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Valentine Gold Project
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To Whom It May Concern:

As federally recognized members of the Qalipu Mi'kmaq First Nation we the Young sisters believe that we have a duty to provide comments and share our concerns relating to the ecosystem of the island of Newfoundland, with particular focus on protecting spiritually and culturally significant lands, as well as preventing disturbance to the extremely important wildlife which is located in the proposed Valentine Gold Mine Project area. We are Dayna M. Young and Kelly M. Young of Stephenville, NL. Our leisure time has often been spent in the wilderness of the island of Newfoundland with our parents, who are avid participants in hiking and documenting the unique ecosystem which the Province offers. We have spent time enjoying the various wildlife and harvesting resources, such as berries, from the land. We understand the importance of voicing concerns surrounding culturally and spiritually important aspects of their homeland. Kelly is currently a graduate student at Memorial University of Newfoundland in St. John's, completing the Master of Environmental Science program. By obtaining a B.Sc. through Memorial University with study focuses on Biology and Geography, Kelly has studied the complex relationship with which the biological community interacts with the geographic distribution of human interference. Dayna is a current part-time student at Memorial University of Newfoundland Distance, completing a Business Program with a background in Physics as well as a full-time Production Planner for Brenntag Canada Inc.'s largest plant in North America Toronto, ON as well as a certified member of the JOHSC assessing occupational, health and safety risks/ hazards to ensure the safety of employees, the public as well as the environment.

As detailed in the draft Environmental Impact Statement (EIS) Guidelines, there are various aspects of the '*remote upland forest, interspersed lowlands including wetland areas, krummholtz barrens as well as open water habitats'*, with potential to be affected by the Valentine Gold Project proposed by Marathon Gold Corporation, which also affects Indigenous life on the island.[1] For ease of reference, the draft Environmental Impact Statement (EIS) Guidelines will be referred to as '*Guidelines*'. The major concerns discussed in our submission are the following: *Historic, Spiritual and Cultural Significance of the Land within the proposed Project Area; Vitally Important Caribou Population & Cumulative Impacts; Impacts on Habitat & Food Availability of Caribou Population; Waste Management Techniques; and Infrastructure Concerns Regarding Extreme Weather & Emergency Response Procedures.*

Contents of Our Submission

Section 1: Historic, Spiritual and Cultural Significance of the Land

The proposed Valentine Gold Project is to be carried out on traditional Mi'kmaq and Beothuk territory. There are potential impacts on the culturally important waterways and land within proximity to the project area. The use of this land by the Beothuk people has been extensively documented in existing literature. The proposed Valentine Gold Project is set to be conducted near Valentine Lake which is located to the south of Red Indian Lake and to the west of Meelpaeg Reservoir (See Appendix 1). The northern portion of the project area is situated on land adjacent to the Red Indian Lake, a location of historic significance as a key site where interactions between some of the first explorers / colonizers and the Indigenous people of the island have taken place.[2,3] Documentation of the 1810 expedition led by Governor John Holloway, accompanied by six colonizers from Notre Dame Bay and two Mi'kmaq, travelled to Red Indian Lake, found evidence of its use by the Beothuk.[4] Further expeditions were conducted in 1811 and 1823 within the area of Red Indian Lake also noted the evidence of Beothuk occupancy.[5] Since this time, there has been extensive development within the area of the Red Indian Lake, including extensive logging and the construction of dams within the waterways.[6,7] Remaining artifacts from Indigenous people have been uncovered, and continue to be uncovered in the vicinity of Red Indian Lake, reaffirming the importance of consideration for the potential for damage to these historic lands and sites, as well as the disturbance of archaeological and burial sites.[5,6]

There must be a clear communication and action procedure in order to respectfully deal with the discovery of any archaeological remnants of the Beothuk, the Mi'kmaq, and/or *'paleoeskimo Maritime Archaic*' peoples, such that damage to these remnants is minimized, and preservation of remnants is maximized for cultural preservation of these sites for the education of future generations.[7,8] As noted in the Guidelines, the presence of artifacts may alter the status of the land, rendering it a Valued Component, as the site would be of proven historical, archaeological, and/or paleontological significance. Negative, irreversible environmental damage to the land and waterways surrounding this area have the potential for negative cultural impacts on current as well as on future generations of people (both Indigenous and non-Indigenous) who wish to understand the history of the Indigenous peoples of the island of Newfoundland. For example, it has been documented that the Beothuk utilized the migration patterns of the routes taken by the large caribou herds within these proposed project area lands in order to intercept the herds at lake or river crossings, or to entrap them by building '*fenceworks and pounds*.'[9]

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[1]Marathon Gold Corporation. 2019. *Environmental Assessment Registration / Project Description.* Valentine Gold Project Newfoundland and Labrador.
[2] Cormack, W.E. Narrative of a journey across the island of Newfoundland. 1873. Pg. 45 & 46
[3] Young, K.M. 2018. *Imperial Influence on 1820's Newfoundland: Cormack and his dreams of a colony*. Research Report. Memorial University of Newfoundland.
[4] Dictionary of Canadian Biography. 2019. *Cull, William*. Volume VI (1821-1835). University of Toronto.
[5] McLean, L. 2017. *Unusual Artifact Found At A Beothuk Site.* the Beothuk Institute.
[6] NL Archaeology. 2015. *Archaeology and the Beothuk at Indian Point, Red Indian Lake: Part 1.*
[7] Skeard, J., et al. 2013. Understanding Land Use in the Grand Falls-Windsor – Baie Verte – Harbour Breton Region. Memorial University of Newfoundland.
[8] the Beothuk Institute Inc. 2019. *Reports and Papers.*
[9] Howley, J.P. 1915. *The Beothucks or Red Indians: The Aboriginal Inhabitants of Newfoundland.* Cambridge, England. Pg. 30, 37, 39, 69, 75

