

YGS list of publications and maps for 2018

YGS released 25 publications in 2018: 3 Annual Reports, 20 Open Files, 1 Brochure and 1 Educational Series pamphlet.

Open Files

- Bordet, E., 2018. Bedrock geology map of the Teslin Mountain and East Lake Laberge areas, parts of NTS 105E/2, 3, 6. Yukon Geological Survey, **Open File 2018-1**, 2 sheets, scale 1:50 000.
- Allan, M.M. and Friend M.A., 2018. Bedrock geological map of the Mount Freegold district, Dawson Range (NTS 115I/6 and parts of 115I/2, 3, 5, 7, 10, 11, 12). Yukon Geological Survey, **Open File 2018-2**, scale 1:50 000.
- Kiss, F. and Boulanger, O., 2018. Residual Total Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105C/south. Geological Survey of Canada, Open File 8412; Yukon Geological Survey, **Open File 2018-3**.
- Kiss, F. and Boulanger, O., 2018. First Vertical Derivative of the Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105C/south. Geological Survey of Canada, Open File 8413; Yukon Geological Survey, **Open File 2018-4**.
- Kiss, F. and Boulanger, O., 2018. Residual Total Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105C/north. Geological Survey of Canada, Open File 8414; Yukon Geological Survey, **Open File 2018-5**.
- Kiss, F. and Boulanger, O., 2018. First Vertical Derivative of the Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105C/north. Geological Survey of Canada, Open File 8415; Yukon Geological Survey, **Open File 2018-6**.
- Kiss, F. and Boulanger, O., 2018. Residual Total Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105D/south. Geological Survey of Canada, Open File 8416; Yukon Geological Survey, **Open File 2018-7**.
- Kiss, F. and Boulanger, O., 2018. First Vertical Derivative of the Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105D/south. Geological Survey of Canada, Open File 8417; Yukon Geological Survey, **Open File 2018-8**.
- Kiss, F. and Boulanger, O., 2018. Residual Total Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105D/north. Geological Survey of Canada, Open File 8418; Yukon Geological Survey, **Open File 2018-9**.
- Kiss, F. and Boulanger, O., 2018. First Vertical Derivative of the Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105D/north. Geological Survey of Canada, Open File 8419; Yukon Geological Survey, **Open File 2018-10**.
- Kiss, F. and Boulanger, O., 2018. Residual Total Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105E/south. Geological Survey of Canada, Open File 8420; Yukon Geological Survey, **Open File 2018-11**.
- Kiss, F. and Boulanger, O., 2018. First Vertical Derivative of the Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105E/south. Geological Survey of Canada, Open File 8421; Yukon Geological Survey, **Open File 2018-12**.
- Kiss, F. and Boulanger, O., 2018. Residual Total Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105E/north. Geological Survey of Canada, Open File 8422; Yukon Geological Survey, **Open File 2018-13**.
- Kiss, F. and Boulanger, O., 2018. First Vertical Derivative of the Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105E/north. Geological Survey of Canada, Open File 8423; Yukon Geological Survey, **Open File 2018-14**.

Kiss, F. and Boulanger, O., 2018. Residual Total Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105F/south. Geological Survey of Canada, Open File 8424; Yukon Geological Survey, **Open File 2018-15**.

Kiss, F. and Boulanger, O., 2018. First Vertical Derivative of the Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105F/south. Geological Survey of Canada, Open File 8425; Yukon Geological Survey, **Open File 2018-16**.

Kiss, F. and Boulanger, O., 2018. Residual Total Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105F/north. Geological Survey of Canada, Open File 8426; Yukon Geological Survey, **Open File 2018-17**.

Kiss, F. and Boulanger, O., 2018. First Vertical Derivative of the Magnetic Field, Aeromagnetic Survey of the Marsh Lake Area, Yukon, Part of NTS 105F/north. Geological Survey of Canada, Open File 8427; Yukon Geological Survey, **Open File 2018-18**.

