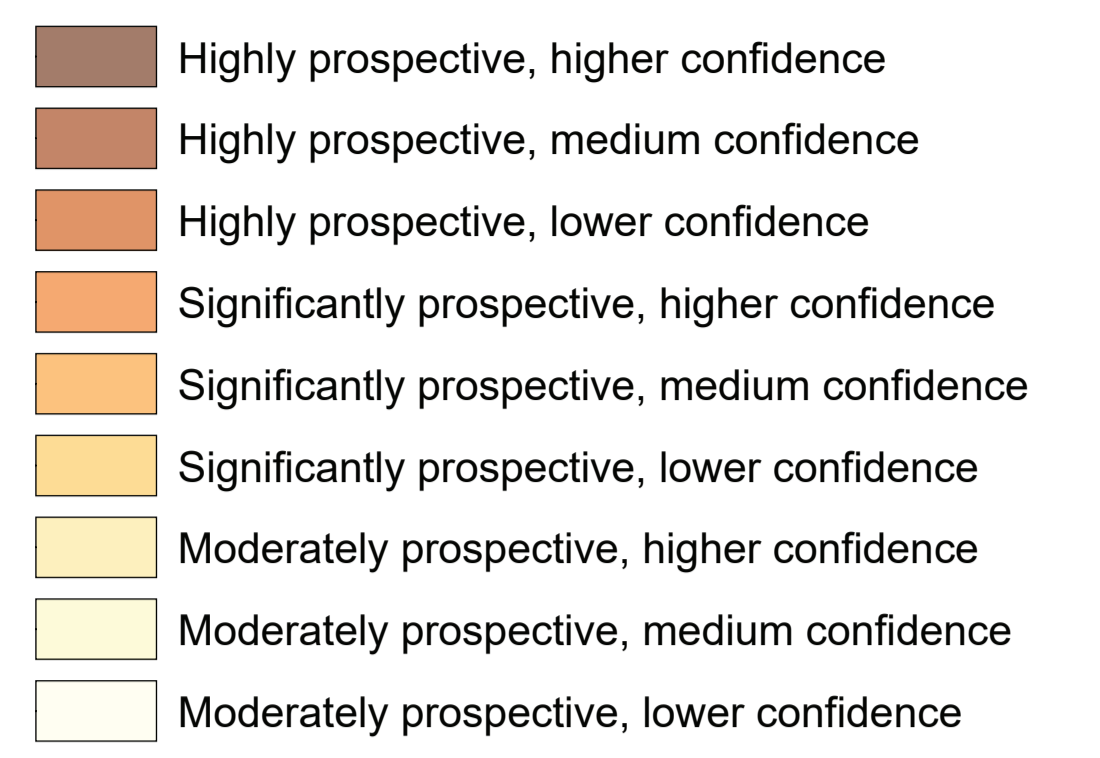
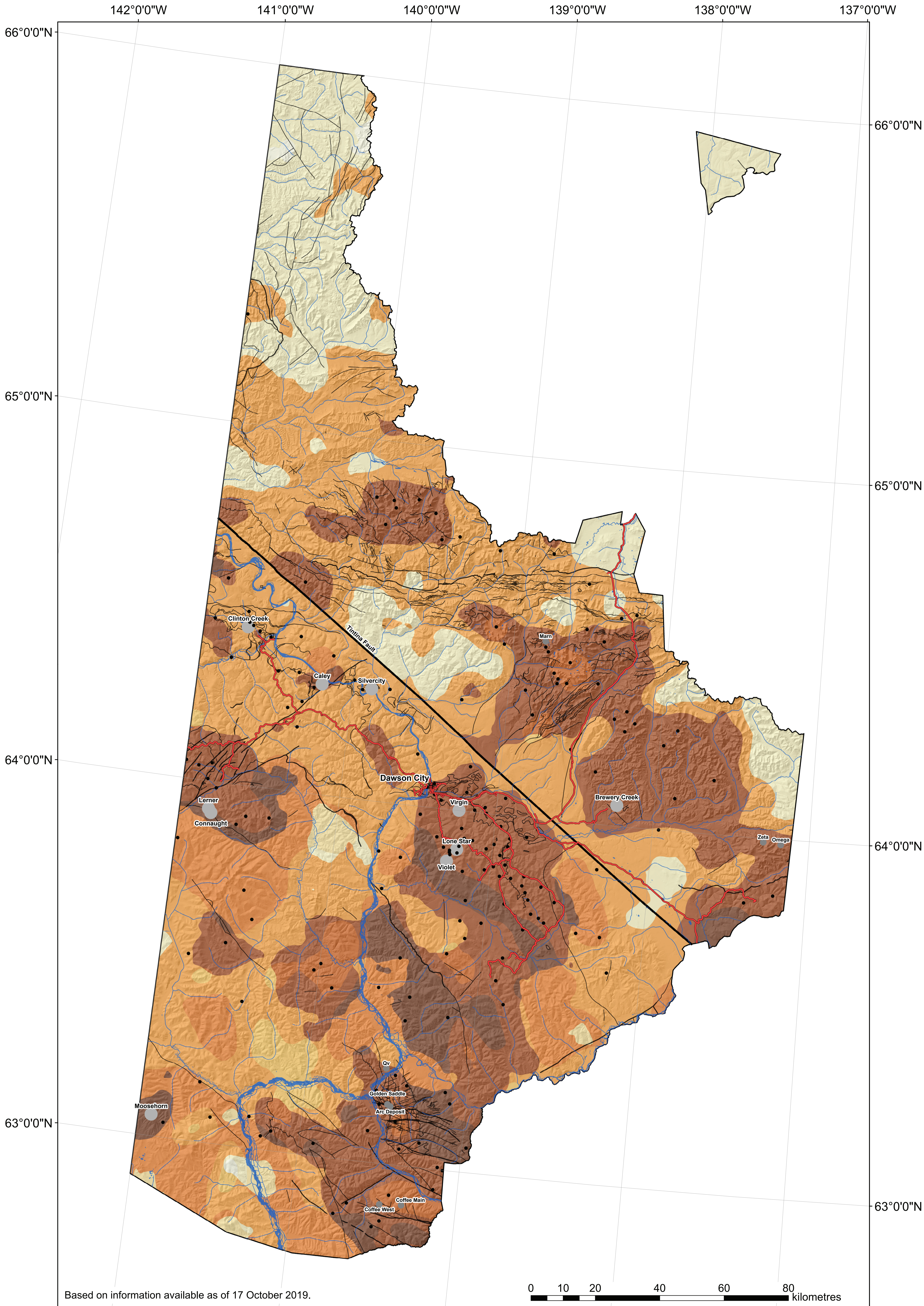