The continuing preservation of these lands is necessary to allow the continued teaching of future generations of the methods of subsistence living that were used on the island.[10]

The Red Indian Lake is a site of cultural and spiritual value to Indigenous peoples living today. For example, remains of two culturally significant Beothuk individuals (Demasduit and Nonosabasut) have yet to be returned to Canada, and when they do, there are Indigenous groups who believe it is necessary for them to be repatriated with respect and dignity on the shores of the Red Indian Lake. As stated by Buchans Mayor Derm Corbett: "*These remains should be placed back in the original site where her people had interred them and had buried them. That's where they belong.*"[11] Saqamaw Mi'sel Joe of the Miawpukek First Nation, believes re-burying the remains would not be satisfactory, as they have been removed from the land for an extended period of time, however there is still a vital importance to preserving the story and repatriating the remains with the dignity they deserve: "*I think we have to somehow find a way to have them above ground, but in some kind of monument, that surely tells the story of their disappearance from this island, and why they disappeared from this island.*"[11] Preservation of these remains, as well as the land which they originated from is an important spiritual and cultural practice to show respect which the Miawpukek First Nation and other Indigenous peoples believe require recognition and respect: "*To me, as we're bringing back remains of our people — people would say well, we're not Beothuk, but it's still our people — then we have to have an appropriate ceremony for bringing those remains.*"[11] This is another example of the spiritual and cultural significance which this land holds for today's living Indigenous people.

The Red Indian Lake also plays an additional immediate cultural role for living Indigenous people. For example, the Mi'kmaq Cultural Group named *Nataqumtuk* (whose name means "*at the riverbank*,") currently use this land and waterway to celebrate and share Mi'kmaq culture.[12] As documented by the travels of William Cormack in 1822, the Mi'kmaq also used these adjacent lands for traditional hunting, fishing and other subsistence use.[2,3] Negative, irreversible environmental damage to the Meelpaeg Reservoir must also be minimized, as this lake has also been documented during the Cormack trek as having Indigenous toponomy associated with it, indicating the land was used by the Mi'kmaq people traditionally, prior to colonization of the interior.[2] Hence, Meelpaeg reservoir also has a role of importance in history which must be considered, and impacts on this waterway also mitigated. Today's living Indigenous and non-Indigenous people are still being education about the truth of the Beothuk story, through forms such as the arts. For example, the story of Shawnadithit and her family is still being told to new audiences today, such as through the production '*Shawnadithit*' by the Tapestry Opera, and Opera on the Avalon, which was described as *'a landmark Canadian-Indigenous world premiere.*'[13] This is evidence that the history, stories, culture and spiritual beliefs surrounding the peoples of the shores of Red Indian Lake must be taken into account during potential risk planning for this project. Consideration for impacts to the area surrounding the project must be addressed accordingly with Indigenous groups, as such, it may become

[10] Marshall, I. 1990. *Evidence for Two Beothuk Subsistence Economies.*
[11] CBC News. 2019. *Demasduit, Nonosabasut must be returned to Red Indian Lake: Buchans mayor*
[12] The Central Voice. 2018. Indigenous Peoples Day marked at Red Indian Lake Heritage Park in Millertown
[13] Tapestry Opera. 2019. *Shanawdithit.*

important to consider the avoidance of the areas in proximity to Red Indian Lake, as well as Meelpaeg Reservoir for construction, operation, decommissioning and abandonment of any components of the project, as listed in Section 3.2 of the Guidelines, where practicable. Additional consideration for impacts must be addressed regarding the resilience of waste tailing infrastructure and management system in the face of a changing climate, and the potential for breaching of safety infrastructure with effects on the local environment (including these specific culturally significant waterways and land), as noted in Section 5 of this comment document.

Section 2: Vitally Important Caribou Population & Cumulative Impacts

When considering the impacts on species within the proposal area, the Caribou population (*Rangifer tarandus*) must be considered a 'Valued Component' of the ecosystem, due to the potential changes in the physical environment that affect the biophysical or human features of the landscape, as defined in the Guidelines. The Caribou is a significant culturally and spiritually important animal to the First Nations of Newfoundland. Specifically, there is significance for the Qalipu Mi'kmaq First Nation, whose name '*Qalipu*' comes from the Mi'kmaq word for Caribou. The Caribou were traditionally used for food, tools, clothing, traditional medicine, construction of shelter, transportation, and other uses such as snowshoes and packsacks.[14] The Mi'kmaq people kept knowledge of the Caribou migratory paths throughout the seasons, and travelled in a lifestyle similar to the Caribou, through a subsistence lifestyle, and the constant relocation of their encampments with the changing seasons.[14] The Caribou are considered noble, respected and dignified, and their important use in both the current lifestyle and history of the past and present Mi'kmaq people cannot be minimized.[14]

