



Gold occurrences in the Bigstone Lake greenstone belt

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Summary

Recent findings from the 2017 field season, in addition to occurrences previously documented by the Geological Survey of Canada and Noranda Exploration Company Ltd., highlight the potential for widespread gold mineralization in the Bigstone Lake greenstone belt (BLGB).

Gold mineralization in the BLGB is hosted in quartz-carbonate-sulphide veins within late brittle-ductile shear structures (**Figure 1**). High gold grades (>30 ppm) were retrieved from veins as well as from samples of carbonate-sericite-altered wallrock (Rinne, 2017). Areas containing samples with greater than 5 ppm Au are labeled in **Figure 2**; more regionally extensive gold mineralization (e.g., samples with >1 ppm Au) is indicated in **Figure 3**.

The information currently available would readily support surface and subsurface exploration near the known gold occurrences, including new structural targets for gold mineralization outlined in Rinne (2017). Further work may also lead to the recognition of chemically favourable units (e.g., iron formation), alteration zonation (e.g., transitions from chlorite-calcite to vein-proximal ankerite-sericite-pyrite), systematic patterns in pathfinder elements (e.g., W, Bi, B, As; see **Figure 4**) or other vectors to lode-gold mineralization (Ames et al., 1988; Groves et al., 1998). Detailed exploration work in the BLGB was last undertaken between 1986 and 1993 (e.g., Assessment Files 94359, 94022, 94035; Manitoba Growth, Enterprise and Trade, Winnipeg).

Acknowledgements

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Figure 1: Photos of shear-hosted quartz-carbonate-sulphide-gold veins in the Bigstone Lake greenstone belt

