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Mr. Tim Sellars, Senior Planner
Dawson Regional Planning Commission
Suite 201, 307 Jarvis St.
Whitehorse, Yukon

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Dear Mr. Sellars and Commissioners,

On behalf of the YPA, I would like to provide you and the Commission some responses and comments regarding the Dawson Draft Land Use Plan.

It is important that the Commission consider and analyze the serious implications on the exploration and mining industry if some of the proposed conditions, restrictions and thresholds in the Dawson Regional Draft Plan are implemented. Scenarios showing what the adverse effect would be on ongoing and potential future exploration programs and mining need to be examined. If the incentive and ability to prospect and open mines down the road becomes uncertain then the effect on the personal lives of families and the economy would be great.

This requires careful analysis and evaluations before final recommendations are made. It is important get whatever independent analysis that may be useful to you and to take the time to get it right, and if more time is required than is currently planned for we recommend you take it.

The cumulative effects thresholds in an LMU could discourage or prevent potentially having even one mine in some of the LMUs. Adjacent MLU's may not even have potential for a mine due to economic mineral deposits are rare and are located wherever they are located. Best to incorporate ways to allow the limited potential for mines to be found on most all of the land and allow and enable them to be developed responsibly.

Low impact exploration should definitely be allowed and flexibility and adaptive management incorporated into the plan. Uncertainty of being able to develop mines in a given area due to

restrictions greatly discourages the investment of time and money into exploration. These investments can and do easily get diverted to other countries and jurisdictions.

If the goal is to have a thriving, responsible exploration and mining industry that has process and procedures that respects environmental and cultural concerns and the rights of citizens and First Nations, which most all, I believe, want, then the conditions and restrictions in the draft plan must be modified.

Here is a model that achieves this goal to empower and enable successful, responsible quartz/hard rock exploration that provides the necessary incentives for persons and companies to invest time and money.

Explorationists need to be able to prospect on most all of the land. They need to acquire the mineral rights in the ground and do low impact prospecting such as outcrop and soil sampling and geophysical studies. Once land areas containing potential ore bodies are located more advanced exploration is required, subject to YESAB review, consultations with the Governments – First Nations, Yukon and Canada, stakeholders and the public. Decision documents are issued permitting work to proceed with conditions including mitigation of potential adverse effects and reclamation. If results warrant it exploration can lead to identifying drill targets and then drilling. Much drilling is done using helicopters, or using low ground pressure off road vehicles. Some roads and trails and planning to develop a mine may become necessary and must go through a similar YESAB and consultation and permitting process.

A model that works for placer exploration is to research what are prospective areas where potential placer deposits may be. Techniques such as digging shafts and pits by hand or excavator and testing samples with a small sluice or by gold pan are used to establish gold values. They need to acquire mineral rights on the ground where the gold is located.

Shafts must be left safe and protected so the land can reclaim them and excavations and trenches filled in after exploration and/or mining is done. If prospects look promising, or it is on a known gold bearing watershed, then drilling or excavating trenches can be used to test for exact location and grades of gold in the pay channels. All of this more advanced exploration requires permitting through the YESAB and permitting process to provide for consultation and imposing conditions requiring mitigation and reclamation. Placer mining is a temporary use of the ground.

Other variations of these models could be explored as long as the incentive is there for explorationists to acquire mineral rights and by following responsible processes and procedures (laws and regulations) they and mining companies will be able to responsibly operate and do reclamation of mines.

Regarding mining in wetlands:

Most wetlands including bogs, fens and marshes do not have economic gold deposits, and the ones that do can be responsibly mined and the land reclaimed so wilderness and biodiversity returns even if the ecosystems are changed. An example is by creating shallow water wetlands (very rare in the Dawson region) are more productive than bogs and supports more biodiversity, and the vegetative growth does soak up carbon.

The amount of carbon release by mining some frozen bogs and wetlands should be compared to the amount stored in the new vegetation, and compared to the amount of carbon released by other human activities and by forest fires. The significance should be determined and evaluated.