Detailed analysis of the potential and predicted impacts on Caribou populations is necessary when considering the proposed project. Particular focus is placed on those populations within the "*Buchans Plateau Newfoundland Caribou Management Area 62,*" as well as those within the "*Grey River Newfoundland Caribou Management Area 63*" as delineated by Provincial Department of Fisheries and Land Resources due to management areas' proximity to the project.[15] The Grey River area is currently closed to hunting and as such, consideration for existing restrictions on Indigenous peoples to conduct their traditional activities regarding the Caribou must be taken.[16] These areas are traditionally used by Indigenous peoples to conduct hunting, as well as recreation activities with respect for the local wildlife of cultural significance.[2] Therefore, further limitations placed on these peoples due to environmental impacts on adjacent populations due to environmental impacts stemming from the project construction, operation, decommissioning and abandonment of any components of the project, would contribute to the cumulative impacts on the Indigenous hunting communities. This also includes the further expansion of access roads to accommodate the project life cycle. Disturbance of the Caribou population from expanded access roads, as well as blasting operations during the project life cycle must be considered in this project.[17] Section 3.2.1 of the Guidelines delineates

[14] Qalipu First Nation. 2016. *Qalipu Cultural Information.* Culture and Heritage.
[15] Department of Fisheries and Land Resources. 2019. *2018-19 Hunting & Trapping Guide – Caribou.* Regulations, Acts and Orders for Hunters / Trappers.
[16] Department of Fisheries and Land Resources. 2014. *Newfoundland (Island) Caribou Management Areas.*
[17] Sullivan, L.A. 2013. *A Review of Legislation and Best Practices for Trail Construction in Newfoundland and Labrador*. Memorial University of Newfoundland.

the requirement for the inclusion of scheduling, frequency and duration of the blasting operations, as well as the methods used. Consideration should be taken in particular for the migratory nature of the Caribou population, to maximize their potential for avoidance of this disturbance. Additional consideration may be taken to examine a 'noise disturbance radius estimate' in order to better predict when blasting, or other construction, and decommissioning and abandonment operations have a higher potential for disturbance, and these details can be included in Section 7.1.1 of the Guidelines. Once measures to limit and mitigate these disturbance impacts are addressed meaningfully, the proponent must also communicate these practices clearly to Indigenous communities, so that they can also independently ensure compliance with the conditions under which the project can be conducted, such as monitoring the compliance with scheduled operations. Additional restrictions on hunting in the area (resulting from an environmental impact) can also have an effect on future caribou management, as reductions in hunting opportunities may increase risks of hunters becoming '*disengaged.*'[15] This would thus bring subsequent population management implications and issues once the project has ended. Therefore, the proposed monitoring programs before, during and post-decommissioning and abandonment of the project must include the Caribou populations to successfully manage said population into the future sustainably. For an additional reduction in the risk of hunters becoming disengaged in the practice, involvement of these Indigenous people in the co-management of the natural resource population may aid in stimulating their interest. For example, the Indigenous Guardians initiative conducted by the Boreal Conservation organization consists of Indigenous communities whose programs promote the involvement of '*Indigenous Guardians*' to use both Indigenous knowledge and western scientific methods to study and monitor the environment surrounding industrial projects, while continuously engaging with industry and government partners.[18] This represents an ideal partnership between Indigenous people and the proponent, as well as additional stakeholders to work together for a collective involvement in environmental protection.

Development and activity can negatively affect caribou populations, but as noted in the 'Report on the Newfoundland Caribou, 2015' (for ease of reference, the Report on the Newfoundland Caribou (2015), will be referred to as '*the Report*'): "*...in other jurisdictions where caribou are limited in space because of human development, vast expanses of caribou habitat remain intact in Newfoundland.*"[19] Despite this fact, it is nonetheless important to ensure the continuous, valuable habitat for the caribou is kept intact, with particular avoidance of high-production areas or high quality habitat must be taken into account for the construction, operation, decommissioning and abandonment of any components of the project. Increasing habitat fragmentation has been shown to increase rates of predation on the Caribou population.[19] While there remain expanses of caribou habitat, existing research points to four sub-populations of caribou, as well as non-arbitrary, predictable aggregates during calving season which may affect population dynamics as a whole over various seasons.[19,21,22] Therefore,

[18] Boreal Conservation Organization. 2019. *Indigenous Guardians.*
[19] Department of Environment and Conservation. 2015. *A Report on the Newfoundland Caribou.*
[20] Canadian Boreal Initiative. 2011. *Intact Habitat Landscapes and Woodland Caribou on the Island of Newfoundland.*
[21] Wilkerson, C.D. 2010. *Population Genetics of Woodland Caribou (Rangifer tarandus caribou) on the Island of Newfoundland.* Memorial University.
[22] Schaefer, J.A. & Mahoney, S.P. 2013. *Spatial dynamics of the rise and fall of caribou (Rangifer tarandus) in Newfoundland*. Canadian Journal of Zoology.

