

# CASINO

## **Supplementary Information Report**

*Response to Request for Supplementary Information  
to the Proposal for the Casino Project  
submitted by Casino Mining Corporation  
on January 3, 2014*

*Pursuant to the Yukon  
Environmental and Socio-economic Assessment Act*

*YESAB Registry # 2014-0002*

**December 18, 2015**

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## B.24 – CONCLUSION

Casino Mining Corporation (CMC) submitted a Project Proposal under the *Yukon Environmental and Socio-economic Assessment Act* (YESAA) to the Yukon Environmental and Socio-economic Assessment Board (YESAB) on January 3, 2014. The Project Proposal contained five volumes and 25 chapters of documentation to support the assessment of the Project under the YESAA regulations. As production capacity of the proposed Project is greater than 300 tonnes per day, the Project is subject to an Executive Committee Screening for the proposed construction, decommissioning and closure activities.

On May 23, 2014, CMC requested that YESAB place the review of the Project on hold for up to 180 days to enable CMC to continue engagement with affected First Nations. YESAB granted the request on June 2, 2014. The hold period was lifted on November 27, 2014, and YESAB issued the *Adequacy Review Report: Project Assessment 2014-0002, Casino Mine* on January 27, 2015.

CMC submitted a response to that Adequacy Review Report on March 16, 2015, in the form of a Supplementary Information Report (SIR-A) for evaluation by YESAB. After review of the SIR-A, YESAB issued *Adequacy Review Report Information Request No.2: Project Assessment 2014-0002, Casino Mine* (ARR-2) on May 15, 2015.

This Supplementary Information Report (SIR-B) has been written to respond to ARR-2. The information contained in SIR-B supplements information previously provided in the Project Proposal, and in Supplementary Information Report (SIR-A) submitted on March 16, 2015. There has been no change to the conclusion of potential effects and determinations of significance presented in the Proposal.

All 224 requests outlined in the Adequacy Review Report No.2 (ARR-2) prepared by the Executive Committee of the Yukon Environmental and Socio-economic Assessment Board (YESAB) have been responded to in the SIR-B. Several new commitments have been made by CMC in addition to the commitments previously provided in Table 24.1-2 of the Proposal, and previously updated in Table A.24-1. The further updated table of commitments is presented as Table B.24-1.

Table B.24-1 represents a complete list of the commitments made to date throughout the adequacy review process under YESAA. Non-consecutive numbers indicate that commitments in the Project Proposal have been replaced by commitments in SIR-A or SIR-B and have been deleted from Table B.24-1, to make the list of commitments more clear.

**Table B.24-1 Updated Table of Commitments**

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
<b>Consultation</b>			
1	CMC will develop management and monitoring plans, as described in Sections 22 and 23.	<ul style="list-style-type: none"> <li>• Access management to reduce negative effects on caribou populations.</li> <li>• Access road route needs to consider known heritage resources.</li> <li>• Clarification of buffer distance requirements for heritage sites.</li> <li>• Effects on ability to practice traditional activities.</li> </ul>	2
2	CMC intends to continue to discuss collection and consideration of traditional knowledge.	<ul style="list-style-type: none"> <li>• Baseline information collection needs to be complemented by significant traditional knowledge of the area.</li> <li>• Establishment of a TK policy/protocol to ensure protection for Selkirk First Nation Elders' knowledge.</li> </ul>	2
3	CMC intends to continue to engage with First Nations to discuss topics of interest.	<ul style="list-style-type: none"> <li>• Benefits agreements should consider social and health impacts.</li> <li>• Concern about heap leach cover and stabilization with revegetation.</li> <li>• Concern about the cyanide treatment process and the duration of this part of the closure process.</li> <li>• Concerned about encumbering rights that allow mining companies to proceed with activities that may damage heritage sites without doing impact assessment studies.</li> <li>• Consultation with Selkirk First Nation regarding access points for the project.</li> </ul>	2

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
		<ul style="list-style-type: none"> <li>Effects on increased access on subsistence hunting, fishing and harvesting.</li> <li>Engagement of the whole Selkirk First Nation community in the preparation of the environmental assessment, including the socioeconomic effects assessment.</li> <li>Have you yet performed a Failure Modes Effects Analysis (FMEA)?</li> </ul>	
4	CMC will monitor project socio-economic effects and adapt management measures where required.	<ul style="list-style-type: none"> <li>Development and use of spur roads off of the primary Casino project access road.</li> </ul>	2
5	CMC intends to continue discussions with First Nations regarding agreements and funding to participate in the review of the Project Proposal.	<ul style="list-style-type: none"> <li>First Nations need capacity to participate in the assessment process.</li> </ul>	2
6	CMC will work with First Nations to arrange for access as appropriate consistent with the access road management plan as approved by First Nations and Yukon Government.	<ul style="list-style-type: none"> <li>Increased traffic and spur roads.</li> </ul>	2
<b>Environmental Management Plans</b>			
7	Erosion and Sediment Control Management Plan <ul style="list-style-type: none"> <li>CMC will develop a final plan prior to construction and operations.</li> <li>The Plan will describe the measures to be undertaken to manage erosion and sedimentation during all phases.</li> </ul>	<ul style="list-style-type: none"> <li>As described in Section 7.4.</li> </ul>	22.3 Appendix A.22C Spill Contingency Management Plan
8	Air Quality Management Plan <ul style="list-style-type: none"> <li>CMC will develop a final plan prior to construction and operations.</li> <li>The final plan will include a table of commitments with mitigation measures developed through the environmental assessment process, and terms and conditions of any applicable licences, permits</li> </ul>	<ul style="list-style-type: none"> <li>As described in Section 8.4.</li> </ul>	22.3

