

10SK	10SJ	10SI
TAY RIVER	SHELDON LAKE	LITTLE NAHANNI RIVER
10SF	10SG	10SH
QUIET LAKE	<b>THIS MAP</b>	FRANCES LAKE
10SC	10SB	10SA
TEBUS	WOLF LAKE	WATSON LAKE

**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 Finlayson Lake map area (NTS 105G) were collected at a reconnaissance scale in 1987 as part of the National Geological Reconnaissance program. Field data for 914 sites and initial geochemical data were released in Geological Survey of Canada ("GSC") Open File 1648 (Friske and Hornbrook, 1988). In 2008, new geochemical data (ICP-MS) was released in GSC Open File 5696 (Friske et al., 2008a) and Yukon Geological Survey ("YGS") Open File 2008-3 (Friske et al., 2008b). The reader is referred to these open files for details regarding sampling techniques, analytical procedures and quality control and assurance.

While the database contains information for 914 sample sites, only 871 have been included in this assessment as catchment basins (provided by the YGS) were only generated for those samples that could be reasonably assigned to a specific stream polyline. This unusually high proportion of 'omitted' sample sites is due to the difficulty in defining drainage basins in areas of subdued topography.

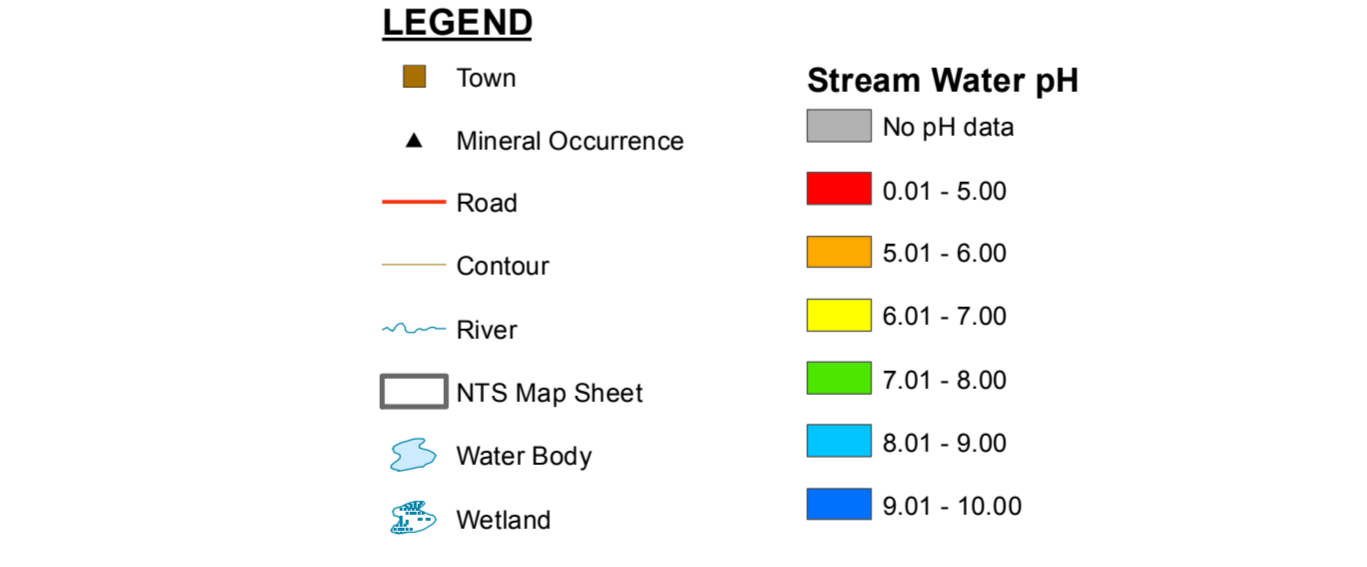
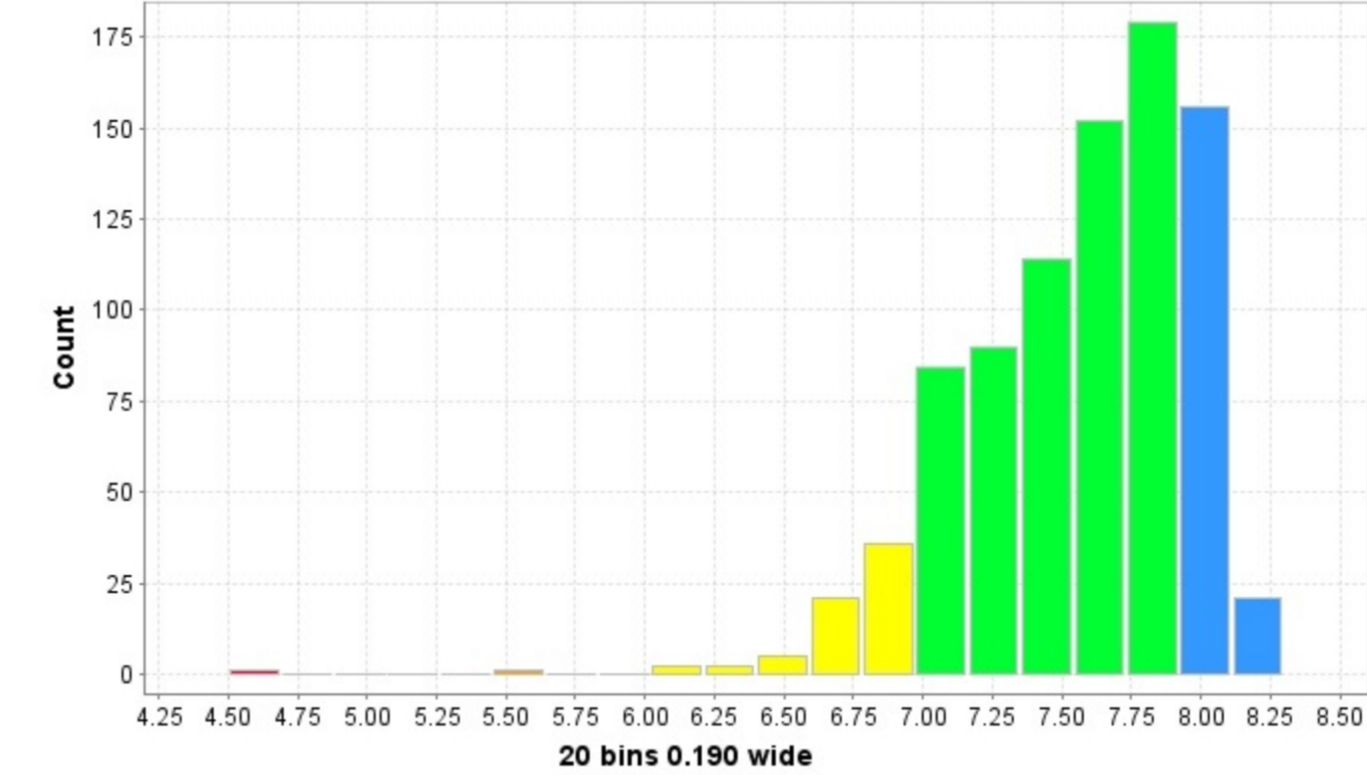
**MINERAL OCCURRENCES**

