the southern Cape coastline such as Blombos and Pinnacle Point have yielded evidence of habitation by the earliest humans who occupied this area between about 160 000 and 70 000 years ago. Amongst other artifacts, a deliberately carved chevron pattern on a piece of orange brown- ochre provides evidence of human –like activity at this time. Within the last several thousand years’ coastal caves such as Nelson’s cave on the Robberg Peninsula in the Southern Cape have yielded abundant evidence of habitation from sea shell middens, by Khoi hunter gatherers.

Inland, in the mountains of western Swaziland, about 40000 years ago, early inhabitants mined and used red ochre formed from a hematite enriched banded iron formation. About 1200 years ago Khoisan pastoralists and later, Sotho –speaking, Iron Age people mined specularite, (recrystallized hematite with a brilliant metallic lustre) that crushes to a red ochre highly prized as a cosmetic.

About 800 years ago, early inhabitants built citadels along the Limpopo River, such as those of Thulamela in the northern Kruger National Park and Mapungubwe. Both are situated on prominent mesas or outliers of resistant Clarens sandstone, the former being an upfaulted block and the latter an erosional outlier of the post African land surface. Gold was mined in the region and a gold rhino and many gold artefacts were found at Mapungubwe. Evidence suggests that gold and ivory were traded for Asian goods including beads.

The impressive and well preserved great Zimbabwe stone walled complex of southern Zimbabwe was constructed shortly after Mapungubwe, and built entirely from exfoliated slabs from the abundant Basement granite outcrops of the area.

San rock paintings abound on suitable flat rock surfaces developed in natural caves, rock overhangs and shelters and on many rock outcrops throughout southern Africa. Of note are the outstanding paintings on Clarens sandstone shelters in the foothills of the Drakensberg Mountains of Kwazulu Natal. In many parts of the drier western parts of southern Africa, petroglyph engravings have been “pecked” onto generally massive, smooth, rock exposures such as those created by recently exhumed ancient glacial pavements near Kimberley formed during the Gondwana (Dwyka) ice age, 300 million years ago.

