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## **The Kamoia Copper Project on the Congolese Copperbelt**

Gilchrist G. R.<sup>1</sup>, Edwards D.<sup>2</sup> and Twite F.<sup>3</sup>

<sup>1</sup>Ivanhoe Mines, 82 Maude Street, Sandton, Johannesburg, george.gilchrist@ivanplats.com

<sup>2</sup>Kamoia Copper SA, davide@ivanplats.com

<sup>3</sup>Kamoia Copper SA, franckt@ivanplats.com

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The Kamoia Copper Project represents the first major greenfields discovery on the Congolese Copperbelt in over 100 years. Unique in its stratigraphic position and lack of typical copper indicators on surface, the deposit remained hidden even whilst the world class Cu-Co deposits were being developed in Kolwezi only 25km away. Kamoia is also unique in its scale and style of mineralisation. Unlike the dominantly oxide, narrow thrust-bound blocks typically discovered on the Congolese Copperbelt, Kamoia is a relatively flat-lying tabular deposit with comparatively little structural deformation and sulphide-dominant mineralisation. At a 1% Cu cut-off the currently defined Mineral Resource extends over 21km north-south, and over 10km east-west, with only the available drillhole information limiting the definition of resources. True thickness varies from 2.7m up to 18m, with an average thickness of 5.6m.

Kamoia was discovered following a systematic soil and stream sediment sampling programme in 2006. Copper sulphides have been leached at surface to a depth of 30m to 40m. Regionally anomalous copper values were, however, identified in the diamictite and siltstone interbeds of the stratigraphically higher Grand Conglomérat of the Nguba Group where the basal contact of this unit rises up to surface on the edges of sandstone domes. Initial diamond drilling in 2008 identified laterally continuous Cu mineralisation close to the contact of the Nguba Group with the Roan Group (Mwashya Subgroup) sandstones. This contact represents a major change in depositional style during what was probably a period of rapid subsidence [1], with the effects of syn-sedimentary faulting evident in the distribution of elevated Cu grades.

Over 1,100 diamond drillholes have been drilled (over 270,000m of drilling), systematically closing the grid from 800m to 200m to 100m in the planned mining areas. Mineralisation is formed in a typical redox setting with an Upper Roan sandstone red-bed stratigraphically below a reduced diamictite with a mud matrix. Mineralisation is hosted within the diamictite or localised siltstone interbeds, with a clearly defined lateral and vertical zonation in sulphide minerals from chalcocite to bornite to chalcopyrite to pyrite. Copper sulphide minerals occur as fine grained disseminations within the diamictite matrix as well as in coarse-grained mineral rims on diamictite clasts [1].

Drilling, to date, has defined an Indicated Resource of 752Mt at 2.67% Cu (20,110kt of contained Cu), ranking Kamoia as one of the largest, highest grade undeveloped copper projects in the world. 5km to the south-west, still within the current mining permit, the exploration success story continues with a

newly discovered zone of highly prospective, chalcocite-dominant Cu mineralisation in an area known as Kakula.

Development of Kamoā commenced in 2015 with the construction of a portal in preparation for a twin decline system to access the orebody. The Phase 1 project includes the construction of a concentrator and other associated infrastructure to support a start-up to production at a nominal plant capacity of 3 Mtpa, doubling to 6Mtpa during Phase 2.

*References:*

[1] Schmandt D et al. (2012). Econ Geol 108:1301-1324.