A variety of types of base and precious-metal mineralization have been documented in the map sheet area as summarized in Table 1 (Yukon MINFILE, 2015). Several volcanogenic massive sulphide deposits have been discovered and encompass the Finlayson Lake VMS district. Various sub-classes or types have been documented including: volcanic-sediment hosted Wolverine-Lynx mine (Fetish Occurrence), Kuroko-type Kudz Ze Kayah (Tag Occurrence) and GP4F deposits, Besshi-type Fyre Lake deposit and Cyprus-type Ice deposit. Other notable deposits in the region include the Tintina (105G), Groundhog, Ketzakey and Stumpy (105F) polydealt Ag-Pb-Zn deposits (105G), Ketsa River Au deposit (105F), Anvil district Pb-Zn-Ag SEDEX (105K) and Grew Creek epithermal Au-Ag deposits (105K).

**STREAM WATER pH**

As shown in Figure 1 the vast majority of the streams samples have water with mildly alkaline compositions (median = 7.7). Comparison of the location of known occurrences and stream water pH shows no obvious relationship suggesting any response related to the oxidation of near-surface sulphide mineralization in these catchments has been diluted or neutralized. Two streams have mildly acidic water (pH <6) which may be related to sulphide mineralization.

**Figure 1: Histogram of stream water pH**



**REFERENCES**

Friske, P.W. and Hornbrook, E.H., 1988. National Geochemical Reconnaissance Stream Sediment and Water Geochemical Data, South-Central Yukon (NTS 105G). Geological Survey of Canada, Open File 1648.  
Friske, P.W.B., Hornbrook, E.H.W., McCurdy, M.W., Day, S.J.A. and McNeil, R.J., 2008a. Regional stream sediment and water geochemical data, Finlayson Lake area, southeastern Yukon (NTS 105G). Geological Survey of Canada, Open File 5696.  
Friske, P.W.B., McCurdy, M.W., Day, S.J.A. and McNeil, R.J., 2008b. Regional stream sediment and water geochemical data, Finlayson Lake area, southeastern Yukon Territory (NTS 105G). Yukon Geological Survey, Open File 2008-3.