Mineral Potential/*Confidence in Geological Mapping for the Dawson Region Land Use Planning Area



- anomalies/drilled prospects
- deposits
- past/current producers
- faults - minor
- faults - major
- Tintina Fault

Explanation

This map was produced to support the Dawson region land use plan, which is currently underway. In Yukon (and elsewhere), land use planning refers to the process whereby land use (e.g., hunting, fishing, mining, agriculture, forestry) is codified. Protected areas such as parks are another outcome of land use planning. The process is overseen by government (territorial and First Nation) appointees who make recommendations based on feedback from land use planners, who rely, in turn, on input from government, non-governmental agencies, and the general public.

The mineral potential mapping process is based on a mineral systems approach, and is both data- and knowledge-driven. Mineral system components that could potentially contribute to the development of metal accumulations in an area, in this case the Dawson region, are evaluated.

The procedure makes use of block modeling techniques where each block (unit cell) is assigned a prospectivity score and, separately, a confidence score. Scores are calculated based on the presence or absence of categorical features within unit cells and represent the posterior favourability of each unit cell relative to other unit cells. The posterior favourability refers to mineral potential and confidence scores after all evidence has been taken into account. Evidential layers are weighted according to buffer distance and/or through the application of knowledge-based factors. Lithology classes are an exception – these features are factored using a multiclass weights-of-evidence approach with known mineral deposits and occurrences used as training points.

Mineral potential confidence is based on bedrock mapping confidence, which is derived from a combination of data- and knowledge-driven attributes. The metric is considered appropriate for mineral potential maps for land use planning purposes.

* Reflective of how much bedrock mapping has been done in an area.

References

Details on methods used to produce the map can be found in:

Bullen, W., in press. Updates to the Yukon Geological Survey's Mineral Potential Mapping Methodology. In: Yukon Exploration and Geology 2021, K.E. MacFarlane (ed.), Yukon Geological Survey.

