

Casino Mine: The Biggest Gamble with the Yukon's Environment Yet

The Casino Mine is a proposed large (by Yukon standards) copper-silver-gold-molybdenum project located roughly due west of Pelly Crossing and due south of Dawson City.

Operating over a planned lifespan of twenty-two years, it would process approximately 120,000 tonnes per day (or 43.8 million tonnes per year) of copper and gold ore. It is anticipated to produce 5.72 million ounces of gold, 30.26 million ounces of silver, 3.58 billion pounds of copper, and 325 million pounds of molybdenum.

It would be built about sixteen kilometres from the Yukon River on a stream called Canadian Creek, which in turn drains into Britannia Creek and then the Yukon River. Thanks to a quirk in the landscape the majority of the project site actually drains into Casino Creek. This in turn drains into Dip Creek, the Klotassin River, the Donjek River, the White River and finally to the Yukon River, a journey of two hundred kilometres.

Access to the Casino Mine would be via the Freegold Road and then a yet to-be-built road from Carmacks. This road would go through the range of the Klaza caribou herd. Total length of the road from Carmacks to the project site is about two hundred kilometres.

There would be a massive open pit, and perhaps more disturbing a huge tailings pond. Pond is not really the appropriate term, as it would be a massive dam. However, tailings pond is the technical term that is used.

This tailings pond would have to contain all the waste rock, process tailings, and process water from the project. The amount of this material is estimated at 947 million tonnes of tailings and 658 million tonnes of potentially reactive waste rock and overburden materials.

To put it in perspective the volume of material in the Mount Polley tailings pond was about 80 million cubic metres. The Mount Polley tailings pond failure happened on Aug. 4 in central British Columbia. It released twenty-five million cubic metres of contaminated sand and water into lakes, creeks and rivers in the region. A very rough comparison is that one million tonnes of tailings and waste rock is about 400,000 cubic metres. The Casino Mine tailings pond could be eight times the volume of the Mount Polley tailings pond.

The Casino tailings pond would all be contained behind an earthen dam, very similar in concept to the Mount Polley one which was about thirty-five metres high. Except the Casino earthen dam would, at its deepest point, be 286 metres high. Let's repeat that...286 metres high.

The closure plan consists of letting the open pit fill up with water, letting that water then flow into the tailings pond. Over time, it is assumed that natural in-situ treatment will occur and the water will then flow out of the tailings pond into Casino Creek. After the mine has shut down after operating for 22 years, this 'natural' treatment will have to occur in perpetuity. Provided, of course, the tailings dam doesn't do a Mount Polley.

The mine would require 150 MW of power. Liquefied natural gas ("LNG") will be trucked to the site to meet this demand. The entire Yukon hydro grid only provides about 77 MW of power, and that's at peak capacity. This mine will consume twice the capacity of Aishihik, Mayo and the Whitehorse Rapids hydro generating output combined. The greenhouse gases from that 150 MW of LNG is going to put the Yukon's emissions through the roof.

As this project currently stands, the Yukon Conservation Society is utterly opposed to it. The very name of the project, Casino, is apt given the unthinkable gamble we will be taking with the Yukon's environment should we allow the mine to proceed.

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