

YGS list of publications and maps for 2020

YGS released 47 publications in 2020: 43 Open Files, 2 Miscellaneous Reports and 2 Annual Reports

Open Files

- Sack, P.J., Colpron, M., Crowley, J.L., Ryan, J.J., Allan, M.M., Beranek, L.P. and Joyce, N.L., 2020. Atlas of Late Triassic to Jurassic plutons in the Intermontane terranes of Yukon. Yukon Geological Survey, **Open File 2020-1**, 365 p.
- Ambrose, T., 2020. Preliminary bedrock geology map of the southern Rusty Mountain area, southern Wernecke Mountains, Yukon (part of NTS 106C/4,5 and 106D/1,8). Yukon Geological Survey, **Open File 2020-2**, scale 1:50 000.
- Witter, J.B., 2020. Early-stage exploration for geothermal energy resources along the Denali fault near Duke River, Yukon. Yukon Geological Survey, **Open File 2020-3**, 62 p.
- De Pasquale, J., 2020. Lithostratigraphic metalotect ranking of non-plutonic rocks in Yukon. Yukon Geological Survey, **Open File 2020-4**, 31 p.
- Kennedy, K.E. and Ellis, S.E., 2020. Surficial geology of the northern Kluane Ranges (parts of NTS 115G/5, 6, 11, 12). Yukon Geological Survey, **Open File 2020-5**, 4 sheets, scale 1:50 000.
- Jackaman, W., 2020. Regional Stream Sediment Geochemical Data, Nash Creek and Larson Creek survey areas, Yukon (parts of NTS 106C, 106D and 116A). Yukon Geological Survey, **Open File 2020-6**.
- Kiss, F., 2020. Aeromagnetic survey of the Nash Creek area, Yukon, parts of NTS 105M,N, 106C,D, 115P and 116A. Geological Survey of Canada, Open File 8728; Yukon Geological Survey, **Open File 2020-7**, scale 1:100 000.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 116I. Yukon Geological Survey, **Open File 2020-8**, scale 1:250 000, 2 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 95E. Yukon Geological Survey, **Open File 2020-9**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105B. Yukon Geological Survey, **Open File 2020-10**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105C. Yukon Geological Survey, **Open File 2020-11**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105D. Yukon Geological Survey, **Open File 2020-12**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105E. Yukon Geological Survey, **Open File 2020-13**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105F. Yukon Geological Survey, **Open File 2020-14**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105G. Yukon Geological Survey, **Open File 2020-15**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105H. Yukon Geological Survey, **Open File 2020-16**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105I. Yukon Geological Survey, **Open File 2020-17**, scale 1:250 000, 4 sheets.

- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105J. Yukon Geological Survey, **Open File 2020-18**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105K. Yukon Geological Survey, **Open File 2020-19**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105L. Yukon Geological Survey, **Open File 2020-20**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105M. Yukon Geological Survey, **Open File 2020-21**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105N. Yukon Geological Survey, **Open File 2020-22**, scale 1:250 000, 2 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105O. Yukon Geological Survey, **Open File 2020-23**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 105P. Yukon Geological Survey, **Open File 2020-24**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 106B. Yukon Geological Survey, **Open File 2020-25**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 106C. Yukon Geological Survey, **Open File 2020-26**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 106D. Yukon Geological Survey, **Open File 2020-27**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115A. Yukon Geological Survey, **Open File 2020-28**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115B. Yukon Geological Survey, **Open File 2020-29**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115F. Yukon Geological Survey, **Open File 2020-30**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115G. Yukon Geological Survey, **Open File 2020-31**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115H. Yukon Geological Survey, **Open File 2020-32**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115I. Yukon Geological Survey, **Open File 2020-33**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115J. Yukon Geological Survey, **Open File 2020-34**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115K. Yukon Geological Survey, **Open File 2020-35**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115N. Yukon Geological Survey, **Open File 2020-36**, scale 1:250 000, 4 sheets.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115O. Yukon Geological Survey, **Open File 2020-37**, scale 1:250 000, 4 sheets.

Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 115P. Yukon Geological Survey, **Open File 2020-38**, scale 1:250 000, 4 sheets.

Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 116A. Yukon Geological Survey, **Open File 2020-39**, scale 1:250 000, 4 sheets.

Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 116B. Yukon Geological Survey, **Open File 2020-40**, scale 1:250 000, 4 sheets.

Aurora Geosciences Ltd. and Bruce, J.O., 2020. Reprocessing of Yukon magnetic data for NTS 116C. Yukon Geological Survey, **Open File 2020-41**, scale 1:250 000, 4 sheets.

Read, P., McOnie, A. and Iles, S., 2020. Geology of the Keno Hill district. Yukon Geological Survey, **Open File 2020-42**, 2 sheets, scale 1:25 000 and 1:2500.

Cronmiller, D.C., 2020. Surficial geology, Carmacks area, Yukon (parts of NTS 115I/1). Yukon Geological Survey, **Open File 2020-43**, scale 1:15 000.

Miscellaneous reports

Langevin, H., Fraser, T.A. and Raymond, J., 2020. Assessment of the thermo-hydraulic properties of rock samples near Takhini Hot Springs and in the Tintina fault zone, Yukon. Yukon Geological Survey, **Miscellaneous Report 19**, 30 p. plus appendices.

Cronmiller, D.C., McParland, D.J., Goguen, K.M. and McKillop, R.J., 2020. Carmacks surficial geology and community hazard susceptibility mapping. Yukon Geological Survey, **Miscellaneous Report 20**, 16 p. plus appendices.

Annual Reports

Yukon Exploration and Geology 2019. K.E. MacFarlane (ed.), 2020. Yukon Geological Survey 139 p., digital only.

Yukon Exploration and Geology Overview 2019. K.E. MacFarlane (ed.), 2020. Yukon Geological Survey, 78 p.

Annual Overview Papers (YEG)

Relf, C., 2020. Yukon Geological Survey: Planning for the future. In: Yukon Exploration and Geology Overview 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 1–22.

Bond, J. and van Loon, S., 2020. Yukon placer mining 2019 development and exploration overview. In: Yukon Exploration and Geology Overview 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 23–34.

Torgerson, D., 2020. Yukon Mineral Exploration Program 2019 update. In: Yukon Exploration and Geology Overview 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 35–42.

Lewis, L.L. and Casselman, S.G., 2020. Yukon hard rock mining, development and exploration overview 2019. In: Yukon Exploration and Geology Overview 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 43–60.

Weston, L., 2020. Yukon Geological Survey's outreach program: 2019 highlights. In: Yukon Exploration and Geology Overview 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 61–70.

Annual Report papers (YEG)

Ambrose, T. and Bowie, S., 2020. Preliminary report on the bedrock geology of the Rackla River area, southern Wernecke Mountains, Yukon (parts of NTS 106C/4, 5 and 106D/1, 8). In: Yukon Exploration and Geology 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 1–21.

Bullen, W., 2020. New mineral potential mapping methodology for Yukon: Case studies from the Beaver River and Dawson regional land use planning areas. In: Yukon Exploration and Geology 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 23–42.

Cobbett, R., 2020. Preliminary report on the bedrock geology of Castle Mountain area, Yukon (parts of NTS 105D/6). In: Yukon Exploration and Geology 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 43–55.

