

INTRODUCTION

New geochemical data from re-analysis of archived stream sediment samples have been assessed using weighted sums modeling (WSM) and catchment basin analysis as described in the methodology report that accompanies this map (Mackie et al., 2015). In addition to a series of maps displaying WSM results, a catchment map of stream water pH has also been constructed.

SAMPLING AND ANALYSIS PROGRAMS

Field descriptions and initial geochemical data, including stream water pH, for 940 sites were released in Geological Survey of Canada ("GSC") Open Files 1961 and 2174 (Friske & Hornbrook, 1989; Friske et al., 1990). New geochemical data from the re-analysis of archived sample material were released in Yukon Geological Survey ("YGS") Open Files 2011-29 and 2012-7 (Jackaman, 2011 & 2012). The reader is referred to these open files for detailed descriptions of sampling techniques, analytical procedures and quality control measures.

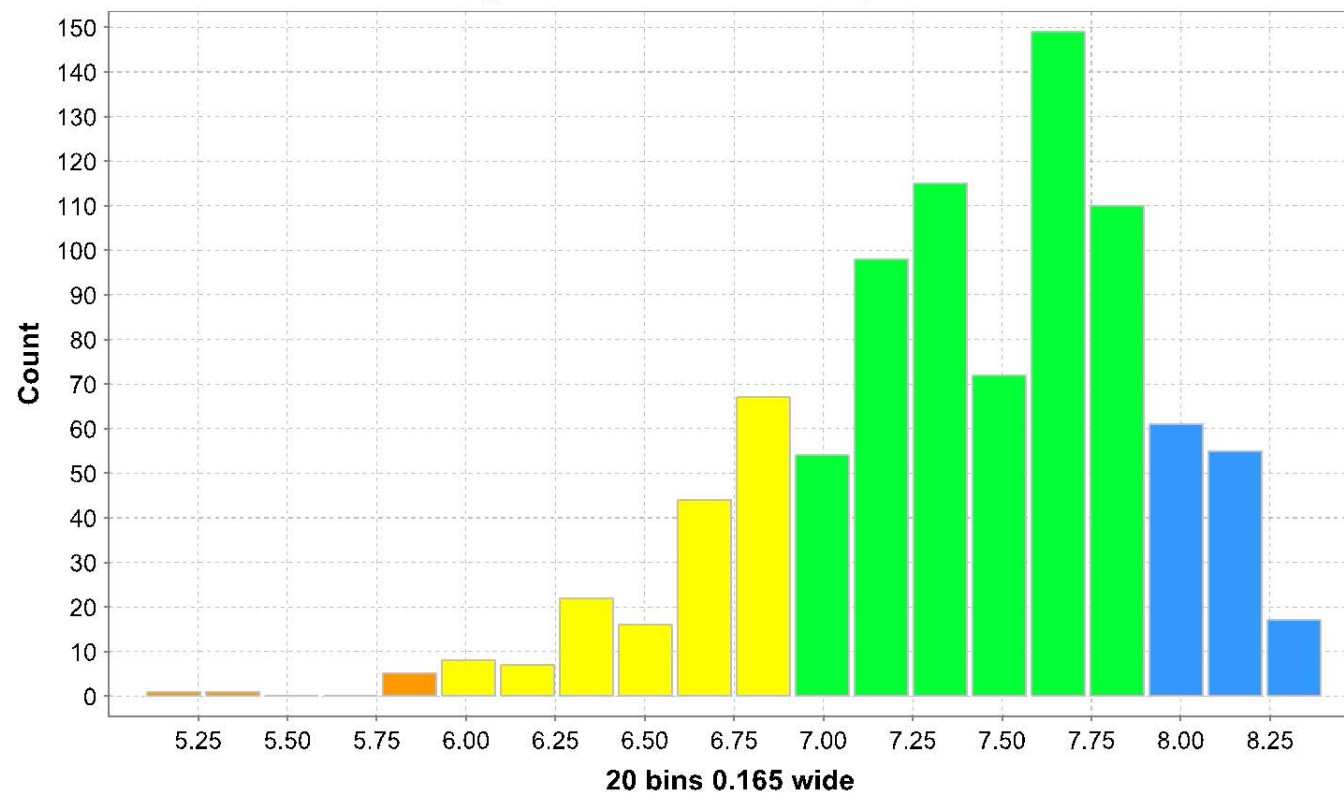
MINERAL OCCURRENCES

A variety of types of base and precious-metal mineralization are known to occur in the Tay River area as shown in Table 1 (Yukon MINFILE, 2015). These include sedimentary exhalative Zn-Pb-Ag (past-producing Faro, Vangorda and Grum mines; and Swim and Dy deposits) and epithermal Au-Ag (Grew Creek) deposits. Polymetallic vein, Pb-Zn skarn, Cu skarn, intrusion-related Au and volcanogenic Zn-Pb-Ag-Cu-Au and Cu-Co massive sulphide mineralization is also documented within the map area. Along strike towards the southeast, in the Finalyoun Lake district, numerous volcanic and sedimentary-hosted massive sulphide deposits occur, including Yukon Zinc Corporation's Wolverine mine (currently on care-and-maintenance).

STREAM WATER PH

As shown in Figure 1 the vast majority of the streams at the sample site are near-neutral to weakly alkaline. Comparison of the location of known occurrences and stream water pH shows no obvious relationship suggesting any response from oxidation of near-surface sulphide mineralization has been diluted or neutralized. Regional variations in pH are evident and indicate some level of lithological control on the hydrogen ion content of stream waters. A few catchments have waters that are mildly acidic (i.e., pH<6) which could be related to sulphide mineralization.

Figure 1: Stream Water pH



LEGEND

- ▲ Mineral Occurrence
 - Town
 - Road
 - Contour
 - River
 - NTS map sheet
 - Water Body
 - Wetland
 - Sample Location
 - Catchment
- Stream Water pH**
- No pH data
 - 0.01 - 5.00
 - 5.01 - 6.00
 - 6.01 - 7.00
 - 7.01 - 8.00
 - 8.01 - 9.00
 - 9.01 - 10.00

REFERENCES

- Friske, P.W. and Hornbrook, E.H., 1989. National Geochemical Reconnaissance Stream Sediment and Water Geochemical Data, Central Yukon (105KW and 105L). Geological Survey of Canada, Open File 1961.
- Friske, P.W.B., Hornbrook, E.H.W., Lynch, J.J., McCurdy, M.W., Gross, H., Galetta, A.C., and Durham, C.C., 1990. National Geochemical Reconnaissance Stream Sediment and Water Geochemical Data, Central Yukon (105KE). Geological Survey of Canada, Open File 2174.
- Jackaman, W., 2011. Regional Stream Sediment Geochemical Data, Tay River Area, Central Yukon (NTS 105K East), Yukon Geological Survey, Open File 2011-29.
- Jackaman, W., 2012. Regional Stream Sediment Geochemical Data, Glenlyon Area, Central Yukon (NTS 105K west & 105L), Yukon Geological Survey, Open File 2012-7.
- Mackie, R., Arne, D. and Brown, O., 2015. Enhanced interpretation of regional stream sediment (RGS) geochemical data from Yukon: catchment basin analysis and weighted sums modeling. Yukon Geological Survey, Open File Report 2015-10.
- Yukon MINFILE, 2015. Yukon MINFILE – A database of mineral occurrences. Yukon Geological Survey. www.data.geology.gov.yk.ca, accessed May 2015.

RECOMMENDED CITATION

MACKIE, R., ARNE, D. AND BROWN, O., 2015. Stream water pH. In: Enhanced interpretation of stream sediment geochemical data for NTS 105K. Yukon Geological Survey, Open File 2015-25, scale 1:250 000, sheet 17 of 17.

Catchment basin polygons generated by the Yukon Geological Survey (J. O. Bruce).

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

Paper copies of this map and the accompanying report may be purchased from the Yukon Geological Survey, Energy, Mines and Resources, Government of Yukon, Room 102-300 Main St., Whitehorse, Yukon, Y1A 2B5. Ph. 867-667-3201, Email geology@gov.yk.ca.

