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# MINING



**The History of Mining in British Columbia**

**By G W TAYLOR**

(1978)

# Where Copper is King

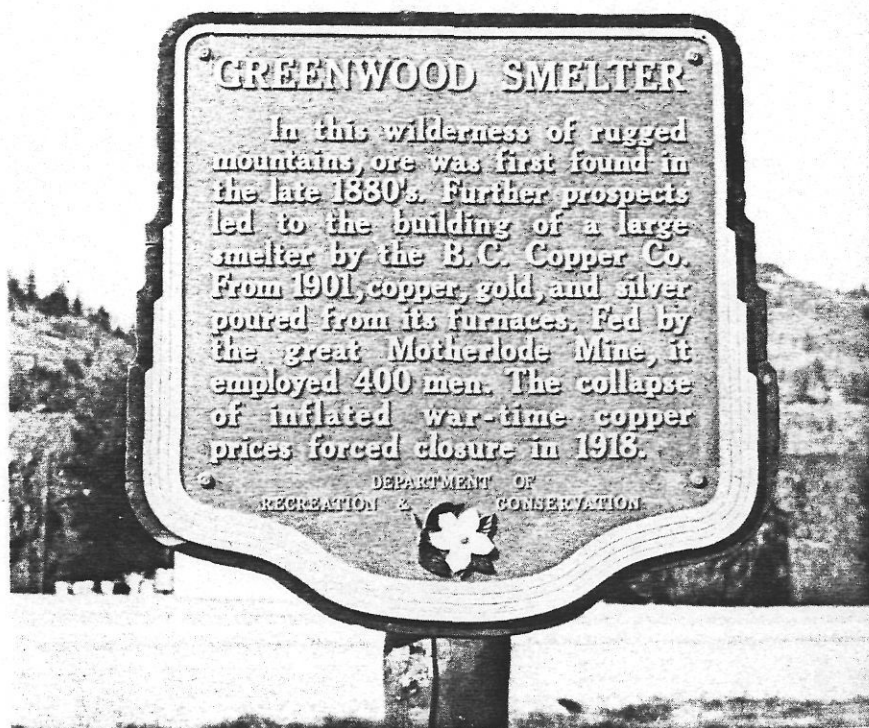
Some 40 or 50 miles west of Rossland lies the Boundary country, a district along the Canadian-U.S. border between the valleys of the North Fork of the Kettle River and Boundary Creek. In the gold-rush days of the 1860's placer gold had been found along Boundary Creek, but for the next 20 years there was no further mining activity. Then prospector James McConnell staked a claim on Rock Creek a few miles above Kettle River. In 1887 David Leyson and George Bowerman, a team that staked and worked the first claim near Rossland in the same year, located the **Big Copper** near the future **Mother Lode** mine in Deadwood Camp. This claim was never worked by them and lapsed. Two other prospectors, Ed Lefevre and James Lynch staked the **King Solomon** in the same area; they promptly sold it to D.C. Corbin, a Spokane railway tycoon who was the first prominent financier to invest in Boundary copper.

The biggest finds came in 1891, when William McCormack and Richard Thompson staked the **Mother Lode** in Deadwood Camp. Phoenix produced the big discoveries: gigantic ore bodies contained in the **Old Ironsides** and **Knob Hill** claims by Matthew Hotter and his partner, Henry White. Nearby locations were soon staked.

It was one thing to locate these vast deposits of low-grade copper ore, but quite another to find moneyed people willing to risk their capital in purchasing and developing them. The Rossland and Slocan booms were on — mining men preferred to risk money there, rather than on the low-grade ores of the Boundary country. After all, the nearest railway was south of the border in Washington State 75 miles away; no wagon roads or trails existed in the region and freight charges were prohibitive.

