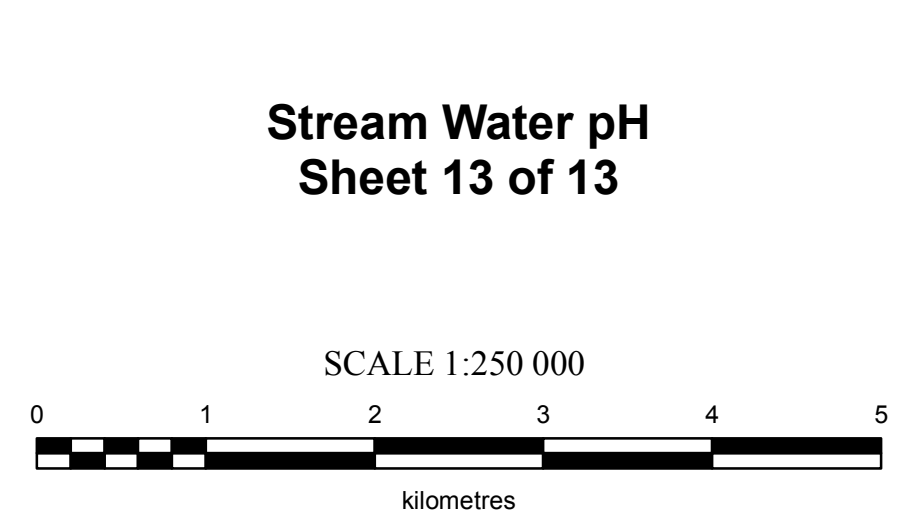


1:250 000-scale topographic base data produced by CENTRE FOR TOPOGRAPHIC INFORMATION, NATURAL RESOURCES CANADA. Copyright Her Majesty the Queen in Right of Canada.

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
20°42'
Magnetic North
Grid North

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

115I CARMACKS	105L GLENLYON	105K TAY RIVER
115H AISHIK LAKE	105E THIS MAP	105F QUIET LAKE
105E DEADASH RANGE	105D WHITEHORSE	105C TESLIN