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

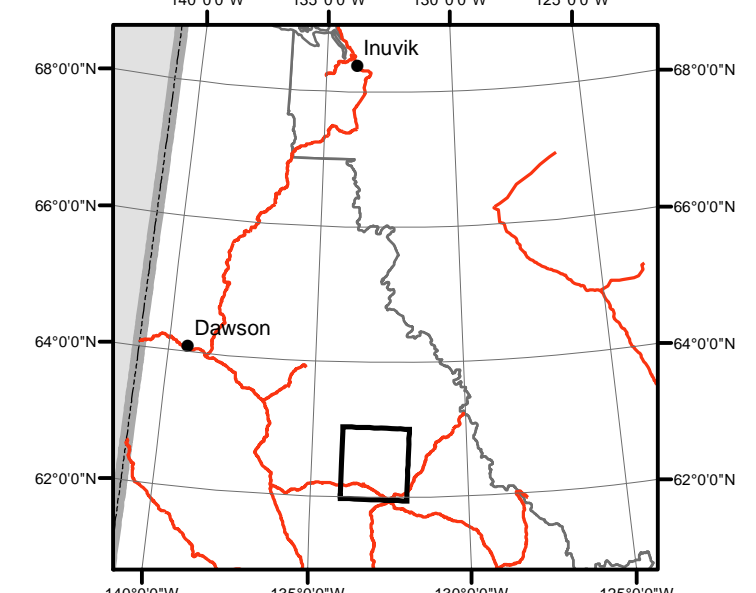
Table 1: List of Mineral Occurrences for NTS map sheet 105K (Yukon MINFILE, 2015)

