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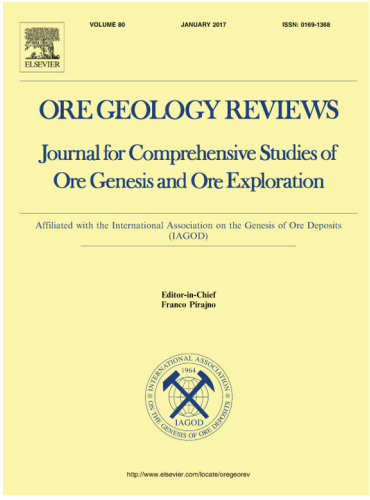

A Review of the Mineral Potential of Liberia

A.G. Gunn, J.K. Dorbor, J.M. Mankelow, P.A.J. Lusty, E.A. Deady, R.A. Shaw, K.M. Goodenough

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A Review of the Mineral Potential of Liberia

A.G. Gunn [a*], J.K. Dorbor [b], J.M. Mankelow [a], P.A.J. Lusty [a], E.A. Deady [c], R.A. Shaw [a] and Goodenough, K.M[c].

[a] British Geological Survey, Keyworth, Nottingham, UK.

*Corresponding author: email: agg@bgs.ac.uk.

[b] Liberian Geological Survey, Ministry of Lands, Mines and Energy.

[c] British Geological Survey, The Lyell Centre, Research Avenue South, Edinburgh, EH14 4AP, UK.

Abstract

The Republic of Liberia in West Africa is underlain mostly by Precambrian rocks of Archaean (Liberian) age in the west and of Proterozoic (Eburnean) age in the east. By analogy with similar terranes elsewhere in the world, and in West Africa in particular, the geology of Liberia is favourable for the occurrence of deposits of a wide range of metals and industrial minerals, including gold, iron ore, diamonds, base metals, bauxite, manganese, fluorspar, kyanite and phosphate.

Known gold deposits, mostly orogenic in style, occur widely and are commonly associated with north-east-trending regional shear zones. Gold mining commenced at the New Liberty deposit in western Liberia in 2015, while significant gold resources have also been identified at several other sites in both Archaean and Proterozoic terranes. Liberia has large resources of itabirite-type iron ores, most of which are located in the Liberian terrane, and was the largest producer in Africa prior to the onset of civil war in 1989. Production of iron ore is currently restricted to a single mine, Yekepa, in the Nimba Range. Other important deposits, some of them previously mined, include Bong, the Western Cluster, Putu and Goe Fantro. There is a long history of alluvial diamond production in western and central Liberia, together with more than 160 known occurrences of kimberlite. Most of the known kimberlites occur in three clusters of small pipes and abundant dykes, located at Kumgbor, Mano Godua and Weasua, close to the border with Sierra Leone. Many of these are considered to be part of a single province that includes Jurassic age diamondiferous kimberlites in Sierra Leone and Guinea.

Deposits and occurrences of a wide range of other metals and industrial minerals are also known. Several of these have been worked on a small scale in the past, mainly by artisanal miners, but most are poorly known in detail with sub-surface information available at only a few localities. By comparison with most other countries in West Africa, the geology of Liberia is poorly known and there has been very little systematic exploration carried out for most commodities other than gold, iron ore and diamonds since the 1960s and 1970s. Further detailed field and laboratory