

# Hajdukovich Project

## Avalon Development Corporation Summary Report 2012

The Hajdukovich (pronounced high-DUKE-ovich) gold project is an exploration stage project located in the north central Alaska Range. The claims are located in the Mount Hayes quadrangle 60 kilometers southeast of the town of Delta Junction and 24 kilometers south of the Alaska Highway. The Hajdukovich project is owned 100% by Fairbanks-based Anglo Alaska Gold Corporation, a private Alaska-domiciled corporation and consists of a contiguous group of 49 State of Alaska mining claims covering approximately 7,840 acres. The property was explored by Teck in 1999 and 2000 before being optioned by Canaco Resource who conducted exploration on the project in 2005. Anglo Alaska Gold acquired 100% ownership in the project in 2010.

The property is situated near the southwest margin of the Yukon Tanana Terrane (YTT), a variably metamorphosed continental margin assemblage of late Proterozoic to mid-Paleozoic age. Gold mineralization is closely associated with the Hajdukovich intrusive complex, a massif on the north flank of the Alaska Range. The Hajdukovich intrusive complex occupies a 5 x 15 km area, with an axis trending approximately N70W which is coincidentally subparallel to the Denali fault. The Denali fault, located approximately 65 km south of the project, is a major right lateral strike slip fault forming the south boundary of the YTT. A single U-Pb age date for megacrystic granite at the Sneaker prospect on the east end of the project, suggests crystallization at 56.2 Ma (late Paleocene). The felsic phases in the complex generally post-date and crosscut the mafic phases. The complex is zoned with sharp intrusive contacts between phases with an overall mafic core to felsic margin pattern. This pattern is observable on a large-scale as a zonation from a sequence of mafic-ultramafic rocks in the central portion of the complex, to granite and granodiorite on the margin. On a smaller scale, the zonation of the intrusive phases forming the Sneaker stock grades from a granodiorite core to a granite margin.



Mineralization at Hajdukovich is associated with the felsic phases of the intrusive complex. Multiple areas of +5 gpt gold mineralization have been identified on the project, only one of which has seen drilling. Gold mineralization at the Sneaker prospect, on the east end of the complex, has been examined in detail at the surface and is the only prospect that has been

drilled (462.7 meters, 3 holes). The drilling completed thus far is insufficient to evaluate the subsurface potential for gold mineralization at the prospect. The ore deposit model invoked is a magmatic hydrothermal model similar to other intrusive intrusive-related gold deposits in the YTT (Ft. Knox, Pogo, True North, Dublin Gulch). There are at least two important distinctions between the Hajdukovich project model and these other deposits, 1) some of the gold mineralization at the Hajdukovich project is hosted by weakly alkalic (subalkalic) felsic intrusive rocks (alkali-feldspar granite), as opposed to being hosted in strictly calc-alkalic granite to granodiorite, and 2) the age of gold mineralization at the Hajdukovich project is younger (late Paleocene), compared to gold mineralization found at these other deposits (mid to late-Cretaceous). The complex has been faulted along several distinct structural trends. The predominant fault trends on the project are approximately N45E, N70W and N25W. A series of major northeast-trending faults has juxtaposed different levels of the Hajdukovich complex in a block fault fashion. The result has exposed deeper levels of the complex on the east end and progressively shallower levels to the west.

Thus far, six types of mineralization have been documented on the Hajdukovich project, all of which bear at least anomalous gold values. These types include

- 1) low sulfide, gold-quartz veins,
- 2) gold-sulfide-carbonate-quartz veins and veinlets,
- 3) sulfide-quartz veinlets,
- 4) gold-PGE-bearing chalcopyrite-magnetite pods and veins,
- 5) gold-bearing sulfide-quartz breccias, and
- 6) gold-bearing semi-massive sulfide mineralization.

Alteration associated with gold mineralization includes potassic, tourmaline, and iron carbonate-sericite alteration associated with quartz and/or quartz-carbonate veins.

Most of the exploration on the Hajdukovich project has been conducted on the Sneaker prospect where a series of at least four northeast-trending vein systems are hosted in megacrystic granite. At the Sneaker prospect, these vein systems trend N45E and dip steeply NW or SE. The veins forming these vein systems are characterized by locally spectacular gold values (up to 122,500 ppb) and highly anomalous As, Bi, Cu, Mo, Te and W. Other veins and sheeted veinlets present at Sneaker also contain gold, but in slightly lower concentrations, and bear a different geochemical signature indicating relatively depleted Bi, Cu, Mo, Te and W, and relatively enriched Pb, Sb and Zn. The second type mentioned occurs in shear zones with bulk tonnage gold mineralization potential.

Progressing from west to east across the project, there are only minor changes in metallogeny. The same suite of elements (Au-Ag-As-Bi-Cu-Mo-Te-Pb-Sb) is present at prospects across the entire project. The main change which is seen is the relative abundances of the elements within this same suite, the addition of Sn to the suite in the central project (UPEG Saddle prospect) and sporadic anomalous Zn at prospects in the western portion of the project. A working model suggests that higher levels of the hydrothermal system contained relatively elevated concentrations of Pb, Sb, and Sn with relatively lower concentrations of Bi and W. Field data supports the incidence of higher, more widespread Pb and Sb values in the western half of the project, and higher Sn values in the central portion of the project (UPEG Saddle

prospect). Multi-gram gold values occur at all levels of the hydrothermal system, suggesting potential for a variety of different types of gold mineralization.

Copper grades in excess of 3% have also been identified on the project in association with elevated gold and molybdenum hosted in phyllic and potassic-altered granite and diorite covering several square kilometers of the property. Chalcopyrite ± molybdenite occurs as disseminations and in quartz stockwork veinlets within. No significant exploration has been directed toward this Cu-Mo-Au mineralization which remains untested by drilling and open to expansion in all directions.

Potential exists for significant grade-tonnage accumulations of intrusive and/or metamorphic-hosted gold mineralization that is being mined and explored elsewhere in the Tintina Gold Belt. In addition, poorly defined Cu-Mo-Au mineralization may be similar to other alkaline porphyry-related Cu-Mo-Au systems being explored in the central and southern Alaska Range. Anglo Alaska Gold is seeking to lease the property to a financially and technically capable party interested in conducting future exploration and development on the Hajdukovich project.

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