Number	Name	Type	Status	Commodities
105K 001	SKEENA	Unknown	Unknown	
105K 002	WOP	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Copper, Molybdenum
105K 003	RAGS	Vein Cu-Ag Quartz	Showing	Copper
105K 004	DARCY	Vein Polymetallic Ag-Pb-Zn-Au	Deposit	Zinc, Lead, Silver
105K 005	DEJAY	Unknown	Anomaly	
105K 006	SNOWCAP	Skarn Cu	Drilled Prospect	Copper
105K 007	CITATION	Unknown	Unknown	
105K 008	MOURNE	Epithermal Au-Ag-Cu: High Sulphidation	Prospect	
105K 009	GREW CREEK	Epithermal Au-Ag: Low Sulphidation	Deposit	Gold, Silver, Mercury, Arsenic
105K 010	FARGO	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Lead, Silver, Zinc
105K 011	LYN	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Lead, Silver, Zinc
105K 012	CASCA	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Anomaly	
105K 013	THOMAS	Skarn Pb-Zn	Prospect	Lead, Tin, Zinc
105K 014	TILLMAN	Unknown	Unknown	
105K 015	EYE	Epithermal Au-Ag-Cu: High Sulphidation	Unknown	
105K 016	BRIDGE	Unknown	Unknown	
105K 017	FANTAN	Unknown	Unknown	
105K 018	TAKU	Unknown	Anomaly	
105K 019	GLYN	Unknown	Unknown	
105K 020	NESBITT	Unknown	Showing	Copper
105K 021	SPT	Unknown	Unknown	
105K 022	BOBCAT	Epithermal Au-Ag-Cu: High Sulphidation	Drilled Prospect	
105K 023	GREEN VALLEY	Unknown	Showing	Antimony, Gold, Silver, Zinc, Lead, Copper
105K 024	HOLLY	Unknown	Unknown	
105K 025	ORCHAY	Ultramafic Mafic Gabbroid Cu-Ni-PGE	Showing	Copper
105K 026	SCCK	Unknown	Drilled Prospect	
105K 027	SPUR	Unknown	Drilled Prospect	Lead, Zinc, Silver
105K 028	DGMO	Unknown	Unknown	
105K 029	LAD	Skarn	Drilled Prospect	Lead, Zinc, Copper, Silver
105K 030	WELD	Unknown	Unknown	
105K 031	TRUMP	Unknown	Unknown	
105K 032	LODGE	Unknown	Unknown	
105K 033	DARIN	Vein Polymetallic Ag-Pb-Zn-Au	Deposit	Lead, Zinc, Copper, Silver
105K 034	ADAMSON	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Copper, Lead, Zinc
105K 035	FEZ	Unknown	Drilled Prospect	
105K 036	BETA	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Lead, Zinc
105K 037	BLIND	Unknown	Anomaly	
105K 038	GENTIAN	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Zinc, Lead, Silver, Antimony, Cadmium, Arsenic, Copper
105K 039	CLUB	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Lead
105K 040	NASTY	Unknown	Drilled Prospect	
105K 041	ABRAHAM	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	
105K 042	SEA	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Copper, Zinc, Lead, Silver
105K 043	SB	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Copper, Zinc, Lead, Silver
105K 044	BLACKWOOD	Skarn Pb-Zn	Drilled Prospect	Copper, Lead, Zinc
105K 045	BEA	Unknown	Drilled Prospect	
105K 046	SWIM	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Deposit	Lead, Silver, Zinc, Gold, Copper
105K 047	WANN	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Copper, Lead, Zinc
105K 048	ELBOW	Unknown	Unknown	
105K 049	ST. LUCIE	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Copper
105K 050	O'CONNOR	Unknown	Drilled Prospect	
105K 051	Bubble	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Gold, Silver, Lead, Zinc
105K 052	CIRQUE	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Silver, Gold, Lead, Zinc, Arsenic
105K 053	ARSENO	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Gold, Zinc, Silver, Lead, Tin, Indium
105K 054	SHRIMP	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	
105K 055	VANGORDA	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Past Producer	Lead, Silver, Zinc, Gold
105K 056	GRUM	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Past Producer	Gold, Zinc, Silver, Lead
