

October 4, 2021

Impact Assessment Agency of Canada
55 York Street, 6th Floor
Toronto, ON M5J 1R7

By email: UpperBeaver@iaac-aeic.gc.ca

Re: Agnico Eagle Upper Beaver Project Initial Project Description IAAC Reference Number: 82960

Dear Sirs, Madams,

I am writing in response to the Impact Assessment Agency of Canada's (IAAC) invitation for comments in order to establish whether an Impact Assessment for the above-mentioned project is necessary. Underlining, italics, and bold print are mine.

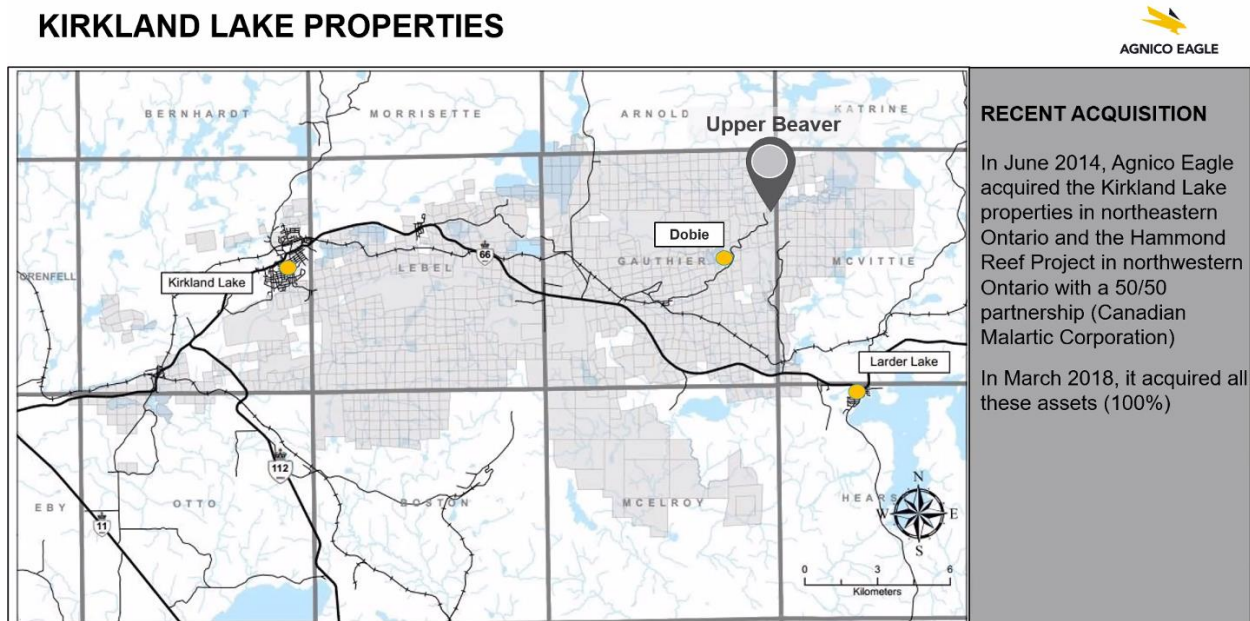
I would like to draw your attention to the following from page 13 of the IPD: "*The Upper Beaver Gold project is not part of a larger project that is not listed on the Project List.*"

However:

1a. The company's properties in the northern Timiskaming Region in Ontario, including other large gold ore deposits close to Upper Beaver

The company owns 25,506 hectares (63,026 acres) of land from west of Kirkland Lake, ON, all the way east, past Larder Lake, ON, as can be seen on slide 14 from its public Zoom meeting for this project, held in June of this year. The location of the Upper Beaver project site and the village of Dobie, ON, have been marked as well. The entire slide show can be found here:

