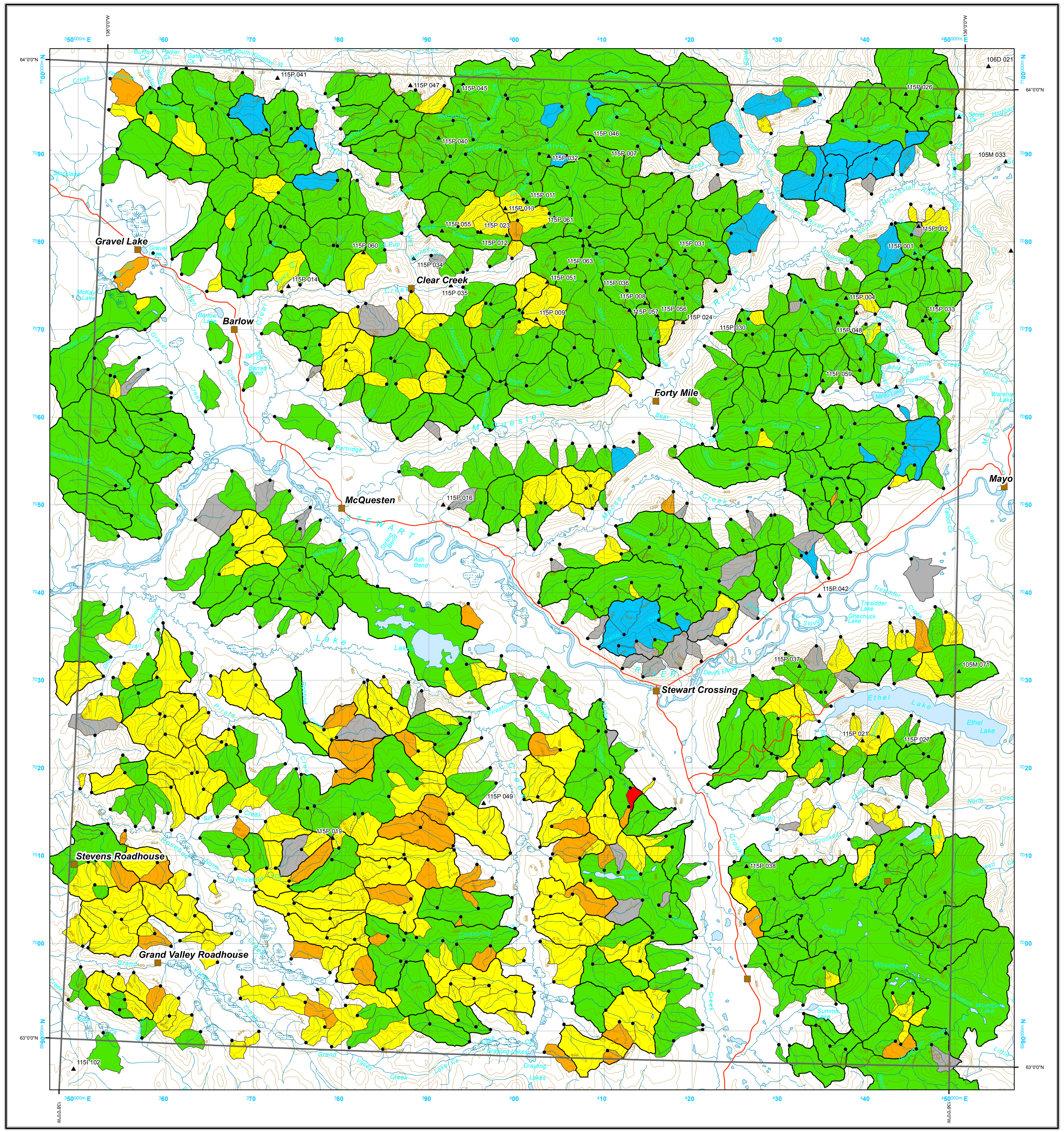


INTRODUCTION

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.

SAMPILNG AND ANALYSIS PROGRAMS

Stream sediment and water samples from the McQueston area (NTS 115P) were collected at a reconnaissance scale in 1987 as part of the Canada – Yukon Mineral Development Agreement (Hornbrook & Friske, 1988). Field descriptions and initial geochemical data for 841 sites were originally released in Geological Survey of Canada (GSC) Open File 1650. New geochemical data from the re-analysis of archive sample material were released in Yukon Geological Survey (YGS) Open File 2012-9 (Jackaman, 2012). The reader is referred to these reports for detailed descriptions of sampling techniques, analytical procedures and quality control measures.