105K 057	KULAN	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Lead, Silver, Zinc
105K 058	KM	Unknown	Prospect	Copper
105K 059	LO	Unknown	Drilled Prospect	
105K 060	TAY	Unknown	Unknown	
105K 061	FARO	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Past Producer	Silver, Gold, Zinc, Lead
105K 062	FLAGSTONE	Skarn Cu	Drilled Prospect	Copper
105K 063	BRIDEN	Unknown	Drilled Prospect	
105K 064	JACOLA	Plutonic Related Au	Drilled Prospect	Lead, Silver, Zinc
105K 065	SKOVN	Unknown	Drilled Prospect	
105K 066	LEON	Unknown	Unknown	
105K 067	LORNA	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Lead
105K 068	RESERVE	Skarn Cu	Drilled Prospect	Copper
105K 069	PARADOX	Unknown	Unknown	
105K 070	MARY	Unknown	Drilled Prospect	
105K 071	COWARD	Vein Cu-Ag Quartz	Unknown	Copper
105K 072	PAISE	Plutonic Related Au	Anomaly	
105K 073	TWOPEETE	Unknown	Drilled Prospect	
105K 074	COLT	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Zinc
105K 075	BLUE	Unknown	Unknown	
105K 076	HOOT	Skarn Pb-Zn	Anomaly	Lead
105K 077	OWL	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Copper, Zinc, Silver, Lead, Tin, Indium
105K 078	KEG	Skarn	Deposit	Lead, Zinc, Silver, Copper, Tin, Indium, Cadmium
105K 079	IVAN	Plutonic Related Au	Drilled Prospect	Copper, Lead, Zinc
105K 080	SHANNON	Unknown	Anomaly	
105K 081	COMPLICATION	Unknown	Unknown	
105K 082	TRY	Unknown	Drilled Prospect	
105K 083	REBEL	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Copper, Zinc, Lead, Silver, Tin, Indium
105K 084	HAMMER	Epithermal Au-Ag-Cu: High Sulphidation	Drilled Prospect	Silver, Antimony, Gold, Lead, Zinc
105K 085	YETI	Unknown	Anomaly	
105K 086	MARKS	Manto Polymetallic Ag-Pb-Zn	Showing	Lead, Zinc
105K 087	TEDDY	Volcanogenic Sulphide - type not determined	Drilled Prospect	Copper, Zinc
105K 088	SIROLA	Unknown	Drilled Prospect	
105K 089	ANDREW	Vein Polymetallic Ag-Pb-Zn-Au	Deposit	Lead, Zinc, Silver, Germanium, Copper
105K 090	MYSCHKA	Vein Polymetallic Ag-Pb-Zn-Au	Prospect	Antimony, Gold, Zinc, Silver, Tin, Lead
105K 091	EL PINO	Epithermal Au-Ag: Low Sulphidation	Anomaly	Antimony, Arsenic, Gold
105K 092	GALWAY	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Arsenic, Lead, Mercury, Silver, Zinc, Gold
105K 093	PARLIAMENT	Epithermal Au-Ag-Cu: High Sulphidation	Drilled Prospect	Arsenic, Gold, Mercury, Zinc, Lead, Copper
105K 094	CESSNA	Unknown	Drilled Prospect	
105K 095	BUNBURY	Unknown	Showing	
105K 096	JON	Unknown	Anomaly	
105K 098	CHAPLIN	Volcanogenic Sulphide - type not determined	Drilled Prospect	Copper, Lead, Silver, Zinc, Gold
105K 100	MOR	Unknown	Drilled Prospect	Copper
105K 101	DY	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Deposit	Gold, Zinc, Silver, Lead
105K 102	SELLMER	Unknown	Anomaly	
105K 103	TENAS	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Prospect	Arsenic, Bismuth, Gold, Lead, Zinc
105K 104	DEV	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Lead, Silver, Zinc
105K 105	SIR JOHN A.	Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)	Drilled Prospect	Lead, Zinc
105K 106	LUNA	Sediment hosted Stratiform Barite	Showing	Barium
105K 107	WEDEKIND	Epithermal Au-Ag-Cu: High Sulphidation	Unknown	
105K 108	LADY DI	Plutonic Related Au	Drilled Prospect	Lead, Zinc, Silver
105K 109	PRINCE CHARLES	Unknown	Anomaly	
105K 110	MT. MENZIE	Sediment hosted Stratiform Barite	Showing	Barium
105K 111	UNION	Skarn W	Showing	Copper, Molybdenum, Silver, Zinc
105K 112	STARLIGHT	Vein Cu-Ag Quartz	Drilled Prospect	Copper, Zinc
105K 113	PONTOON	Epithermal Au-Ag-Cu: High Sulphidation	Drilled Prospect	
105K 115	MULTI	Unknown	Drilled Prospect	

