

REPORT OF H. G. VENNOR

In Canada Geological Survey, 1869, p. 164.

In connection with my examinations of the lead deposits of Hastings region I visited the Frontenac mine in the rear of Kingston. The rock of the country consists of grayish and reddish gneiss, interstratified with thick bands of crystalline limestone, all striking N.N.E. and S.S.W., and dipping to the westward at a high angle. The vein cuts these various bands at right angles, having a course about N. 75° W., or W. 70° W. (mag.) The portion worked has a slight underlie to the north, at the surface, but becomes vertical at a depth of 60 feet in the main shaft. From this shaft an adit has been run about 400 feet west and 50 feet east. The average width of the vein appears to be about 10 feet, although at the main shaft it varies from 13 to 19 feet. The vein-stone, which consists of calc spar only, is arranged in bands, more or less coarsely crystalline, and sometimes of a purplish or lilac color. The only other minerals observed were very small quantities of iron and copper pyrites and blende. The galena is diffused in crystals and bunches throughout the whole vein, but appears to be more abundant towards the north wall. It also appeared to have a disposition to run in shoots, having a western slope of about 45°. Between 1000 and 2000 tons of ore had been mined. This had been sampled and portions of it assayed mechanically by Dr. Dawson, Prof. Chapman, and others, the mean of whose results gave from 12 to 15 per cent. of galena.

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In association with Professor Bell of Kingston, whose intimate knowledge of the location rendered his co-operation most valuable, I have visited and carefully examined the mineral property of the Frontenac Lead Mining Company.

This property comprises the south half of Lot 16 in the 9th Concession of the Township of Loughborough, County of Frontenac, and contains about 200 acres.

In its surface aspect the location presents very favorable conditions