

## Renaissance for the Renzy Lake area: nickel-copper discovery on the Vulcain property

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NTS map: 31 K/15  
Location: 100 km NW of Mont-Laurier and 165 km SW of Val-d'Or  
Geological Province: Grenville Province  
Commodities: nickel and copper  
Operator: Matamec Explorations Inc.  
Owner: Matamec Explorations Inc.  
Project or Property: Vulcain

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In March and April, [Matamec Explorations](#) published encouraging results from exploration drilling on its Vulcain property. Previously, a helicopter-borne geophysical survey had detected an electromagnetic (EM) anomaly, 700 metres long by 100 metres wide, covering the old Renzy Lake Mine site. Nearly 718,000 t at 0.7% Ni and 0.7% Cu were extracted there between 1969 and 1972. The most recent reserve calculation, conducted by Géostat for Matamec Explorations, reported 259,000 t at 0.9% Ni and 0.9% Cu, with a 0.5% Ni-equivalent cut-off grade (Qualifying Report, October 2003).

The magmatic nickel-copper-type mineralization consists of magmatic breccias with a sulphidic matrix, massive sulphide veins and disseminated sulphides in ultramafic rock. The best results obtained by the company were from six holes drilled in the southern open pit of the Renzy Lake Mine, with values of:

- 1.93% Ni, 4.09% Cu and 0.13% Co over 2.96 m (hole RZ-05-10);
- 1.25% Ni, 1.77% Cu and 0.09% Co over 10.80 m (hole RZ-05-11).

It should be noted that values of 0.03 to 0.07 g/t Pt and 0.035 to 0.17 g/t Pd were reported in two drill holes, the highest Pd values being associated with copper-rich zones.

The company drilled three holes in the northern extension of the same open pit. The best values obtained were:

- 1.01% Ni, 1.24% Cu and 0.07% Co over 14.7 m (hole RZ-05-14);
- 1.61% Ni, 0.86% Cu and 0.12% Co over 5 m (hole RZ-05-19).

In order to determine the extension of the mineralization outside the limits of the old mine, the company drilled ten holes in the northern part of the main EM anomaly. The best values obtained were:

- 0.42% Ni, 0.71% Cu and 0.02% Co over 10.35 m, including 3 m at 1.02% Ni, 1.58% Cu and 0.05% Co (hole RZ-05-05);
- 2.12% Ni, 1.68% Cu and 0.145% Co over 4.90 m (hole RZ-05-07).

### Geological context

The Vulcain property lies in the Baskatong–Dozois Terrane, in the western part of the Para-autochthonous Belt of the Grenville Province. The Renzy Lake deposit is hosted by a tabular ultramafic body, which is concordant with the surrounding rock, Archean paragneiss (Giguère et al., 2005; Sharma et al., 1992; Johnson, 1972). Several bands of ultramafic and mafic rocks, similar in size to or larger than the body hosting the Renzy Lake deposit, occur on the property and in the area (e.g.: the Flora Lake Igneous Complex).

### Regional mineral potential

According to published petrological data on the olivines of the Renzy Lake deposit, the ultramafic rocks are either crustal in origin or result from strong re-equilibration during the Grenville Orogen (Giguère et al., 2005). In the case of infracrustal origin, their emplacement is either late-Archean or syn- to late-Grenvillian orogenic, and they would therefore be metal-poor. However, in the case of significant re-equilibration during the Grenville Orogen, the ultramafics could be of mantle origin and metal-rich. Their emplacement could be associated with the opening of a Paleoproterozoic or Mesoproterozoic volcanosedimentary basin (e.g.: Raglan-type ultramafic sills).

In this context, it is important to define the geological environment associated with the Renzy Lake ultramafics. Dating the rocks would make it possible to determine their origin. Detailed mapping, backed by a detailed airborne Mag-EM survey in the paragneiss sequences of the Baskatong–Dozois Terrane, would bring out new exploration targets for nickel and copper mineralization associated with previously unknown ultramafic rocks. Carrying out this work is important for guiding future exploration in the Baskatong–Dozois Terrane.

## References

Giguère, E., Hébert, R., Sharma, K.N.M. et Cimon, J., 2005. Étude pétrologique des roches ultramafiques des régions de Témiscaming, du lac Bryson et de la mine du lac Renzy, Province de Grenville, Québec. Ministère des Ressources naturelles et de la Faune, Québec; ET 2004-04, 46 pages.

Johnson, W.L., 1972. Copper-nickel sulphides in a layered ultramafic body, Renzy mine, southwestern Quebec, Unpublished master thesis, University of Western Ontario, London, Canada; 107 pages.

Sharma, K.N.M, Giguère, E., Cimon, J. et Madore, L., 1995. Les roches ultramafiques dans le Grenville de l'Outaouais : contexte tectonique et potentiel minéral. Ministère des Ressources naturelles et de la Faune, Québec; PRO 95-08.



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