

CORE SHACK ABSTRACT GUIDE

GROUP TEN METALS

PLATINUM GROUP ELEMENT MINERALIZATION ASSOCIATED WITH DISSEMINATED AND SCHLIEREN TYPE CHROMITE: A NEW TYPE OF PGE DEPOSIT IN THE ULTRAMAFIC SERIES OF THE STILLWATER COMPLEX, MONTANA, USA

Group Ten Metals

The Stillwater Igneous Complex is a 2.7 Ga layered intrusion, located in south-central Montana. Group Ten Metals is actively exploring a variety of targets within the lower, ultramafic portion of the stratigraphic package. The Chrome Mountain sector in particular is recognized to have a complex structural setting and very likely an attenuated Peridotite Zone stratigraphy, as compared to the better-known, eastern part of the Complex. Specifically, the repetitive cyclic units (chromitite-dunite-peridotite -pyroxenite) famously described by Jackson in the early 1960's from the Stillwater Valley sector are rarely encountered.

In addition to better known "reef type" targets (A-B chromitites) and "contact type" targets associated with the Basal Series, exploration conducted by predecessor companies during the 2007 and 2008 field seasons resulted in discovery of a previously-unrecognized style of disseminated PGE occurrence on the southeastern flank of Chrome Mountain, well within the Ultramafic Series. Discovery holes were targeted based on a broadly distributed PGE-in-soil anomaly, located well to the south of, and down-section of, the JM Reef which is currently being mined by Sibanye-Stillwater.

Re-logging of surviving drill core splits demonstrates that broad intervals of highly anomalous levels of Pt+Pd (eg 1.02 g/t Au+Pd+Pt over 116.7m) are associated with disseminated and schlieren type chromite. Host rocks are complexly-textured mixes of pyroxene-cumulate and olivine-cumulate rocks which have provisionally been binned together as hitherto unrecognized magmatic breccias. Pegmatoidal textures, increased abundances of intercumulus plagioclase, and trace amounts of base metal sulfide (po, cpy) are ubiquitous. Finally, mineralized intercepts are spatially associated with demonstrably discordant dunite masses which themselves contain PGE-bearing chromite lenses.

In 2018, mapping and rock chip sampling targeted the discovery area and was successful in extending this anomalous lithologic package and associated PGE mineralization over one kilometer to the east.

We suspect that this occurrence may have similarities to other, unconventional PGE-chromite systems such as seen in the Bushveld Complex (Platreef) and in the Black Thor Intrusive Complex (Black Label Hybrid Zone).

Group Ten land package combines properties formerly divided amongst other companies enabling unprecedented integration of targets, databases, and geologic thinking. The purpose of this core shack presentation is to "re-introduce" an extraordinary and underappreciated discovery. We suspect this is a fundamentally new style of PGE occurrence for the Stillwater Complex.