MINERAL OCCURRENCES

Various types of base and precious-metal mineralization have been identified in the McQueston area as listed in Table 1 (Yukon MINFILE, 2015). The most significant deposits are classed as intrusion-related Au (Hobo, Pukelman and Highet prospects), polymetallic Ag-Pb-Zn vein (Quest, East Ridge, May Creek and Hawthorne prospects prospects), W skarn/porphyry (Rhosgobel and Scheelite Dome prospects) and Sn-Ag vein/greisen (Zeta deposit and Jabberwock prospect). The Nucleus-Revenue Cu-Mo porphyry and Minto Cu deposits occur in the adjacent NTS map area to the south and the Keno Hill Ag district occurs in the adjacent map sheet to the east, supporting the prospectivity of the region for these types of deposits.

STREAM WATER pH

As indicated in Figure 1, the vast majority of streams are near neutral to slightly alkaline (median pH = 7.3). Regional trends in pH are evident with relatively acidic streams generally corresponding to areas mapped as felsic intrusions. This is particularly apparent in the southern part of the map area which consists of mainly felsic orthogneiss, granite, monzogranite and intervening clastic sedimentary rocks. Streams with mineral occurrences in the corresponding catchments are not notably acidic suggesting that any response from oxidation of near-surface sulphides related to these occurrences has been diluted or neutralized and is indistinguishable from background variations.

Figure 1: Stream water pH

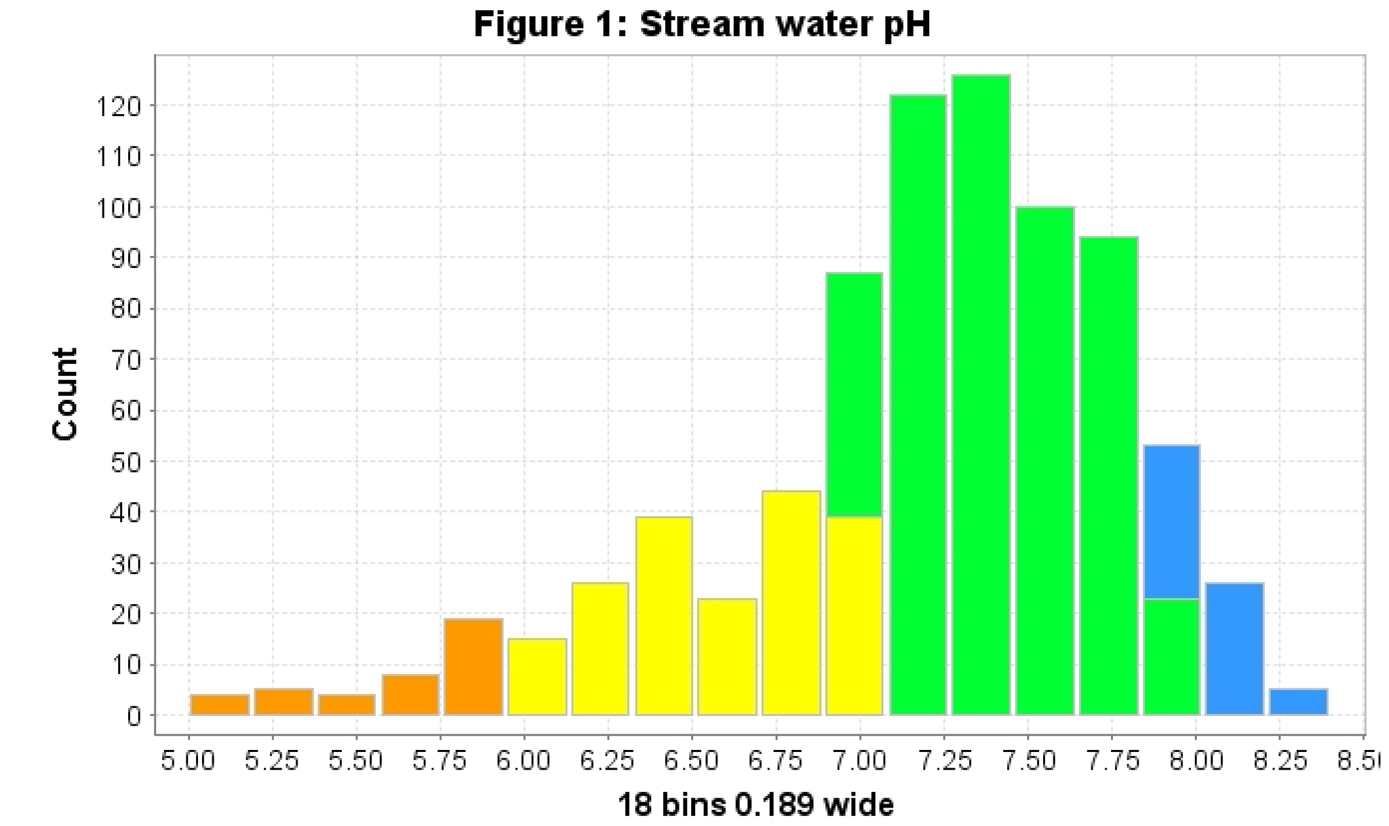


Table 1: List of Mineral Occurrences for NTS map sheet 115P (Yukon MINFILE, 2015)