- Langevin, H., Fraser, T. and Raymond J., 2020. Assessment of thermo-hydraulic properties of rock samples near Takhini Hot Springs, Yukon. In: Yukon Exploration and Geology 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 57–73.
- Lee, W.-S., Kontak, D.J. Richards, J.P. and Sack, P. 2020. Updated geology and porphyry copper potential of the Klaza deposit, Mount Nansen district (Yukon MINFILE 115I 067). In: Yukon Exploration and Geology 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 75–97.
- Sack, P., Gabites, J., Crowley, J., Benowitz, J., McFarlane, C., Gobadi, M. and Ferraro, D., 2020. Geochronologic and Pb-isotopic constraints on gold mineralization at the Plateau South property (Yukon MINFILE 105N 034, 035, 036), central Yukon. In: Yukon Exploration and Geology 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 99–119.
- Wiest, A.C., Beranek, L.P. and Manor, M.J., 2020. Upper Triassic to Lower Jurassic stratigraphy of the Faro Peak formation, southern Tay River map area, central Yukon (NTS 105K). In: Yukon Exploration and Geology 2019, K.E. MacFarlane (ed.), Yukon Geological Survey, p. 121–139.
- External publications**
- Bickerton, L., **Colpron, M.**, Gibson, H.D., Thorkelson, D. and Crowley, J.L., 2020. The northern termination of the Cache Creek terrane in Yukon: Middle Triassic arc activity and Jurassic-Cretaceous structural imbrication. *Canadian Journal of Earth Sciences*, vol. 57, p. 227–248. **YGS Contribution 041**, <https://doi.org/10.1139/cjes-2018-0262>.
- Cobbett, R.N., **Colpron, M.**, Crowley, J.J.L., Cordey, F., Blodgett, R.B. and Orchard, M.J., 2020. Late Devonian magmatism and clastic deposition in the upper Earn Group (central Yukon) mark the transition from passive to active margin along western Laurentia. *Canadian Journal of Earth Sciences*. **YGS Contribution 047**, <https://doi.org/10.1139/cjes-2020-0161>.
- Gadd, M.G., Peter, J.M., Hnatyshin, D., Creaser, R., Gouwy, S. and **Fraser, T.**, 2020. A Middle Devonian basin-scale precious metal enrichment event across northern Yukon (Canada). *Geology*, vol. 48. **YGS Contribution 043**, <https://doi.org/10.1130/G46874.1>.
- Kovacs, N., Allan, M.M., Crowley, J.L., **Colpron, M.**, Hart, C.J.R., Zagorevski, A. and Creaser, R.A., 2020. Carmacks Copper Cu-Au-Ag Deposit: Mineralization and Postore Migmatization of a Stikine Arc Porphyry Copper System in Yukon, Canada. *Economic Geology*, vol. 115, p. 1413–1442. **YGS Contribution 044**, <https://doi.org/10.5382/econgeo.4756>.
- Pattison, D.R.M., **Moynihan, D.P.**, McFarlane, C.R.M., Simony, P.S. and Cubbley, J.F., 2020. Field Guide to the geology, metamorphism and tectonics of the Foreland and Omineca belts of SW Alberta and SE British Columbia. Geological Association of Canada Field Guide Series 2020-A, 257 p., <http://dx.doi.org/10.11575/PRISM/38351>.
- Pinet, N., **Sack, P.**, Mercier-Langevin, P., Colpron, M., Lavoie, D., Dubé, B. and Brake, V.I., 2020. Neoproterozoic-hosted Carlin-type mineralization in central Yukon, part 1: regional to prospect-scale geological controls. In: Targeted Geoscience Initiative 5: contributions to the understanding of Canadian gold systems, P. Mercier-Langevin, C.J.M. Lawley and S. Castonguay (eds.), Geological Survey of Canada, Open File 8712, p. 281–297. **YGS Contribution 2020-1**, <https://doi.org/10.4095/326045>.
- Pinet, N., **Sack, P.**, Mercier-Langevin, P., Colpron, M., Lavoie, D., Dubé, B. and Brake, V.I., 2020. Neoproterozoic-hosted Carlin-type mineralization in central Yukon, part 2: mineralization. In: Targeted Geoscience Initiative 5: contributions to the understanding of Canadian gold systems, P. Mercier-Langevin, C.J.M. Lawley and S. Castonguay (eds.), Geological Survey of Canada, Open File 8712, p. 299–314. **YGS Contribution 2020-2**, <https://doi.org/10.4095/326047>.

Strauss, J.V., Fraser, T., Melchin, M.J., Allen, T.J., Malinowski, J., Feng, X., Taylor, J.F., Day, J., Gill, B.C. and Sperling E.A., 2020. The Road River Group of northern Yukon, Canada: early Paleozoic deep-water sedimentation within the Great American Carbonate Bank. *Canadian Journal of Earth Sciences*, vol. 57, p. 1193–1219. **YGS Contribution 046.**

