

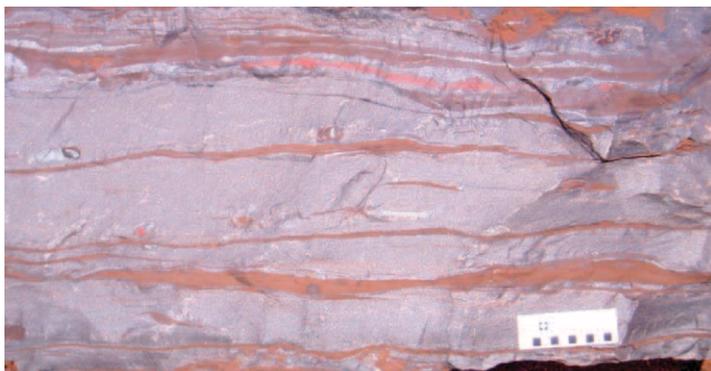
## THE LEGACY OF IRON: SCHEFFERVILLE, QUÉBEC, CANADA



Schefferville, a planned northern community, shortly after mine closure

Missionary-explorer Father Louis Babel penetrated the little-known interior of the North American continent north of the Gulf of St. Lawrence in the 1860s, and he was probably the first to mention the presence of iron-rich rocks in this region. In the 1890s, geologist-explorer Albert P. Low described vast stretches of iron formation in the area now known as the Labrador Trough. In 1929, geologists W. F. James and J. E. Gill discovered iron-rich “direct-shipment” ore in the Sokoman Formation near Knob Lake. Economic growth in post-World War II North America spurred exploration for iron. Over the years an impressive group of field geologists, researchers, and prospectors contributed to our knowledge of the Labrador iron belt and to the discovery of some 340 mineral deposits and occurrences—not only of Fe but also of Ni-Cu, Cu-Zn, U, Au, and rare earths. A consortium of steel makers and exploration companies formed the Iron Ore Company of Canada (IOC) to exploit the vast reserves of direct-shipment ore at Knob Lake<sup>1</sup>. But before mining could begin, the formidable task of building a 575 km long railway through the rough terrain between Knob Lake and the port of Sept-Îles on the Gulf of St. Lawrence had to be completed, and a new town, Schefferville, had to be built at Knob Lake. Mining began in 1954, and Schefferville flourished, eventually boasting a population of over 5000 and all the amenities of a large community farther south: schools, churches, a hospital, a curling club, and an airport. Two aboriginal “First Nations” groups, the Innu and Naskapi, established themselves in or near the town.

IOC discovered some 45 minable direct-shipment ore deposits near Schefferville in Québec and adjacent Newfoundland-Labrador. Blue, black, red, yellow, and brown residual ore with a crumbly, lumpy, spongy, or earthy texture was extracted from the open pit mines. Composed largely of hematite, goethite, and martite, this ore resulted from the leaching of silica from the various facies (oxide, carbonate, silicate) of primary banded iron formation by percolating groundwater during the



Sokoman Formation oxide facies taconite, consisting of fine-grained magnetite-hematite bands and thin layers of cherty iron carbonate and jasper



A flooded open pit mine, showing multicolored residual iron ore and a white quartz arenite unit



*L'homme de fer* (Iron Man), symbol of Schefferville, on the shore of Knob Lake; about 6 m tall

Cretaceous...in fact, fossilized wood and leaves have been discovered in certain open pits. Leaching also produced local supergene enrichments in manganese. Deposits of primary banded iron formation, called taconite, occur over the entire 850 km length of the Labrador Trough, as well as in its southwards extension into the Grenville province, where coarse-grained, metamorphosed iron formation is currently mined in the Fermont-Wabush area. With an age of 1.88 Ga, the Sokoman Iron Formation was formed at the end of the worldwide period of banded iron formation deposition during the Paleoproterozoic.

But the economic difficulties of the early 1980s and increased competition were fatal to the Schefferville operations. In 1982, IOC decided to close the mines, although much “ore” still remained. A period of rapid decline in Schefferville followed. The mine workers and their families deserted the town, half the homes were demolished, the hospital was closed, and many social amenities disappeared. Buildings fell into disrepair,

and the streets and former house lots became overgrown with alders and, curiously, poppies, which had been planted in gardens by the mine workers. But the native population remained.

Chronic unemployment and serious social problems for many residents of Schefferville became iron's legacy. In 1976, as a freshly minted PhD graduate, I was assigned by the Québec Ministry of Natural Resources to carry out detailed mapping of the Labrador Trough about 350 km north of Schefferville. I came to know the town well as I used it as a base for my field camps. During the 15 years I worked in the area and on occasional visits thereafter, I saw Schefferville at its best and then, sadly, its worst. But Schefferville's future may be rosier than its present, because efforts are now being made to recommence the mining of residual ore, and exploration is continuing on huge, fine-grained taconite deposits near the town. New development would rekindle civic pride, shared by the native communities, who now insist on participating fully in the mining operations and benefits. Schefferville's story is one that should be known by all involved in the development of remote areas.

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<sup>1</sup> Geren R, McCulloch B (1990) *Cain's Legacy: The Building of Iron Ore Company of Canada*. Iron Ore Company of Canada, Sept-Îles, Québec, 351 pp