

CESIUM

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Canadian Developments

Canada possesses the most extensive known cesium reserves in the world. A pollucite deposit at the Bernic Lake lithium mine of Tantalum Mining Corporation of Canada Limited (Tanco) is the sole source of Canadian cesium production. The 300 000-t deposit of pollucite grades about 24% Ce_2O . The next largest deposit thought to be commercially exploited is owned by Bikita Minerals Ltd. in Zimbabwe. Currently, the largest producer of cesium chemicals is Germany's Metallgesellschaft AG.

World Developments

World demand for cesium chemicals was estimated at about 200-250 t/y. The main uses have included in biochemical research as a density gradient media for biomedical research or for use in photoemissive and scintillation applications.

In 1995, the Cabot Corporation, which owns 100% of Tanco, announced plans to build a US\$10 million plant at Bernic Lake to produce 2250 t/y of cesium chemicals for the oil industry. Cabot's new plant to produce cesium formate is expected to be operational in mid-1996. Cesium formate's advantage over the currently used potassium formate is that it is 50% denser and is therefore more effective as a drilling mud for deep holes.

Notes: (1) For definitions and valuation of mineral production, shipments and trade, please refer to Chapter 70. (2) Information in this review was current as of January 31, 1996.