Padget, C., 2018. Bedrock geology and metamorphism of the Anderson Lake area, parts of NTS 105H/07, 105H/10 and 105H/11, southeastern Yukon. Yukon Geological Survey, **Open File 2018-19**, 2 sheets, scale 1:50 000.

Cronmiller, D.C, Ward, B.C. and Bond, J.D., 2018. Surficial geology of Gladstone Creek. Yukon Geological Survey, **Open File 2018-20**, scale 1:50 000.

Educational Series

Yukon Geological Survey, 2018. Geology Matters. Yukon Geological Survey, Educational Series.

Annual Reports

Bond, J.D. and van Loon, S., 2018. Yukon Placer Mining Industry 2015 to 2017. Yukon Geological Survey, 284 p.

Yukon Exploration and Geology 2017. K.E. MacFarlane (ed.), 2018. Yukon Geological Survey, 163 p., digital only.

Yukon Exploration and Geology Overview 2017. K.E. MacFarlane (ed.), 2018. Yukon Geological Survey, 106 p.

Annual Overview Papers (YEG)

Relf, C., 2018. Summary of Yukon Geological Survey 2017-18 Activities. In: Yukon Exploration and Geology Overview 2017, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 1–17.

Bond, J. and van Loon, S., 2018. Yukon Placer Mining 2017 Development Overview. In: Yukon Exploration and Geology Overview 2017, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 19–32.

Torgerson, D., 2018. Yukon Mineral Exploration Program 2017 update. In: Yukon Exploration and Geology Overview 2017, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 33–40.

Lewis, L.L. and Casselman, S., 2018. Yukon Hard Rock Mining, Development and Exploration Overview 2017. In: Yukon Exploration and Geology Overview 2017, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 41–63.

Coulter, A.B., Lane, J. and Steiner, A., 2018. Osiris cluster Carlin-type gold, east-central Yukon. In: Yukon Exploration and Geology Overview 2017, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 65–74.

Sack, P.J., Kruse, S. and Ferraro, D., 2018. Gold occurrences on the Plateau South property (Yukon MINFILE 105N 034, 035, 036), central Yukon. In: Yukon Exploration and Geology Overview 2017, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 75–91.

Annual Report Papers (YEG)

Bordet, E., 2018. Bedrock geology of the Teslin Mountain and east Lake Laberge areas, south-central Yukon. In: Yukon Exploration and Geology 2017, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 1–24.

- Ellis, S.H., Roberts, N.J., Kennedy, K.E., Reyes, A.V. and Jensen B.J.L., 2018. Clast fabric analysis of glacial diamict at the Allan Creek section and its implication for paleo-ice flow of Liard Lowland, southeastern Yukon. *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 25–36.
- Fraser, T.A., Crawford, I., Gadd, M.G., Henderson, K., Layton-Matthews, D., Melchin, M., Peter, J.M., Sack, P.J., Sperling, E. and Strauss, J., 2018. An overview of shale studies in Yukon during the 2017 field season. *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 37–45.
- Friend, M.A., Allan, M.M. and Hart, C.J.R., 2018. New contributions to the bedrock geology of the Mount Freegold district, Dawson Range, Yukon (NTS 115I/2, 6 and 7). *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 47–68.
- Hutchison, M.P., 2018. An appraisal of Devonian-Mississippian shale strata in Yukon's Liard basin. *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 69–88.
- Kennedy, K.E., 2018. Evidence for limited glaciation in northern Kluane Range, southwestern Yukon, with implications for surficial geochemical exploration. *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 89–102.
- Liverton, T. and Casselman, S., 2018. Mod Property, VMS Mineralization in the Western Part of the Yukon-Tanana terrane? (Yukon MINFILE 105B 028, 029, 031). *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 103–109.
- Manor, M.J. and Piercey, S.J., 2018. Re-evaluating the chronostratigraphic framework for felsic volcanic and intrusive rocks of the Finlayson Lake region, Yukon-Tanana terrane, Yukon. *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 111–127.
- Moynihan, D., 2018. Stratigraphic affinity of late Neoproterozoic limestone in the vicinity of Tillei and McPherson lakes, 105H/13, 14, southeastern Yukon. *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 129–137.
- Steiner, A., Hickey, K. and Coulter, A.B., 2018. The structural framework for Carlin-type gold mineralization in the Nadaleen trend, Yukon. *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 139–149.
- van Drecht, L.H. and Beranek, L.P., 2018. New investigations of basal Laberge Group stratigraphy, Whitehorse trough, central Yukon. *In: Yukon Exploration and Geology 2017*, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 151–163.