impacts on the sub-population integrity must also be considered when defining population risks and environmental effects. In addition to this, there are inadequate protections in place for continuous intact Caribou habitat, (See Appendix 2 & 3).[19] The Report states there exists opportunity *"to plan human-land use and activity that is complementary to caribou conservation and management*", but also that there is a need to incorporate *'existing research, GIS tools, and substantive data sets'* to aid in the environmental assessment process for such a project.[19] Detailed baseline population data regarding habitat and food distribution for the Caribou population, as well as seasonal migration patterns is a crucial component of the 'existing research' which is required to ensure an effective environmental assessment, as delineated in Section 7.1 of the Guidelines. Environmental impacts such as disturbance of these populations during migration times must be minimized, as the corridors for migration have been shown to be in proximity to the project area (See Appendix 4).[20] This data would need to include the following key vegetation types: *the common "caribou moss" (Cladonia rangiferina), grasses, sedges, birch and willow leaves, and other mosses*.[23] It is necessary to use model projections to produce estimates for future food and habitat distributions, while taking into account the future predicted impacts of climate change, such as changes in global precipitation patterns, to understand if the environmental impact of the decommissioning and abandonment of any components of the project within the proposed project area may be changed by future limitations on Caribou habitat and food sources. This is especially important considering the recent lowering of rates of survival of caribou calves, as well as the population recruitment, both of which are not high enough for the population to be characterized as stable.[19]

Research initiatives have been undertaken to determine best approaches for engagement on development projects in the province. Many valuable recommendations have culminated from this research effort, some of which are relevant to the proposed project. The research initiative notes that meaningful land use planning and the addressing of Indigenous and stakeholder concerns is crucial to ensure "*maximizing economic, social and ecological benefits from the province's natural resources while reconciling diverse and competing demands on these resources*."[7] Indigenous groups and relevant stakeholders require open, clear communication flow in the planning and decision stages of land use allocation and planning of projects.[7] This communication plan ensures the public as well as Indigenous groups are kept informed on land or waterway related issues in the adjacent project area, as well as ensures these groups are informed of the results and responses to the consultation process.[7] Additional recommendations from this research initiative point to consideration for the cumulative impacts on the land within and adjacent to the project area from additional resource sectors such as forestry, to ensure the upkeep of access roads used by both the forestry and mining industries will still be in compliance with the approved project conditions.[7] The management & maintenance plans of the decommissioned and abandoned sites must also be clearly identified for the Indigenous groups and relevant stakeholders, along with the clear communication of the potential risks associated with the remaining infrastructure and waste to the communities in the area who may be affected. Additional education for the public and community organizations may be required for those parties to understand the process / different stages and conditions under which the project unfolds, as well as their associated impacts on the landscape.

[23] Department of Fisheries and Land Resources. 2019. *Woodland Caribou*

The ecological and cultural benefits of the Caribou must be carefully protected for future generations. Therefore, it is vital that detailed analysis of potential impacts and mitigation measures is conducted, along with the clear quantification of uncertainties and risks, as well as the implementation of thorough monitoring programs for the impacts on population during and after the project, including cumulative impacts. The Report also highlights the need for monitoring and research to be conducted with respect to cumulative and changing circumstances, while also addressing remaining knowledge gaps, and evaluation of new management techniques.[19]

Section 3: Waste Management Techniques

The proposed project must address concerns regarding the comprehension of waste management techniques being used. Resources must be dedicated to the accumulation of detailed baseline data regarding the '*Riparian, Wetland and Terrestrial environments*' as described in Section 7.1.4 of the Guidelines. The detailed, accessible information about the changes to the land and waterways due to changes '*attributed to acid rock drainage and metal leaching associated with the storage of waste rock, ore, low grade ore, tailings, overburden and potential construction materials*' must be shared with the public, community groups and stakeholders involved.[2] Continual oversight and inspection is necessary to address any risks associated with waste leakage, especially from the heap leaching processes proposed. Monitoring of these effects is an area where involvement of Indigenous and community groups to ensure regulatory compliance may be considered. Monitoring of internal components of the project including the '*flows of potentially toxic chemical solutions (containing acid or cyanide and dissolved metals) through the large scale operation present a certain risk for leakage into the environment — through cracks in the liners underneath heaps and through open channels for solution collection and ponds for storage'* must also be conducted diligently by the proponent, as well as Environment and Climate Change Canada, and the Department of Fisheries and Oceans to ensure regulatory compliance, as well as effective protection of the environment.[24,25,26] The frequency by which these monitoring and inspection programs will take place must also be communicated. The criteria used to determine if a risk is deemed large enough (trigger events) to influence the operations and safety plans of the mine must also be communicated to ensure operations are able to be delayed, if necessary, to address the risk that arises.

Waste management techniques regarding the final effluent discharge points as well as the mine waste disposal methods and sites being considered, as outlined in the Guidelines must be communicated clearly to all relevant groups, such as the public, Indigenous groups, government and other stakeholders. If development for tourism or education of the sites mentioned in Section 1 of this comment document and the surrounding lands were to be considered for future generations of Indigenous people, or non-Indigenous parties interested in preserving the land for historic, cultural, spiritual and future archaeological uses, then the northern section of the proposed site with its closest proximity to the land surrounding Red Indian Lake must have

[24] Petersen, J. 2016. *Heap leaching as a key technology for recovery of values from low-grade ores – A brief overview.* Hydrometallurgy. 165. Pp. 206-212.
[25] Johnson, C.A. 2015. *The fate of cyanide in leach wastes at gold mines: An environmental perspective.* Applied Geochemistry. 57. Pp. 194-205.
[26] Birich, A., Stopic, S. & Friedrich, B. 2019. *Kinetic Investigation and Dissolution Behavior of Cyanide Alternative Gold Leaching Reagents.* Nature. Scientific Reports.

robust waste management plans to mitigate the environmental impacts and / or risks to those sites and lands.

