

Crystal Data: Hexagonal. *Point Group:* $\bar{3}2/m$. As aggregates of rhombic crystals, to 0.6 mm; in nodular concretions, commonly compact massive.

Physical Properties: *Cleavage:* Good on {10 $\bar{1}$ 1}. *Fracture:* Uneven. *Hardness* = 4.5–5
D(meas.) = 3.71(1) D(calc.) = 3.748

Optical Properties: *Translucent.* *Color:* Pale green to bright grass-green, olive-green.
Streak: Yellow-green. *Luster:* Vitreous to dull.
Optical Class: Uniaxial (-). $\omega = 1.83(1)$ $\epsilon = 1.61(1)$

Cell Data: *Space Group:* $[R\bar{3}c]$ (by analogy to the calcite group). $a = 4.608\text{--}4.621$
 $c = 14.805\text{--}14.93$ $Z = 6$

X-ray Powder Pattern: Gaspé Peninsula, Canada.
2.741 (100), 1.692 (45), 3.543 (36), 2.098 (36), 1.932 (25), 2.317 (20), 1.337 (11)

Chemistry:	(1)	(2)	(3)		(1)	(2)	(3)
CO ₂	42.0	[35.9]	43.36	MgO	17.3	2.6	19.85
SiO ₂	0.9	0.9		CaO		0.3	
FeO	5.7	0.1		insol.	1.8		
NiO	35.0	55.5	36.79	<hr/>			
				Total	102.7	[95.3]	100.00

(1) Gaspé Peninsula, Canada; CO₂ by ignition and absorption; after removal of MgO and SiO₂ from serpentinite, corresponds to (Ni_{0.49}Mg_{0.43}Fe_{0.08}) $\Sigma=1.00$ CO₃. (2) Otway prospect, Western Australia; by electron microprobe, here converted to oxides from an original elemental analysis totalling 94.8%, CO₂ calculated for charge balance. (3) (Ni, Mg)CO₃ with Ni:Mg = 1:1.

Polymorphism & Series: Forms a series with magnesite.

Mineral Group: Calcite group.

Occurrence: An uncommon secondary mineral in a Ni-sulfide-bearing vein in metamorphosed siliceous dolostone (Gaspé Peninsula, Canada); possibly from alteration of a nickel-rich meteorite (Bon Accord, South Africa).

Association: Millerite, nickeline, annabergite, gersdorffite, polydymite, heazlewoodite, magnesite, spinel, dolomite (Gaspé Peninsula, Canada); pecoraite, magnesite, siderite, chrysotile, antigorite, magnetite, millerite, polydymite (Otway prospect, Western Australia); glaukosphaerite, mcguinnessite, jamborite (Shinshiro, Japan); liebenbergite, trevorite, nickeloan ludwigite, bunsenite, violarite, millerite, nimitite (Bon Accord, South Africa).

Distribution: Found in a prospect pit near Mount Albert, Gaspé Peninsula, Quebec, Canada. In Western Australia, from the Otway nickel prospect, near Spinnaway, Nullagine district; in the Otter Shoot gossan, Kambalda, 56 km south of Kalgoorlie; at the Rocky's Reward pit, near Agnew; from the 132 North nickel mine, Widgiemooltha district. Found at Shinshiro, Aichi Prefecture, Japan. In South Africa, on Mabilikwe Hill, Pafuri; from three km west of the Scotia Talc mine, Bon Accord, Barberton district, Transvaal. In the San Benedetto mine, Iglesias district, Sardinia, Italy.

Name: For the original locality on the Gaspé Peninsula, Canada.

Type Material: University of British Columbia, Vancouver, Canada, S-75-4222; National Museum of Natural History, Washington, D.C., USA, 119544.

References: (1) Kohls, D.W. and J.L. Rodda (1966) Gaspeite, (Ni, Mg, Fe)(CO₃), a new carbonate from the Gaspé Peninsula, Quebec. *Amer. Mineral.*, 51, 677–684. (2) Nickel, E.H. (1973) An occurrence of gaspéite and pecoraite in the Nullagine region of Western Australia. *Mineral. Mag.*, 39, 113–115. (3) Pertlik, F. (1986) Structures of hydrothermally synthesized cobalt(II) carbonate and nickel(II) carbonate. *Acta Cryst.*, C40, 4–5.