Howard C. Walter, a mining man from Spokane, came in around 1892 and acquired a number of high-grade claims at practically no

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To commemorate the passing of an era. The Boundary country's copper smelters, of which Greenwood was one, built up a great industry from copper ore, employing thousands.



cost to himself. Prospectors no longer had faith in such ore finds and viewed the grade as too low to be worth the trouble. Walter brought in two stamp mills for Boundary Falls and sent a few shipments by mule to the Everett smelter. Then came the slump of 1893. Metal prices declined and the Boundary country became practically deserted.

Undaunted, Henry White interested P.J. Graves, an electric railway magnate of Spokane, in the **Old Ironsides** claim. Graves took a half share and started development in a small way in 1895-96. After a few months, though, his Spokane backers refused to advance any more money. Ore tests showed a copper recovery well below the smelter charges of \$8 per ton. The Northport smelter declined to take payment for its work, explaining that it was "not customary for smelters to demand charges for payment of ore when same is less than their usual treatment charges because they don't have to smelt the ore unless they want to."

GRANBY MINING COMPANY



*The beginnings of Phoenix, 1900.*

GRANBY MINING COMPANY



*The town of Phoenix in its heyday, with one of the mines in the background.*

Graves managed to find new investors in Canada (S.H.C. Miner of Granby and his associates in Quebec's Eastern Townships) and undertook systematic development. A steam power plant was installed after being carted over 65 miles of poor wagon road from the nearest railhead in Washington State — at a haulage cost that almost doubled the price of the machinery. An air compressor to drive a battery of power drills arrived by the same route.

But how should the ore be processed? Its grade was too low and transportation costs too high to justify shipping it out to any smelter beyond the Boundary country. Grand Forks, at the junction of the Kettle River and its North Fork, was chosen as the site for the region's first smelter. The 'Granby smelter' may well have been the only one that was ever built on the proceeds of the sale of town lots. The Miner-Graves Syndicate was a large owner of land in and around Phoenix, the settlement that grew up to service the surrounding mines. Just before the turn of the century, much of the property went up for sale as town lots. Prospective bidders came in

from hundreds of miles around, only to find all the lots sold. Prices ran from \$500 to \$600 — a goodly sum in those days — and by the end of the sale the syndicate found itself richer by \$100,000. The furnaces first blew on August 13, 1900, just one month after the first ore train had left the mine site at Phoenix for Grand Forks.

Neither the development of the mines nor the building of the smelter would have been possible without the coming of the railway. The Columbia & Western (a C.P.R. subsidiary) reached Midway via Grand Forks in 1899, giving the Boundary district a through rail connection with the East Kootenay coalfields and Central Canada. Its building was not without international interest as the planner was the famous U.S. engineer John F. Stevens, who later won world fame as chief engineer in the building of the Panama Canal. The C.P.R. built a spur to the mines at Phoenix and soon was carrying 700 tons of ore daily to the smelter. In 1901 the rate increased to 1400 tons; by 1904 it was 2000; the peak figure of 4500 tons per day

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*What it looked like after Granby left in 1919. An open pit copper mine at Phoenix.*



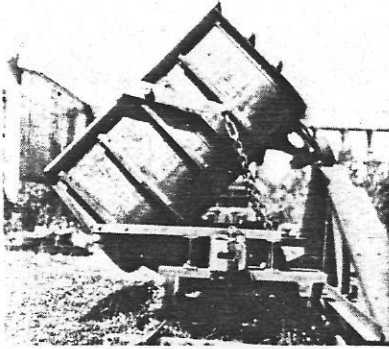
*Another view of one of the Granby open pit copper mines at Phoenix.*

in 1918 marked the largest copper operation of its time in the British Empire. By the end of 1917, 15 million tons of ore had been carried from the Phoenix mines — a colossal tonnage.