Consideration must be taken for the long term impacts and / or risks that may arise due to the 'p*otential seepage from waste rock dumps, tailings / waste rock, impoundment facility, stockpiles and other infrastructure during operation and post closure'* of the project, and those impacts and / or risks communicated in a way that groups can readily access and understand the information needed which may impact their use of the land for traditional, historic, educational or cultural purposes now, and in the future.[2] Specific details of the potential environmental impacts, as well as the composition of the chemicals (including the prevalence of Polycyclic Aromatic Hydrocarbons, Metals, Naphthenic Acids, Phenolic Compounds, Ammonia, and any other hazardous substances) which remain in the tailings and waste sites must be communicated effectively to communities and Indigenous groups to avoid any potential health risks during construction, operation, as well as during the cleanup / remediation process, and into the future. If risks are present, worst case scenarios regarding the previously mentioned chemicals and other hazardous substances, along with waste rock disposal pile delineated in Figure 2.2 of the Guidelines must also be communicated effectively to communities and Indigenous groups, with monitoring programs keeping these groups involved throughout the entire length of process, addressing concerns or questions as they arise.[27] The communication of the risks associated with the waterways and land surrounding culturally significant locations must be clear, involving a communication process that ensures access to the information in a timely manner. The effects must also consider the impacts on the food web, whereby environmental impacts on the biodiversity of prey for fish and other aquatic species have implications for the predator populations which depend on the aquatic species for survival.

The management of waste continues once the project is decommissioned and abandoned, and previous mining projects have been lacking in their reclamation planning and funding.[7] Therefore, crucial resources are needed to ensure the management of waste is able to continue after the project has been completed, as delineated in Section 7.5 of the Guidelines, to continue to assess risks resulting from any residual effects and ensure proper mitigation measures remain intact over time. For example, ensuring barriers (such as walls or fencing) remain intact, or are repaired as needed to protect wildlife from potential exposure to waste sites such as tailings.[28]

For this proposed project, detailed reclamation plans, as well as the conditions by which funding is allocated for said reclamation plans for the project area must be communicated effectively to communities and Indigenous groups. Recommendations have been made for proponents of mining projects to '*develop risk management and/or remediation strategies for contaminated areas*'.[7] The reclamation plans must also include consideration for changing role in which the topography of the area will have in mitigating flooding risk, especially surrounding the sites listed in Section 1 of this comment document, and therefore avoid in-filling crucial waterways and storm drainage points. This consideration and the plans for reclamation of the greater area surrounding the sites listed in Section 1 may be conducted through a partnership

[27] CBC News. 2014. *Tailings ponds for mining and oilsands waste: FAQs.*
[28] CBC News. 2012. *Caribou's dip into radioactive pond upsets anti-nuclear activist.*

with governments, stakeholders, proponents of the project, in collaboration with the other industries operating in the area, such as forestry. Reclamation plans must also consider the decommissioning and abandonment of access roads.[17]

Section 4: Infrastructure Concerns Regarding Extreme Weather & Emergency Response

When considering the decommissioning and abandonment of the waste tailings management facility and disposal sites, monitoring programs must continually monitor and address the emerging concerns. This may involve adding, updating or altering protective infrastructure, as well as the alteration and continual updating of emergency response plans for the decommissioned and abandoned infrastructure that remains in the proposed area. This would be done to ensure all potential impacts are mitigated to the best of the proponent and relevant stakeholders' abilities.

To best mitigate flooding risks, as monitoring programs continue over the life cycle of the project, and after decommissioning and abandonment, as data becomes available, predictions for probability patterns of extreme weather as well as the impacts of local hydrological changes such as increased precipitation should be taken into consideration for updates. Consideration must be taken for the long term impacts and/or risks that may arise due to the influence of climate change on the resilience of the infrastructure put in place to mitigate the '*potential seepage from waste rock dumps, tailings/waste rock, impoundment facility, stockpiles and other infrastructure during operation and post closure'* of the project, and those impacts and / or risks communicated in a way that groups can readily access the information, as well as have their concerns addressed as needed which may impact the use of the land for traditional, historic, educational or cultural purposes now, and in the future with respect to a changing climate and the respective changing infrastructure needs, if not fully supported or implemented.[2]

The local hydrological conditions of this area may be impacted by this project, as these waterways are vital for mitigation of increased precipitation and flooding expected with climate change. Water is a vital part of Indigenous culture, and respect is given to the waterways for providing us with hydration, ecosystem balance, and the balance of the Earth as it changes states throughout its journey through the hydrological cycle. The proposed project denotes a plan operate in proximity to lands such as wetland areas, as well as open water habitats. Any changes to the distribution of the ecosystem's hydrological components such as wetlands, rivers, streams, etc. must be factored into detailed models for the prediction of flooding and subsequent potential risks to infrastructure with the potential for environmental damage. Key focus must be placed on areas where flooding risks are possible, and future plans for emergency response for remaining infrastructure that has a potential for breaching and releasing waste or hazardous materials into the surrounding aquatic environment.