It should be noted that by exploring and mapping most all of the land it would result in possibly 5% to 10% of the land requiring more advanced exploration, and then less than 1% of the ground being mined. Maybe 90% or more of the land does not require advanced exploration and is thereby is automatically “protected” from advanced exploration and mining.

The low-impact prospecting should be allowed on most all of the land as it does minimal or no damage to the land, flora and fauna, as all other low-impact activities on the land are allowed.

There is the fear, with justification looking at past practices and experiences, that if prospecting is allowed in an area, an economic mineral deposit – ore body – may be discovered and a mine started which could leave a mess and be abandoned. Over the past 20 years and into the future laws and regulations have and are being developed that addresses these fears and ensures only responsible exploration and mine development will be allowed, with proper effective reclamation, which includes wetlands reclamation. Reclamation may not restore the landscapes and wetlands to their original state but would allow wilderness ecosystems and biodiversity to thrive.

Re: Critical Level of development thresholds

The YPA submission by Carl Schulze BSc, PGeo, to the Commission of October 18 explains the extreme effects of “critical level thresholds” for the ISAreas and how the SMAreas are essentially off limits. These calculations shows the implications and how these thresholds very seriously impede the Industry much more than it may initially appear.

Further in the Yukon Prospectors Association submission of Oct. 18th by Carl Schulze to the Commission he informs that The Canadian Institute of Mining, Metallurgy and Petroleum (CIM) has established a series of five official definitions governing mineral resources and reserves, utilized by Canadian mining companies throughout worldwide exploration.

The accepted definition of an “advanced exploration project” is one which includes a deposit where, at minimum, an Inferred Resource reportable under NI 43-101 has been determined.

Advanced projects represent a small minority of all exploration projects, and the surface disturbance, including roads and infrastructure, are unlikely to exceed 1.0% of any land use planning region.

The footprints of medium or larger sized mines are mostly under 10 km².

However, a maximum amount of a land base is required to explore and discover mineral prospects that could possibly reach advanced exploration status.

Further data and calculations in the presentation submission of Andrew Carne of Atac Resources in Dawson on October 26th presents research that shows the cumulative effects thresholds recommended in the draft Dawson Land Use plan are unreasonably low and restrictions in most LMU's would preclude many mines from opening, and thereby discourage even prospecting and exploration in these areas.

Also in the presentation submission of Andrew Carne he points out that exploration and mining have been occurring in conjunction with the Fortymile caribou herd recovery and are capable of co-existing with appropriate mitigations. Assumptions made in the draft plan should be revisited and effective mitigations that protect caribou populations that are successfully used in other locations should be considered for inclusion in the final plan.

Mike Settington, M.Sc., R.P.Bio., C.W.B. in September presented to the Dawson Land Use Planners information and scientific studies that in regards to Cumulative Effects Thresholds the scientific assessment that Environment Canada conducted back in 2011... with a threshold of ~ 35% habitat disturbance being used as a general guideline for many projects. I expect this information and other information related to this has been analyzed and I hope the Commissioners incorporate this knowledge into the Plan.

Other studies and scientific assessments should be evaluated to determine reasonable cumulative effect thresholds.

Swift and Hannon (2010) provide a meta-analysis of simulation, and empirical small scale (e.g., fungus and some insect habitat) and large-scale (e.g., birds and some mammals) studies on habitat pattern and habitat loss factors that lead to potential population-level impacts.

- *Simulation Studies - "The threshold levels range across nearly the entire continuum of habitat proportion, from about 1-99% (though most fall between 10-50%)" [habitat remaining].*
- *Empirical Small-Scale - 20-40%, range from 20-100% habitat remaining.*
- *Empirical Large-Scale - 20%, 10-30% habitat remaining (e.g., impacts seen at 70-90% habitat loss).*

Environment Canada (2011) thresholds are within the bounds of increasing populations.

Low risk of decline when disturbance is 10–35% with a 60–90% probability of a stable ($\lambda = 1$) or increasing ($\lambda > 1$) population.

