BC Transboundary Mines

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The “transboundary mines” is the informal name for a group of mines (only one of which, Red Chris, (http://www.imperialmetals.com/s/RedChris.asp) is operational) in northern British Columbia watersheds which drain across the U.S.-Canada border into Alaska.

These mines target ore bodies which collectively contain tens of billions of dollars of metals, mostly gold and copper. All the transboundary mines would be in acid-generating ores, and their wastes would require perpetual storage. (/Issues/OtherIssues/perpetual-waste-storage-perpetuity.html) The mines have become particularly controversial in Alaska due to their very large scale, and the potential of acid mine drainage (/Issues/MetalsMining/AcidMineDrainage.html) and tailings (/Issues/MetalsMining/MineTailings.html) spills to contaminate SE Alaska fisheries. The BC transboundary mines face the same challenge mines face worldwide, of containing large volumes of long-term wastes, against both chronic and catastrophic leakage, while attempting to minimize costs and supply society’s rising thirst for metal. (http://www.icmm.com/document/4441)

Mining is very energy-intensive, and a new high-voltage electrical line (The Northwest Transmission Line (https://www.bchydro.com/energy-in-bc/projects/ntl.html)) which would bring inexpensive hydroelectricity from southern BC has made mining in the area economically attractive. Previously, the cost of energizing mines in the area has been prohibitive.

Mine	Primary Metals	Production	Watershed	Con
Kerr-Sulphuretts-Mitchell (/Issues/MetalsMining/ksm-kerr-sulpheretts-mitchell-gold-copper-mine-prospect.html)	Gold, Silver, Copper, Molybdenum	120-180,000 tons/day	Unuk, Nass	May Nor larg
Est. 20 billion gallons of wastewater to be treated per year.	Permitted			
Schaft Creek (http://www.copperfoxmetals.com/s/SchaftCreek.asp)	Gold, Silver, Copper, Molybdenum	130,000 tons/day	Stikine (Mess Creek)	Nor

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Mine	Primary Metals	Production	Watershed	Con
Galore Creek (http://www.novagold.com/section.asp?pageid=22238)	Gold, Silver, Copper	95,000 tons/day	Stikine (Small tributary)	Nor
Red Chris (http://www.imperialmetals.com/s/RedChris.asp)	Gold, Silver, Copper	30,000+ tons/day	Stikine (Iskut)	Red com criti con and for by I Met own Poll

Mine	Primary Metals	Production	Watershed	Con
Brucejack (http://www.pretivm.com/projects/brucejack/overview/default.aspx)	Gold, Silver	2,700 tons/day	Unuk	Nat be u taili imp Adv bei con disa loss life.
Tulsequah Chief (http://www.chieftainmetals.com/tulsequah-chief.php)	Undetermined	Undetermined	Taku/Tulsequah	Tuls sev min acti 194 195 thei unn aci hav into rive

Acid, Wastes, Cross-Border Issues and Downstream Fisheries

The transboundary mines intertangle many issues: Industrial development versus conservation, mine waste management and perpetual storage, risk to ecological and economic resources (particularly salmon), and international property rights. Transboundary issues around the mines have recieved extensive attention, such as from the Petroleum News, (http://www.petroleumnews.com/pntruncate/947175691.shtml) Juneau Empire, (http://juneauempire.com/opinion/2014-11-14/empire-editorial-keep-pressure-transboundary-mines#.VGZctUvfYVT) Fisherman's News, (http://fnonlinenews.blogspot.com/2014/10/transboundary-mine-issues-prompt-more.html) Vancouver Sun, (http://www.vancouversun.com/news/Stephen+Hume+Political+fallout+from+Mount+Polley+mine+spill+come+10138497/story.html) and the Alaska Dispatch. (http://www.adn.com/article/20140813/following-bc-disaster-alaskans-seek-tougher-review-canadian-mines) Salmon Beyond Borders (http://www.salmonbeyondborders.org/) was founded to respond to the potential threat to fish and water quality downstream of the mines. Many Alaska communities have called for an international review panel (http://www.ktoo.org/2015/02/04/juneau-joins-chorus-communities-calling-international-mine-review-panel/) on the proposed mines.

British Columbia's Stikine-area watersheds drain into SE Alaska, and are part of the spawning grounds for SE Alaska's salmon fishery. British Columbia does not reap substantial

economic benefit from the SE Alaska salmon fishery, but this fishery relies on and utilizes waters which flow from BC's north. Unless there are economic benefits which "trickle" across the BC border into SE Alaska, there is little reason to believe the mines will have benefit for Alaska. However, it is possible that Alaskans will find work across the border at the mines, or that the BC mines would foster further industrial development in SE Alaska.

The benefits, costs, and risks of the mines fall unequally on different parties. Transboundary mine development appears to create risks for Alaska, but brings few if any benefits. However, mine development may generate major revenue for mining firms, and tax revenue in BC. The mines are expected to create hundreds of well-paying jobs each in BC, but may also adversely impact rivers and general environment. Some local First Nations, as well as conservationists, strongly oppose the mines.

Is Mount Polley A Transboundary Mine?

Mount Polley mine was the site of a major 2014 tailings breach. (http://en.wikipedia.org/wiki/Mount_Polley_mine_disaster) Mount Polley is not a transboundary mine: it drains in the Fraser River, which runs through British Columbia to the Strait of Georgia, near Vancouver.

However, the Mount Polley disaster has become inextricably connected (http://www.vancouversun.com/news/Stephen+Hume+Political+fallout+from+Mount+Polley+mine+spill+come+10138497/story.html) to the transboundary mines, in terms of

environmental risk. Mount Polley has been held up by critics as an indicator of the hazard of the transboundary mines (examples: 1 (http://commonsensecanadian.ca/mount-polley-highlights-risk-red-chris-ksm-tailings-dam-failures/), 2 (http://www.huffingtonpost.ca/desmog-canada/alaskans-ring-alarm-mount-polley_b_6616512.html), 3 (http://americansalmonforest.org/wp-content/uploads/2012/03/pfoped102014.pdf),4 (http://www.earthworksaction.org/earthblog/detail/bc_mount_polley_mine_failure_highlights_pebble_mine_risks)), and in at least one case by mining proponents as an example of how tailings are inert (article link not located).

Mount Polley's dam collapse has been linked (https://www.mountpolleyreviewpanel.ca/) to founding the dams on ice-age lake clays, to oversteepening the dams, and to overfilling the reservoir. If more rigorous facility standards (such as a footprint-to-height ratio for tailings dams of 1.5+ instead of 1.3) were applied and successfully enforced, the catastrophic breach of other tailings facilities would be much less likely.

Mount Polley's actual tailings and downstream impact are not a good comparison to the transboundary mines. In constrast to many of the transboundary mines, Mount Polley is in non-acidic ore, so the primary threat caused by the breach is believed to be particulates (mud and clay in the water). Two downstream lakes also acted as settling basins for tailings (and most heavy metals in them), a feature which many mines do not have.

For more on transboundary water & fisheries issues, see our article on the KSM mine. (/Issues/MetalsMining/ksm-kerr-sulpheretts-mitchell-gold-copper-mine-prospect.html)

Current Status

Red Chris mine was being commissioned as of this writing, somewhere between construction and operation. Other projects are proceeding through exploration and permitting, as of early 2015.