Responsible parties must ensure all emergency response plans are kept up-to-date, and proponents are recommended to practice the plans to ensure communication and access to the logistics needed for efficient response can always be quickly initiated. As noted in Section 9.3 of the Guidelines, the monitoring follow-up program may involve intervention mechanisms used in

the event that an unexpected deterioration of the environment is observed, and in these emergency situations, the timely communication of information to relevant groups is key to maintaining trust and understanding between the proponent and those groups, hence the mechanism for disseminating the results and communicating any updates should be implemented, with sufficient resources set aside for the continuation of the program post decommissioning and abandonment of the physical facilities and sites. This communication plan must also be efficient and timely between Indigenous groups, stakeholders, residents, municipalities, and governments in a transparent and open process in which the participation of these groups can be facilitated to effectively address additional concerns.

Conclusion

As federally recognized members of the Qalipu Mi'kmaq First Nation, we the Young sisters believe that we have a duty to provide comments and share our concerns discussed in this submission. We believe there is a potential for impacts and/or risks regarding the Historic, Spiritual and Cultural value of the land within and surrounding the proposed Project Area, which would impact the ability for our future First Nations people, as well as fellow Canadians and Newfoundlanders to enjoy and be educated by the same land which our ancestors and those who have come before us cared for. The land, waterways, upland forests, lowlands including wetlands, and krummholtz barrens have valuable roles in the local ecosystem. They also have important roles to play in local ecosystem adaptation in the face of climate change, which must be understood and protected wherever practicable. The resources and valuable support system of primary producers, including rare plants and lichen are necessary for the future preservation of our biological system. The valuable resources which wildlife provide, recreation, hunting, and trapping opportunities, while also keeping in mind their role in the food web are crucial for humans to remember their place in nature. The lands and sites referenced in this comment document must be protected with all available technologies, policies and practices from irreparable damage alteration, which takes away from the opportunities for those who will come after us.

We believe the vitally important Caribou population must be respectfully protected by all measures available, and that they must also be evaluated for potential for vulnerability to cumulative environmental impacts which they currently face, and will face in the future as the climate continues to change. We believe resources must be dedicated to assess and predict impacts on habitat & food availability of Caribou population. We have a need to be informed about how this project is approved, how concerns are addressed, and we have a need to obtain detailed data regarding the use of Waste Management Techniques throughout the entire lifecycle of the project, including post-decommissioning and abandonment. If this project is approved, we believe there are opportunities for additional concerns to appear regarding residual infrastructure, extreme weather and the ability to respond to emergencies during and after the project. The procedures by which stakeholders may participate in emergency response, and obtain updates must be communicated in a readily accessible manner. We have a vested interest in protecting

the ecosystem of the island of Newfoundland, with particular focus on protecting spiritually and culturally significant lands, as well as preventing disturbance to the extremely important wildlife which is located in the vicinity of proposed Valentine Gold Mine Project area, to ensure all natural resources, including wildlife and unique plant life are sustainably managed for the benefit, education, and appreciation of future generations. We appreciate the opportunity to voice our concerns with the land use changes and ecosystem effects that influence us.

Sincerely,
The Young sisters - Qalipu Mi'kmaq First Nation

Kelly M. Young, B.Sc.

