

LUCY LITHIUM-TANTALUM PEGMATITE - SUMMARY

The Lucy pegmatite is a highly fractionated granitic pegmatite with many similarities in mineralogy, zoning and orientation to the well-known Tanco pegmatite being mined for tantalum, lithium and cesium at Bernic Lake. Drilling on the Lucy pegmatite during the 1950s outlined a pre-NI43-101 reserve of 226,800 tonnes at a grade of 1.75% Li_2O . Recent drilling for tantalum has included intersections up to 44.43m with 0.029% Ta_2O_5 , including 0.046% Ta_2O_5 over 12.90m, though this may be a down-dip intersection. The Lucy pegmatite demonstrates potential for a possible open pit resource of tantalum and lithium. The areas below and, more significantly, to the south and east from the Lucy pegmatite, offer an excellent exploration target for the discovery of additional Tanco-type granitic pegmatites.

One of the common characteristics of highly fractionated pegmatites around the world is that they are flat-lying, or shallow-dipping, or dome-shaped in orientation. As a result, it is important to utilize vertical drill holes in these environments in order to understand the orientation of these pegmatites and to identify the apical portions of these dikes/structures, which are more likely to contain significant mineralization. While steep-dipping feeder dikes may occur along the margins of the prospective structure, they are less likely to be mineralized than the shallow-dipping zones.

Further exploration of the Lucy dike and immediate area for tantalum-lithium-cesium mineralization in Tanco type pegmatites is highly recommended. This will be mainly a drilling task, though there may be some usefulness to additional geologic mapping and geochemistry. The tensile fractures occupied by rare metal pegmatites are frequently oriented perpendicular to schistosity in the host rocks, so a "roll-over" in schistosity from south-dipping to north-dipping may identify the apical zone within a possible sub-surface tensile structure. Geochemical analysis of host rocks, soil or vegetation, using lithium as a pathfinder element, may also be useful in this area.

William C. Hood, P.Geo.
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