

Kiviniemi Scandium Project Property Technical Characteristics

Property/Location. The Kiviniemi property is located in the municipality of Rautalampi, Eastern Finland Province, approximately 350km northeast of Helsinki, by road. The closest major city/airport is Kuopio (pop. 110,000), approximately 70km to the northeast of the property. The exploration target is located on a small portion of a family farm, partially cleared for farming. Most of the property is wooded, including the area where the mineralization has been located,

Prior Exploration Work. The Geological Survey of Finland (“GTK”) performed magnetic surveys on the general area in 1986, focused on copper/nickel/cobalt targets, and based on current mining activity in the area. That initial field work located a significant magnetic anomaly on the Kiviniemi property. In 2008, GTK initiated an exploration drilling program on the property, completing 4 diamond core holes in that first program phase, followed by a further 5 diamond holes in 2010, totaling 1,250 meters, at an average (angled) length of 139 meters, and a maximum vertical extension of 167 meters. The drill spacing varied from 50-200 meters, using a diamond drill size of 46mm (T56).

Four of the nine total holes drilled (approx. 850 meters) are in the mineralized area, with the remainder defining portions of the mag zone that did not contain scandium. The mag zone is generally very high in iron, ranging from about 20% to 35% Fe. The GTK published the results of the drill program assays, and other information on the geology and mineralization, on their website in 2016.

Geology of Resource Target. The host rock is very iron-rich, garnet-bearing fayalite ferro(monzo) diorite. The main minerals in the deposit include: plagioclase, potassium feldspar, ferrohedenbergite (clinopyroxene), ferrohastingsite (amphibole), almandine garnet and fayalite.

The principal scandium carrier minerals are ferrohastingsite (59 %) and ferrohedenbergite (40 %).

Resource Modeling. GTK completed and published a paper outlining property work including a 3D modeling and resource estimation on the project, in March 2016. The authors employed data from 6 holes, and used an industry standard GEOVIA Surpac software to produce a geological 3D domain model, and inverse distance was run to estimate resource grades into the block model. The authors declined to specifically characterize the resource on the basis of limited holes and uneven spacing, describing their estimate as an “exploration potential measurement”. The authors estimated that another 500-700 meters of drilling (5-7 holes) would establish 50 meter centers on the target and allow a resource classification. The mineralized target remains open at depth.

The authors did provide a table of results on tonnage estimates from their modeling work, at various cut off values, excerpts of which are presented below.

Kiviniemi Scandium Property - GTK Resource Potential Estimate				
Estimated Potential Tonnage (Mt)	Sc Cut Off Grade (ppm)	Average Grade Estimate (ppm)		
		Scandium	Yttrium	Zirconium
12.6	60	170.1	80.5	1745
12.5	100	170.9	80.3	1744
11.1	150	173.3	80.2	1830

SOURCE: Publication, GTK, "3D Modeling and Mineral Resource Estimation of the Kiviniemi Scandium Deposit, Eastern Finland". Authors, Janne Hokka & Tapio Halkoaho

NOTE: This historical resource estimate does not use the categories prescribed by NI 43-101. A qualified person (as defined in NI 43-101) has not done sufficient work to classify the historical estimate as a current mineral resource. The Company is not treating the historical estimate as a current mineral resource.

The Company believes the standards and controls employed by GTK are consistent with the standards contemplated by NI 43-101. However establishing a mineral resource that meets the standards prescribed by NI 43-101 will require independent verification of past results and infill drilling.

Metallurgical Upgrade Work. In 2010, GTK engaged their metallurgical research laboratory (at Outokumpu) to conduct standard upgrade testing on the drill core sample material, specifically magnetic gravity separations. The mag separation work suggested a scandium upgrade to approximately 346ppm, based on a resource material head grade of 160-200ppm, and a 72% scandium recovery.

In June 2017, SCY engaged FLSmidth (Salt Lake City, Utah) seeking to duplicate the earlier 2010 upgrade work and confirm the earlier results. The earlier results were generally confirmed, in that the 2017 work achieved magnetic separation upgrade assays of 286ppm on a resource material head grade of 186ppm. SCY supplied FLSmidth with approximately 16kg of resource material sourced from GTK, all samples from a single hole (P433-R3). FLSmidth also carried out scandium check assays on the individual drill hole samples provided by GTK, with good grade correlation to GTK data.