

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 were collected from the Lansing Range area (NTS 105N) in 1990 and the original geochemical data, including stream water pH, was released in Geological Survey of Canada Open File 2363 (Friske *et al.*, 1991). Archived sample material was re-analyzed for Bi and Se as reported in GSC Open File 3685 (Friske *et al.*, 1998). Subsequently, the samples were re-analyzed by ICP-MS and these new geochemical data were released in GSC Open File 6272/YGS Open File 2009-27 (Day *et al.*, 2009). The reader is referred to these open files for detailed descriptions of sampling techniques, analytical procedures and quality control measures.

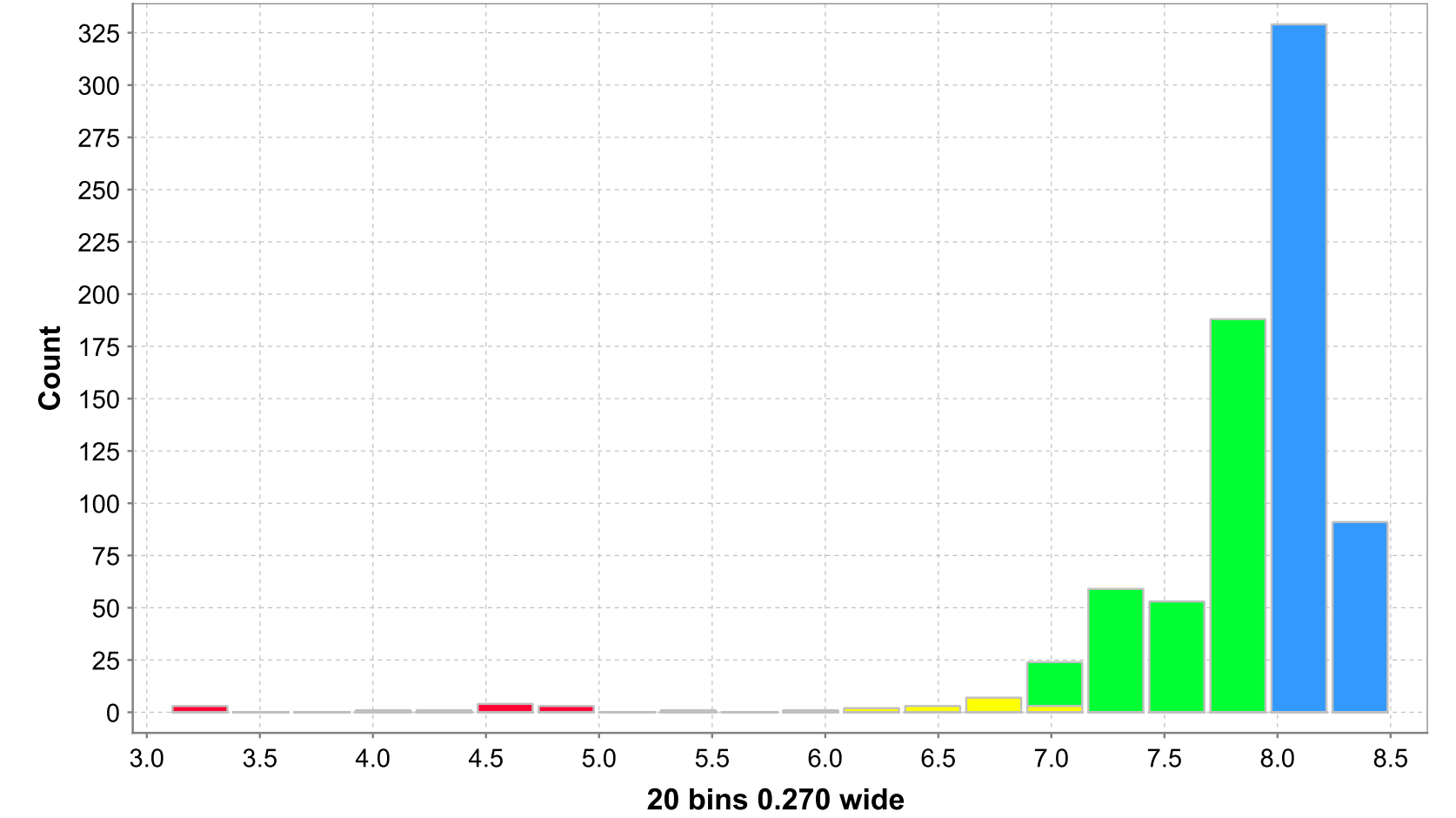
MINERAL OCCURRENCES

A variety of base and precious-metal deposit types have been documented in NTS map sheet 105N as shown in Table 1 (Yukon MINFILE, 2015). The Inca and Plata polymetallic Ag-Pb-Zn (\pm Au) deposits are located near the eastern edge of the map area. Additionally, Cu (\pm Ag) vein type (Joy, Dean, Cartier and Etzel showings), sedimentary exhalative Pb-Zn-Ag (Kidd Prospect) and W skarn mineralization (Tongue Prospect) have been discovered. In the adjacent map area to the north (106C), Carlin-type gold (Rackla Gold Project of Atac Resources Ltd.) and Mississippi Valley-type Pb-Zn-Ag mineralization (Craig Deposit) is noted. Other types of deposits in the region include Cu skarn (Golf Showing), Zn-Pb-Cu volcanogenic massive sulphide (Marg Deposit) and various types of gold mineralization, such as unclassified quartz-vein hosted/related (Cynthia and Cache Creek prospects; Berdahl showing) and intrusion-related (LM and Niddery Prospects).

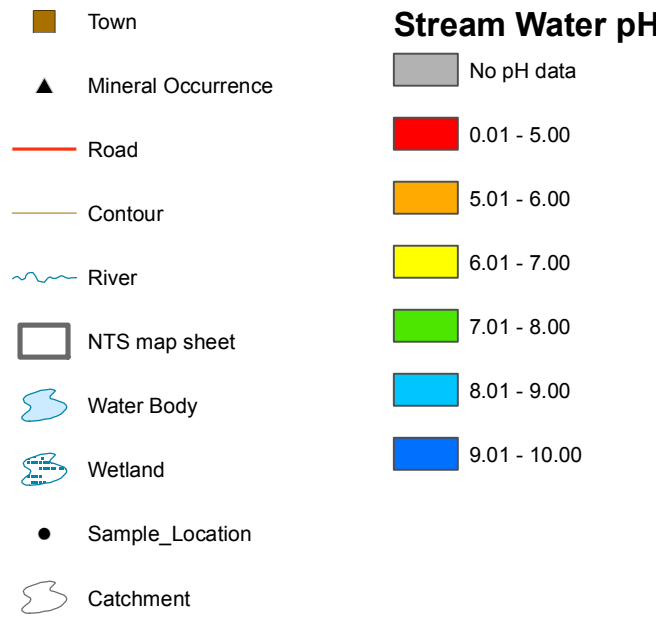
STREAM WATER pH

