

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 Stevenson Ridge Area (NTS 115J and part of 115K) were collected at a reconnaissance scale in 1986 as part of the Canada-Yukon Mineral Development Agreement (Geological Survey of Canada, 1987). Field descriptions and initial geochemical data for 1305 sites were released in Geological Survey of Canada (GSC) Open File 1363. New geochemical data from the re-analysis of archive sample material were released in Yukon Geological Survey (YGS) Open File 2011-28 (Jackman, 2011). 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 has been identified in the Stevenson Ridge area as listed in Table 1 (Yukon MINFILE, 2015). The most significant deposits are classed as Cu-Mo porphyry (Casino deposit), Orogenic Au (Supremo deposit; Mascot and Boulevard prospects) and polymetallic Ag-Pb-Zn (Bomber deposit). Other deposit types within the area include Cu skarn (Nutzotin) and magmatic Ni-Cu-PGE (Snag showing). The Golden Saddle orogenic Au and Tuleary Cu-Ag-Zn volcanogenic massive sulphide deposits occur in the adjacent map area to the north and the Welgreen Ni-Cu-PGE deposit occurs in the adjacent map area to the south supporting the prospectivity of the region for these deposit types.

STREAM WATER pH

As indicated in Figure 1, the vast majority of streams sampled are near-neutral (median = 7.1). Regional trends in stream water pH are evident but do not appear to correspond specific lithological map units. Generally, moderately acidic waters (pH<6) correspond with catchments that contain predominantly felsic intrusions or clastic sedimentary rocks however none of these catchments contain mineral deposits. 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.

