

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

Stream sediment and water samples from the Aishihik Lake Area (NTS 115H) were collected at a reconnaissance scale in 1986 as part of the Canada-Yukon Mineral Development Agreement (Geological Survey of Canada, 1986). Field descriptions and initial geochemical data for 934 sites were released in Geological Survey of Canada (GSC) Open File 1219. New geochemical data from the re-analysis of archive sample material were released in Yukon Geological Survey (YGS) Open File 2015-13 (Jackaman, 2015). The reader is referred to these reports 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 Aishihik Lake area as shown in Table 1 (Yukon MINFILE, 2015). The most significant deposits are classed as Cu-Mo porphyry (Hopper deposit and Sato prospect), Cu skarn (Mack's, Janis and Thatch prospects) and quartz vein Au (Shut, Lib and Mom prospects). The Mt Nansen epithermal Au-Ag and Wellgreen Ni-Cu-PGE deposits are located in the adjacent map areas to the north and west, respectively.

STREAM WATER pH

As indicated in Figure 1, stream water pH shows a bimodal distribution with peaks at approximately 6.5 and 7.5. The relatively low pH population correspond to sample catchments containing dominantly felsic-intermediate intrusive rocks or biotite and muscovite-rich schist (*i.e.*, Klwane and Snowcap assemblages). The relatively high pH population corresponds to regions mapped as mafic-intermediate volcanic and clastic sedimentary rocks. Stream samples with mineral occurrences in the corresponding catchment are not notably acidic suggesting any response from oxidation of near-surface sulphides related to these occurrences has been diluted or neutralized and is indistinguishable from variations associated with changes in lithology.

