

Carlin-style gold mineralization in the Yukon Territory, Canada; Venus Zone, Einarson property

NIKOLETT KOVACS^{1*} AND GRAHAM D. LAYNE² - 1. *Department of Earth Sciences, Memorial University of Newfoundland, Newfoundland and Labrador, A1B 3X9 ¶* 2. *Anthill Resources Ltd., Vancouver, British Columbia, V6C 2W2*

Carlin-style deposits are broadly categorized as a sediment- (predominantly carbonate-) hosted class, with gold contained as solid solution or submicron particles within disseminated pyrite and arsenian pyrite. To date, Carlin-type gold deposits have been largely defined and described in the Great Basin region of Nevada. However, recent discoveries in the Yukon Territory show many of the defining characteristics of Carlin-type gold deposits. The Einarson Property is located in the central eastern part of the Yukon Territory at 64° 0' N, 131°57' W - 15 km east from the 50 km long Nadaleen Trend, which hosts six recently recognized zones of Carlin-type mineralization in Middle Proterozoic to Middle Paleozoic carbonates of the Selwyn Basin. The 1.65 km² Venus Zone is located on the north-western side of the Einarson property, where initial drilling has intersected values as high as 9.67 g/t Au over 38.7 m within silicified, sandy dolostone. This honours project is designed to compare the Venus Zone to the Carlin-type deposits and environments in Nevada. Thin section analysis, SEM-EDX-MLA and a compilation of field and exploration geochemical data will be used to further elucidate the ore paragenesis, deportment and localization of gold mineralization of the Venus Zone. This will form the basis for the comparison of this example, within an emerging gold district in the northern Cordillera, with the classic examples and characteristics described from the Nevada districts of Carlin-style mineralization.

***Winner of the Frank S. Shea Memorial Award for best economic geology presentation**