



**DENTONIA MINE, JEWEL LAKE AREA
(82E/2E)**

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Renewal of mining activity near Jewel Lake in the Greenwood area is the direct result of recent spectacular increases in the price of gold and silver, a good local market for flux-grade silica, and the success of Colt Resources Ltd. in gaining control of key Crown-granted claims in the vicinity of the old Dentonia mine.

Production, averaging about 50 tons per day, began in March from an extension of the Dentonia quartz vein about 600 feet south of the Jewel shaft on the 250-foot level below Colt's new Denero Grande shaft. Currently this ranks as the largest lode gold-silver operation in the province. Previous work, intermittent in the years from 1900 to 1948, produced about 135,000 tons of ore averaging 0.30 ounce per ton gold and 1.7 ounces per ton silver. Most of this ore was derived from the Jewel and Enterprise zones with important subsidiary tonnage from the Anchor and Rowe zones.

Investigation of the property was completed in the latter part of June; the new underground workings were investigated together with detailed surface mapping of the Dentonia mine area and reconnaissance of the surrounding region to the north and east (Fig. 14).

Briefly, the geology of the area consists of highly metamorphosed volcanic and sedimentary rocks, mostly gneisses and schists, intruded by a large granodiorite body.

The Dentonia quartz vein is exposed over a length of approximately 6,000 feet, traceable from a point 1,500 feet north of the Ethiopia adit and south a distance of about 4,500 feet to the Colt workings. It strikes across the fabric of the country rocks which dip variably 30 to 60 degrees easterly.

Shearing has obscured many primary structures, but the vein does appear to be largely the result of fissure filling with only local evidence of wallrock silicification or replacement.

Splays and screens of country rock and post-vein dykes cause considerable dilution in some zones. Nevertheless, the silica content of the ore, maintained during present mining, averages 85 per cent.

Sulphides are not especially abundant, occurring mainly as grey streaks of fine disseminated grains or pockets and lenses of coarser admixtures composed mostly of pyrite with some galena and chalcopyrite. The presence of sphalerite, tellurides, and native gold has also been reported.

Control of the ore zones has been attributed to deflections in the overall vein attitude, the enriched thickened segments of the vein bearing more to the northeast and being inclined more gently than normal. This generalization appears to be true for the main Jewel orebody, which is an enlarged part of the vein roughly coinciding with the

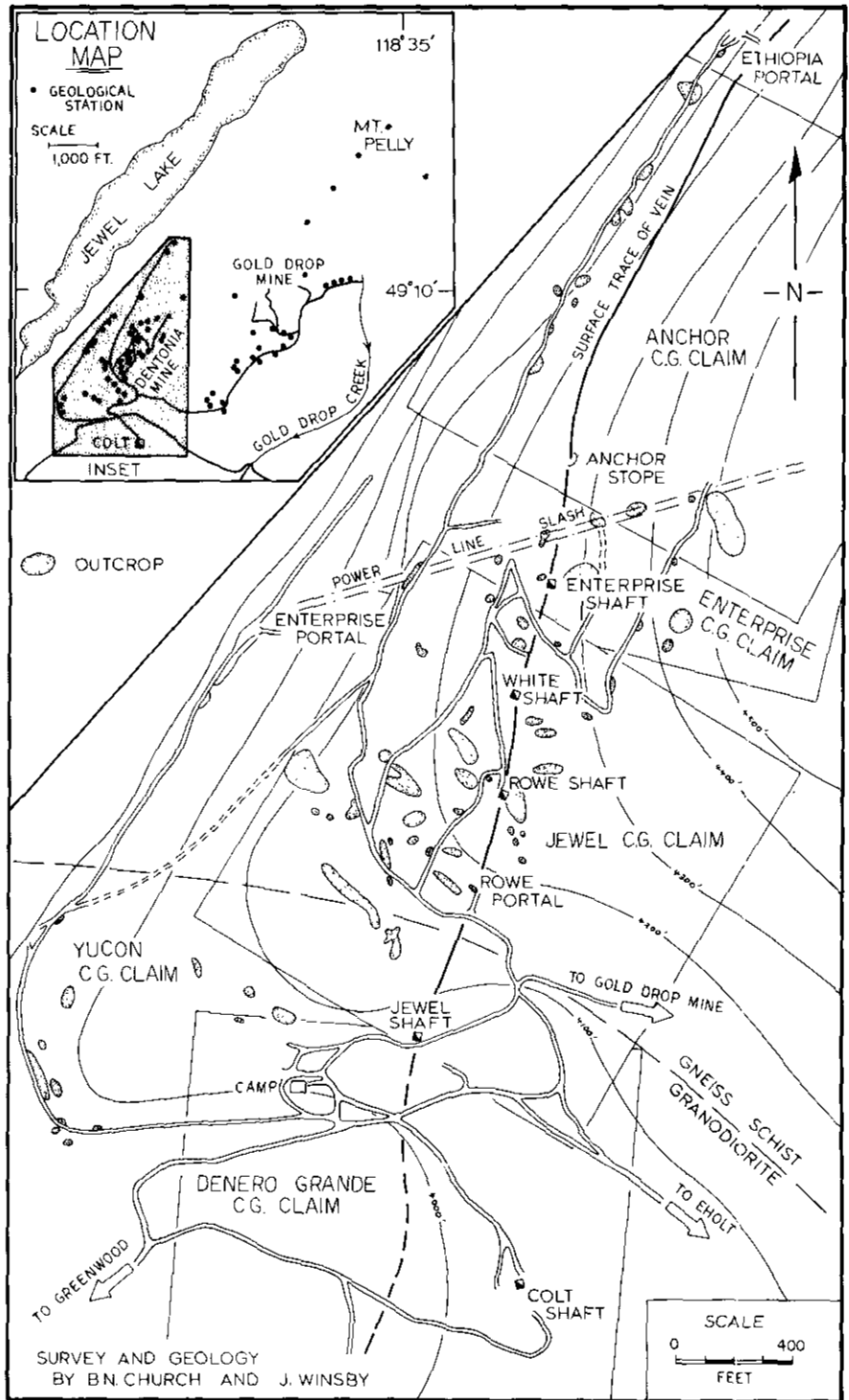


Figure 14. Geology of Dentonia mine, Jewel Lake area.

intersection of the vein and the north boundary of the granodiorite intrusion. The nature of the Colt orebody, which is located several hundred feet south of the Jewel area, is still unknown because of the preliminary state of mine development.

The age of the Dentonia vein is bracketed by the granodiorite, which locally hosts the vein, and by crosscutting dykes. The dykes are correlated with petrographically similar Tertiary lavas at the summit of Pelly Mountain and with volcanic rocks which occur to the southwest near Midway, dated at 49 ± 2 m.y. by Mathews (1964). A sample of the granodiorite, taken from a point near the Denero Grande shaft on the 250-foot level of the Colt workings, was recently dated at 125 ± 5 m.y. by Geochron Laboratories Ltd.

Potassium (per cent)	$\bar{X} = 4.188$
Ar ⁴⁰ * ppm	0.3864
Ar ⁴⁰ * / total Ar	0.632
Ar ⁴⁰ * / K ⁴⁰	0.007564
Apparent age	125 ± 5 m.y.
K ⁴⁰ / K constant	1.22×10^{-4} g/g

REFERENCE

Mathews, Wm. H. (1964): Potassium-Argon Age Determinations of Cenozoic Volcanic Rocks from British Columbia, *Geol. Soc. Amer., Bull.*, Vol. 75, pp. 465-468.