March 03, 2021

<Original signed by>

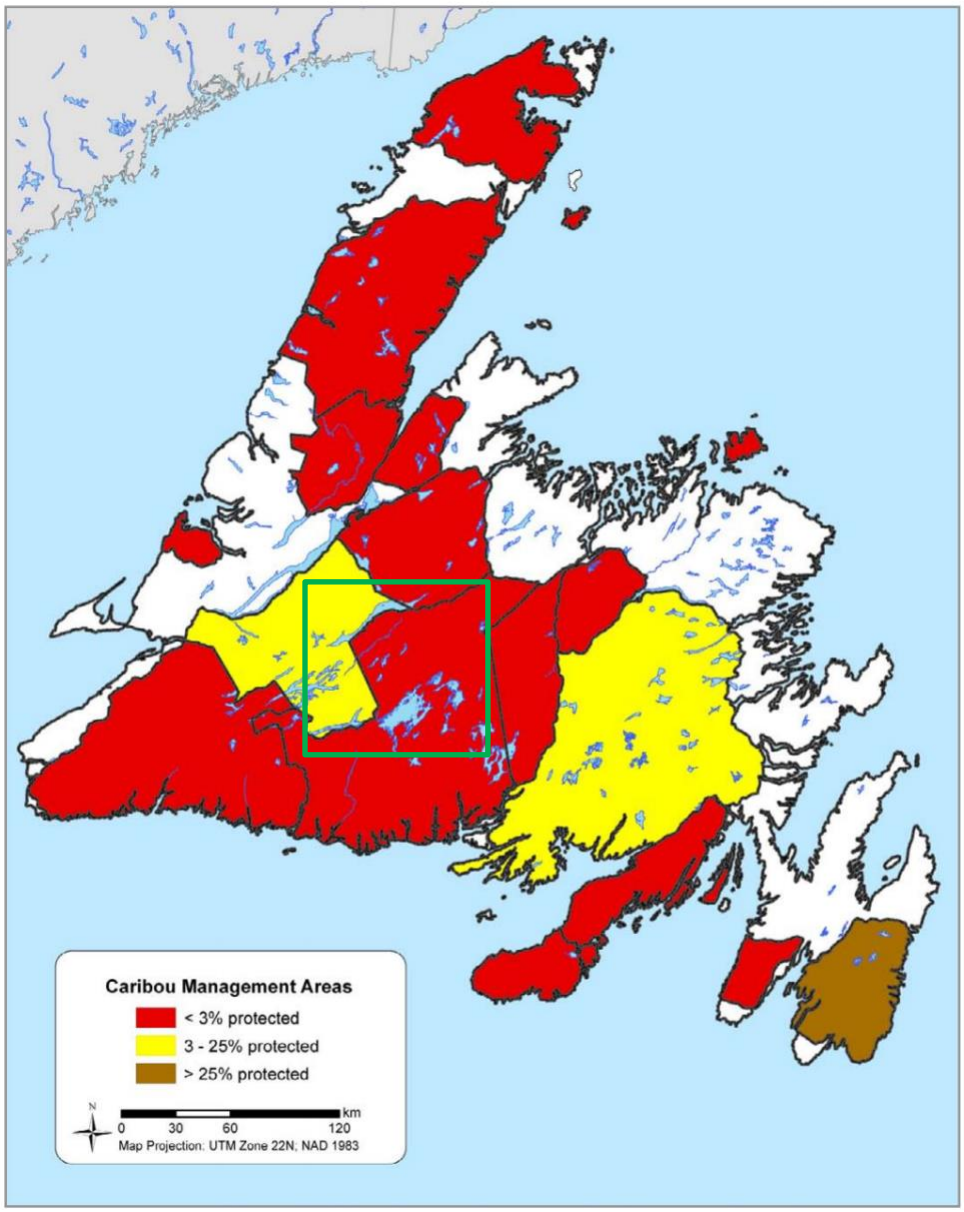
Dayna M. Young

March 03, 2021

Appendix 1

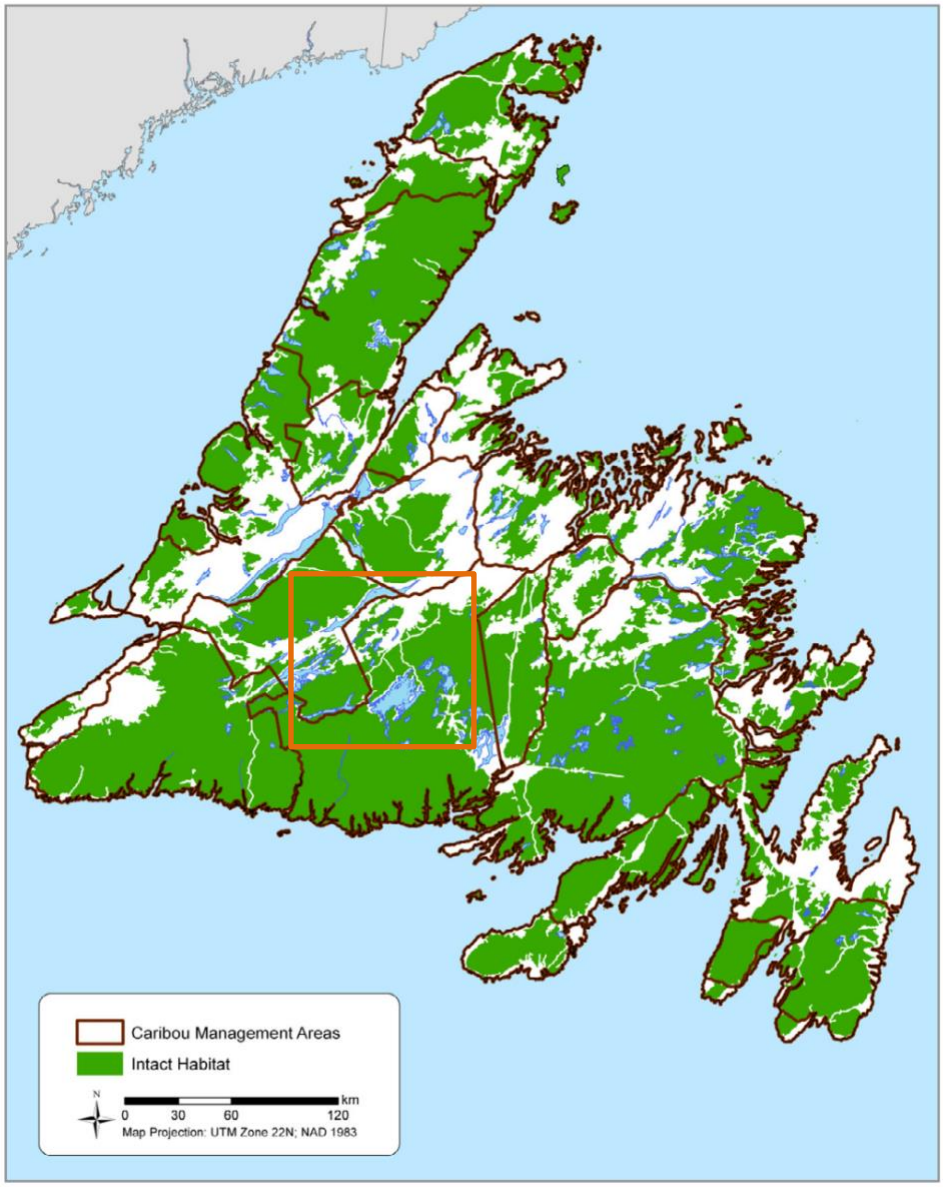
Appendix 1: *Proximity to culturally and spiritually significant sites.* 2019. Imagery: TerraMetrics; Map Data: Google Canada.

