Supplementary data 1: A summary table of base metal and PGE smelting operations in Canada and their affect on the regional soil geochemistry. Information such as years in operation, metals released by smelter emissions, distance at which the effect of smelting operations is noted in vegetation and the depth of soil at which smelter-derived metals are detected is also include.

Supplementary data 2: Precision calculations at 95 % confidence interval for lab duplicates of B-horizon and C-horizon till samples were completed on 10 duplicates pairs for As, Bi, Cd, Co, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, Te, Zn, Au, Ir, Pd, Pt, Rh, Ru, and on 9 duplicate pairs for humus for As, Bi, Cd, Co, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, Te, Zn and Au.

Supplementary data 3: Log-normalized, Pearson product moment correlation matrix for element content in humus samples analyzed by aqua regia ICP-MS and ICP-AES.

Supplementary data 4: Log-normalized, Pearson product moment correlation matrix for element content in humus samples analyzed by Na pyrophosphate ICP-MS.

Supplementary figure 1: A poor correlation (r2 = 0.2) is noted in 107 samples (n=107) between the depth of collected humus sample and loss on ignition (LOI). The data are attributed by how well the humus is developed at a sample site and ranges from poorly- to well-developed.

Supplementary figure 2: A poor correlation (r2 = 0.002) is noted in 107 samples (n=107) between Cu content in humus samples analyzed by Na pyrophosphate and the loss on ignition (LOI). A poor correlation (r2 = 0.004) is also noted in 107 samples (n=107) between Ni content in humus samples analyzed by Na pyrophosphate and the LOI.