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

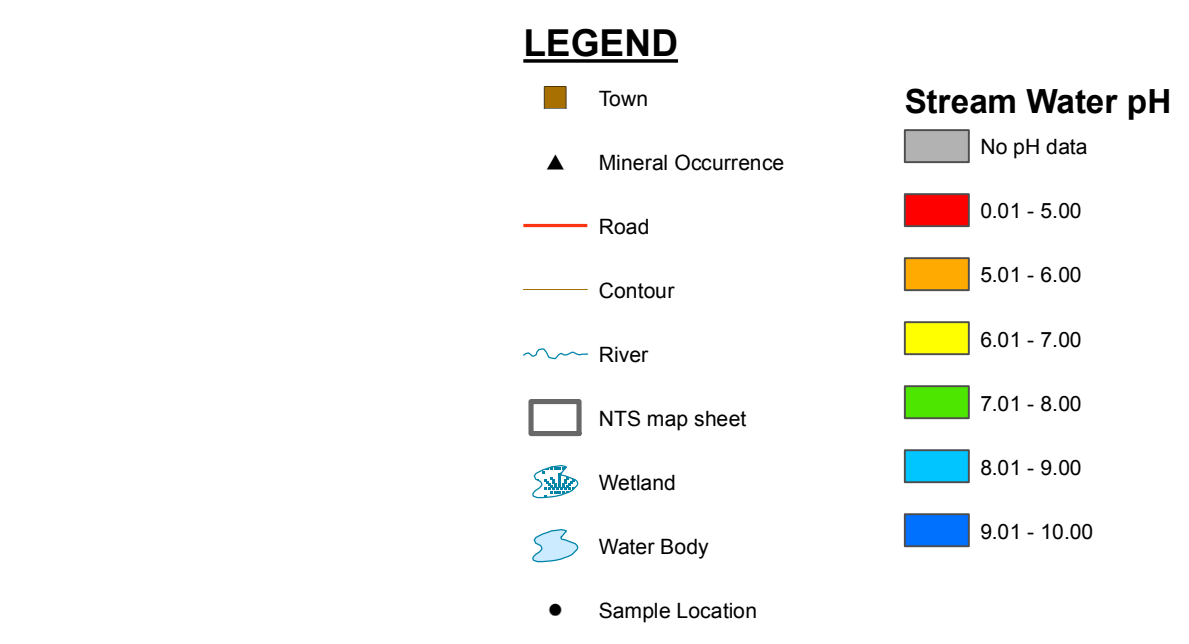
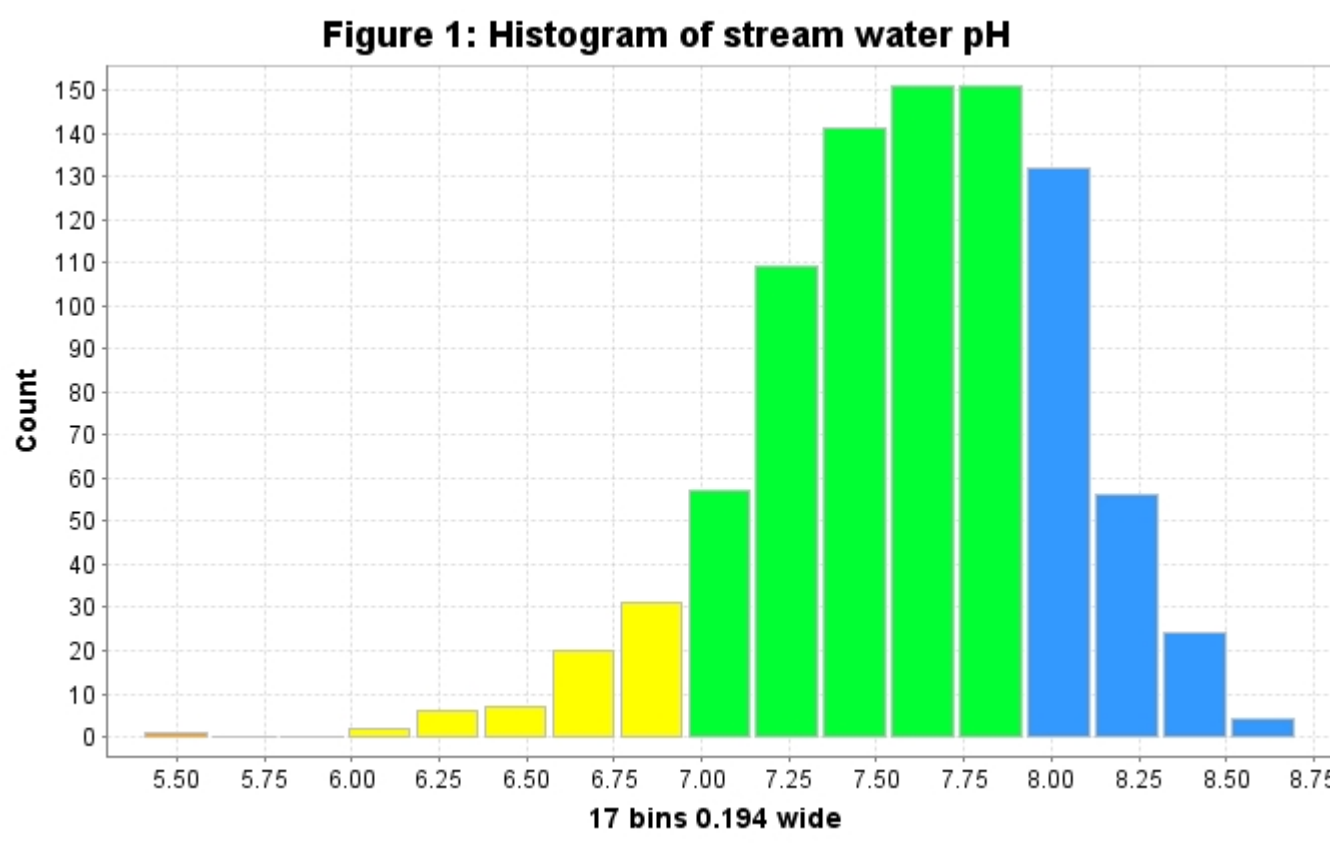
Regional stream sediment and water samples from the Lake Laberge map area (NTS 105E) were collected at a reconnaissance scale in 1988 as part of the National Geochemical Reconnaissance program under the Canada-Yukon Mineral Development Agreement (Hornbrook & Friske, 1989). Field descriptions and geochemical data for 908 sites were initially released in Geological Survey of Canada ("GSC") Open File 1960 (Hornbrook & Friske, 1989). As part of the Yukon Database Upgrade Project, archived sample material was re-analyzed by Induced Coupled Plasma Mass Spectrometry following an aqua regia digestion. The new geochemical data were released in Yukon Geological Survey ("YGS") Open File 2015-7 (Jackman, 2015). The reader is referred to these open files for details regarding sampling techniques, analytical procedures and quality control and assurance.

