

Gold mineralisation in the Sadiaken Grid, River Gee County, Liberia

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Liberia is composed of 4 NE striking formations, which transition in age from the Upper Archaean to Lower Proterozoic, from NW to SE, respectively. The central and south-eastern shear zones, such as Cestos, Dugbe, Dube & Juazohn, and the later Gibi Mountain Thrust zone, are known to offset and alternate Archean and Paleoproterozoic Birimian rocks, forming complex fused boundaries. The SE of the country contains distinct areas of complex metamorphosed Birimian formations, thought to be exceptional targets for primary and secondary mineral exploration. This project is the first from the Tienhpo Range in River Gee County, where an estimated 9000 people live and work in gold camps, washing alluvial and lateritic concentrations of gold from the area's sediments. Although only one example of visible gold was found in a bedrock hand sample, three phases of associated mineralisation were identified using reflected light and scanning electron microscopy. Sulphide mineralisation was associated with varying amounts of pyrite, arsenopyrite, chalcopyrite and pyrrhotite and occurred as blebby disseminated infills, micro-veins and in oxidised gossan crusts throughout the biotite-garnet gneisses and migmatites, along the outer axis of folded and altered granodiorite dykes. Here we present some of the first ever geological, geochemical and structural interpretations from the region.