Articles of interest

- Bandara, S., Froese, D., Porter, T.J. and Calmels, F., 2020. Holocene pore-ice $\delta^{18}\text{O}$ and $\delta^2\text{H}$ records from drained thermokarst lake basins in the Old Crow Flats, Yukon, Canada. *Permafrost and Periglacial Processes*, <https://doi.org/10.1002/ppp.2073>.
- Best, M., Fage, I. and Ryan, S., 2020. Mapping the distribution of permafrost using the Resolve Airborne EM system: Klondike Highway, Yukon, Canada. *CSEG Recorder*, vol. 44.
- Blais-Stevens, A., Clague, J.J., Brahney, J., Lipovsky, P., Haeussler, P. and Menounos, B., 2020. Evidence for large Holocene earthquakes along the Denali fault in southwest Yukon, Canada. *Environmental & Engineering Geoscience*, vol. XXVI, no. 1, p. 1–18.
- Cordey, F., 2020. Timing of Cache Creek Ocean closure: insights from new Jurassic radiolarian ages in British Columbia and Yukon and their significance for Canadian Cordillera tectonics. *Canadian Journal of Earth Sciences*, vol. 57, p. 1167–1179.
- Gaidies, F., Morneau, Y.E., Petts, D.C., Jackson, S.E., Zagorevski, A. and Ryan, J.J., 2020. Major and trace element mapping of garnet: Unravelling the conditions, timing and rates of metamorphism of the Snowcap assemblage, west-central Yukon. *Journal of Metamorphic Geology*, <https://doi.org/10.1111/jmg.12562>.
- Gibson, T.M., Kunzmann, M., Poirier, A., Schumann, D., Tosca, N.J. and Halverson, G.P., 2020. Geochemical signatures of transgressive shale intervals from the 811 Ma Fifteenmile Group in Yukon, Canada: Disentangling sedimentary redox cycling from weathering alteration. *Geochimica et Cosmochimica Acta*, vol. 280, p. 161–184.
- Homer, L.E., Blodgett, R.B., Liang, Y. and Zhang, Z., 2020. The Early Devonian (Emsian) acrotretid microbrachiopod *Opsincondion minor* Popov, 1981, from the Alaska/Yukon Territory border and Novaya Zemlya. *Estonian Journal of Earth Sciences*, vol. 69, p. 143–153, <https://doi.org/10.3176/earth.2020.10>.
- Kochtitzky, W., Copland, L., Painter, M. and Dow, C., 2020. Draining and filling of ice dammed lakes at the terminus of surge-type Dañ Zhùr (Donjek) Glacier, Yukon, Canada. *Canadian Journal of Earth Sciences*, vol. 57, p. 1337–1348.
- Kochtitzkey, W., Winski, D., McConnell, E., Kreutz, K., Campbell, S., Enderlin, E.M., Copland, L., Williamson, S., Main, B. and Jiskoot, H., 2020. Climate and surging of Donjek Glacier, Yukon, Canada. *Arctic, Antarctic, and Alpine Research*, vol. 52, p. 264–280, <https://doi.org/10.1080/15230430.2020.1744397>.
- Magnall, J.M., Gleeson, S.A., Creaser, R.A., Paradis, S., Glodny, J. and Kyle, J.R., 2020. The Mineralogical Evolution of the Clastic Dominant-Type Zn-Pb \pm Ba Deposits at Macmillan Pass (Yukon, Canada)—Tracing Subseafloor Barite Replacement in the Layered Mineralization. *Economic Geology*, <https://doi.org/10.5382/econgeo.4730>.
- Magnall, J.M., Gleeson, S.A. and Paradis, S., 2020. A new subseafloor replacement model for the Macmillan Pass clastic-dominant Zn-Pb \pm Ba deposits (Yukon, Canada). *Economic Geology*, vol. 115, p. 1–7, <https://doi.org/10.5382/econgeo.4719>.
- Mottram, C.M., Kellett, D.A., Barresi, T., Zwingmann, H., Friend, M., Todd, A. and Percival, J.B., 2020. Syncing fault rock clocks: Direct comparison of U-Pb carbonate and K-Ar illite fault dating methods. *Geology*, vol. 48, <https://doi.org/10.1130/G47778.1>.
- Williamson, S.N., Zdanowicz, C., Anslow, F.S., Clarke, G.K.C., Copland, L., Danby, R.K., Flowers, G.E., Holdsworth, G., Jarosch, A.H. and Hik, D.S., 2020. Evidence for elevation-dependent warming in the St. Elias Mountains, Yukon, Canada. *Journal of Climate*, vol. 33, p. 3253–3269.