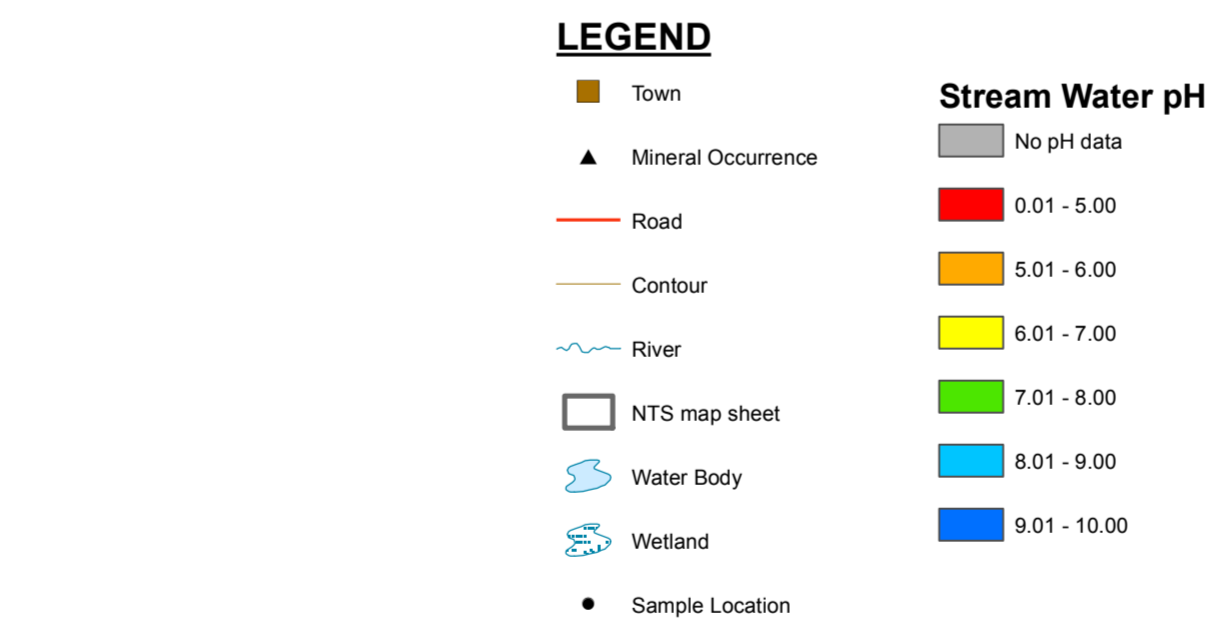
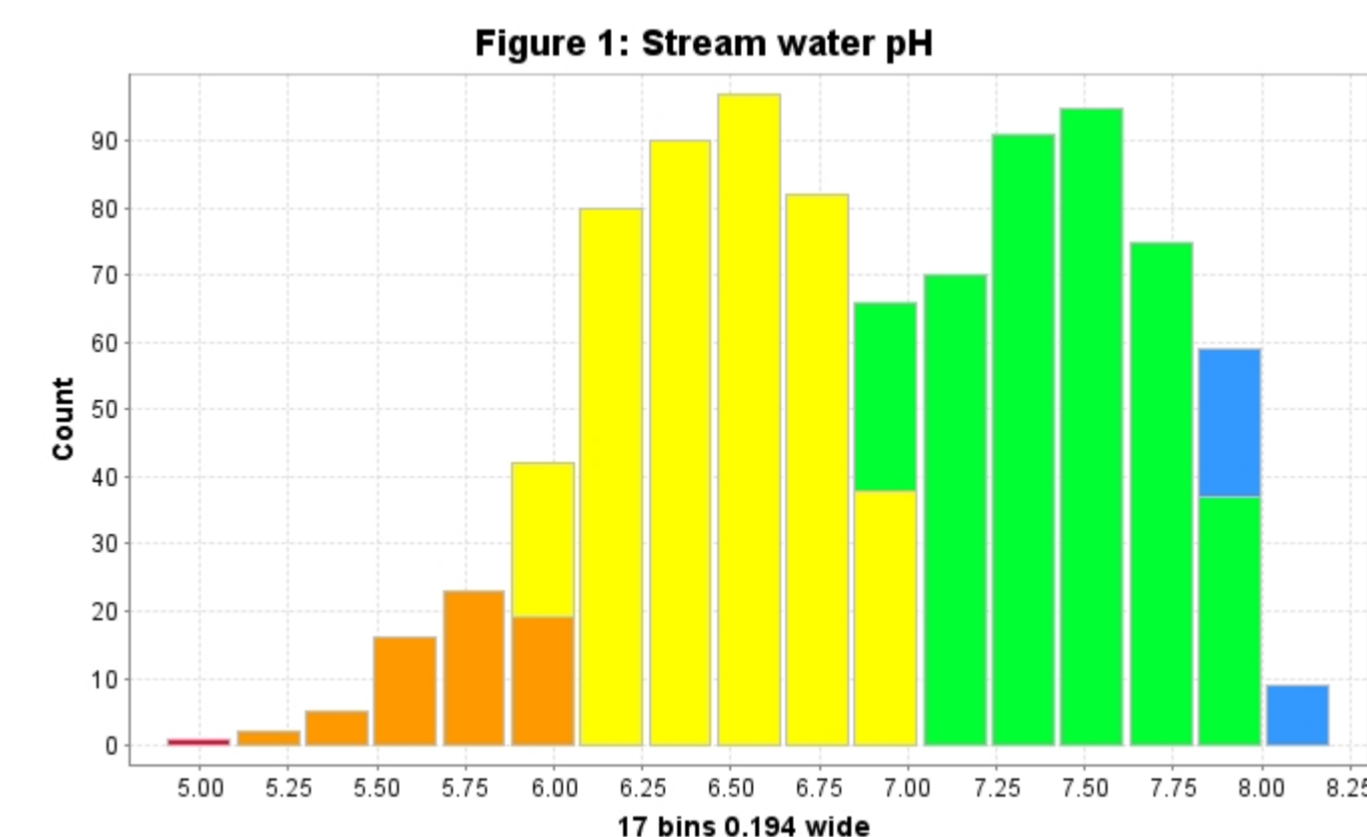
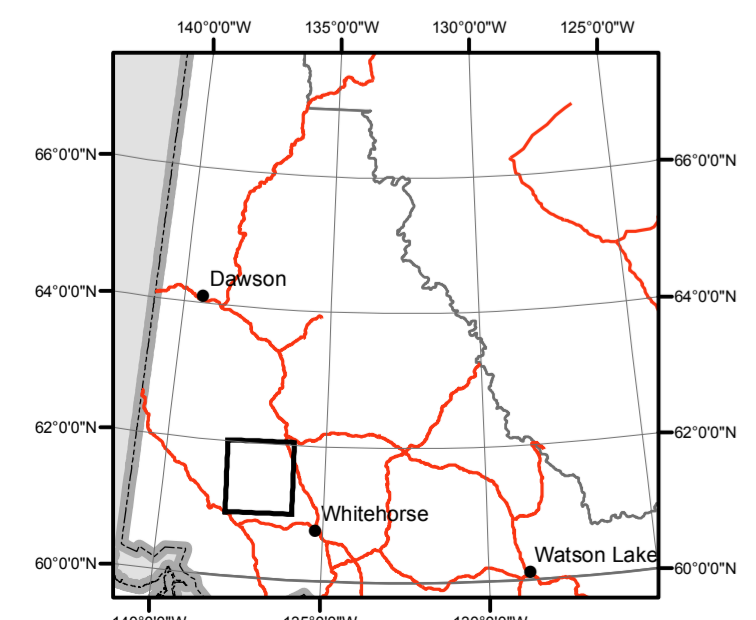