<https://upperbeaver.agnicoeagle.com/documents-downloads/>



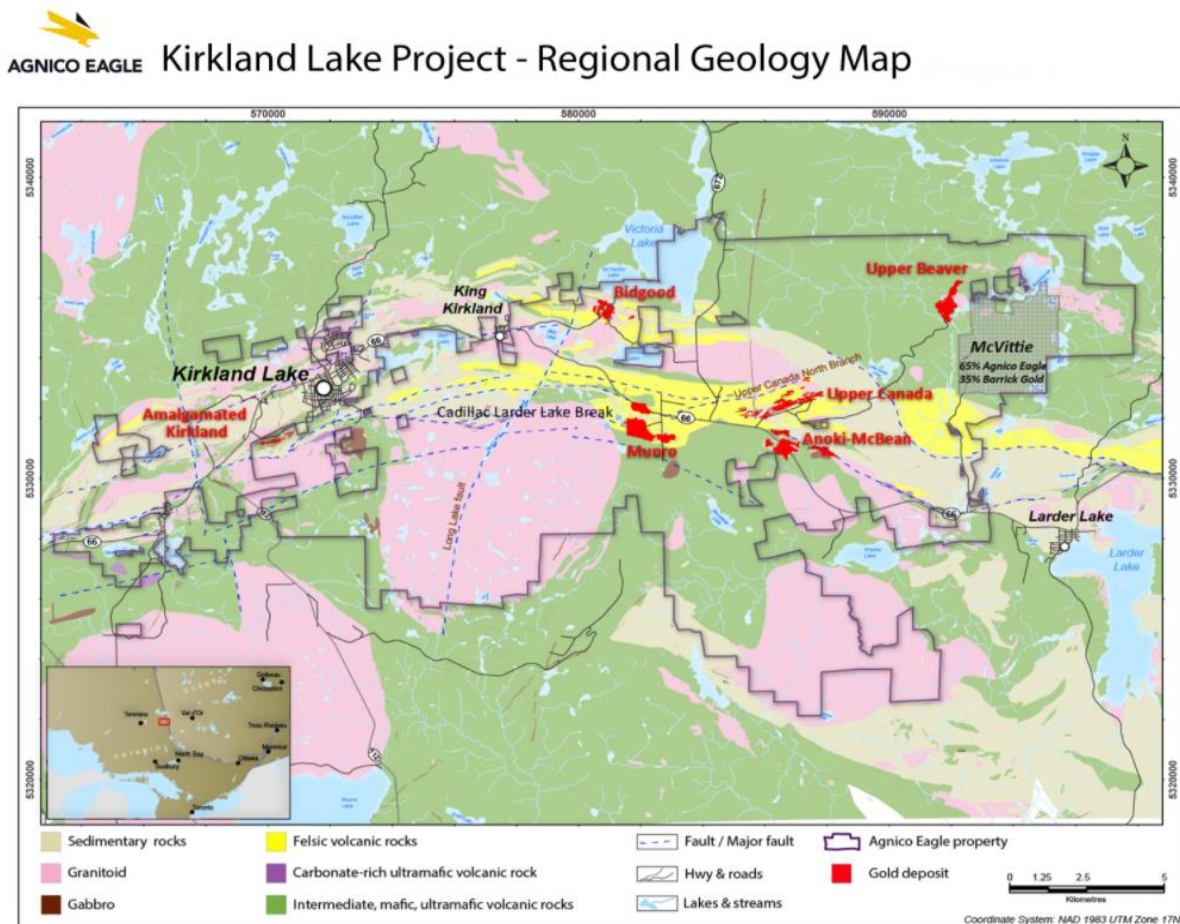
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On its website, the company shows the, at present, known locations of significant gold deposits on those lands:

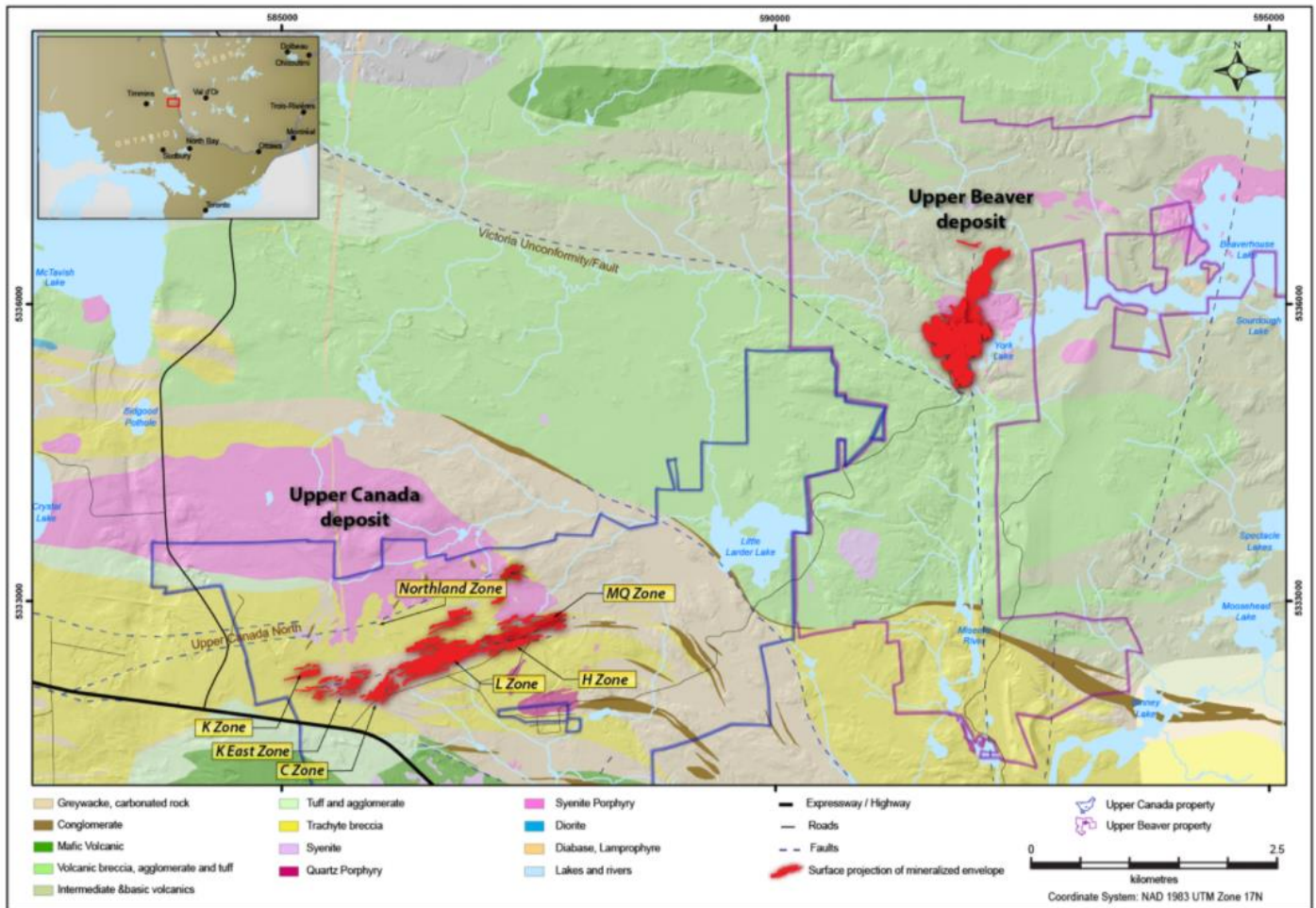
https://s21.q4cdn.com/374334112/files/doc_downloads/GeologyMaps/June2019/Kirkland-Lake-Project-Regional-Geology-Map.png

Note again the Upper Beaver deposit in the northeast corner of the property.



A second map from the company's website shows the location of the Upper Beaver deposit beside Beaverhouse Lake and Ava Lake, and how close the Upper Canada deposits are to the Upper Beaver deposit.

https://s21.q4cdn.com/374334112/files/doc_downloads/GeologyMaps/June2019/Kirkland-Lake-Project-Upper-Beaver-and-Upper-Canada-Local-Geology-Map.png



The company describes exploration results and further undertakings here:

<https://www.agnicoeagle.com/English/exploration/exploration-projects/Kirkland-Lake-project/default.aspx>

The company mentions that it is focusing on its exploration of the extensive Upper Canada deposit and the Upper Beaver deposit together. The Upper Canada deposit too is an old mine site, situated around 6km south-west of the Upper Beaver deposit, and less than 1km west and north-west of Dobie, ON. These two deposits are connected via a backroad on the company’s property and part of Beaverhouse Road. The Upper Canada deposit is at least 25% and possibly more than 100% larger than the Upper Beaver deposit. The Upper Canada deposit is a surface deposit, which the company states, is at ‘underground and open pit depths’. This last mention is significant for future developments at that site because the village of Dobie is so close. This is one of the main reasons why the IPD should include these other properties in the close vicinity of Upper Beaver and the timeline of future applications to the IAAC for Impact Assessments that the company intends to make.

The company also lists the gold estimates at the Anoki and McBean properties, located south-west of Dobie and south of Dobie, respectively. It shows its Munro and Bidgood properties further west and has started exploring its Skead-MacGregory property that stretches out from west to east throughout the entire southern region of the

Township of Gauthier: from the east of Mousseau Lake, along the north of Grassy Lake to both sides of the Misema River in the east, as you can see here:

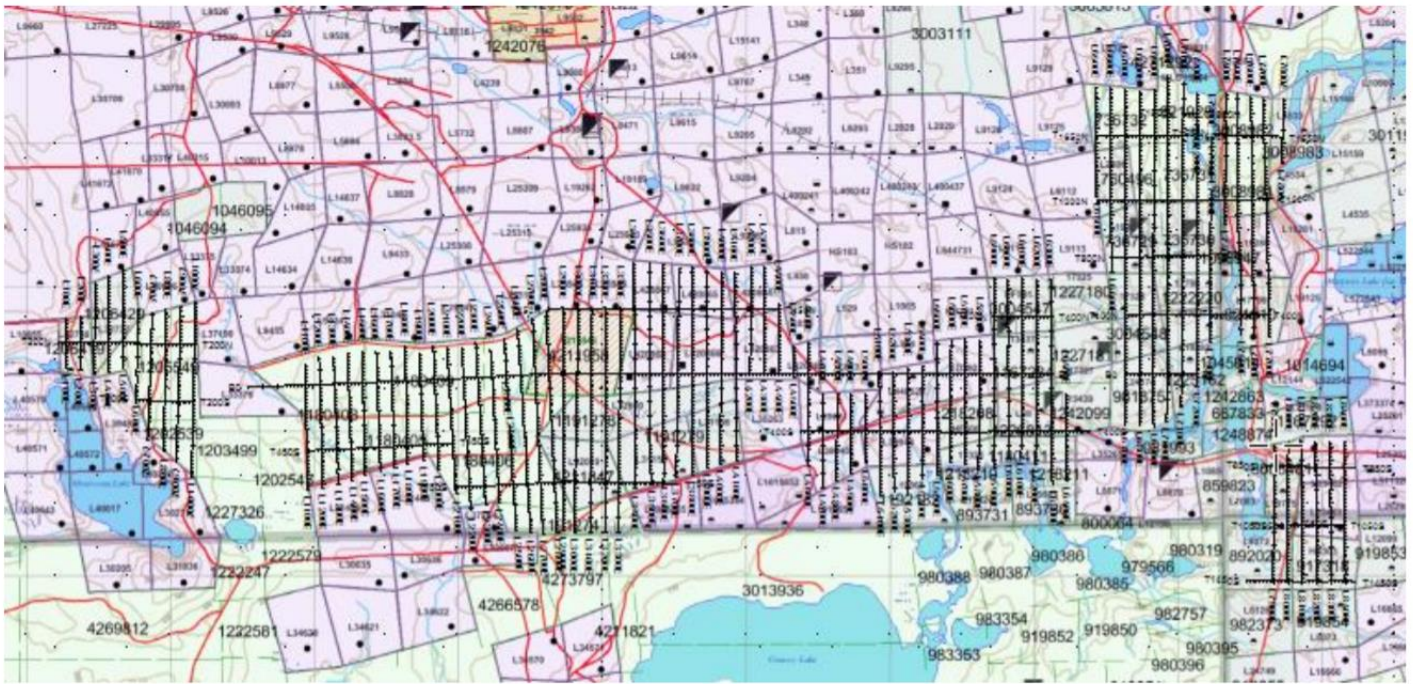


Figure 2: Cut Grid Sketch on Claim Map

The company has recently announced a merger with KLGGold for the operating of the KLGGold mine in Kirkland Lake, ON. KLGGold is in the process of doubling to tripling its mining capacity but does not indicate it will also enlarge its existing mill, which has at present a capacity of 2,000 tonnes per day. Transporting millions of tonnes of ores from Kirkland Lake to Upper Beaver would have a major impact on the safety on highway 66 and will add significantly to the carbon footprint of these mines.

<https://www.kl.gold/our-business/canada/macassa-mine/default.aspx>

1b. Proposed mining and milling activities

The IPD indicates that mining and processing volumes will be between 4,000 and 10,000 tonnes per day and at peak 15,000 tonnes of mining ore per day. This raises a number of thoughts and questions.

- The underground Upper Beaver mine has a mine life expectancy of nine years. This expectancy is based on the 2012 report made for Queenston Mining Inc. which states multiple times that production would max at 2,000 tonnes per day. This report is referenced here, where up to date information is presented about developments at the site:

<https://miningdataonline.com/property/1765/Upper-Beaver-Project.aspx>

Link to the Queenston report:

https://minedocs.com/20/UpperBeaver_PEA_03302012.pdf

If the Upper Beaver mine were to be mined at a rate of 4,000/10,000 tonnes a day, would that not shorten the life expectancy? Would that also not require a wider shaft, a bigger ramp? The IPD does not mention widening the existing shaft or adding another shaft. Instead, the IPD maintains that the underground mine will produce ore for approximately nine years.

