



## Compilation Details

**Layer Name:** Stream Sediment Basins (RGS)

**Layer Type:** Minerals Geology

**Feature Type:** Dataset

## General Information

**Release Date:** 2023-11-15

**Released By:** Yukon Geological Survey

**Contact Info:** ygs-minerals@gov.yk.ca; geology@gov.yk.ca

### Summary

Geochemical data from regional geochemistry survey samples from Yukon have undergone exploratory data analysis and principal component analysis. The results of these analyses clearly demonstrate geological control on the distribution of a number of important commodity and mineral deposit pathfinder elements. Catchment basins have been delineated for the samples and the dominant simplified geological unit in each catchment basin used to level the geochemical data where appropriate.

### Description

**Last Updated:** Nov 15, 2023

Geochemical data from regional geochemistry survey samples from Yukon have undergone exploratory data analysis and principal component analysis. The results of these analyses clearly demonstrate geological control on the distribution of a number of important commodity and mineral deposit pathfinder elements. Catchment basins have been delineated for the samples and the dominant simplified geological unit in each catchment basin used to level the geochemical data where appropriate. Levelling the geochemical data in this fashion generally fails to fully account for enrichments in many commodity and mineral deposit pathfinder elements in the bedrock due to practical limitations on the resolution of the mapping and knowledge of the relative contributions of different geological units, although the resulting data interpretation is an improvement on one based solely upon raw geochemical data. Weighted sums models have been generated for the deposit types that either exist within the individual map areas covered by this report or are considered by the authors to be of exploration significance. Separate catchment maps showing the distribution of stream water pH and the concentration of elements inferred to have accumulated through hydromorphic dispersion are also provided. An additional series of maps has been generated to display weighted sums models calculated using regression of commodity and mineral deposit pathfinder elements against those principal components containing the same elements that show the strongest spatial associations with bedrock geology. Both model types have been iteratively tested using known mineral occurrences in the relevant map areas and, for the most part, are compatible with the distribution of known mineralization where sampling coverage is adequate. Geochemical anomalies unrelated to known mineral occurrences are evident in both data sets and provide possible targets for further investigation.

### Related References

Number	Reference Type	Document Type	Title	Year	Page(s)
2015-27	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105H	2015	
2015-29	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105N	2015	
2016-11	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 115H	2016	
2015-10	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of regional geochemical stream sediment data from Yukon: catchment basin analysis and weighted sums modeling	2015	
2015-25	Yukon Geological	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105K	2015	

	Survey	(Geochemical)			
2015-26	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105G	2015	
2015-28	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105F	2015	
2015-30	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 95D and 105A	2016	
2015-31	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105I and 105J	2016	
2016-8	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105B	2016	
2016-9	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105E	2016	
2016-10	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105L	2016	
2016-12	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105C	2016	
2016-13	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 115F and 115G	2016	
2016-14	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 115I	2016	
2016-15	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 115J and 115K	2016	
2016-26	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105D	2016	
2016-27	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105M	2016	
2016-28	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 105O and 105P	2016	
2016-29	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 115A	2016	
2016-31	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 115P	2016	
2016-32	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 116B and 116C	2016	

2016-30	Yukon Geological Survey	Open File (Geochemical)	Enhanced interpretation of stream sediment geochemical data for NTS 115N and 115O	2016	
---------	-------------------------------	----------------------------	---	------	--