

This means that carnotite carries 0.00000375 gram of radium per 100 grams of mineral carrying 16 per cent of uranium, or that for every gram of uranium in the mineral there is 0.00000234 gram of radium. If Mlle. Gleditsch's figures are correct for Colorado carnotite in general, then one ton of uranium in these ores would carry 213 milligrams (3.28 grains) of radium or 396 milligrams (6.1 grains) of radium bromide ( $\text{RaBr}_2 \cdot 2\text{H}_2\text{O}$ ), the form in which it is usually sold.<sup>1</sup> The proportion of radium in the pitchblende tested from Joachimsthal and Cornwall is somewhat higher.

Owing to the infinitesimal amount of radium present in the ore the cost of recovery is extremely high. "Many experiments have been made in the United States with the object of separating radium from carnotite, but most experimenters have found that the cost of extraction of the minute quantities contained in the ore, including the cost of mining, transportation, chemical and technical knowledge, was so great that even with the enormous prices quoted for radium the process did not pay."

---

<sup>1</sup> Hess: U. S. Geol. Survey, Mineral Resources, Part 1, Metals, 1912, p. 1008.