As shown in Figure 1 the vast majority of the streams sampled are mildly alkaline (median pH = 8). Comparison of the location of known occurrences and stream water pH shows no consistent relationship suggesting, in most instances, any response from oxidation of near-surface sulphide mineralization has been diluted or neutralized. However, streams in the vicinity of the Berdahl Au and Flataza Ag-Pb-Zn occurrences in the northern and eastern part of the map area are moderately acidic (pH <5).

Figure 1: Stream Water pH



LEGEND



RECOMMENDED CITATION

MACKIE, R., ARNE, D. AND PENNIMPEDE, C., 2015. Stream water pH. In: Enhanced interpretation of stream sediment geochemical data for NTS map sheet 105N. Yukon Geological Survey, Open File 2015-29, 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) of this map may be downloaded free of charge from the Yukon Geological Survey website: <http://www.geology.gov.yk.ca>.

REFERENCES

- Day, S.J.A., McCurdy, M.W., Friske, P.W.B., McNeil, R.J., Hornbrook, E.H.W., Lynch, J.J., Durham, C.C., Gross, H. and Galletta, A.C., 2009. Regional stream sediment and water geochemical data, Lansing Range area, east central Yukon (NTS 105N). Geological Survey of Canada, Open File 6272, Yukon Geological Survey, Open File 2009-27.
- Friske, P.W., Day, S.J.A., Durham, C.C. and McCurdy, M.W., 1998. Regional stream sediment and water data, central Yukon (NTS 105M and 105N). Geological Survey of Canada, Open File 3685.
- Friske, P.W.B., Hornbrook, E.H.W., Lynch, J.J., McCurdy, M.W., Gross, H., Galletta, A.C. and Durham, C.C., 1991. National Geochemical Reconnaissance stream sediment and water data, east central Yukon (NTS 105N). Geological Survey of Canada, Open File 2363.
- 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, 2015. Yukon MINFILE – A database of mineral occurrences. Yukon Geological Survey, www.data.geology.gov.yk.ca, accessed May 2015.

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by

Rob Mackie, Dennis Arne,
and Chris Pennimpede