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 2015-10.

**RECOMMENDED CITATION**

Mackie, R., Arne, D. and Pennimpede, C., 2015. Stream water pH. In: Enhanced interpretation of stream sediment geochemical data for NTS 105G. Yukon Geological Survey, Open File 2015-26, 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 105G (Yukon MINFILE, 2015)**

Number	Name	Type	Commodities	
105G 001	IMONT	Vein Polymetallic Ag-Pb-Zn-Au	Prospect	Copper, Silver
105G 003	BLUEBERRY	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Copper, Silver, Zinc, Tungsten, Gold, Lead
105G 005	BLAKE	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Copper, Zinc
105G 006	TINTINA	Sediment hosted Mississippi Valley Type Pb-Zn (MVT)	Deposit	Bismuth, Gold, Silver, Zinc, Lead, Cadmium, Copper
105G 007	FLAME	Sediment hosted Mississippi Valley Type Pb-Zn (MVT)	Showing	Lead, Silver, Zinc
105G 008	HASSELBERG	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Deposit	Silver, Lead, Zinc, Copper, Barite, Gold
105G 009	MCNEIL	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Showing	Copper
105G 010	HALLER	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Copper, Silver
105G 011	AME	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Barite, Copper, Silver
105G 013	HOOD	Skarn Pb-Zn	Drilled Prospect	Lead, Silver, Zinc
105G 014	CHEER	Unknown	Anomaly	
105G 015	WAIN	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Anomaly	
105G 016	ELI	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Prospect	Arsenic, Silver, Zinc, Lead, Asbestos, Gold, Barite
105G 017	PIPK	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Lead, Silver
105G 018	GRASS	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Molybdenum, Tungsten
105G 019	RODIT	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Copper, Lead, Zinc, Tungsten
105G 020	RILEY	Unknown	Anomaly	Arsenic, Beryllium, Lead, Tungsten, Copper
105G 021	ZELINSKI	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Arsenic, Beryllium, Fluorite, Lead, Zinc, Silver, Copper
105G 023	GL	Unknown	Unknown	Copper, Zinc
105G 024	GOOD	Unknown	Anomaly	Copper, Zinc
105G 025	CHISHOLM	Unknown	Anomaly	
105G 026	RIVERA	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Drilled Prospect	Copper, Zinc
105G 027	LEO	Vein Polymetallic Ag-Pb-Zn-Au	Prospect	Arsenic, Gold, Zinc, Lead, Copper
105G 028	COPP	Vein Polymetallic Ag-Pb-Zn	Prospect	Copper, Lead, Zinc
105G 029	GEE	Vein Polymetallic Ag-Pb-Zn-Au	Showing	
105G 030	PIT	Unknown	Showing	Copper, Silver, Gold, Uranium, Zinc
105G 031	ROSE	Vein Au-Quartz	Showing	Copper, Lead, Silver
105G 032	PAC	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Beryllium, Chromium, Gold, Lead, Zinc, Silver, Copper
105G 033	TRAK	Unknown	Anomaly	Copper, Zinc
105G 034	FRYE	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Deposit	Cobalt, Copper, Zinc, Silver, Gold
105G 035	TOP	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Cobalt, Copper, Lead, Silver, Zinc
105G 036	DOB	Skarn Cu	Anomaly	Cobalt, Gold, Lead, Zinc, Silver, Copper
105G 037	BLACK	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Anomaly	Cobalt, Copper, Molybdenum, Zinc
105G 038	NORTH RIVER	Skarn Cu	Showing	Copper, Zinc, Lead, Silver
105G 039	VINCENT	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Copper, Zinc, Silver, Lead
105G 040	JAY	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Nickel, Zinc
105G 041	FINLAYSON	Unknown	Anomaly	
105G 042	MCEVOY	Sediment hosted Sedimentary Exhaustive Zn-Pb-Ag (Sedex)	Anomaly	
105G 043	ROST	Ultramafic-hosted asbestos	Unknown	Asbestos
105G 044	MINK	Unknown	Unknown	
105G 045	STARR	Unknown	Anomaly	
105G 046	TRAP	Unknown	Unknown	
105G 047	FOP	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Showing	Asbestos, Gold, Zinc, Lead, Copper
