

Update on the Geology of Rennie and Leeson Townships, Michipicoten Greenstone Belt

L. Robichaud

Geoscientist, Earth Resources and Geoscience Mapping Section, Ontario Geological Survey

INTRODUCTION

Geological bedrock mapping of the Michipicoten greenstone belt carried out during the summer of 2015 focussed on Rennie and Leeson townships (Robichaud, McDivitt and Trevisan 2015). This short report highlights new assay results from samples collected by field party personnel in 2015 from the Conboy Lake occurrence (MDI42B05NW00021; Ontario Geological Survey 2015).

NEW ASSAY VALUES

The Conboy Lake occurrence (NAD83, Zone17, 282745E 5366813N) is located in north-central Rennie Township. It is an historic zinc, silver and copper occurrence with secondary gold mineralization, and is classified in the Mineral Deposit Inventory (MDI) as a developed prospect with reserves. It has a long history of sporadic mineral exploration between 1939 and 2010, as summarized in Ontario Geological Survey (2015).

The Conboy Lake occurrence is found within felsic metavolcanic rocks that display pervasive sericite alteration. The zinc mineralization occurs as thick layers of massive sphalerite with disseminated pyrite and chalcopyrite (Robichaud, McDivitt and Trevisan 2015; Riley 1971, p.45-49; Ontario Geological Survey 2015).

Sampling of the occurrence by the Ontario Geological Survey in 1971 returned values of 14.1% Zn, 0.80% Pb, 0.10% Cu, 20.28 oz/ton Ag and 0.06 oz/ton Au; a second sample contained trace amounts of Pb, 7.60% Zn, 2.15% Cu, 18.12 oz/ton Ag and 0.06 oz/ton Au (Riley 1971; Ontario Geological Survey 2015). Diamond-drill core sampled by Westfield in 1980 to 1981 returned values of 14.8% Zn. Gold values ranging from 0.05 to 0.95 oz/ton are found to the south of the main zone (Ontario Geological Survey 2015). The best historical values are 14.8% Zn, 2.15% Cu, 20.28 oz/ton Ag and 0.95 oz/ton Au (Ontario Geological Survey 2015).

Several samples collected at the occurrence during the summer of 2015 were submitted for analysis at the Geoscience Laboratories of the Ontario Geological Survey using an inductively-coupled plasma mass spectrometry analytical method designed for mineralized rocks. Values obtained by this method were 31 707 ppm Zn, 2272 ppm Cu and >1000 ppm Pb (approximately 3.17 wt% Zn and 0.227 wt% Cu). Values for Zn and Pb were above the detection limit of the instrument and are being re-analysed. Lead-fire assay values were 68 oz/ton Ag and 0.64 oz/ton Au (approximately 2332 g/t Ag and 21.9 g/t Au, respectively).

The Ag and Au results are better than, or comparable to, the previous reported results, suggesting that this occurrence has further precious metal potential. The base metal results, although still incomplete, confirm the previous reported results from the occurrence.

REFERENCES

- Ontario Geological Survey 2015. Mineral Deposit Inventory; Ontario Geological Survey, Mineral Deposit Inventory (May 2015 update), online database.
- Riley, R.A. 1971. Glasgow, Meath, and Rennie townships, Algoma and Sudbury districts, Ontario; Ontario Department of Mines and Northern Affairs, Geological Report 90, 55p.
- Robichaud, L., McDivitt, J.A. and Trevisan, B.E. 2015. Geology and mineral potential of Rennie and Leeson townships, Michipicoten greenstone belt; *in* Summary of Field Work and Other Activities 2015, Ontario Geological Survey, Open File Report 6313, p.5-1 to 5-11.