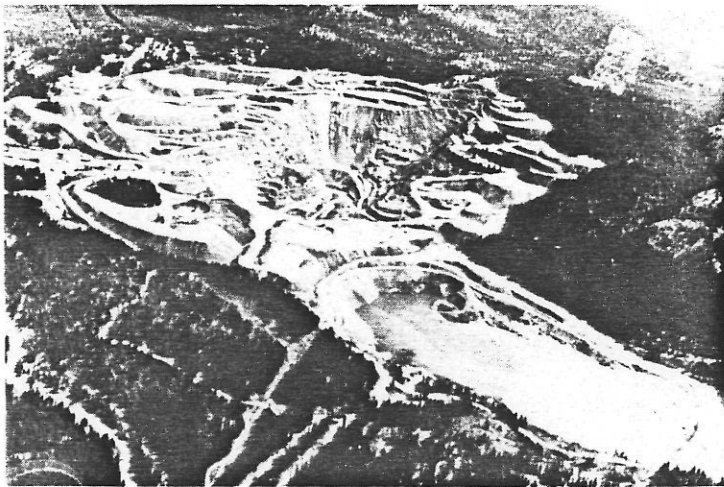
The settlement around the mines was fast growing into a town with all the modern conveniences that could be expected. In its heyday Phoenix served as a base for several mining companies other than Granby. B.C. Copper, Dominion Copper, and the **Snowshoe** mines all had nearby properties. Served by two railways — the C.P.R. and the Great Northern — Phoenix enjoyed the benefits of telephones, electric light, and a domestic water system. Recreational facilities included curling and skating rinks, and 17 saloons operating around the clock.

Like the Consolidated Mining & Smelting Co. at Trail a few years later, Graves and Miner soon saw the benefit of bringing into one organization all their individual enterprises in the Boundary country. Thus was born the Granby Consolidated Mining & Smelting Co., an amalgamation of their interests in mineral claims, real

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A close-up of the Granby ore car designed by Frank Knott and built in the company's shops at Grand Forks.



Aerial view of one of the copper mines at Phoenix, run by Granby Consolidated.

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estate, mines, and smelting works. The creation of one corporate structure, finally accomplished in 1902, tightened up administration and eased the problems of raising money.

**Granby's** high-volume operation, through labor-saving devices, achieved economies that were the admiration of the mining fraternity.

"I was really surprised," said John Stanton of New York, a director of **Granby** and a leader in the U.S. copper industry, "to see so intelligent and up-to-date a company in operation. . . . I refer especially to mining methods, the mining and smelting plants and system of bookkeeping." That was in 1903. In January 1904, the *Phoenix Pioneer* wrote: "The necessity of saving every few cents possible on each ton of ore sent to the smelter on account of low grade has brought economies that have heretofore been unthought of in the history of mining in this province."

B.C. PROVINCIAL ARCHIVES



The greatest railway disaster in Phoenix' history. The wreck of the Canadian Pacific Railroad ore train on August 23, 1904, when it ran wild down Phoenix Hill.

There was continuous expansion. The end of 1903 saw six blast furnaces in operation; by 1905 the total had grown to eight, housed in the largest copper smelter in the British Empire. Of the labor-saving machinery that was invented on the premises, the best known was the **Granby** ore car. Frank Knott's design led to a steel side-dumping car with a capacity of (at first) three tons, easily and cheaply manufactured in the company's machine shops. It became standard equipment in the industry.

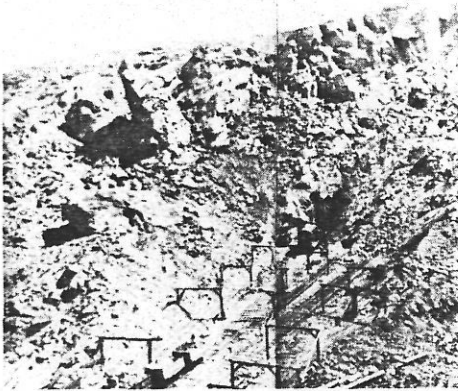
Another innovation was a drill-sharpening machine that eliminated the need for many blacksmiths and forges. The design, by head blacksmith Martin McHale, was taken over by the machine-tool industry and modified versions were sold to mining and exploration companies. Superintendent Hodges of the smelter designed and produced an automatic furnace charger that greatly reduced the time and manual labor for this operation. Much of this heavy equipment was manufactured in the **Granby** machine shops at Grand Forks where all repairs for the mines and smelters were done.