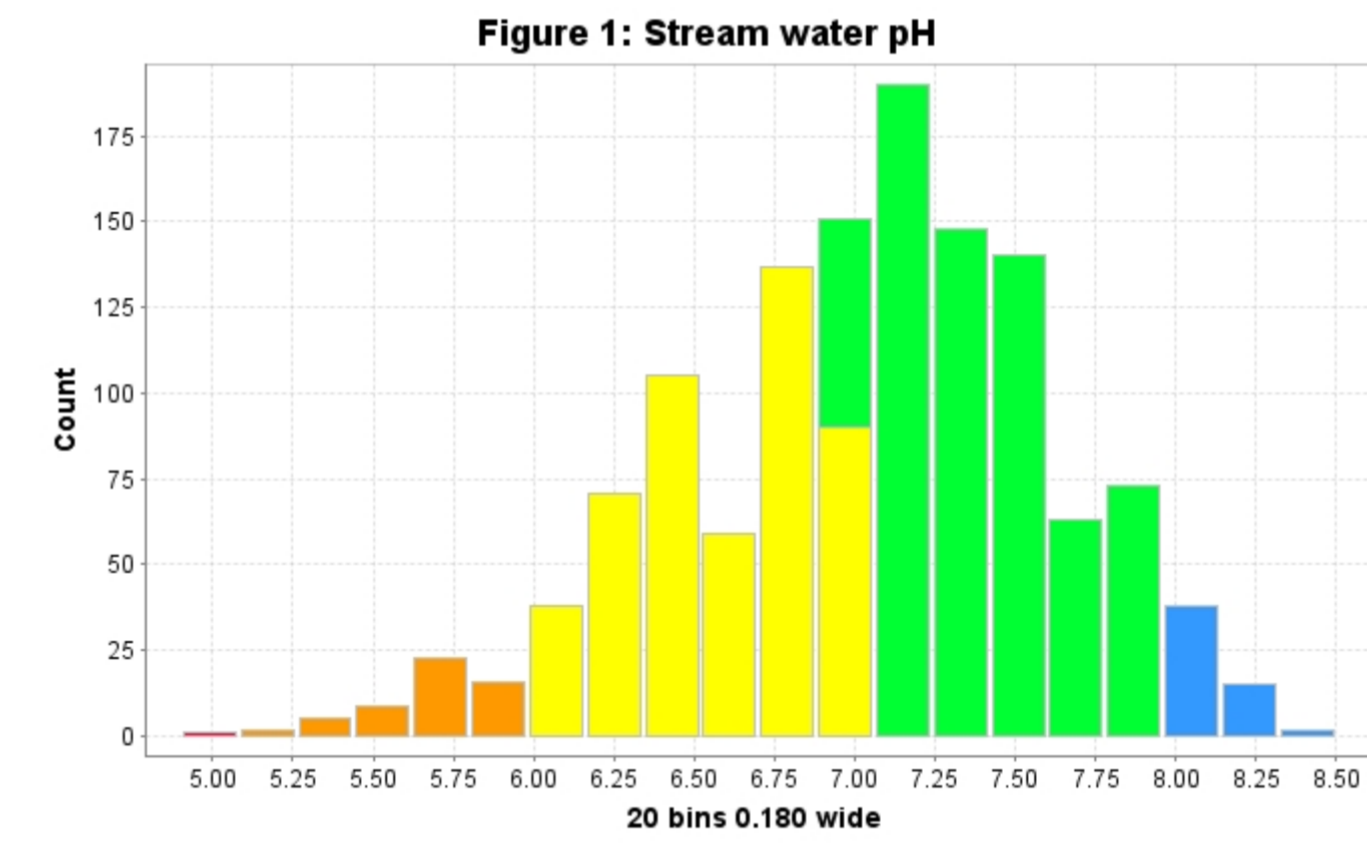


Figure 1: Stream water pH

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

Number	Name	Type	Status	Commodities
115J 001	BRACKT	Unknown	Unknown	
115J 002	KLOT	Porphyry Cu-Mo-Au	Showing	Copper, Molybdenum, Uranium
115J 003	MM	Porphyry Cu-Mo-Au	Prospect	Copper, Gold
115J 004	SOMME	Porphyry Mo (Low F-Type)	Anomaly	
115J 005	PREDE	Vein Polymetallic Ag-Pb-Zn-Au	Showing	
115J 006	BURL	Unknown	Unknown	
115J 008	SONORA GULCH	Orogenic Au	Drilled Prospect	Antimony, Copper, Silver, Lead, Molybdenum, Gold
115J 009	STRAW	Unknown	Anomaly	Antimony, Arsenic, Copper
115J 010	YOG	Unknown	Unknown	
115J 011	GUESS	Plutonic Related Au	Anomaly	Molybdenum, Bismuth, Tin, Arsenic, Gold
115J 012	OATS	Unknown	Unknown	
115J 013	SELWYN	Unknown	Anomaly	
115J 015	COCK	Porphyry Cu-Mo-Au	Unknown	
115J 016	BATTLE	Unknown	Anomaly	Copper
115J 017	COCKFIELD	Porphyry Cu-Mo-Au	Showing	Copper, Molybdenum
115J 020	HAVE	Vein Polymetallic Ag-Pb-Zn-Au	Anomaly	Copper, Molybdenum
115J 022	RUDE CREEK	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Gold, Silver, Lead, Zinc
115J 023	NORDEX	Vein Polymetallic Ag-Pb-Zn-Au	Unknown	Lead, Silver
115J 024	FOAD	Unknown	Unknown	Copper
115J 025	PEGS	Porphyry Cu-Mo-Au	Anomaly	
115J 026	SABINA	Unknown	Unknown	
115J 027	BOMBER	Vein Polymetallic Ag-Pb-Zn-Au	Past Producer	Lead, Zinc, Silver
115J 028	CASINO	Porphyry Cu-Mo-Au	Deposit	Copper, Gold, Molybdenum, Silver
115J 029	HOLE	Porphyry Cu-Mo-Au	Anomaly	Copper, Molybdenum
115J 030	BRAN	Unknown	Anomaly	Copper
115J 031	CLEVELAND	Porphyry Cu-Mo-Au	Anomaly	Copper, Molybdenum
115J 032	WENGE	Unknown	Unknown	
115J 033	FUI	Unknown	Unknown	
115J 034	GEP	Porphyry Cu-Mo-Au	Anomaly	Copper, Molybdenum
115J 035	AZTEC	Porphyry Cu-Mo-Au	Anomaly	Copper, Molybdenum
115J 038	ZAPPA	Porphyry Cu-Mo-Au	Drilled Prospect	Copper, Gold, Molybdenum
115J 037	DOYLE	Unknown	Unknown	
115J 038	ROCKLAND	Unknown	Unknown	
115J 040	BONFAY	Porphyry Cu-Mo-Au	Showing	Copper, Molybdenum, Silver
115J 041	JOG	Unknown	Unknown	
115J 043	MOG	Unknown	Anomaly	
115J 044	BID	Porphyry Cu-Mo-Au	Showing	Copper, Molybdenum
115J 045	VINA	Porphyry Cu-Mo-Au	Showing	Copper, Molybdenum
115J 048	HANNA	Porphyry Cu-Mo-Au	Anomaly	Gold, Arsenic, Copper
115J 049	POLARIS	Unknown	Anomaly	
115J 050	Boulevard	Orogenic Au	Drilled Prospect	Molybdenum, Antimony, Gold, Arsenic
115J 051	GOLD HAWK	Unknown	Unknown	
115J 052	TONI TIGER	Skarn Cu	Showing	Copper, Molybdenum, Silver, Tungsten
115J 053	LEO LION	Unknown	Anomaly	Copper, Silver, Lead
115J 054	OVERPROOF	Unknown	Unknown	Arsenic, Gold
115J 055	KIRKMAN	Unknown	Unknown	
115J 056	CORONATION	Unknown	Unknown	
115J 057	SAMSON	Unknown	Anomaly	
