WHO WE ARE

About Us

Tantalum Mining Corp. of Canada Ltd (Tanco) is 100% owned and operated by Sinomine (Hong Kong) Rare Metals Resource Co., Ltd. Located on the northwest shore of Bernic Lake, Lac du Bonnet, Canada, it is well known for its large deposit of pollucite and is also one of the world's largest producers of cesium.

Since the first 500 ton per day tantalum concentrator was built for commercial production in 1969, Tanco has been expanding its production capacity year by year.

Mining on the TANCO property began in the 1920's, but the commercial mining of the TANCO pegmatite did not begin until 1969. Over the years, the property has commercially produced tin, tantalum, cesium, lithium, and rubidium. The currently mined products are tantalum, cesium, and lithium.

Tantalum is used mainly in the electronics industry, as its electronic properties make it ideal for use in capacitors. Tantalum also has a high melting point, strong resistance to corrosion, and good strength at high temperatures. Because of this, tantalum is included in "superalloys" which are used in aerospace structures and jet engines; in cemented carbides for wear-resistant applications such as cutting tools; and in the chemical industry in corrosion-resistant applications such as heat exchangers and liners for reactors and tanks.

Cesium at TANCO is mined in the form of the mineral pollucite. TANCO currently has 82% of the world's known reserves of pollucite. Cesium is processed into several different products, the primary of which is cesium formate, a high-density brine used as a drilling fluid in deep-sea oil wells. The remaining products are various conventional cesium chemicals, such as cesium sulphate, cesium hydroxide, cesium carbonate and cesium chloride.

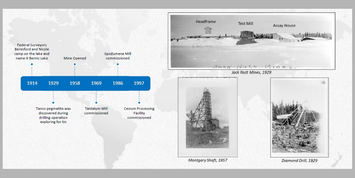
Lithium is produced from the mineral spodumene. Mined spodumene is concentrated into four different grades of lithia product. TANCO's spodumene is used as a flux in the glass and ceramics industries. Lithia lowers thermal expansion and decreases the firing temperature in the ceramics industry. In glass making, lithia lowers both melting point and viscosity, allowing the improvement of glass quality and faster rates of production.

The majority of employees are from local communities, including the children of some of the original employees. The continuous operation of the mine over the years has produced a very stable workforce.

History

The TANCO pegmatite was discovered during a drill program by Jack Nutt Mines Limited in 1929. At the time, Jack Nutt Mines was producing tin concentrates from the ore of several pegmatites exposed on the surface of the surrounding claims. Jack Nutt Mines was trenching some of the exposed pegmatites to provide mill feed, and also sank a 2 compartment shaft to an eventual depth of 179 feet to gain access to pegmatites intersected by diamond drilling.

Jack Nutt Mines stopped work on the property in 1930 due to the stock market crash, and the claims eventually reverted back to the crown. No further exploration of the property occurred until 1955, when Montgary Petroleum, which later became Chemalloy Minerals, acquired the property and began an intensive drilling program. During the next 14 years, the pegmatite was drilled from both surface and underground, and evaluated for cesium, lithium, tantalum, quartz, and amblygonite. Limited amounts of quartz, pollucite, and amblygonite were mined and sold, and Montgary began sinking a new, 3-compartment shaft.



In 1967, a tantalum market study was carried out. A 500 ton bulk sample of tantalum ore was mined, and the Tantalum Mining Corporation of Canada, Limited was formed.

In 1968, construction began on a 500 ton per day tantalum concentrator. The new shaft was completed to its current depth of 553 feet, and underground development was accelerated. In 1969, the first tantalum concentrates were produced, with the concentrator reaching full production by September. Also in 1969, sales of pollucite to the Soviet Union began. On September 8, 1969, TANCO celebrated its grand opening.

From 1969 to 1982, TANCO produced over four million pounds of tantalum in concentrate. There was a 9-month tantalum shutdown in 1973, during which spodumene concentrate was produced in a pilot project.

In 1980, the price of tantalum hit a record high of $118 per pound of contained tantalum oxide. The high price was caused by a combination of high demand, low production of concentrate, and forecasts of increased demand for tantalum in the future. Processors of tantalum concentrate built up large inventories of tantalum as a hedge against perceived future shortages. As a result of the high price, the demand for tantalum began to drop as end-users switched to other materials and began recycling more tantalum. The price then began to drop dramatically. TANCO made the decision in 1982 to suspend operations at year end due to the low market demand and price of tantalum concentrate.

In 1984, TANCO began a pilot operation to produce ceramic grade spodumene concentrate. From 1984 until 1988, spodumene was the primary mined mineral. In 1988, TANCO gained "major supplier" status with Corning. Also by 1988, the price of tantalum had increased, due to increased demand for tantalum concentrates. TANCO once again began mining tantalum as a response to this demand. From 1988 to 1992, TANCO mined both spodumene and tantalum ores. Then in 1992, tantalum mining was suspended again, although tantalum concentrate was produced during the following two summers through the reprocessing of tantalum tailings. Cabot Corporation, which had been part of the TANCO joint venture since 1974, became the 100% owner of TANCO in 1993, through the purchase of the remaining interest from Hudson's Bay Mining and Smelting and the Manitoba government. In 1995, tantalum mining recommenced, and has continued without cessation, along with spodumene ore, through to the present. In 2000, TANCO lost its contract with Corning, but continues to produce spodumene concentrates for a number of smaller customers.

Also in 1995, construction began on a plant for the production of cesium formate. Pollucite became a primary mined ore upon the commissioning of the chemical plant in 1997. The chemical plant was placed under care and maintenance in 1999 due to a drop in the price of petroleum, but resumed operations in 2000. In 2001, the plant was expanded to allow for the production of fine cesium chemicals.

Our Management

Joey Champagne
Operations Director - North American Business Division Facility
General Manager - Tantalum Mining Corporation of Canada Ltd.
Description

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