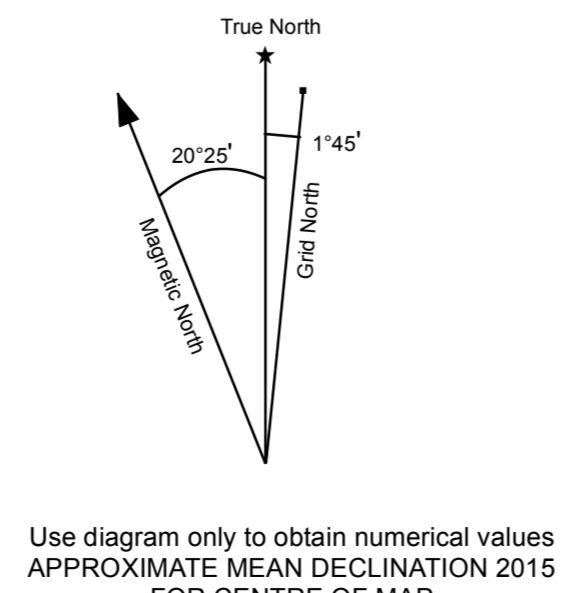
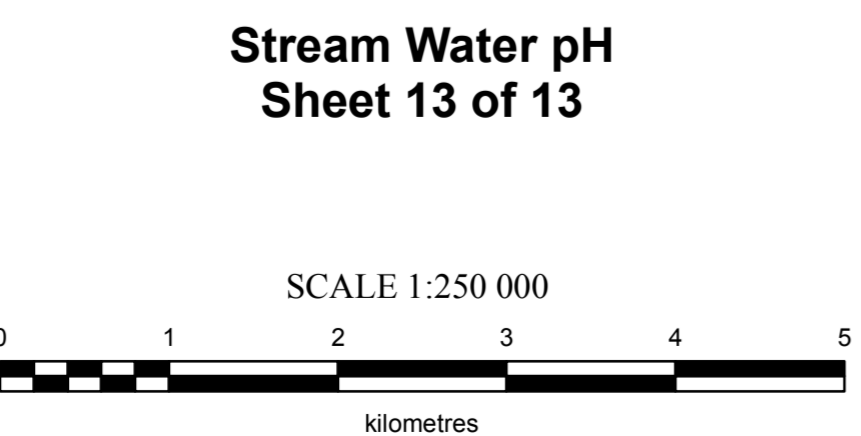