115J 058	NECAS	Unknown	Anomaly	Copper
115J 059	TULARE	Unknown	Unknown	
115J 060	ARLINGTON	Unknown	Unknown	
115J 061	BALLARAT	Plutonic Related Au	Anomaly	Galena, Gold, Silver
115J 062	SUGAR	Unknown	Anomaly	
115J 063	FLUSH	Unknown	Unknown	
115J 064	LYON	Porphyry Cu-Mo-Au	Anomaly	
115J 065	TUANA	Unknown	Unknown	
115J 066	NEWMAR	Unknown	Anomaly	Gold
115J 067	JIPPO	Unknown	Anomaly	
115J 068	ACROLL	Unknown	Unknown	
115J 069	EMPIRE	Unknown	Anomaly	
115J 070	MARQUERITE	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Gold, Silver, Copper
115J 071	BUCK	Plutonic Related Au	Prospect	Gold, Arsenic, Antimony, Mercury, Barium
115J 072	SCROGGIE	Porphyry Cu-Mo-Au	Showing	Copper, Molybdenum
115J 073	BAJA	Unknown	Unknown	
115J 074	MASCOT	Orogenic Au	Prospect	Gold, Silver, Arsenic
115J 089	PATRISON	Porphyry Cu-Mo-Au	Drilled Prospect	Copper, Molybdenum
115J 090	INDIANA	Porphyry Cu-Mo-Au	Drilled Prospect	Copper, Molybdenum
115J 091	AMOCO	Porphyry Cu-Mo-Au	Showing	Copper, Molybdenum
115J 092	HASL	Uranium	Anomaly	Uranium
115J 093	CHASICK	Unknown	Anomaly	Uranium
115J 098	SIZZLER	Vein Au-Quartz	Showing	Gold
115J 099	IDAHO	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Antimony, Gold, Arsenic, Lead, Zinc, Silver
115J 100	SHADOW	Porphyry Related Au	Anomaly	Gold
115J 101	CANADIAN CREEK	Porphyry Cu-Mo-Au	Drilled Prospect	Copper, Gold, Molybdenum
115J 102	NOWHERE	Vein Au-Quartz	Showing	Gold, Silver
115J 103	SERTIE MAN	Orogenic Au	Drilled Prospect	Gold, Bismuth, Arsenic, Molybdenum
115J 108	TOTAL	Unknown	Unknown	Gold
115J 110	COFFEE MAIN	Orogenic Au	Deposit	Gold, Antimony, Arsenic
115J 111	COFFEE WEST	Orogenic Au	Deposit	Gold
115J 112	DAN MAN	Orogenic Au	Drilled Prospect	Gold, Arsenic, Antimony
115J 113	Hacky Gold	Orogenic Au	Drilled Prospect	Gold, Bismuth, Molybdenum
115K 075	SNAG	Ultramafic Mafic Gabbroid Cu-Ni-PGE	Anomaly	
115K 077	ONON	Ultramafic Mafic Gabbroid Cu-Ni-PGE	Prospect	Copper, Indium, Gold, Nickel, Palladium, Platinum, Rhodium
115K 078	CHAR	Vein Polymetallic Ag-Pb-Zn-Au	Prospect	Copper, Zinc, Silver, Lead, Gold
115K 079	NUTZOTIN	Skarn Cu	Prospect	Copper, Silver
115K 080	CALIFORNIA	Plutonic Related Au	Unknown	
115K 081	WRANGELL	Porphyry Cu-Mo-Au	Anomaly	
115K 082	TRUDI	Porphyry Cu-Mo-Au	Drilled Prospect	Copper, Molybdenum
115K 083	HP	Vein Cu/Ag Quartz	Showing	Copper, Gold
115K 084	BONZA	Ultramafic Mafic Gabbroid Cu-Ni-PGE	Anomaly	
115K 085	FARCLOUGH	Vein Cu/Ag Quartz	Showing	
115K 086	BATRICK	Vein and replacement Mn	Showing	Manganese
115K 095	NEIZ	Volcanogenic Sulphide - type not determined	Showing	
115K 105	YELLOW	Ultramafic Mafic Gabbroid Cu-Ni-PGE	Showing	
115K 109	BAKER	Unknown	Anomaly	Arsenic, Gold