The original plan for the **Granby** Phoenix mines involved underground working. But open-pit mining also went on in the early days, and in some years fully 50 per cent of production came from this method. By 1905 **Granby** was the backbone of the Boundary. It employed more men — and it mined, shipped and smelted more ore — than all of the district's other companies combined. It was the springboard for all other copper successes in the Boundary.

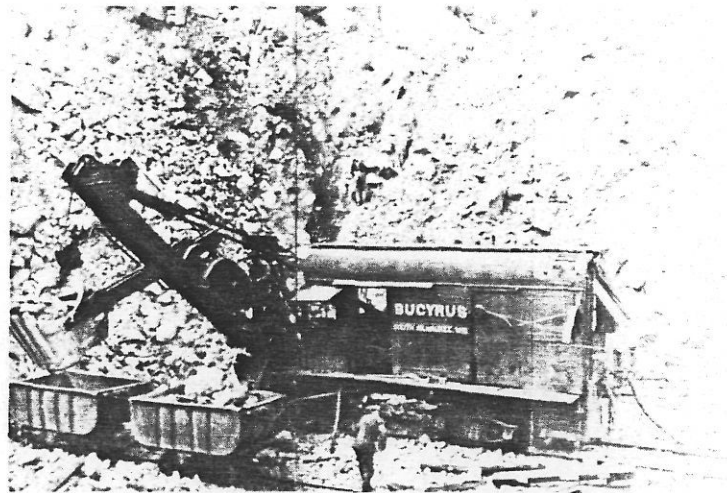
Less successful was the million-dollar British Columbia Copper Co., founded in 1898 by a New York group to acquire the **Mother Lode** claim in Deadwood Camp. The proprietors thought there was sufficient ore in sight to justify the building of a smelter. Erected at Greenwood in 1899-1900 by Paul Johnson, it became active in February 1901. The smelter boasted the highest smokestack in B.C. — 120 feet high, 12 feet in diameter, and containing 220,000 bricks.

*One of the two steam shovels owned by Granby at the Phoenix mines.*



*Granby's open pit copper mine at Phoenix, with steam shovel and electrified ore removal tramway.*

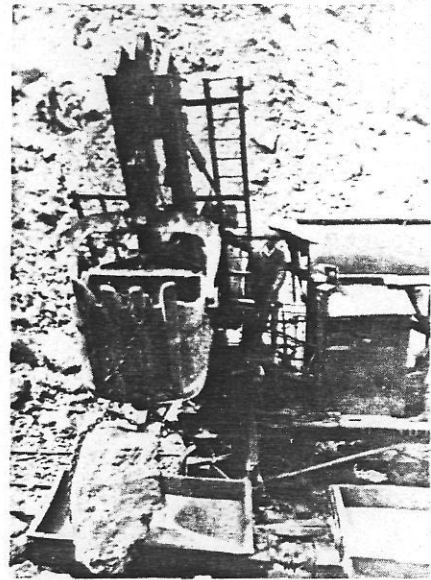
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Mine blasting in the early years was handled on or near the surface. When a whistle blew the warning, people from the nearby houses would rush out to the reinforced shelters provided by the company. (Only one fatal accident was reported — a woman failed to hear the warning and was killed by a rock crashing through her house.) In 1912 the company set off the biggest bang ever heard in the Boundary country. The blast took two years to prepare, with about 5000 holes drilled for 50,000 pounds of dynamite. The windows were boarded up in the surrounding houses and the inhabitants were told to take a day's holiday. Detonation shook the countryside and allegedly so diluted the ore that it could no longer be profitably smelted. The smelter struggled on for another six years but closed forever when the copper market collapsed in 1918. The community of **Mother Lode** was abandoned.