- The IPD mentions the development of an open pit mine at the Upper Beaver site, which will be producing for around four years prior to mining starting underground. Because the open pit mining and the underground mining will not happen simultaneously, this does not explain the 4,000 to 10,000 tonnes per day projection either.
- One possible explanation for this discrepancy would be what is stated on page 18 of the IPD:

A low grade ore stockpile and potentially a temporary stockpile for off-site ore transported to site for processing may also be created.

and

Although not currently planned, there is also the potential that the processing plant could also process ore trucked to the site from other compatible deposits at the same time as processing the Upper Beaver Mine ore, or potentially after the on-site ore resource is depleted.

- The most logical origins for this ‘off-site ore’ would be the other gold deposits on the company’s property, three of which are within a 10km radius from the Upper Beaver site. These deposits are not part of this IPD but could become ore-producing during the mining life of the Upper Beaver property.
- The production of ore on those ‘off-site’ locations would have to be considerable, considering that the capacity of the mill is 10,000 tonnes of ore per day. This can even include ore from as far away as the Kirkland Lake Gold mine, which ore production will increase in the next few years but its mill capacity will apparently not. The IPD is not clear on how long after the depletion of ore at the Upper Beaver location ore from these other locations will be milled here. Both the volume and the duration of this extra milling will significantly increase the footprint that this site will have on the surrounding lands and waters, living creatures, First Nations, cottagers, residents, vacationers.
- It would most likely follow that the tailings from ore from other locations will be left around the Upper Beaver mining site. At this point it is not clear how long these activities would continue after the 13 years proposed in the IPD and how much larger the volume of the dry-stack tailings will become. These are cumulative effects that are not acknowledged in the IPD. Also, if the mill were to operate for many more years than is now expected, its water intake and disposal of effluent would affect Beaverhouse Lake, Ava Lake, York Lake, the Misema River and all the waters bodies south of that River to a much greater, and possibly exponential, extent with a significant increase of risks as well.

All the above puts the statement that “*The Upper Beaver Gold project is not part of a larger project that is not listed on the Project List*” in a different perspective:

Lots of ore can be mined from all local ore deposits which then only has to be transported a short distance to Upper Beaver to be milled and the massive tailings stored. Together with the ever presence of fresh water and a river for the release of effluent, Upper Beaver is the preferred location for all of this.

One last point that should not be overlooked is that the company, in its Advanced Exploration Phase, plans to explore the Upper Beaver mine at significantly deeper levels. This could result in the finding of more gold deposits which could mean that the life expectancy of the Upper Beaver mine would increase significantly. If

this were to happen, what would that mean for the timeline of the reversal of the damming of Ava Lake and the rerouting of the Misema River? They could be postponed indefinitely.

2. The Upper Beaver location

What could be better than a location where both fresh water intake and releasing effluent are easy: an existing high volume water system such as Beaverhouse Lake draining into the Misema River via Ava Lake and York Lake?

The location is remote and has endless room for an enormous volume of dry-stack tailings, also for tailings from ores mined from other deposits in the region, for example at Upper Canada, which will then be transported to and milled at Upper Beaver.

Both the intake and release of water in large quantities and the proposed dry-stack tailings pose grave risks for the quality of the underlying and surrounding lands and bodies of water, for many decades after all mining and milling has ended.

3. Alternative locations

The Beaverhouse Lake/Misema River system seems to be the only location on this company's Timiskaming property where this undertaking has access to this amount of fresh water and a convenient outlet for its effluent. The second map, above, shows other larger water bodies in the region. The lakes east of Kirkland Lake, up to and including Victoria Lake, are used by the Town of Kirkland Lake for its own water supply. Larder Lake beside the Town of Larder Lake is used for recreational purposes. The remaining and ideal location for a large mine/mill project that requires both the intake and disposal of a lot of water would then be the remote Beaverhouse Lake where, as mentioned before, there is also a lot of room for an enormous volume of dry-stack tailings.

The selection of this location then may not come as a big surprise.

4. Beaverhouse Lake – Misema River – watershed and flow

Beaverhouse Lake, Ava Lake, York Lake, and the Misema River are fed by a watershed of 25,409.93 hectares (62,789 acres) that is mainly used for Indigenous, residential, and recreational purposes. The Misema River streams south, under highway 66, into Grassy Lake. Grassy Lake is adjacent to the South Grassy Lake Conservation Reserve. The Misema River then continues to flow south where it merges with many other rivers, flows past farmlands and the Hilliardton Marsh Provincial Wildlife Area, to finally flow into Lake Timiskaming.