MINERAL OCCURRENCES

A variety of types of base and precious-metal mineralization have been documented in the map area as summarized in Table 1 (Yukon MINFILE, 2015). The most notable occurrences are classed as Cu±Ag-Pb-Zn skarn (Laberge prospect; Dycer and D'Abadie showings), Polymetallic Ag-Pb-Zn±Au vein (Loon Prospect; RK, Deet, Livingston and Sylvia showings), and Cu-Mo porphyry (TUV Prospect). Additional deposit types include Cu-Ag vein, Mo porphyry, W skarn, Sb-As-Ni-Co and Au quartz vein. Notably, there are no occurrences within the map area that are considered 'deposits' based on YGS classification. However, both the Red Mountain Mo porphyry and Whitehorse Cu skarn deposits occur in the adjacent map sheet area, towards the south (105D).

STREAM WATER pH

As shown in Figure 1 the vast majority of the streams sampled have water with pH values between 7.0 and 8.5 (median = 7.6). There are no clear regional trends in stream water pH for the Lake Laberge area that can be consistently related to lithological variations. Comparison of the location of known occurrences and water pH from corresponding catchment basin shows no consistent relationship suggesting that any response from oxidation of near-surface sulphide mineralization has been diluted or neutralized. A few streams are mildly acidic (pH <6) which could be related to either undocumented sulphide mineralization, or local increases in hydrolysis of feldspar during weathering of felsic intrusions.



REFERENCES

Hornbrook, E.H. and Friske, P.W., 1989. National Geochemical Reconnaissance stream sediment and water geochemical data, southern central Yukon (105E). Geological Survey of Canada, Open File 1960.

Jackman, W., 2015. Regional stream sediment geochemical data, Lake Laberge area, southern Yukon (NTS 105E). Yukon Geological Survey, Open File 2015-7.

Mackie, R., Arne, D. and Brown, O., 2015. Enhanced interpretation of regional stream sediment geochemical data from Yukon: catchment basin analysis and weighted sums modeling. Yukon Geological Survey, Open File 2015-10.

Yukon MINFILE, 2010. Yukon MINFILE – A database of mineral occurrences. Yukon Geological Survey, www.data.geology.gov.yk.ca, accessed May 2015.

