

Dredge No. 4 National Historic Site

By Frank B. Edwards

For Parks Canada, January 2010

In its heyday, the gigantic, floating, mechanical monster known as Dredge No. 4 tore up the Yukon landscape in a tireless quest for gold. It ran 24 hours a day, six months a year, ingesting 600 tons of gravel an hour, separating out gold flakes, dust and nuggets before dumping the waste rock out along its conveyor-belt tail. On one record-breaking day in the late 1920s, the dredge produced 800 ounces of gold – worth almost \$1 million today.

The size of an eight-storey apartment block, Dredge No. 4's deafening roar was as bad as its bite. The grinding of its "teeth," a revolving series of 72 massive iron buckets crashing into rock and gravel, could be heard kilometres away.

Today, the massive barge is silent, a ghostly reminder of the early age of corporate industrial mining that followed the initial Klondike gold rush of 1898. Launched on the Klondike River in 1913, it sank 47 years later on Bonanza Creek in 1960 where it was left to rot by its owners.

In 1969, Parks Canada acquired Dredge No. 4 and designated it a National Historic Site to protect it so that Canadians could better appreciate the region's mining heritage. It was North America's largest wooden-hull, bucket-line dredge, one of a few dozen that were built in the region. (At 23 metres high, 43 metres long and 20 metres wide it would fit neatly into a hockey rink.)

Thanks to the federal Economic Action Plan in 2010, Parks Canada is about to start a new stage of restoration on Dredge No. 4.

This summer, work crews will crawl below the cramped bow deck and remove sections of rotted timbers that are jeopardizing the barge's integrity. Fortunately, the bow's timbers – some of them more than a metre thick – do not have to be completely replaced. The rotten wood is out of sight and, thanks to a temporary new support structure, is no longer bearing the weight of the 200-ton bucket arm or the tall Douglas-fir gantry timbers that hold it in place.

“Our intention is to use epoxy and glued wood-insert pieces for the ‘structural repairs’ because the structure is not under working load anymore,” explains Public Works project manager Patrick Habliuk who has overseen much of the restoration work since 1990. The repaired timbers will be treated with fungicide to prevent further rotting.

Dredge No. 4, located 16 kilometres from downtown Dawson City, will remain open to visitors throughout the three-year process that will cost about \$1 million. In fact, deck planking has been removed to allow a better view of the work – and some more wiggle room for the four-man restoration crew. A space-frame fabric tent has been erected over the bow area to protect the worksite from weather.

Designed to replace an earlier wave of 30,000 gold rush miners who had worked the area's creeks with pans and pick axes, Dredge No. 4's buckets could dig down 18 metres after work crews had melted the permafrost with long metal steam points driven into the valley bottom. The points blasted hot steam into the ground and the dredge scooped up the melted muck. In its best years, Dredge No. 4 collected about 200 ounces of gold a day.

While a dredge had to stay afloat to function, it was not limited to natural waterways. A dredge master could steer it off a creek by excavating its way across nearby meadows

and forests, digging an artificial pond deep enough to support its 2,200-metric-ton weight. Dozens of men cut down trees in its path, while others diverted streams and pumped water to maintain pond levels.

Today, Dredge No. 4 attracts about 20,000 visitors a year. These repairs, part of an ongoing Parks Canada restoration program, will ensure that the story of the Yukon Goldrush and its early mining technology will be preserved for future generations.