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African Copper

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The African continent is a major source of the world's copper and is set to remain so through the 21st century.

Africa lacks geologically young convergent margins similar to those that host porphyry copper deposits, the world's major source of copper. It does, however, contain several sedimentary basins with world-class sedimentary rock-hosted stratiform copper deposits. The Central African Copperbelt of the Democratic Republic of Congo (DRC) and Zambia is the world's best-endowed district for this deposit type. Deposits occur within an intracratonic Neoproterozoic evaporitic basin containing a mixed siliciclastic-carbonate sequence. Although few new discoveries were made during the late 20th century, the revival of exploration and the development of a new geological understanding of the district [1] [2] at the end of the 20th century and beginning of the 21st century has led to exploration successes. The giant Kamoia deposit in the southern DRC (810 Mt @ 2.69% Cu and open) discovered in 2006 demonstrates the belt's vast remaining potential. Extensions of favourable Copperbelt geology into central Zambia and along strike into eastern Angola and northwestern Botswana provide highly favourable exploration terrain. More poorly known Neoproterozoic basins in southern and central Africa are also highly prospective. The recent recognition of the large-scale sediment-hosted mineralized systems in the Kalahari Copperbelt of Botswana and Namibia suggest it will soon become a vibrant copper producer.

Volcanogenic massive sulfide deposits in the Horn of Africa are currently being exploited in Eritrea and further discoveries are expected there and in neighbouring Ethiopia and Sudan. Though difficult exploration targets, iron oxide-copper-gold (IOCG) deposits, such as the Guelb Moghrein deposit in Mauritania, will continue to attract attention and additional discoveries of such deposits will probably be made in the numerous Pan-African belts of northern Africa.

References:

[1] Selley D et al. (2005) In: *Economic Geology – 100th Anniversary Volume*: Society of Economic Geologists, 965-1000

[2] Hitzman M et al. (2012) In: *Geology and Genesis of Major Copper Deposits and Districts of the World: A Tribute to Richard H. Sillitoe*, Society of Economic Geologists, 487-514