RECOMMENDED CITATION

MACKIE, R., ARNE, D. AND PENNIMPEDE, C., 2016. Stream water pH. In: Enhanced interpretation of stream sediment geochemical data for NTS map sheet 115J and 115K, Yukon Geological Survey, Open File 2016-15, 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.

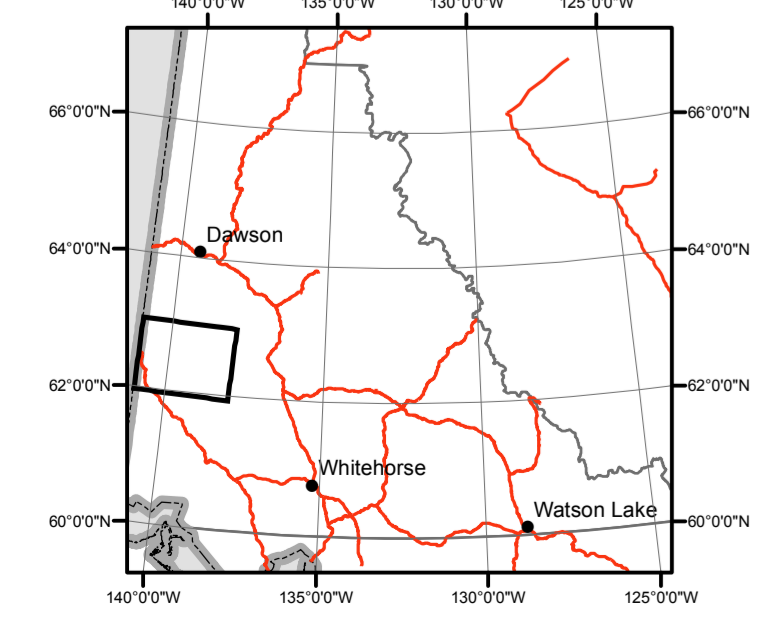
Paper copies of this map and the accompanying report may be obtained from the Yukon Geological Survey, Energy, Mines and Resources, Government of Yukon, Room 102-300 Main St., Whitehorse, Yukon, Y1A 2B5. Ph. 867-667-3201, Email geology@gov.yk.ca.

