# **Trident Mountain Nepheline Syenite Property**

Revelstoke Area, Southeast BC

## **Summary**

The Trident Mountain property covers a concordant lenticular nepheline syenite body high on the slopes of Trident Mountain. Sampling by the BC Geological Survey in 1987 indicates that the site can produce a feldspathic product which will meet commercial specifications for glass and ceramic manufacturing. The samples tested are comparable to nepheline syenite currently imported into western Canada from Ontario. The property provides an exciting opportunity and very good potential to produce commercial grade nepheline syenite.

# Claims, Location and Access

The Trident Mountain property is located approximately 100 kilometres north of Revelstoke in southeast British Columbia on NTS map sheet 082M16E, or TRIM map 082M100. The property is near the headwaters of Bigmouth Creek at Trident Mountain, about 5 kilometres east of road access.

A 199 hectare claim was staked in early January 2006 and is 100% owned by Garry Payie, who is also the property vendor. The claim is in the Golden Mining Division, Tenure Number 525252, and covers MINFILE occurrence 082M 173 located at Latitude 51° 54′ 20″N, Longitude 118° 09′ 04″W (NAD 83).

#### **Property History**

Geological mapping in the area was conducted in 1965 by J.O. Wheeler of the Geological Survey of Canada, in 1983 by M.J. Perkins as part of a Ph.D. thesis for Carleton University, and in 1986-87 by the British Columbia Geological Survey.

## Geology and Mineralization

Nepheline syenite gneiss occurs as a concordant lenticular mass at Trident Mountain. The syenites intrude psammitic and kyanite-bearing pelitic schists of the Hadrynian Horsethief Creek Group. The nepheline syenite gneiss occurs in the core of an undulating, recumbent nappe forming a lenticular body, diminishing in thickness to the northwest and southeast. The rock is white to grey, medium to coarse grained and consists of microcline, albite and nepheline with minor biotite, ilmenite, sodalite, cancrinite, calcite, apatite, sphene, pyrochlore and zircon. The composition of three samples collected in 1987 is:

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SiO2	55.59 - 63.70%	Mesh Analysis			Analyses of the Nonmagnetic Concentrate			
Al2O3 Fe2O3	20.73 - 24.69% 0.17 - 0.59%	Mesh	Magnetic concentrate (Weight %)	Nonmagnetic Concentrate	Major oxides	-10+35 mesh	-35+10 mesh	0-100 mesh
CaO	0.56 - 1.20%	-10 +35	4.1	67.7			(Weight %)	
Na2O	8.16 - 8.39%	-35 +100	1.3	19.8	SiO2	56.6	58.0	62.0
K2O	3.12 - 8.22%	-100	0.5	6.6	Al2O3	16.8	17.3	18.5
					Fe2O3	0.07	0.03	0.10
					CaO	0.75	0.76	0.95
				•	Na2O	6.11	5.79	5.63
					K2O	7.59	8.05	8.31

Processing of a 20-kilogram sample by CANMET indicates that the nepheline syenite is low in magnetic impurities, has a high recovery rate of nonmagnetic materials and has a very good potential to produce commercial grade nepheline syenite (see Mesh Analysis and Analyses of the Nonmagnetic Concentrate). Processing indicates that a product brightness of 85 per cent can be obtained (BC Geological Fieldwork 1988). Ground nepheline syenite was tested in Clayburn Refractories Limited laboratories for potential glaze material. The glaze produced was white, translucent and glassy with a smooth unblemished surface.

Garry Payie (Property Owner and Vendor)

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(from George
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