

MINERALOGICAL NOTES No. 3.\*

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(Plates xxvii-xxx.)

CALCITE.

GARIBALDI MINE, LIONSVILLE, NEW SOUTH WALES.

(Plates xxvii, figs. 1-4, xxviii, xxix, fig. 1 and xxx.)

Some forty specimens of well crystallised calcite were collected by Mr. D. A. Porter in July, 1916, from the Garibaldi (Gold) Mine near Lionsville, about five miles west of the Upper Clarence River, Parish of Churchill, County of Drake, New South Wales. The mine is situated in very rugged country on the side of a spur about 730 feet above the Lionsville post office and about a quarter mile to the west.

According to Mr. Porter, the men were driving a tunnel and had driven about 150 to 200 feet when they noticed that one of the walls sounded quite hollow. They put in a charge of explosive and exposed a cavern with a cubic content of about 1200 cubic feet, but containing no calcite crystals of any note. The floor of the cavern was level with the floor of the tunnel and on the far side was a deep natural well about six feet in diameter, filled with clear water, the walls probably covered with calcite crystals. Beyond the well is a bar of rock rising up diagonally, and about two feet above the floor is a small opening leading into another chamber slightly larger than the first and completely lined with calcite crystals.

The largest single crystal collected by Mr. Porter measures approximately 33 cm.  $\times$  30 cm.  $\times$  28 cm., although very much larger crystals do occur, as I have seen one weighing several hundredweight. Some of the smaller crystals are quite transparent, but the majority become more or less cloudy toward the centre.

There appears to be no reference to the geology of the mine that will help to throw any light on the origin of the cave or the calcite. Mr. Porter reported that he was unable to find any limestone in or around the mine. Only two specimens in the collection contained matrix. In one the calcite is deposited on quartz containing minute dodecahedral and cubic crystals

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\*For No. 2, see "Records of the Australian Museum," vol. xv, no. 1, 1926, p. 69.