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

Number	Name	Type	Status	Commodities
105E 001	LIVINGSTON	Vein Polymetallic Ag-Pb-Zn±Au	Showing	Copper, Silver, Lead, Gold
105E 002	TUV	Porphyry Cu-Mo-Au	Drilled Prospect	Fluorite, Gold, Lead
105E 003	LOON	Vein Polymetallic Ag-Pb-Zn±Au	Drilled Prospect	Copper, Gold, Lead, Silver
105E 006	LABERGE	Skarn Cu	Drilled Prospect	Copper
105E 008	RUTH	Skarn Cu	Showing	Copper, Silver, Zinc
105E 010	PACKERS	Skarn Cu	Showing	Copper
105E 011	CLARE	Coal	Unknown	Coal
105E 012	WALSH	Coal	Showing	Coal
105E 014	SEMENOF	Vein Cu±Ag Quartz	Showing	Copper, Gold, Silver
105E 015	ILLUSION	Ultramafic-hosted asbestos	Showing	Chrysotile
105E 016	CASSIER BAR	Vein Cu±Ag Quartz	Showing	Copper, Silver
105E 020	SYLVIA	Vein Polymetallic Ag-Pb-Zn±Au	Showing	Copper, Gold, Zinc, Silver, Lead
105E 022	CORDUROY	Coal	Drilled Prospect	Coal
105E 024	RK	Porphyry Alkalic Cu-Au	Showing	Copper, Molybdenum
105E 025	LORI	Porphyry Mo (Low F-Type)	Showing	Copper, Molybdenum
105E 028	MUSTARD	Vein Au-Quartz	Showing	Gold
105E 027	BACON	Porphyry Mo (Low F-Type)	Showing	Copper, Gold
105E 028	KLUSHA	Coal	Drilled Prospect	Coal
105E 030	SALMON	Skarn W	Showing	Tungsten
105E 031	HITCHENS	Skarn W	Showing	Tungsten
105E 039	AKEL	Unknown	Anomaly	Gold
105E 040	OYOAS	Unknown	Anomaly	Gold
105E 041	ENOF	Unknown	Anomaly	Gold
105E 042	LAKE	Vein Au-Quartz	Showing	Gold
105E 043	GERM	Unknown	Anomaly	Gold
105E 044	PRESTON	Unknown	Anomaly	Gold
105E 046	RANKL	Unknown	Anomaly	Gold
105E 047	MAYBE	Unknown	Anomaly	Gold, Lead
105E 053	DEET	Vein Polymetallic Ag-Pb-Zn±Au	Showing	Antimony, Gold, Arsenic, Lead, Silver, Zinc
105E 057	MILNER	Coal	Anomaly	Coal
105E 061	BRABURN LIME	Limestone	Drilled Prospect	Limestone
105E 062	EGYPT	Unknown	Anomaly	Gold
105E 034	RICHTHOFEN	Unknown	Unknown	
105E 009	REEF	Unknown	Drilled Prospect	
105E 038	SLINE	Unknown	Anomaly	
105E 064	RK	Vein Polymetallic Ag-Pb-Zn±Au	Showing	Bismuth, Cadmium, Silver, Lead
105E 063	NICKELINE	Ultramafic - Nickel	Showing	Antimony, Arsenic, Nickel, Cobalt
105E 065	DYCER	Skarn Cu	Showing	Copper, Tungsten, Lead
105E 054	TREXICE	Unknown	Unknown	
105E 037	CROST	Unknown	Anomaly	
105E 005	NAPUA	Unknown	Unknown	
105E 056	IRENDA	Unknown	Unknown	
105E 035	LITTLE BEAR	Unknown	Unknown	
105E 032	MENDOCINA	Unknown	Unknown	
105E 029	TERAKTU	Unknown	Unknown	
105E 059	FONE	Unknown	Anomaly	
105E 050	DEBICKI	Unknown	Unknown	
105E 049	LITTLE VIOLET	Unknown	Unknown	
105E 058	COUGHLAN	Unknown	Unknown	
105E 033	D'ABADIE	Unknown	Anomaly	
105E 036	AURIER	Unknown	Anomaly	

RECOMMENDED CITATION

MACKIE, R., ARNE, D. AND PENNIMPEDE, C., 2016. Stream water pH. In: Enhanced interpretation of stream sediment geochemical data for NTS 105E. Yukon Geological Survey, Open File 2016-9, 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>.

Yukon Geological Survey
Energy, Mines and Resources
Government of Yukon

Open File 2016-9

Stream Water pH (NTS 105E)
Sheet 13 of 13

by

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