The risks and effects of pollution of all these waterbodies and adjacent lands over at least two decades have to be studied during the process of an Impact Assessment.

This is one of the risks:

<https://thenarwhal.ca/yukon-gold-mine-release-43-million-litres-wastewater/>

5. Upper Beaver Open Pit Mine

It is only very recent (within the last half year) that the public has heard about the possibility of the development of an open pit mine at the Upper Beaver location. The public learned that without the open pit mine

underground mining will be dangerous due to instability in the upper layers of materials above the old mine workings and that without the open pit mine the entire project would not be viable. Both claims can be debated:

The Queenston report of 2012 makes no mention of these instabilities; see the link under point 1b. It also does not mention the need for an open pit mine in order to proceed with underground workings.

No mentions of an open pit mine or instabilities are made in the report that was submitted by the company to the Ontario Ministry of Northern Development and Mines at the end of 2019:

[48360 - Upper Beaver Project Report on 2018 and 2019 Diamond Drilling Programs \(gov.on.ca\)](https://www.gov.on.ca/48360-Upper-Beaver-Project-Report-on-2018-and-2019-Diamond-Drilling-Programs)

However, in the fall of 2019 a great success was celebrated at a Mexican mining site owned by the same company:

<https://www.agnicoeagle.com/English/the-eagle-blog/blog-news-details/2019/A-crowning-achievement-for-our-Pinos-Altos-team/default.aspx>

It became possible to mine the crown pillar of that mine after the overburden was removed by means of an open pit mine:

*The decision came after geological and economic studies revealed it would be a **safer, more efficient and profitable way to mine the remaining orebody.***

*But one key technical challenge remained. How to recover the Santo Niño **crown pillar – the valuable ore reserves that lie between the bottom of the open pit and the upper level of the underground mine** – without exposing employees to any additional risks or ground instability and with an eye to safeguarding the future of the underground mine?*

The article concludes with stating that the company wants to use this technique elsewhere.

This seems to be the exact situation the Upper Beaver mine is in. The process is called ‘untopping’, where the crown pillar in an old mine is relieved from the weight it carries, after which that crown pillar can be safely mined for the desirable ores.

https://minewiki.engineering.queensu.ca/mediawiki/index.php/Crown_pillars

Note that it is the mining of the crown pillar without removing the overburden that leads to the instability of the grounds above the mine and the risks for workers. It is not the instability of these grounds that requires the open pit mine if the crown pillar were to be left alone.

Note also that the company will not be able to give guarantees that the open pit mine will become or remain a lake again after the open pit mine is exhausted. One of the reasons can be that the pit inadvertently will start to leak water into the underground workings of the mine. This would be detrimental to the plan to reverse the damming around Ava Lake and the rerouting of the Misema River after the mining project is completed.

The IPD gives the impression that without the open pit no other underground mining can take place. What may become lost in this discussion is the fact that there is already a shaft, quite deep, north east of the proposed open pit mine, which can function very well with or without the existence of an open pit mine. The IPD refers to the deepening and use of this shaft during the Advanced Exploration Phase to remove at least

2,000,000 tonnes of mine rock from below (page 15). Apparently removing this much rock is safe and can be done before claimed dangers under/around York Lake are resolved.

Note that the IPD also mentions the storage of 12,000,000 tonnes of mine rock in a stockpile (page 18). It is not clear where this rock comes from and in which phase of the project this storage will take place.

In slide presentations earlier this year 3 different scenarios for mining the Upper Beaver location were shown. These 3 scenarios are listed in the letter that the Ontario Rivers Alliance has submitted in response to this IPD. The open pit scenario has the highest return in gold but comes with the highest price for the environment and the community (without adding the cumulative effects of the prolonged processing of other local ores and storage of all the tailings at the site). These scenarios show that alternatives are available and should have been included in the IPD. However, these scenarios mostly focus on the production of ore, not on the dry-stack tailings, the bringing in of ore from other sites, the possibly extended longevity of the Upper Beaver, the extensive risks for the environment, and so forth.

Open pit mines are much more destructive to the environment than shaft mines. They produce a lot more rock, and, consequently: a lot more dust, including poisonous materials, noise, air and light pollution, vibrations, and blast effects, all on a 24/7 year-round basis. For more information see <https://ontarionature.org/wp-content/uploads/2017/10/mining-in-ontario-web.pdf>

Additionally, at the Upper Beaver location the creation of an open pit mine would necessarily lead to very invasive interferences in the landscape: the draining of York Lake, the damming of Ava Lake, and the rerouting of the Misema River.