105G 049	COW	Unknown	Anomaly	
105G 051	CHOW	Volcanogenic Sulphide - type not determined	Prospect	Copper, Zinc, Gold, Lead
105G 052	DOL	Volcanogenic Sulphide - type not determined	Prospect	Copper, Zinc
105G 053	CAMPBELL	Coal	Anomaly	Coal
105G 054	SUN	Unknown	Anomaly	Zinc
105G 055	ROBE	Vein Polymetallic Ag-Pb-Zn-Au	Drilled Prospect	Copper, Lead, Zinc, Silver, Gold
105G 056	PAY	Sediment hosted Sedimentary Exhaustive Zn-Pb-Ag (Sedex)	Drilled Prospect	Gold, Silver, Zinc, Lead
105G 057	RIS	Vein Cu-Ag-Quartz	Showing	Copper
105G 058	SPED	Skarn Pb-Zn	Showing	Lead, Zinc
105G 060	JAKE	Skarn Pb-Zn	Showing	Copper, Zinc, Silver, Lead
105G 061	HOOLE	Skarn Pb-Zn	Showing	Lead, Silver, Zinc
105G 062	WAP	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Lead, Silver, Zinc, Silver, Gold
105G 063	WATERS	Vein Polymetallic Ag-Pb-Zn-Au	Showing	Copper, Lead, Zinc
105G 064	ZIMMER	Sediment hosted Mississippi Valley Type Pb-Zn (MVT)	Showing	Copper, Lead, Zinc
105G 065	CW	Vein Cu-Ag-Quartz	Showing	Copper
105G 067	LAWN	Unknown	Unknown	
105G 068	ASH	Unknown	Drilled Prospect	Copper, Lead, Zinc
105G 069	HARMAN	Skarn Pb-Zn	Prospect	Barium, Silver, Zinc, Copper, Lead
105G 070	FRIEND	Sediment hosted Sedimentary Exhaustive Zn-Pb-Ag (Sedex)	Prospect	Copper, Lead, Zinc, Silver
105G 071	ASH	Skarn Pb-Zn	Prospect	Beryllium, Tin, Tungsten, Gold
105G 072	WOLVERINE	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Producer	Copper, Gold, Zinc, Silver, Lead
105G 073	QUANDARY	Unknown	Anomaly	Copper, Nickel, Silver, Zinc, Gold
105G 074	BEV	Unknown	Anomaly	Chromium, Lead, Silver, Zinc, Nickel, Copper, Gold
105G 075	MONTOSH	Unknown	Anomaly	
105G 076	FREBERG	Unknown	Anomaly	Copper, Zinc
105G 077	FILIN	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Lead, Zinc
105G 078	FLOIN	Unknown	Anomaly	
105G 079	HUDDSON	Unknown	Anomaly	Copper, Zinc
105G 080	ARGORME	Unknown	Drilled Prospect	
105G 081	MONEY	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Showing	Copper, Silver, Zinc, Lead
105G 082	AHLURIST	Volcanogenic Sulphide - type not determined	Drilled Prospect	Barite, Copper, Silver, Zinc, Lead
105G 083	PY	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Gold, Silver, Zinc, Lead
105G 084	BARK	Unknown	Drilled Prospect	
105G 085	GENULFLECT	Unknown	Anomaly	
105G 086	BEND	Unknown	Anomaly	
105G 087	KINDT	Unknown	Drilled Prospect	
105G 088	COOKE	Volcanogenic Sulphide - type not determined	Anomaly	Chromium, Copper, Zinc, Lead
105G 089	HENNEL	Unknown	Anomaly	Copper, Zinc, Gold, Lead
105G 090	CARBANK	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Showing	Barite, Silver, Zinc
105G 091	BOUT	Volcanogenic Sulphide - type not determined	Anomaly	Copper, Lead
105G 092	COOPE	Unknown	Anomaly	Zinc
105G 093	HEBCOAT	Sediment hosted Sedimentary Exhaustive Zn-Pb-Ag (Sedex)	Drilled Prospect	Lead, Zinc
105G 094	DWONK	Sediment hosted Sedimentary Exhaustive Zn-Pb-Ag (Sedex)	Drilled Prospect	Barite
105G 095	PELANUT	Unknown	Unknown	
105G 096	RIAD	Sediment hosted Sedimentary Exhaustive Zn-Pb-Ag (Sedex)	Showing	Barium, Zinc, Lead, Silver
105G 097	FOG	Skarn W	Showing	Tungsten
105G 098	ANT	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Zinc, Silver, Lead
105G 099	BRENDEX	Volcanogenic Sulphide - type not determined	Prospect	Barite, Copper, Lead, Silver, Zinc, Gold
105G 100	HARRIS	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Prospect	Copper, Silver, Zinc, Gold, Lead
105G 101	ADISON	Unknown	Drilled Prospect	Copper, Lead, Zinc
105G 102	HONDEE	Skarn W	Showing	Copper, Silver, Tungsten, Gold
105G 103	RUSH	Unknown	Unknown	
105G 104	SANDERS	Skarn W	Drilled Prospect	Beryllium, Copper, Tungsten, Zinc, Lead, Chromium
105G 105	WHIT	Unknown	Anomaly	Copper, Zinc, Lead
105G 106	ST. CYR	Unknown	Anomaly	
105G 107	RIEVER	Unknown	Anomaly	Copper, Lead, Gold, Molybdenum, Zinc