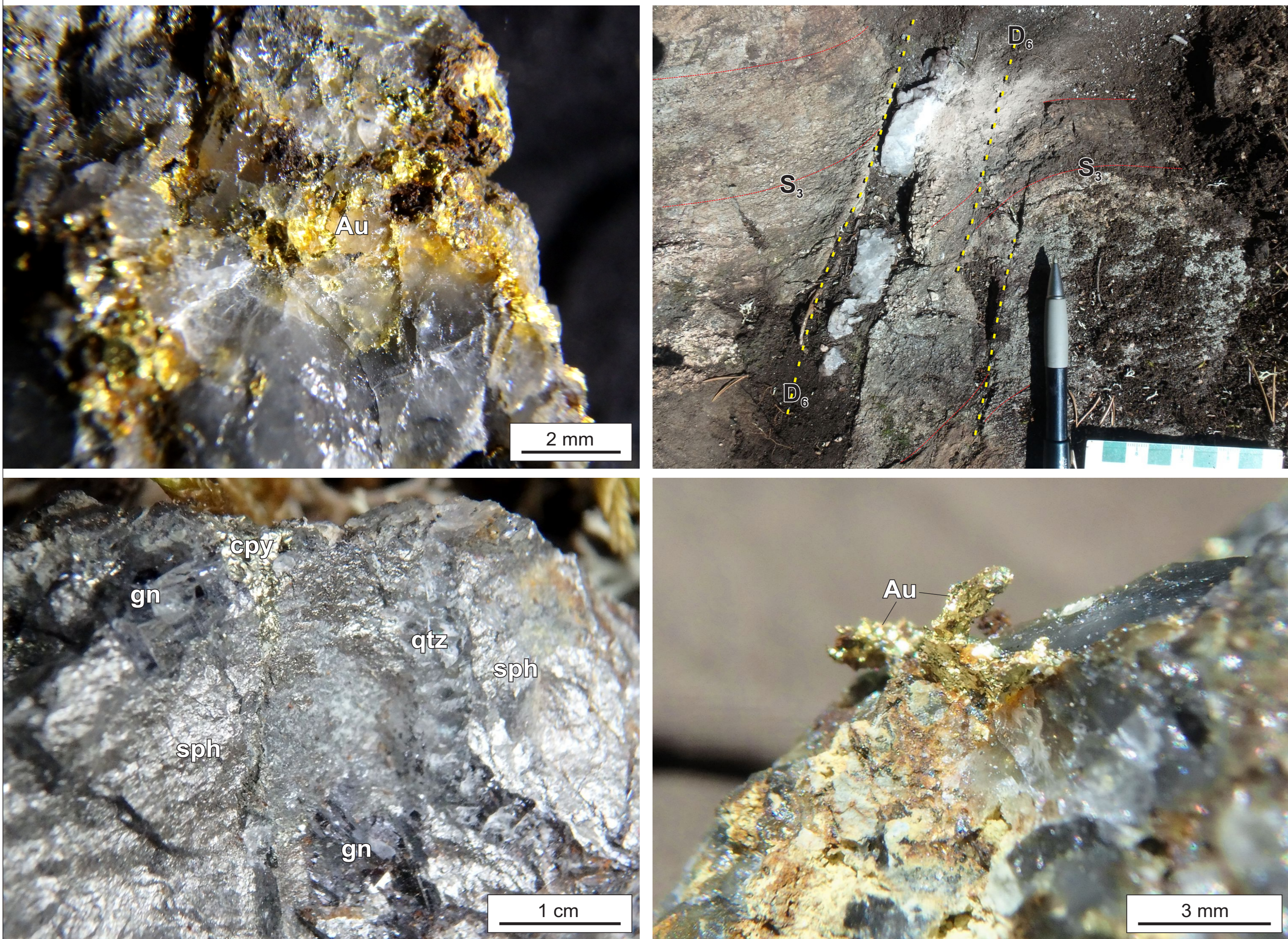


Figure 2: Simplified bedrock geology of the Bigstone Lake greenstone belt with selected Au occurrences labeled