6. Draining York Lake – Damming Ava Lake - Rerouting the Misema River

The creation of the open pit mine at Upper Beaver necessitates that York Lake is drained, Ava Lake dammed, and the Misema River rerouted via canals. No other of the proposed activities in the IPD requires this kind of engineering. Indeed, all of this is not even necessary when the mining activity stays underground.

Note that the size of the open pit mine will be approximately 300m in diameter and 100m deep.

This would be considered to be a small open pit mine which monetary gain would be in no proportion to and cannot justify the extent of the effects and consequences that the required draining of York Lake, the damming of Ava Lake, and the rerouting of the Misema River bring along.

There will be many anticipated and also unknown consequences of the draining, damming, and rerouting alone, among which are the disturbance of the habitats of fish and mammals in the area; the loss of overflow capacities for Beaverhouse Lake at its west end; the risks regarding high water levels, especially during snow melting season and adverse weather effects; these waterbodies becoming less accessible for the First Nations, cottagers, residents, and recreational use by others; the possible irreversibility of the damming, the rerouting of the river the reconstruction of York Lake, and so forth.

All these aspects must be studied and weighed during an Impact Assessment process.

Additionally, from points 5 and 6 can be deducted that the mining of the crown pillar underneath/beside York Lake will weaken the rock between the remainder of the crown pillar and the bottom of the open pit mine. Where the overburden had to be removed to allow for the mining of the crown pillar, it should be considered that the weakened, or by now absent, crown pillar will never be able to support the weight of the volume of water necessary to fill the open pit, in order to recreate a lake that is considerably larger than York Lake is now.

This then would also mean that the damming of Ava Lake and the rerouting of the Misema River cannot be reversed as proposed in the IPD. If all these invasive changes are to become permanent then mitigating any negative effects of these changes by removing the damming of Ava Lake and reverting the flow of the Misema River will not be possible.

7. Dewatering of the old mine workings

The IPD (page 15) indicates that the old mine workings will be dewatered during the Advanced Exploration Phase. A permit for this process seems to have been obtained recently from the government of Ontario: <https://ero.ontario.ca/notice/019-0331>

Who will make sure that these waters, which will be released in Ava Lake and then start to make their way south, are not heavily polluted?

Would it not be prudent for these dewatering activities to not commence until it becomes clear whether an Impact Assessment process has been completed?

8. Other aspects of this project

There are many other parts of the environment that will be affected by this project, and the activities that are hinted at but not quantified or put on a timeline, and that will benefit from an Impact Assessment. Some of these are: wildlife, migratory birds, fish, endangered species and their habitats, the effects of climate change, and the entire carbon footprint of the project, also after the mine is closed but when the mill is still operating.

9. Cumulative Effects

Some of the environmental, social, economic, and health consequences of this project:

- Destruction of the environment on/around the Upper Beaver site. This includes Beaverhouse Lake and the waters north of it (possible drainage from the massive dry-stack tailings in northern direction), Ava Lake, York Lake, the Misema River and all the waters south of it. This also includes many hectares of forest that will be clear-cut to store the massive tailings, including tailings from ores mined elsewhere.
- Dust, noise, light and air pollution, vibration, blasting on site, spreading all around Beaverhouse Lake, Ava Lake, the Misema River and beyond, 24/7, year-round.
- Deep effect on many First Nations' experience and use of the entire area, including hunting, fishing, gathering.
- Deep effect on the residents and cottagers around Beaverhouse Lake.
- Prolonged and increased trucking of ores over Beaverhouse Road means a big increase in noise and air pollution, 24/7, year-round for all Beaverhouse Lake and Dobie residents, because the Beaverhouse Road runs immediately past Dobie to highway 66.
- Deep effect on the residents of Dobie who, in the near future, will find themselves surrounded by mines, both with shafts and at least one open pit mine; noise, dust, light pollution, air pollution, vibrations, blasting and so forth. All these may very well affect those who live around Beaverhouse Lake as well because of the south-western winds we often have here.
- Effects on wildlife, birds, fish, and so forth, be they endangered or not.
- Cumulative effects: these activities will control the living conditions for all who live in the area for decades to come. The tailings around Upper Beaver and their accompanying risks will be here forever.

The company promises up to 700 local jobs but forgets to mention that those workers, who need to be experienced, will come from other mines the company owns in Quebec.

The company promises work for local contractors but does not mention that the bulk of the money generated will leave northern Timiskaming and the province.