105G 108	WOLV	Unknown	Unknown	
105G 109	COPLAND	Unknown	Unknown	
105G 110	LETS	Unknown	Unknown	
105G 111	TOR	Unknown	Unknown	
105G 112	DESOTO	Unknown	Drilled Prospect	Copper, Lead, Zinc, Silver
105G 113	AZULS	Unknown	Anomaly	
105G 114	LADY LEE	Ultramafic Mafic Jade (Nephrite)	Showing	Jade/Nephrite
105G 115	EFF	Vein Polymetallic Ag-Pb-Zn-Au	Prospect	Lead, Zinc, Silver
105G 116	CHARLE	Unknown	Anomaly	Copper, Lead, Zinc, Silver
105G 117	KUDZ ZE KAYAH	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Deposit	Copper, Gold, Zinc, Silver, Lead
105G 118	ICE	Volcanogenic Massive Sulphide (VMS) Cyprus Cu-Zn	Deposit	Copper, Silver, Gold, Cobalt
105G 119	SHOT	Skarn Pb-Zn	Showing	Copper, Zinc, Lead, Silver
105G 120	BLUE LINE	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Showing	Copper, Gold, Lead, Silver, Zinc
105G 121	HEF	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Showing	Copper, Zinc, Lead
105G 122	OVERTIME	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Showing	Copper, Silver, Lead, Zinc
105G 123	GOA	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Prospect	Copper, Lead, Zinc, Silver
105G 124	RED LINE	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Lead, Zinc, Silver
105G 125	GOON	Skarn Pb-Zn	Drilled Prospect	Copper, Zinc, Silver, Gold, Lead, Nickel
105G 126	RBI	Volcanogenic Massive Sulphide (VMS) Besshi Cu-Zn	Drilled Prospect	Copper, Silver, Zinc, Lead, Nickel
105G 127	COBB	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Showing	Barium, Lead, Copper, Zinc, Silver
105G 128	DOB	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Anomaly	
105G 129	MAJOR	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Anomaly	Copper, Zinc, Lead, Silver
105G 130	LEAGUE	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Lead, Silver
105G 131	DOD	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Anomaly	Copper
105G 132	NECK	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Anomaly	Barium, Copper, Lead, Zinc
105G 133	AREA 18	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	
105G 134	FUCK	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Lead, Zinc
105G 135	ELLEN CREEK	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Lead, Zinc
105G 136	WHITE CREEK	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Barite, Lead, Silver, Zinc, Copper
105G 137	RASK	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Anomaly	Copper, Silver
105G 138	POP	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Silver, Zinc, Lead
105G 139	ON	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Copper, Zinc, Lead
105G 140	WAD	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Prospect	Copper, Lead, Zinc, Silver
105G 141	VERMILLION	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Drilled Prospect	Lead, Zinc
105G 142	BLAKE	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Anomaly	Copper, Lead, Zinc
105G 143	GRIFF	Volcanogenic Massive Sulphide (VMS) Kuroko Cu-Pb-Zn	Deposit	Copper, Gold, Zinc, Silver, Lead
105G 144	ARENA	Unknown	Anomaly	Copper
105G 145	WINGER	Skarn Pb-Zn	Anomaly	Lead, Silver, Zinc
105G 146	IC	Volcanogenic Sulphide - type not determined	Showing	Copper, Lead, Zinc, Silver, Gold
105G 147	TSADA GLISZA	Gemstone Schist-hosted emerald	Showing	Emerald, Tungsten, Silver, Copper, Gold
105G 148	ASSIST	Unknown	Anomaly	Arsenic, Zinc, Copper, Lead
105G 149	LHL	Volcanogenic Sulphide - type not determined	Showing	Copper, Zinc, Silver, Lead, Gold
105G 150	SPICE	Epithermal Au-Ag Low Sulphidation	Anomaly	Antimony, Silver, Mercury, Gold, Arsenic
105G 151	GOOD GRIFF	Volcanogenic Sulphide - type not determined	Showing	Copper, Gold

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**Stream Water pH (NTS 105G)  
Sheet 17 of 17**

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