Yukon Geological Survey
Energy, Mines and Resources
Government of Yukon

Open File 2015-25
Stream Water pH (NTS 105K)
Sheet 17 of 17

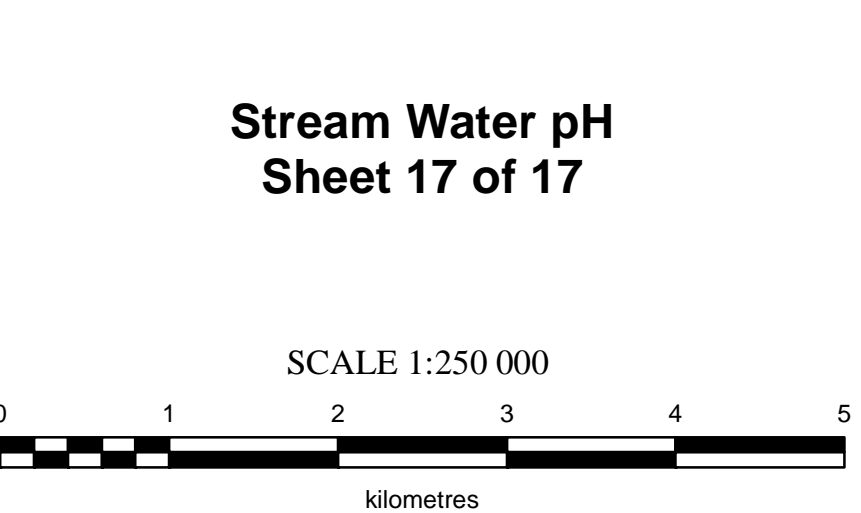
by
Rob Mackie, Dennis Arne,
and Olivia Brown



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ONE THOUSAND METRE GRID
Universal Transverse Mercator Projection
North American Datum 1983
Zone 8

CONTOUR INTERVAL 100 FEET
Elevations in metres above Mean Sea Level



True North
21°12'
1°46'
Grid North
Magnetic North

Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 2015
FOR CENTRE OF MAP

105M	105N	105O
MAYO	LANSING RANGE	NIDDERY LAKE
105L	105K THIS MAP	105J
GLENLYON		SHELDON LAKE
105E	105F	105G
LAKE LABERGE	QUIET LAKE	FINALYOUN LAKE