Appendix 2



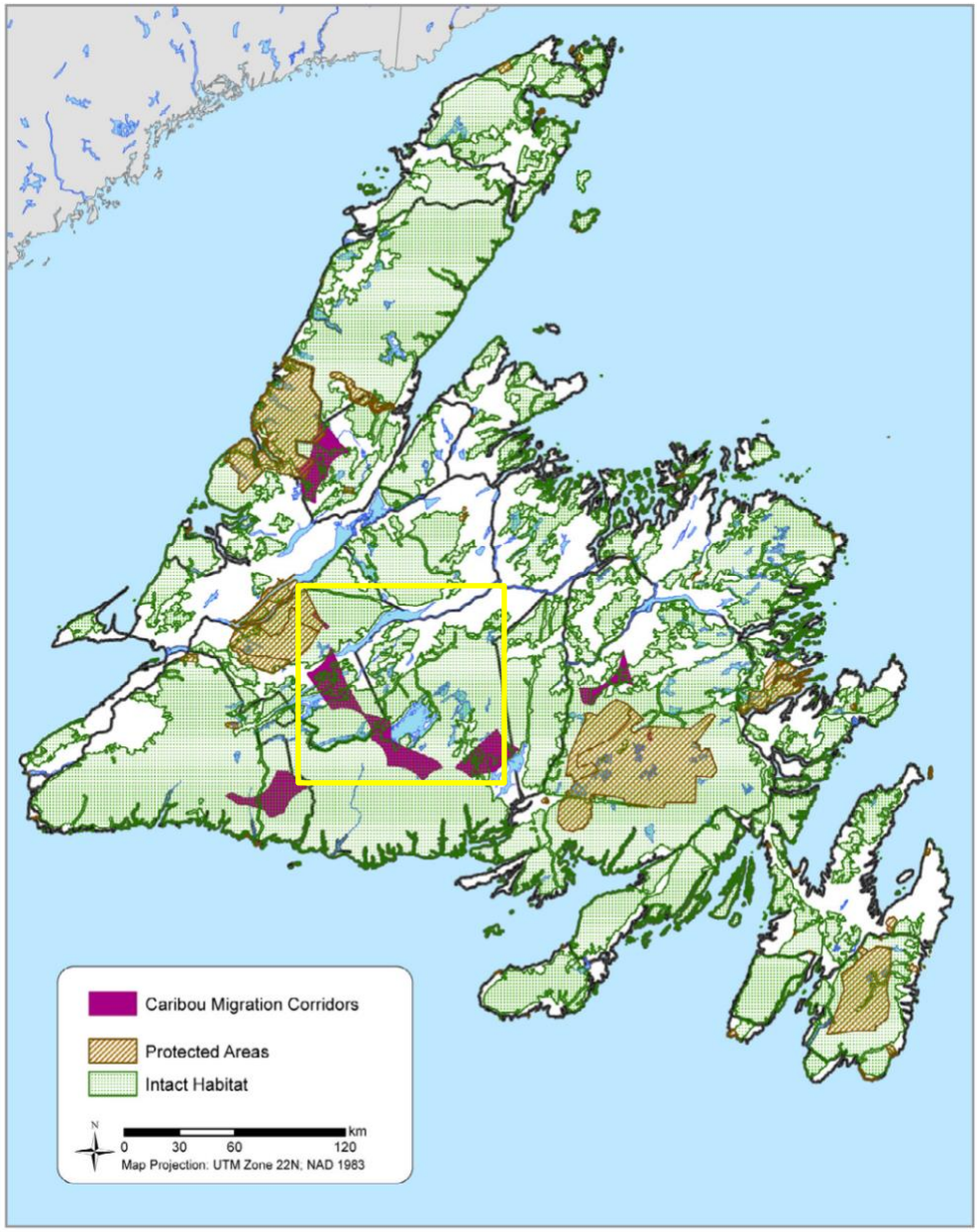
Appendix 2: *Proportion of protected lands within Caribou Management Areas.* Caribou Management Areas surrounding project area have between <3% to 25% land under 'adequate' protection, as described by the Canadian Boreal Initiative.[20]

Appendix 3



Appendix 3: *Large intact habitat landscapes on the Island of Newfoundland.* Caribou Management Areas surrounding project area show signs of fragmentation surrounding the traditional sites listed in Section 1, and which are in proximity to the project area. Map Data: the Canadian Boreal Initiative.[20]

Appendix 4



Appendix 4: *Caribou Migration Corridors.* Caribou Management Areas surrounding project area show signs of fragmentation surrounding the traditional sites listed in Section 1, and which are in proximity to the project area, as well as migration corridors. Map Data: the Canadian Boreal Initiative.[20]

Bibliography

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