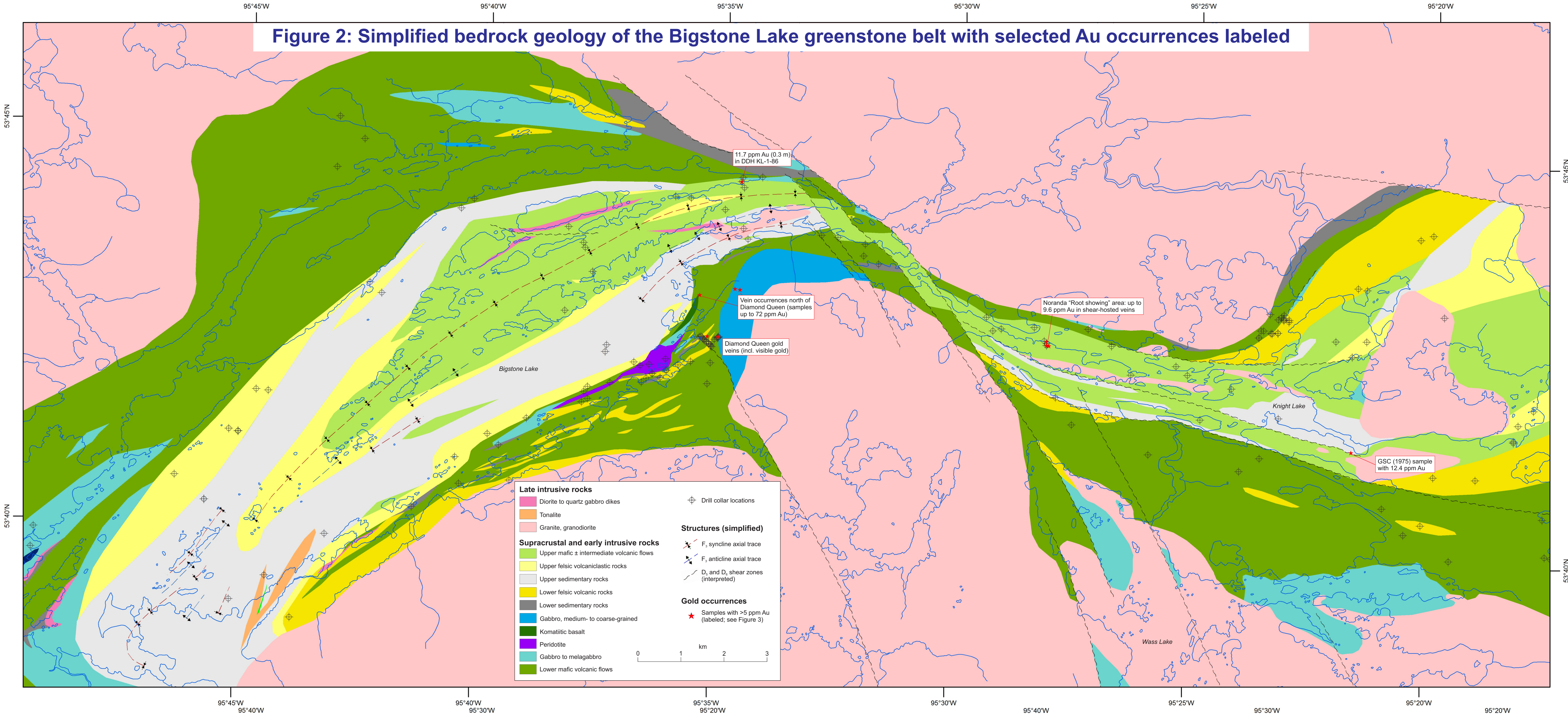


Figure 3: Compilation of Au values (MGS, GSC, industry data)