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.

For MINFILE data:

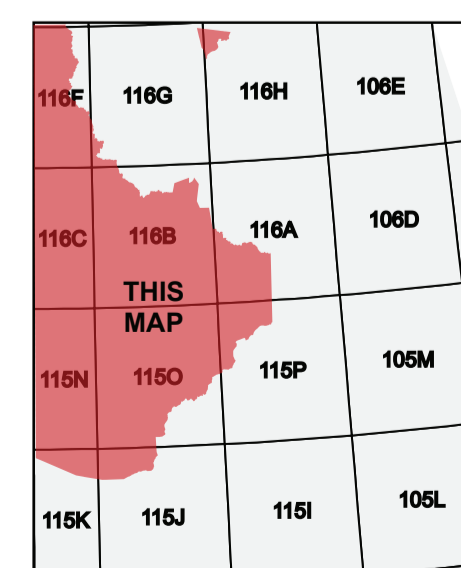
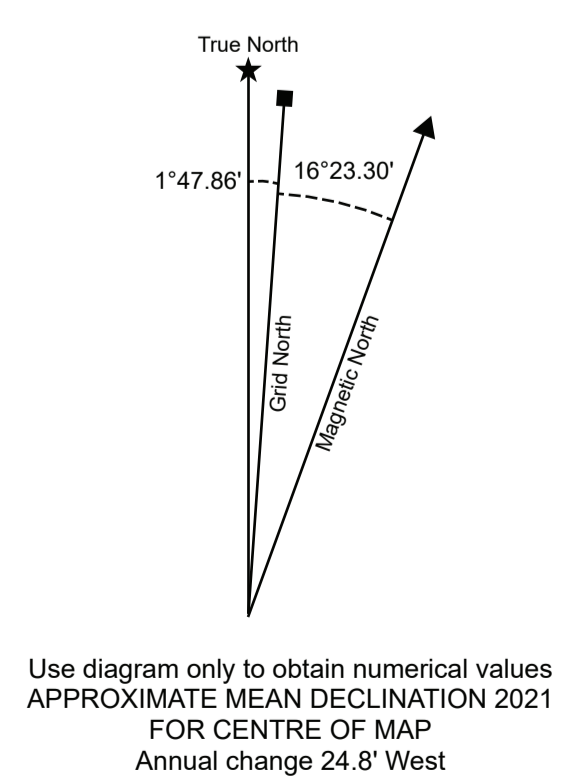
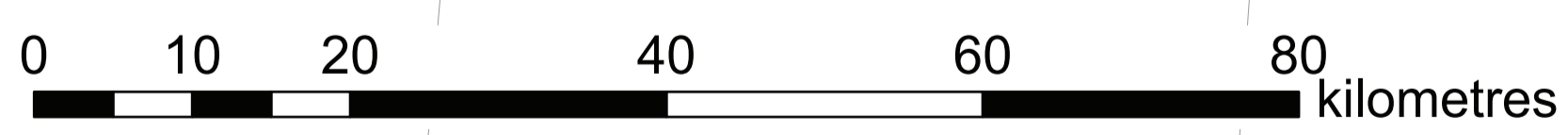
Yukon Geological Survey, 2021b. Yukon MINFILE – A database of mineral occurrences. Yukon Geological Survey, <https://data.geology.gov.yk.ca/Compilation/24 - InfoTab>.

For fault data:

Yukon Geological Survey, 2021a. Yukon digital bedrock geology. Yukon Geological Survey, Bedrock Geology data set - Compilation Details - Yukon Geological Survey (gov.yk.ca).

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Based on information available as of 17 October 2019.



Any revisions or additional geological information known to the user would be welcomed by the Yukon Geological Survey.

Paper copies of this map may be obtained from Yukon Geological Survey, Room 102 - 300 Main St., Whitehorse, Yukon, Y1A 2B5. E-mail: geology@gov.yk.ca.

A digital PDF (Portable Document Format) file of this map may be downloaded free of charge from the Yukon Geological Survey website: <https://data.geology.gov.yk.ca>



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Government of Yukon

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Mineral Potential/*Confidence in Geological Mapping for the Dawson Region Land Use Planning Area

by

Warwick Bullen