

NAME OF PROPERTY  
NOM DE LA PROPRIÉTÉ

ALEY

OBJECT LOCATED - Centre of carbonatite outcrop  
OBJET LOCALISÉ

UNCERTAINTY  
FACTEUR D'INCERTITUDE

Mining Division Division minière	Omineca	District District	Cassiar
County Comté		Township or Parish Canton ou paroisse	
Lot Lot		Concession or Range Concession ou rang	
Sec Sect.	Tp. Ct.	R. R.	

Lat. 56°27' 20"      Long. 123°43'30"

OWNER OR OPERATOR/PROPRIÉTAIRE OU EXPLOITANT

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT

A concentrically zoned carbonatite intrusive complex approximately 4 km in diameter cuts Lower Palaeozoic clastic sedimentary rocks. The core of the complex, about 2 km in diameter, is composed of dolomite and apatite with minor phlogopite, pyrite, magnetite and zircon. Pyrochlore and/or columbite may be developed near the margin of the core. An amphibolite margin about 1 km in width encircles the core. An alteration halo in the sedimentary rocks extends for about 500 m beyond the amphibolite margin. Rare earth element-enriched dykes occur throughout the complex but are most common in the outer alteration halo. The dykes average 0.5 to 1.5 m in thickness. Their primary component is dolomite. Accessory minerals include fluorite, pyrite, barite and rare earth minerals.

Apatite is present as fine-grained crystals and aggregates and is more abundant in calcite carbonatite. K.R. Pride suggests that the average grade of the carbonatite is approximately 5 per cent P<sub>2</sub>O<sub>5</sub> representing approximately 10 per cent apatite. If the entire carbonatite core contains this amount of apatite then the Aley deposit may have a

p.t.o.

Associated minerals or products - Rare earths, phosphate  
Inéaux ou produits associés

HISTORY OF EXPLORATION AND DEVELOPMENT  
HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

The property is located east and north of Williston Lake at elevations of 1 450 to 2 200 m near the head of Aley Creek, a westerly flowing tributary of the Ospika River, some 300 km north-northwest of Prince George.

Cominco Ltd staked the Aley 1-4 claims in 1982. Geological mapping was reported in 1983 and trenching in 1984. Work in 1986 included geophysical surveys, trenching and over 1 400 m of diamond drilling; this work identified 7 mineralized zones in or near the amphibolitic margin, with some niobium-bearing mineralization also discovered in the core zone.

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Exploration in British Columbia; BCDM: 1983, p. 467.

Geological Fieldwork, BCDM: 1985, p. 275; 1986, p. 283; 1987, p. 407.

Mineral Exploration Review, BCDM: 1984, p. 22; 1985, p. 30; 1986, pp. 16, 47.

#### MAP REFERENCES/RÉFÉRENCES CARTOGRAPHIQUES

Map 1232 A, Halfway River, (Geol.), Sc. 1":4 miles, Paper 69-11, Geol. Surv. of Canada.

Halfway River Area, (Geol.), Sc. 1:50,000, Open File 536, Geol. Surv. of Canada, 1978.

Map 94 B/5, Cauvreau Creek, (Topo.), Sc. 1:50,000.

Geological Map of the Aley carbonatite complex; Sc. 2.5 cm: 1 km, Geological Fieldwork, 1986, p. 284.

#### DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT (con't)

potential exceeding 15 billion tonnes at this grade. (Geological Fieldwork, 1987, p. 407).

#### REMARKS/REMARQUES

Comp./Rev. By Comp./rév. par	DMacR	DMacR					
Date Date	11-86	10-88					