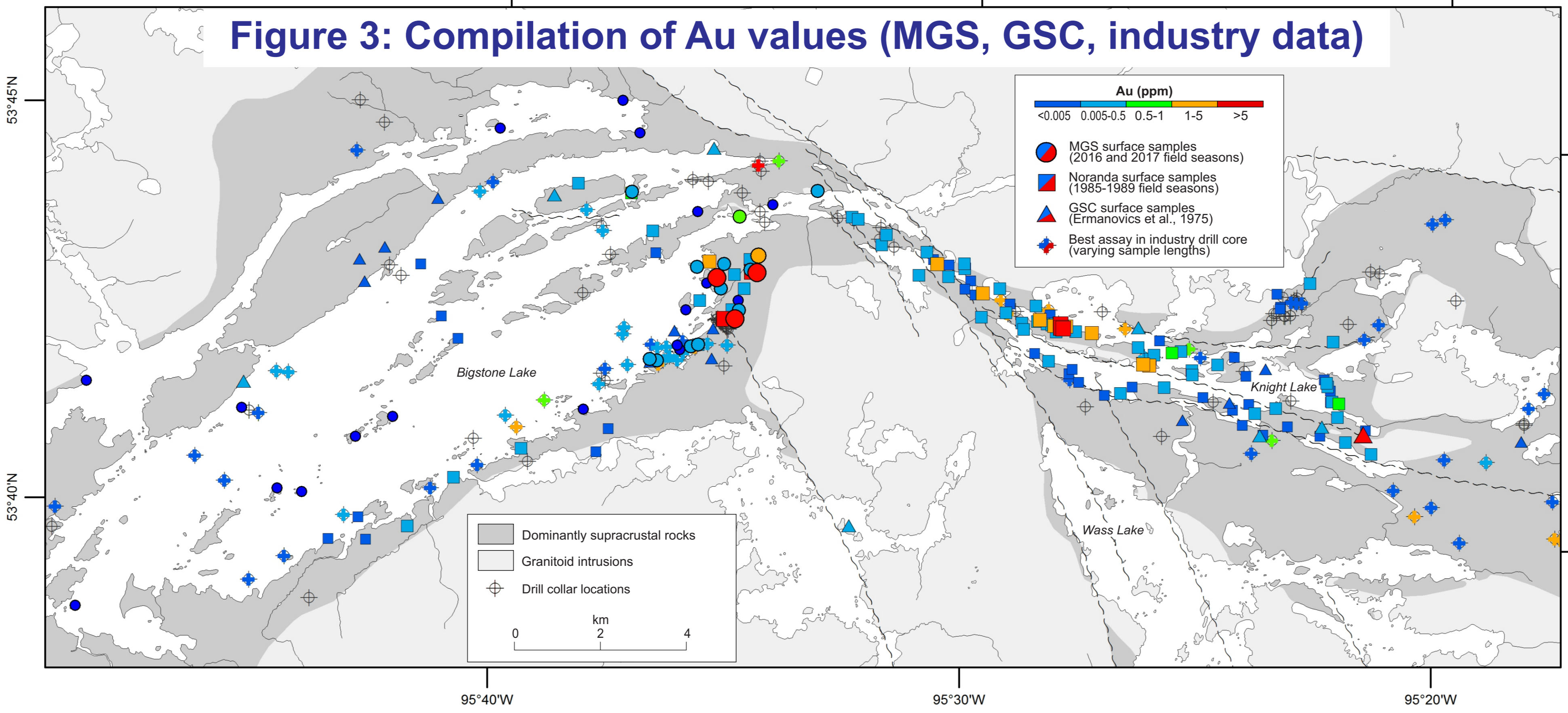
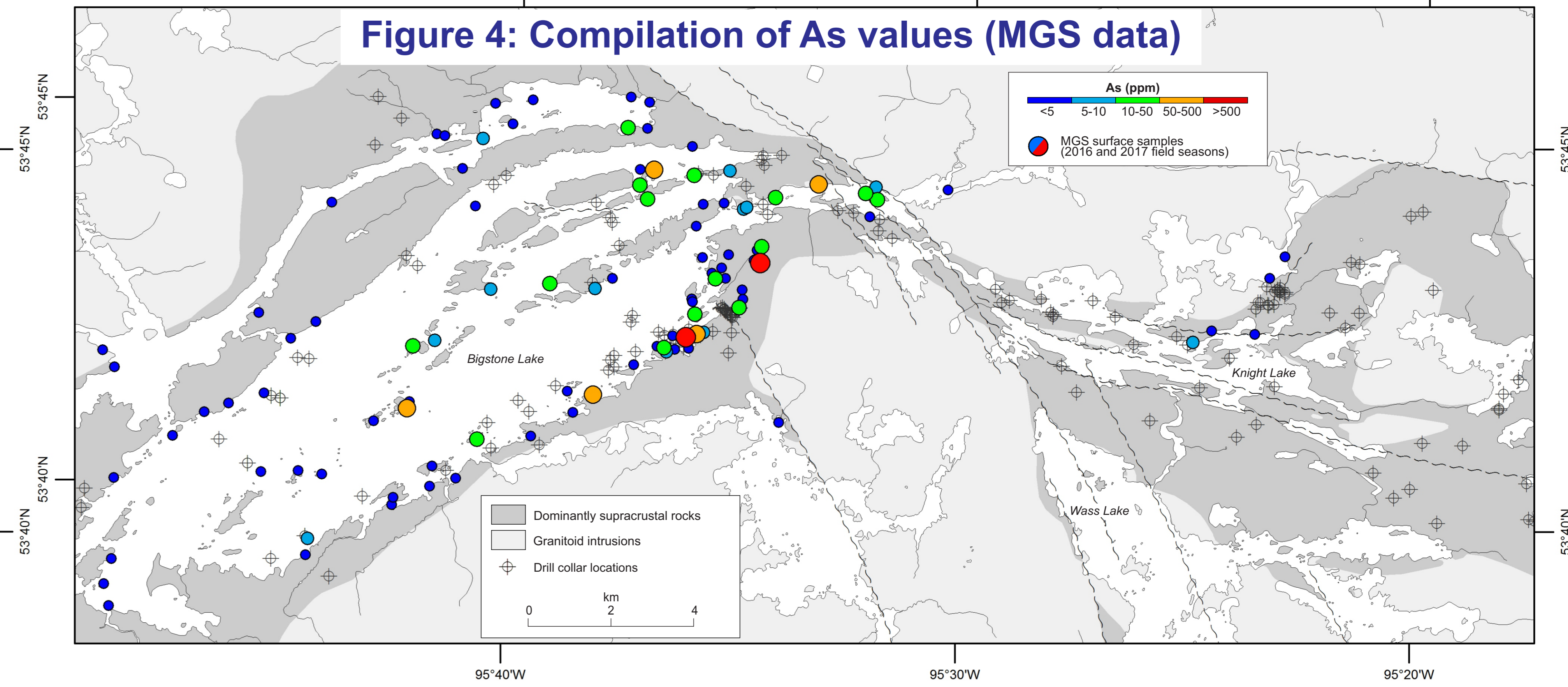


Figure 4: Compilation of As values (MGS data)



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