

## **Geology, lithogeochemistry, and mineralization at the South Wood Lake gold prospect (Staghorn property), Exploits–Meelapaeg subzone boundary, western-central Newfoundland**

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The Staghorn exploration property, in NTS map area 12A/4 of central-western Newfoundland, is situated along the southwestern boundary area between the Exploits, Meelapaeg and Notre Dame subzones of the Newfoundland Appalachians. The property includes three significant gold showings (Hilltop, Sure Shot, and Falls) and one drilled prospect called the South Wood Lake (Main) zone. These discoveries have occurred episodically since the 1970s as the direct result of dedicated grassroots prospecting. Exploration work, including detailed ground geophysics, trenching and drilling, along with mapping, petrography and lithogeochemistry, collectively demonstrate that the mineralization at the Main zone is hosted by variably textured, mylonitized and brecciated, commonly strongly lineated,  $Mu \pm Bt$  monzogranite to granodiorite of the Ordovician ( $464 \pm 4$  Ma) Peter Strides granite suite. Mineralization consists of a network of thin ( $\leq 10$  cm), anastomosing, quartz-pyrite-hematite-siderite±arsenopyrite veins and mineralized fractures accompanied by wall rock sericitization, albitization and silicification. Gold is associated with elevated Bi, Sb, Cd, Ag and Te, and, in particular, strongly elevated As. Native gold occurs as tiny  $\leq 5\mu m$  amorphous blebs intergrown with albite and sericite and is locally accompanied by Bi-telluride, possibly tellurobismuthite.

The mineralized, brecciated and mylonitic monzogranite occurs as a number of imbricate panels in the structural hanging wall of the northeast-trending, south-dipping Silurian Victoria Lake shear zone. The South Wood Lake prospect occurs in the antiformal core of an open, km-scale, post mylonitization, Z-asymmetric flexure of the shear zone. Mineralization is likely Devonian in age.