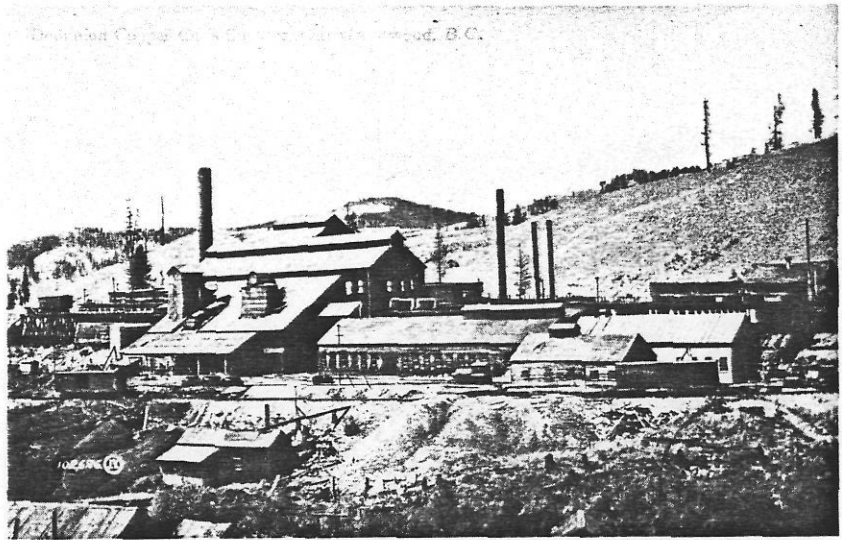
A third smelter was located at Boundary Falls, some three miles from Greenwood. Its chequered career was prompted by a need to



*A close-up of Granby's steam shovel at the Phoenix mines.*

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service the Brooklyn claims at Phoenix owned by the Dominion Copper Co., in which railway contractors Mackenzie & Mann had a large interest. Back in 1900-01 they had employed James Breen, the smelter expert who built Trail and Northport smelters, to appraise the situation. He handed in a negative report and the mine closed down. Meanwhile, the Montreal & Boston Copper Co. had been building a small two-furnaced steam-operated smelter at Boundary Falls, and in the summer of 1904 it arranged with Dominion Copper to re-open the **Brooklyn** mine and smelt the ore at Boundary Falls. Eight months later Montreal & Boston went broke and Samuel Newhouse, a wealthy mining operator from Salt Lake City, with extensive properties in Utah and Colorado, took over. The new owner could not make it go and in 1908 it came into the hands of British Columbia Copper. It closed, never to re-open, in November, 1918.



*Dominion Copper Company's smelter at Greenwood, B.C.*

B.C. MINISTRY OF MINES



*Rawhide, Gold-Drop and Snowshoe mines, Phoenix, 1909.*

The only mine in the Boundary country to be developed by English capital, and the only major one not tied up to a Boundary smelter, was the **Snowshoe**. Development was promoted by the backers of the British Columbia (Rossland & Slovan) Syndicate Ltd., a London-based diversified company owning mines and mineral claims in the Kootenays, real estate in Rossland and Nelson, and shares in a local mining journal. Shareholders of "the Snowshoe Gold Copper Mines" included some of the most prominent merchants of the City of London. The chairman was the Earl of Chesterfield; his deputy, George S. Waterlow — son of Sir Sidney Waterlow, a Lord Mayor of London — acted as executive director. From 1899 to 1901 the company pumped \$130,000 into development. It took out some 100,000 tons of ore but found difficulties in getting it smelted. Finally the mine was leased to the Consolidated Mining & Smelting Co., who produced 500,000 tons more for their smelter at Trail.