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>.

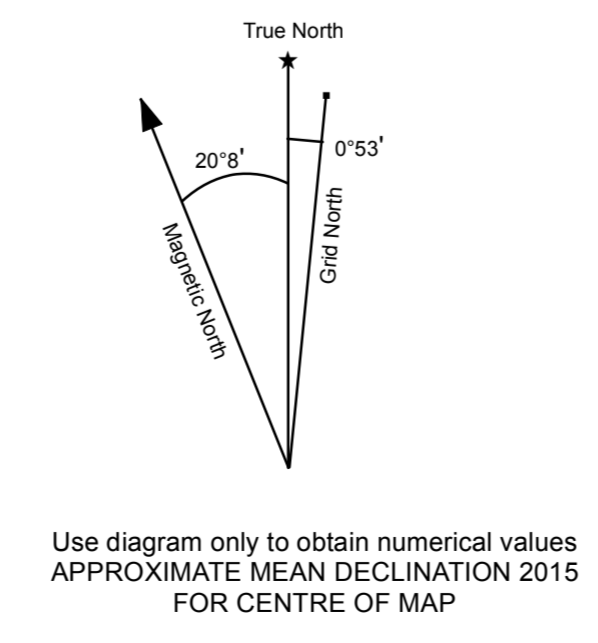
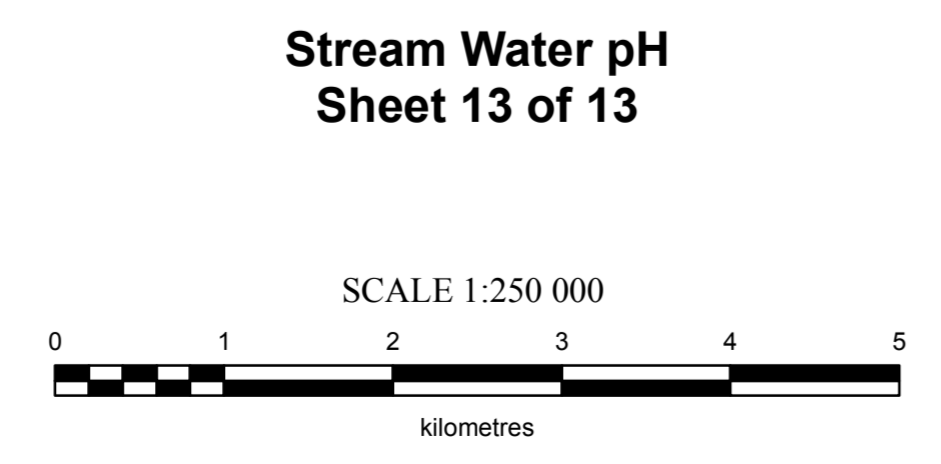
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Yukon Geological Survey
 Energy, Mines and Resources
 Government of Yukon
 Open File 2016-15
Stream Water pH (NTS 115J and 115K)
Sheet 13 of 13
 by
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 ONE THOUSAND METRE GRID
 Universal Transverse Mercator Projection
 North American Datum 1983
 Zone 7
 CONTOUR INTERVAL 100 FEET
 Elevations in metres above Mean Sea Level



115N	115O	115P
PART OF 115D	STEWART RIVER	MCGUISTEN
115K	THIS MAP	115I
		CANACHS
115F	115G	115H
PART OF 115D	KLUANE LAKE	ASHBIK LAKE