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Copper-Gold Exploration and Discovery in the Timok Magmatic Complex, Serbia

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The Timok Magmatic Complex (TMC) comprises the Serbian sector of the Carpathian-Balkan Arc of Late Cretaceous calc-alkaline magmatism that extends for about 1500 km from Romania (Banat), through eastern Serbia (TMC) and into central Bulgaria (Srednogorie). The TMC is lens-shaped, about 85 km long and up to 25 km wide. The complex consists primarily of Turonian to Campanian andesites and trachyandesites (lavas, shallow intrusives and epiclastics), basaltic andesites, volcaniclastics and sediments. There are at least two phases of volcanism, and the volcanic processes were subaerial to submarine eruptive, hypabyssal intrusion, and very rarely explosive. Coupled porphyry and high sulphidation epithermal systems are associated with the first phase of andesite volcanism in the Bor district. The tectonic setting has been described as a back-arc basin, or pull-apart basin, developed on continental crust during subduction related to the convergence of the African plate toward Eurasia, and closure of the Neotethys ocean.

The metallogenic endowment of the TMC is a significant contributor to that of the entire Tethyan Metallogenic Province. The world-class Bor and Majdenpek porphyry systems contribute to an estimated historical production of approximately 6 million tonnes of copper and 9.65 million ounces gold. The combined resources and reserves in the TMC are reported by the state-owned RTB Bor mining company to be a cumulative 2.5 billion tonnes, with total copper and gold metal content of 10.5 million tonnes and 11.7 million ounces respectively.

Reservoir concluded an agreement in 2010 with Freeport McMoran Exploration Corp. (Freeport) to explore three exploration permits in the TMC for porphyry copper mineralisation. Conceptual studies together with CSAMT geophysics suggested the extension of structures under the Miocene sedimentary cover about 5-7 km south from the Bor porphyry district. The Čukaru Peki discovery was identified from high-grade drill intercepts including: 291.3m @ 7.17% CuEq (5.13% Cu, 3.4g/t Au) and 160m @ 10.16% CuEq (6.92% Cu and 5g/t Au). Continued drilling at Čukaru Peki area has returned mineralogy and alteration typical of both epithermal high sulphidation systems and porphyry style mineralization. High sulphidation copper-gold “massive sulphide” mineralization consists of covellite with bornite, enargite and chalcocite in zones, blebs, veins, hydrothermal breccias and replacements hosted by strongly altered (advance argillic and argillic) andesite. Porphyry style chalcopyrite-pyrite veins or blebs with rare molybdenite have been intersected in the deeper intervals, often with a later overprint of covellite with argillic alteration.

New geological models prepared by Company geologists from the drilling announced to date will be discussed in the presentation.