- *Very low risk when disturbance is <10%, >90% probability of a stable ($\lambda = 1$) or increasing ($\lambda > 1$) population.*

The Draft Bathurst Caribou Range Plan (Government of Northwest Territories, 2018), of which the GN is noted as a participant of the workgroup that drafted the plan, identifies 8% as a low risk, and 16% as a high risk to caribou in the Nunavut portion (RAA1) of the range (the identified calving area),

Environment Canada. 2011. Scientific Assessment to Inform the Identification of Critical Habitat for Woodland Caribou (*Rangifer tarandus caribou*), Boreal Population, in Canada. 2011 Update. Canadian Wildlife Service, Ottawa, Ontario. 102 pp.

http://epe.lacbac.gc.ca/100/200/301/environment_can/2011/scientific_assessment_inform-ef/CW66-296-2011-eng.pdf

Government of Northwest Territories. 2018. Draft Bathurst Caribou Range Plan 2018.

Department of Environment and Natural Resources, Yellowknife, NWT. 68 pp.

Swift, T.L. and Hannon, S.J. 2010. Critical thresholds associated with habitat loss: a review of the concepts, evidence, and applications. *Biological Reviews* 85:35–53.

An independent review should be made of potential negative impacts (adverse effects) on the exploration and mining industry arising from conditions, restrictions and thresholds potentially being implemented by a Dawson Regional Plan. Implications for the Industry and economy need to be carefully assessed and analyzed before decisions are made regarding the Plan.

More time and research is needed to study the implications and to improve the Plan so that it will work for all of our benefit.

Further to this, one scenario to consider is that cumulative effects thresholds could result in a responsible Dawson placer miner being shut down and in serious trouble if the miner's license expires and is not renewed due to cumulative effects thresholds. The miner may be correctly mining and reclaiming on his claims, but other activity in the LMU may reach the threshold of cumulative effects for that LMU. If there is still equipment and structures on the ground, and mined land unreclaimed he would be in legal jeopardy and would be faced with possible fines and huge expenses shutting down and vacating the land and be unable to complete reclamation work. Yukon mining families count on continuing to responsibly mine into the future for their children and children's children.

The commission should ensure that the rules and regulations and land use plans don't allow for this to happen – putting responsible miners out of work and in jeopardy. This would seriously discourage even starting to mine if there is a possibility of not renewing the permit even if mining and reclaiming responsibly.

This and other similar scenarios and negative/adverse implications must be avoided by creating a Land Use plan that will allow responsible mining into the future.

The conditions and terminology like low, moderate and highest needs to be reconsidered. For example, a large, efficient mining operation can responsibly mine and reclaim an economic pay channel in a watershed over some time. Small operations would take much longer. Different operations can have different efficiencies and all this should be considered in the Plan.

We in the Yukon have good controls and guidance on advanced exploration and mining as it is subject to YESAB review, consultations with First Nations and all others, and government permitting and oversight. Progressive reclamation, mitigation strategies and adaptive management approaches do work. We can do all this as good as or better than anywhere in the world, and we should ensure that it is more than allowed – it should be encouraged.

If we can't responsibly mine for necessary minerals in our own back yard then the mining and jobs will go elsewhere, and we will be left buying the minerals we need to use in products including "green" technology products and infrastructure. Mining responsibly in our own back yard is the way to go and the Dawson Regional Plan should ensure that this is possible, and encourage it.

Thank you to all of the planning staff and the Commissioners for all of your work and dedication and consideration of our concerns.

It is greatly appreciated! Thank you – Mahsi Cho,

On behalf of the Yukon Prospectors Association,

Grant Allan, President, Yukon Prospectors Association

References

Environment Canada. 2011. Scientific Assessment to Inform the Identification of Critical Habitat for Woodland Caribou (*Rangifer tarandus caribou*), Boreal Population, in Canada. 2011 Update. Canadian Wildlife Service, Ottawa, Ontario. 102 pp.

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