Brochures

- Casselmann, S. (comp.), 2018. Yukon Mineral Deposits Summary 2018. Yukon Geological Survey, 30 p.

External Publications

- Colpron, M.**, McClelland, W.C. and Strauss, J.V., 2018. Detrital zircon U-Pb geochronological and Hf isotopic constraints on the geological evolution of North Yukon. *In: Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens*, K. Piepjohn, W.C. McClelland, J.V. Strauss and L. Reinhart (eds.). Geological Society of America, Special Paper 541; **YGS Contribution 35**.
- Fraser, T.A.**, Grasby, S.E., Witter, J.B., **Colpron, M.** and **Relf, C.**, 2018. Geothermal studies in Yukon - collaborative efforts to understand ground temperature in the Canadian North. Geothermal Resources Council Annual Meeting Transactions; GRC Transactions, vol. 42, p. 1451–1470.

- Johnson, B.G., Strauss, J.V., Taylor, J.F., Ward, W.P., **Colpron, M.**, McClelland, W.C. and Toro, J., 2018. The Whale Mountain allochthon: a fragment of the lapetus Ocean preserved in the northeastern Brooks Range, Alaska. *In: Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens*, K. Piepjohn, W.C. McClelland, J.V. Strauss and L. Reinhart (eds.). Geological Society of America, Special Paper 541; **YGS Contribution 34.**
- Murphy, D.C.**, 2018. Latest Cretaceous-early Eocene Pacific-Arctic?-Atlantic connection: Co-evolution of strike-slip fault systems, rooflines and transverse fold-and-thrust belts in the northwestern North American Cordillera. *In: Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens*, K. Piepjohn, W.C. McClelland, J.V. Strauss and L. Reinhart (eds.). Geological Society of America, Special Paper 541; **YGS Contribution 31.**
- Nelson, L.L., Strauss, J.V., Crockford, P.W., Cox, G.M., Johnson, B.G., Ward, W., **Colpron, M.**, McClelland, W.C. and Macdonald, F.A., 2018. Geochemical constraints on the provenance of pre-Mississippian sedimentary rocks in the North Slope subterranean of Yukon and Alaska. *In: Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens*, K. Piepjohn, W.C. McClelland, J.V. Strauss and L. Reinhart (eds.). Geological Society of America, Special Paper 541; **YGS Contribution 30.**
- Pinet, N., **Sack, P.J.**, Mercier-Langevin, P., Lavoie, D., Dubé, B., Lane, J. and Brake, V., 2018. Breccia styles and controls on carbonate replacement-type ('Carlin-type') gold zones, Rackla belt, east-central Yukon. *In: Targeted Geoscience Initiative: 2017 report of activities, volume 1*, N. Rogers (ed). Geological Survey of Canada, Open File 8358, p. 163–168.
- Sack, P.J.**, Large, R.R. and Gregory, D.D., 2018. Geochemistry of shale and sedimentary pyrite as a proxy for gold fertility in the Selwyn basin area, Yukon. *Mineralium Deposita*, vol. 53, p. 997–1018; **YGS Contribution 21.**
- Strauss, J.V., Johnson, B.G., **Colpron, M.**, Nelson, L.L., Perez, J.L., Benowitz, J.A., Ward, W.P. and McClelland, W.C., 2018. Pre-Mississippian stratigraphy and provenance of the North Slope of Arctic Alaska II: Basinal rocks of the northeastern Brooks Range and their significance in circum-Arctic evolution. *In: Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens*, K. Piepjohn, W.C. McClelland, J.V. Strauss and L. Reinhart (eds.). Geological Society of America, Special Paper 541; **YGS Contribution 36.**
- von Gosen, W., Piepjohn, K., McClelland, W.C. and **Colpron, M.**, 2018. Evidence for the Paleozoic sinistral Porcupine Shear Zone in North Yukon (Canadian Arctic) and geotectonic implications. *In: Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens*, K. Piepjohn, W.C. McClelland, J.V. Strauss and L. Reinhart (eds.). Geological Society of America, Special Paper 541; **YGS Contribution 37.**
- Ward, W., Strauss, J.V., Johnson, B.G., McClelland, W.C., **Colpron, M.**, von Gosen, W., Piepjohn, K., Cobble, M., Crockford, P.W. and Landis, J., 2018. Age, geochemistry and significance of Devonian felsic magmatism in the North Slope subterranean, Yukon. *In: Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens*, K. Piepjohn, W.C. McClelland, J.V. Strauss and L. Reinhart (eds.). Geological Society of America, Special Paper 541; **YGS Contribution 38.**
- Witter, J.B., Miller, C.A., Friend, M. and **Colpron, M.**, 2018. Curie point depths and heat production in Yukon, Canada. *Proceedings, 43rd Workshop on Geothermal Reservoir Engineering*, Stanford University, Stanford, California, February 12–14, 2018, SGP-TR-213.