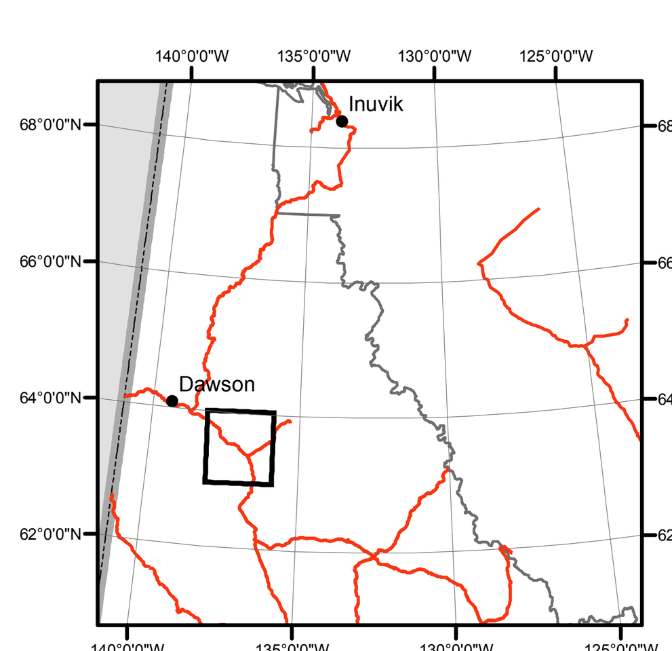
Number	Name	Type	Status	Commodities
115P 001	JAYBEE	Vein Polymetallic Ag-Pb-Zn±Au	Anomaly	Lead, Silver
115P 002	SEATTLE	Vein Polymetallic Ag-Pb-Zn±Au	Showing	Lead, Silver
115P 003	HAWTHORNE	Vein Polymetallic Ag-Pb-Zn±Au	Drilled Prospect	Antimony, Arsenic, Silver, Lead, Gold, Bismuth
115P 004	SCHEELITE DOME	Porphyry W	Drilled Prospect	Arsenic, Tungsten, Copper, Gold, Tin, Molybdenum, Bismuth
115P 007	MAHTIN	Skarn Au	Drilled Prospect	Antimony, Tin, Bismuth, Copper, Silver, Gold, Arsenic
115P 008	EAST RIDGE	Vein Polymetallic Ag-Pb-Zn±Au	Prospect	Copper, Zinc, Lead, Silver, Tungsten, Tin, Gold
115P 009	LUGDUSH	Skarn W	Prospect	Lead, Tungsten, Silver
115P 010	RIDGE	Vein Polymetallic Ag-Pb-Zn±Au	Showing	Lead, Silver, Zinc, Tin
115P 011	JOSEPHINE	Plutonic Related Au	Showing	Gold, Tungsten
115P 012	RHOSGOBEL	Skarn W	Drilled Prospect	Arsenic, Gold, Tungsten, Silver, Bismuth
115P 013	PUKELMAN	Plutonic Related Au	Drilled Prospect	Gold
115P 014	RUSS	Porphyry-related Au	Showing	Thorium, Uranium
115P 016	MOOSE RIDGE	Vein Polymetallic Ag-Pb-Zn±Au	Showing	Silver
115P 019	ROSEBUD	Ultramafic-hosted asbestos	Showing	Asbestos
115P 021	SETHER	Unknown	Anomaly	Gold
115P 023	CLEAR CREEK PROJECT	Plutonic Related Au	Drilled Prospect	Gold
115P 024	BOULDER	Vein Polymetallic Ag-Pb-Zn±Au	Showing	Copper
115P 027	ETHEL	Sediment hosted Mississippi Valley-Type Pb-Zn (MVT)	Showing	Lead
115P 028	SECRET	Plutonic Related Au	Anomaly	Gold, Tungsten, Silver, Tin
115P 030	OLIVER	Skarn Sn	Drilled Prospect	Copper, Zinc, Tin, Silver, Gold
115P 031	BIX	Plutonic Related Au	Prospect	Tin
115P 033	HIGHET	Plutonic Related Au	Drilled Prospect	Antimony, Arsenic, Bismuth, Copper, Gold, Silver, Tungsten
115P 034	BARNEY	Plutonic Related Au	Showing	Tin, Tungsten
115P 036	BANDER	Vein and Greisens Sn	Showing	Lead
115P 044	SAVY	Plutonic Related Au	Unknown	Arsenic, Gold
115P 045	OMEGA	Sediment hosted Stratiform Barite	Deposit	Barite, Zinc, Silver
115P 047	ZETA	Vein and Greisens Sn	Deposit	Barite, Zinc, Tin, Copper, Silver
115P 048	POTTER	Skarn Sn	Prospect	Gold, Lead, Silver, Tin, Zinc
115P 049	PIRATE	Vein Au-Quartz	Anomaly	Gold
115P 051	JABBERWOCK	Vein and Greisens Sn	Prospect	Copper, Silver, Tin
115P 055	LEFT	Plutonic Related Au	Anomaly	Antimony, Arsenic, Gold
115P 056	MAY CREEK	Vein Polymetallic Ag-Pb-Zn±Au	Prospect	Copper, Silver, Zinc, Lead
115P 057	QUEST	Vein Polymetallic Ag-Pb-Zn±Au	Prospect	Gold, Silver, Lead
115P 061	BIG	Plutonic Related Au	Showing	Arsenic, Gold, Manganese, Tungsten, Silver, Lead, Bismuth
115P 063	VAN	Unknown	Showing	Arsenic, Silver, Zinc, Tungsten, Lead, Bismuth, Copper, Gold
115P 040	FIONA	Unknown	Unknown	
115P 042	MCGUINTY	Unknown	Anomaly	
115P 006	HOBO	Plutonic Related Au	Deposit	Gold, Copper, Silver, Molybdenum, Lead
115P 041	SYENITE	Unknown	Unknown	
115P 046	WEIZ	Unknown	Unknown	
115P 032	MOZI	Porphyry Cu-Mo-Au	Anomaly	
115P 025	TOTH	Unknown	Unknown	
115P 054	PENTICTON	Unknown	Unknown	
115P 062	COBBLE	Porphyry Alkalic Cu-Au	Showing	
115P 037	TWENTYSIX	Unknown	Unknown	
115P 035	CLEMENT	Vein Polymetallic Ag-Pb-Zn±Au	Unknown	
115P 059	TURNIP	Unknown	Unknown	
115P 060	LOST HORSES	Unknown	Anomaly	
115P 038	FIREBIRD	Unknown	Unknown	
115P 058	PAW	Unknown	Unknown	
115P 026	ORTELL	Unknown	Unknown	