Table 1: List of Mineral Occurrences for NTS map sheet 115H (Yukon MINFILE, 2015)

Number	Name	Type	Status	Commodities
115H 001	LOSH	Coal	Prospect	Coal, Uranium
115H 002	ANDESITE	Coal	Prospect	Coal, Uranium
115H 004	AH	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Showing	Copper
115H 006	MACK'S COPPER	Skarn Cu	Drilled Prospect	Copper, Gold, Silver, Iron
115H 007	SNPE	Porphyry Cu-Mo-Au	Showing	Copper
115H 012	VOWEL	Coal	Showing	Coal
115H 013	DIVISION	Coal	Deposit	Coal
115H 014	LION	Porphyry Mo (Low F-Type)	Drilled Prospect	Uranium
115H 015	MORANE	Skarn Cu	Prospect	Cobalt, Copper, Silver, Tungsten, Gold
115H 016	GILTANA	Skarn Cu	Drilled Prospect	Copper, Molybdenum
115H 017	AISHIHK	Skarn Cu	Prospect	Copper
115H 018	JANISW	Skarn Cu	Drilled Prospect	Copper, Silver, Tungsten
115H 019	HOPPER SOUTH	Skarn Cu	Drilled Prospect	Molybdenum
115H 020	DERIGON	Unknown	Anomaly	Copper
115H 021	SATO	Porphyry Cu-Mo-Au	Showing	Copper
115H 024	SEKUMUN	Skarn Cu	Drilled Prospect	Copper, Zinc
115H 025	KATHY	Porphyry Mo (Low F-Type)	Unknown	Copper, Molybdenum
115H 026	THATCH	Skarn Cu	Drilled Prospect	Copper, Tungsten, Silver
115H 027	POPLAR	Porphyry Cu-Mo-Au	Anomaly	Molybdenum, Gold
115H 028	STEVENS	Porphyry Cu-Mo-Au	Anomaly	Copper, Molybdenum
115H 029	OCCIDENT	Porphyry Cu-Mo-Au	Anomaly	Copper, Molybdenum
115H 033	BUFF	Porphyry Mo (Low F-Type)	Showing	Molybdenum
115H 035	SHFD	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Showing	Copper, Gypsum, Molybdenum, Fluorite, Gold
115H 038	TAHTE	Porphyry Cu-Mo-Au	Showing	Fluorite, Gold
115H 041	ITILEMIT	Porphyry Cu-Mo-Au	Showing	Copper, Molybdenum
115H 042	SNAP	Epithermal Au-Ag-Cu: High Sulphidation	Showing	Fluorite, Mercury
115H 044	POWER	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Gold, Zinc, Silver, Lead
115H 045	AL	Vein Au-Quartz	Showing	Antimony, Silver, Gold
115H 047	SHUT	Vein Au-Quartz	Drilled Prospect	Arsenic, Gold
115H 052	LASCAS	Unknown	Showing	Silica
115H 055	LIB	Vein Au-Quartz	Drilled Prospect	Arsenic, Gold
115H 060	MOM	Vein Au-Quartz	Prospect	Arsenic, Gold
115H 063	BOWEN	Vein Au-Quartz	Anomaly	Arsenic, Gold
115H 049	MT. BARK	Vein Au-Quartz	Anomaly	
115H 039	TOSH	Unknown	Unknown	
115H 048	KILLERMUN	Unknown	Anomaly	
115H 050	KN	Unknown	Anomaly	
115H 008	SATASHA	Unknown	Anomaly	
115H 005	ALICE	Unknown	Anomaly	
115H 011	KIRK	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Showing	
115H 010	LAND	Unknown	Anomaly	
115H 058	MCKINLEY	Vein Au-Quartz	Anomaly	
115H 034	HOPPER NORTH	Porphyry Cu-Mo-Au	Prospect	Copper, Molybdenum
115H 036	BLQUIST	Porphyry Cu-Mo-Au	Unknown	
115H 046	LIVE	Unknown	Anomaly	
115H 051	MACINTOSH	Vein Au-Quartz	Anomaly	
115H 032	KRI	Porphyry Cu-Mo-Au	Anomaly	
115H 023	BSEET	Unknown	Anomaly	
115H 003	NIPON	Porphyry Cu-Mo-Au	Showing	
115H 031	ORLOFF	Unknown	Anomaly	
115H 009	EMPRESS	Unknown	Anomaly	
115H 022	BRASS	Unknown	Unknown	
115H 030	SAUCE	Unknown	Anomaly	



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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



115J STEVENS RIDGE	115I CARMACKS	105L GLENLYON
115G KLUANE LAKE	THIS MAP 115H	105E LAKE LABERGE
115B MOUNT ST ELIAS	115A DEZADEASH RANGE	105D WHITEHORSE

REFERENCES

Geological Survey of Canada, 1986. Regional stream sediment and water geochemical reconnaissance data, southern Yukon (NTS 115H). Geological Survey of Canada, Open File 1219.

Jackaman, W., 2015. Regional stream sediment geochemical data, Askhiik Lake area, southern Yukon (NTS 115H). Yukon Geological Survey, Open File 2015-13.

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 PENNIMPEDE, C., 2016. Stream water pH. In: Enhanced interpretation of stream sediment geochemical data for NTS 115H. Yukon Geological Survey, Open File 2015-11, scale 1:250 000, sheet 13 of 13.

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 obtained 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>.

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Energy, Mines and Resources
Government of Yukon
Open File 2016-11
Stream Water pH (NTS 115H)
Sheet 13 of 13
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