Articles of Interest

- Blais-Stevens, A., 2018. Landslide susceptibility modelling using the quantitative random forest method along the northern portion of the Yukon Alaska Highway Corridor, Canada by Pouran Behnia. *Natural Hazards*, vol. 90, p. 1407–1426.

- Chapman, R.J., Allan, M.M., Mortensen, J.K., Wrighton, T.M. and Grimshaw, M.R., 2018. A new indicator mineral methodology based on a generic Bi-Pb-Te-S mineral inclusion signature in detrital gold from porphyry and low/intermediate sulfidation epithermal environments in Yukon Territory, Canada. *Mineralium Deposita*, vol. 53, p. 815–834.
- Couture, N.J., Irrgang, A., Pollard, W. and Fritz, M., 2018. Coastal Erosion of permafrost soils along the Yukon Coastal Plain and fluxes of organic carbon to the Canadian Beaufort Sea. *Journal of Geophysical Research – Biogeosciences*, doi: 10.1002/2017JG004166.
- Gadd, M.G. and Peter, J.M., 2018. Field observations, mineralogy and geochemistry of Middle Devonian Ni-Zn-Mo-PGE hyper-enriched black shale deposits, Yukon. Geological Survey of Canada, Open File 8358, p. 193–206.
- Hidy, A.J., Gosse, J.C., Sanborn, P. and Froese, D.G., 2018. Age-erosion constraints on an Early Pleistocene paleosol in Yukon, Canada, with profiles of ^{10}Be and ^{26}Al : Evidence for a significant loess cover effect on cosmogenic nuclide production rates. *Catena*, vol. 165, p. 260–271.
- McDonald, M.J., Piercey, S.J., Layne, G.D., Pigage, L.C. and Piercey, G., 2018. Mineral assemblages, textures and in situ sulphur isotope geochemistry mineralization from the Cyprus-type Ice volcanogenic massive sulphide (VMS) deposit, Yukon, Canada. *Minerals* 2018, vol. 8, doi:10.3390/min8110501.
- Parsons, A.J., Coleman, M.J., Ryan, J.J., Zagorevski, A., Joyce, N.L., Gibson, H.D. and Larson, K.P., 2018. Structural evolution of a crustal-scale shear zone through a decreasing temperature regime: the Yukon River shear zone, Yukon-Tanana terrane, northern Cordillera. *Lithosphere*, doi: <https://doi.org/10.1130/L724.1>.
- Parsons, A.J., Zagorevski, A., Ryan, J.J., McClelland, W.C., van Staal, C.R., Coleman, M.J. and Golding, M.L., 2018. Petrogenesis of the Dunite Peak ophiolite, south-central Yukon, and the distinction between upper-plate and lower-plate settings: A new hypothesis for the late Paleozoic–early Mesozoic tectonic evolution of the Northern Cordillera. *GSA Bulletin*, <https://doi.org/10.1130/B31964.1>.
