

## **Mineral Assessment of Proposed Wellesley Lake SMA Progress Report**

007403

The White River First Nation proposed Wellesley Lake as a Chapter 10 special management area (SMA) to be included in their Final Agreement. Current information from Land Claims Implementation Secretariat is that the area will be designated as a Habitat Protection Area with no up-front mineral withdrawal. The SMA proposal is confidential and the First Nation is in the process of ratifying the Final Agreement Memorandum of Understanding that was initiated on March 31<sup>st</sup>, 2002.

Located on NTS sheet 115J/10 and K/8, the proposed SMA consists of a core area of approximately 50 km<sup>2</sup> (including Wellesley Lake) surrounded by two study areas with a total area of 530 square kilometers. The terrain is very low lying in nature and little outcrop is exposed within the proposed SMA boundaries.

The ultramafic rocks of the Windy assemblage outcrop north of Wellesley Lake and can be projected through the core area using the aero-magnetic survey results. The RGS results indicate the Windy Assemblage has the highest response in multi-elements for potential economic metals.

Carmacks Group volcanic rocks along the south and east margins of the proposed SMA and study area have modest potential for hosting epithermal type gold mineralization. The presence of detectable gold-in-sediment sample along the south shore of the lake drains an area underlain by Carmacks Group volcanic rocks. Silt sediment sampling and pan concentrate sampling of creeks in the area can be used to provide the economic potential in the area.

A regional mineral assessment panel ranked tracts covered by the proposed SMA for the potential to host the following deposit types: gold-quartz vein, gabbroic copper-nickel, low sulphidation epithermal, and plutonic related gold. The proposed SMA area is within tracts that ranked highest & moderate relative regional mineral potential with respect to Phase IV (SW Yukon) of the Yukon-wide Regional Mineral Potential Map (Figure 1 attached).

A compilation of available geoscientific data was completed in April 2002. Lithostratigraphic mapping combined with rock sampling for whole rock and multi-element analysis was used to indicate potential for economic types and styles of mineralization primarily in the Windy Assemblage and Carmacks Volcanic rocks. Multi-element lithochemical and detailed soil and silt sampling was carried out from outcrops of all rock units, streams and across stratigraphic or structural zones in overburden covered areas.

A total of 7 man-days were spent investigating the proposed SMA area. Fifty-nine rock, soil, and silt samples were collected and analyzed as well as several whole rock specimens of petrographic analysis.

This new data is currently being integrated with existing geochemical, geophysical, and geological data in preparation for hosting a mineral assessment panel scheduled for the second week of December 2002. A detailed mineral potential map of a study area slightly larger than the proposed SMA will be the result of the assessment. Tracts of similar geology will be ranked, by consensus, relative to this much smaller detailed study area around the proposed SMA. A substantive report on the findings of the detailed assessment is forthcoming.