The IPD (page 30) quotes:

Overall, it has been identified that people in northeastern Ontario:

- *Have shorter expected lifespans than the average in Ontario;*
- *Are more likely to smoke (26%), which has been linked to illnesses and early death;*
- *Are more likely to report having multiple chronic conditions;*
- *Are far more likely to die prematurely (before age 75) from suicide, heart disease or other causes;*
- *Are much less likely to report being able to see a primary care provider, such as a family doctor or nurse practitioner the same day or next day (Health Quality Ontario 2021).*

However, the IPD does not make clear how the proposed (and following) mining activities will improve the circumstances of the population here, including that local residents will have to share their already scarce health care resources with the workers who will work on this site.

The IPD also does not indicate how the effects of the prolonged mining, milling, dry-stacking and the release of effluent will negatively impact the quality of life of local residents in the near and far future.

10. Further thoughts

Just because you can, doesn't mean you should. This saying seems to apply well to this entire IPD.

We know that approximately 80% of all gold around the globe has been mined, and that 20% remains to be mined.

<https://www.gold.org/about-gold/gold-supply/gold-mining/how-much-gold>

The prolonged use of the area around Beaverhouse Lake and Dobie seems to line up with this very recent article about the prolonged lives of mines:

<https://www.mining.com/yamana-gold-founder-talks-generational-mines/>

I understand the desire to keep growing as a company. There is, however, no urgent need for more gold on this earth. Except that at the moment the price is high, and this makes it desirable for companies to mine.

The question is: at what irreplaceable, immitigable expense?

Unmined gold remains just that: unmined on the land of the landowner. It is still there, for possible mining in the future, with potentially cleaner techniques.

This too makes it important that a full Impact Assessment is done.

It is not comfortable for me to bring this up here but I feel it needs to be said:

From the company's presentations I got the feeling that to them, despite the approval process that this project has to go through, this undertaking is a done deal. No community consultation is taking place. The agenda is set by the company; this is not an endeavor where we together look for the best possible outcome. I did some searching and found how the company has interacted with the residents of Malartic, QC. How eventually these residents took this company to court, for three years, over all the affects that the open pit mine of this company beside their village had on their lives and wellbeing.

Is it acceptable that companies receive permits that lead to all that?

<https://miningwatch.ca/news/2019/10/15/largest-gold-mine-canada-settles-affected-citizens-out-court>

<https://ici.radio-canada.ca/nouvelle/696831/recherche-impacts-sante-publique-mine-canadian-malartic-abitibi>



La mine Canadian Malartic
PHOTO : CLAUDE BOUCHARD

Lastly, because this is at the bottom of all the above: something is fundamentally wrong with proposals such as this one when First Nations have reserves. Something went very wrong at the beginning of the 20th century when the exploration for precious metals was in the back of the minds of officials when they ‘negotiated’ treaties with First Nations local to this vast area. Some were even left out of these treaties and are now petitioning the government of Canada for lands to call their own. In the meantime more and more land is affected by irreversible, long-term damage and thus threatens especially those who originally lived and still live here. They live with this principle: what is the consequence of this action for the next seven generations. We all will benefit when we adopt this and live accordingly.

Conclusion

I strongly object to the extreme environmental and social impacts that will result from an open pit mine which necessitates the damming of Ava Lake, the diversion of the Misema River and the dewatering of York Lake.

I strongly object to this IPD not containing detailed information about this company’s significant ore deposits within a 10km radius from the Upper Beaver site. The project as presented in the IPD is already larger than is necessary for a full Impact Assessment, and that is without mentioning the other gold deposits and the much longer use of the mill than indicated.

I also strongly object to the size of the mill, the transporting of millions of tonnes of ores from these off-site locations, and the accompanying enormous volume of dry-stack tailings that will then cover the land with the risk of polluting all the water, including groundwater, around the area for decades if not centuries to come.

I am very concerned about the permits this company has already received for its activities at the Upper Beaver location. Examples: the logging that is taking place and the water permit.

I am also very concerned that once this company would successfully go through the Impact Assessment process for this project, it will become much easier for this company to apply for its next, adjacent project in our area and be successful there as well.

A full Impact Assessment is necessary so that members of the public can be heard and all aspects of this project can be assessed and weighed.

For all these reasons it is crucial that the IAAC order a full federal Impact Assessment and require this company to thoroughly consider alternative means of carrying out the undertaking, with the objective of significantly reducing the Upper Beaver Gold project's environmental and social footprint.

I strongly support the comments of all the Beaverhouse Lake residents and cottagers and also the letter that you received from the Ontario Rivers Alliance.

I thank you for this opportunity to comment.

Respectfully,

Maria Lelie

<Personal information removed>