- Peter, J.M., Bocking, N., Gadd, M.G., Layton-Matthews, D. and Johnson, N., 2018. Textural and mineralogical characterization of a Ni-Zn-rich black shale occurrence at the Akie property, Kechika Trough, northern British Columbia, and comparison with examples from Yukon. Geological Survey of Canada, Open File 8358, p. 207–216.
- Peter, J.M., Gadd, M.G., Layton-Matthews, D. and Voinot, A., 2018. Reconnaissance thallium isotope study of zinc-lead SEDEX mineralization and host rocks in the Howard's Pass district, Selwyn Basin, Yukon: Potential application to paleoredox determinations and fingerprinting of mineralization. Geological Survey of Canada, Open File 8358, p. 173–191.
- Porter, C., Morin, P., Howat, I., Noh, M.-J., Bates, B., Peterman, K., Keesey, S., Schlenk, M., Gardiner, J., Tomko, K., Willis, M., Cloutier, M., Husby, E., Foga, S., Nakamura, H., Platson, M., Wethington, M. Jr., Williamson, C., Bauer, G., Enos, J., Arnold, G., Kramer, W., Becker, P., Doshi, A., D'Souza, C., Cummins, P., Lauier, F. and Bojesen, M., 2018. ArcticDEM. Harvard Dataverse, V1, <https://doi.org/10.7910/DVN/OHHUKH>.
- Rada, C. and Schoof, C., 2018. Channelized, distributed, and disconnected: subglacial drainage under a valley glacier in the Yukon. *The Cryosphere*, vol. 12, p. 2609–2636.
- Tomes, H.E., Di Cecco, V.E., Tait, K.T. and Cámara, F., 2018. Crystal structure of near-endmember arrojadite-(BaNa) from Big Fish River, Yukon, Canada. *The Canadian Mineralogist*, <https://doi.org/10.3749/canmin.1800018>.

van Staal, C.R., Zagorevski, A., McClelland, W.C., Escayola, M.P., Ryan, J.J., Parsons, A.J. and Proenza, J., 2018. Age and setting of Permian Slide Mountain terrane ophiolitic ultramafic-mafic complexes in the Yukon: Implications for late Paleozoic-early Mesozoic tectonic models in the northern Canadian Cordillera. *Tectonophysics*, vol. 744, p. 458–483.

Verbaas, J., Thorkelson, D.J., Milidragovic, D., Crowley, J.L., Foster, D., Gibson, H.D. and Marshall, D.D., 2018. Rifting of western Laurentia at 1.38 Ga: the Hart River sills of Yukon, Canada. *Lithos*, vol. 316–317, p. 243–260.

Theses

Kovacs, N., 2018. Genesis and post-ore modification of the migmatized Carmacks Copper Cu-Au-Ag porphyry deposit, Yukon, Canada. Unpublished MSc thesis, University of British Columbia, 291 p.

MacWilliam, K.R.G., 2018. Geology and genesis of the Coffee Gold deposit, west-central Yukon, Canada: implications for the structural, magmatic and metallogenic evolution of the Dawson Range, and gold exploration models. Unpublished PhD thesis, University of British Columbia.