LEGEND

- Town
- Mineral Occurrence
- Road
- Contour
- River
- NTS map sheet
- Water Body
- Wetland
- Sample Location
- Catchment >14 km²

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



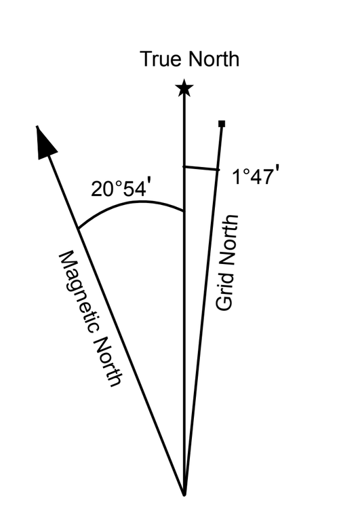
ONE THOUSAND METRE GRID
Universal Transverse Mercator Projection
North American Datum 1983
Zone 8

CONTOUR INTERVAL 100 FEET
Elevations in metres above Mean Sea Level

Stream Water pH
Sheet 11 of 11

SCALE 1:250 000

0 1 2 3 4 5
kilometres



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

116B DAWSON	116A LARSEN CREEK	106D NASH CREEK
115O STEWART RIVER	115P THIS MAP	105M MAYO
115J STEVENSON RIDGE	115I CARMACKS	105L GLENYON

REFERENCES

Hornbrook, E.H.W. and Friske, P.W.B., 1988. Regional Stream Sediment and Water Geochemical Data, central Yukon (NTS 115P and part of 105M). Geological Survey of Canada, Open File 1650.

Jackaman, W., 2012. Regional Stream Sediment Geochemical Data, McQueston area, central Yukon (NTS 115P). Yukon Geological Survey, Open File 2012-9.

Mackie, R., Arne, D. and Brown, O., 2015. Enhanced interpretation of regional stream sediment geochemistry 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 map sheet 115P. Yukon Geological Survey, Open File 2016-31, scale 1:250 000, sheet 11 of 11.

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 2016-31

Stream Water pH (NTS 115P)
Sheet 11 of 11

by

Rob Mackie, Dennis Arne, and Chris Pennimpede