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	and approvals required for Project operation.		
9	<p>Waste Management Plan</p> <ul style="list-style-type: none"> <li>• CMC will develop a final plan prior to construction and operations.</li> <li>• The Waste Management Plan will describe the type of waste generated and related management strategies to responsibly handle, store, transport, and dispose of waste.</li> </ul>	N/A	<p>22.3 Appendix A.22A Waste and Hazardous Materials Management Plan</p>
10	<p>Wildlife Management Plan</p> <ul style="list-style-type: none"> <li>• CMC will develop a final plan prior to construction and operations.</li> <li>• The final plan will include a table of commitments with mitigation measures developed through the environmental assessment process, and terms and conditions of any applicable licences, permits and approvals required for Project operation.</li> </ul>	<ul style="list-style-type: none"> <li>• As described in Section 12.4</li> </ul>	<p>22.3.2 Appendix A.12A Wildlife Mitigation and Monitoring Plan</p>
11	<p>Heritage Resource Protection Plan</p> <ul style="list-style-type: none"> <li>• CMC will develop a final plan prior to construction and operations.</li> <li>• Key components of the Heritage Resources Protection Plan will include:</li> <li>• Heritage resource protection policy;</li> <li>• Heritage resource overview;</li> <li>• Summary of the heritage resource impact assessment conducted as part of this Proposal;</li> <li>• Methods for identification, reporting, and protection of heritage resources;</li> <li>• Reporting requirements and contact list; and</li> <li>• Employee training.</li> </ul>	<ul style="list-style-type: none"> <li>• As described in Section 18.4</li> </ul>	<p>22.3</p>
12	Spills Contingency Management Plan	N/A	22.3

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<ul style="list-style-type: none"> <li>• CMC will develop a final plan prior to construction and operations;</li> <li>• The following components will be included in the Spills Contingency Management Plan:                             <ul style="list-style-type: none"> <li>○ Spill categories</li> <li>○ Spill prevention procedures</li> <li>○ Spill response plan</li> <li>○ Roles and responsibilities</li> <li>○ Training</li> <li>○ Internal and external reporting</li> <li>○ Monitoring</li> </ul> </li> </ul>		Appendix A.22B Spill Contingency Management Plan
13	<p>Occupational Health and Safety Management Plan</p> <ul style="list-style-type: none"> <li>• CMC will develop a final plan prior to construction and operations.</li> <li>• The Occupational Health and Safety Management Plan will be developed in accordance with all applicable Acts and Regulations, as well as terms and conditions of all required licences, authorizations, and approvals.</li> <li>• The final plan will include a table of commitments pertaining to health and safety arising from the environmental assessment review, and indicate how the commitments are addressed within the plan.</li> </ul>	N/A	22.3
14	<p>Emergency Response Plan</p> <ul style="list-style-type: none"> <li>• CMC will develop a final plan prior to construction and operations.</li> </ul>	N/A	22.3 Appendix 22A Emergency Response Plan
15	<p>Hazardous Materials Management Plan</p> <ul style="list-style-type: none"> <li>• CMC will develop a final plan prior to construction and operations.</li> <li>• The final plan will include a table of commitments</li> </ul>	N/A	22.3 Appendix A.22A Waste and Hazardous Materials

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<p>with mitigation measures developed through the environmental assessment process, and terms and conditions of any applicable licences, permits and approvals required for Project operation.</p> <ul style="list-style-type: none"> <li>A separate Cyanide Management Plan will be developed and implemented in recognition of the higher level of public concern associated with this substance.</li> </ul>		Management Plan
16	<p>Road Use Plan</p> <ul style="list-style-type: none"> <li>CMC will develop a final plan prior to construction and operations.</li> <li>The final plan will include a table of commitments with mitigation measures developed through the environmental assessment process, and terms and conditions of any applicable licences, permits and approvals required for Project operation.</li> <li>It is the intent of CMC to negotiate a Freegold Road Extension Access Management Agreement with the Government of Yukon, SFN and LSCFN to address how the private road and access control could be managed to meet the Project requirements with consideration of existing tenure holders and individuals.</li> </ul>	N/A	22.3 Appendix A.22E Road Use Plan
<b>Monitoring Programs</b>			
17	<p>An Environmental Monitoring Plan will be developed in accordance with the Plan Requirement Guidance for Quartz Mining Projects (Yukon Energy, Mines and Resources 2013) to monitor the predicted residual effects of the Project and the effectiveness of implemented mitigation measures. The Plan will identify any variances from predictions that occur and whether such variances require action, including any additional</p>		23



Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	mitigation measures. The Plan will be comprised of the following components: <ul style="list-style-type: none"> <li>• Water Monitoring Program</li> <li>• Air Quality and Fugitive Dust Monitoring</li> <li>• Geochemical Monitoring Program</li> <li>• Meteorological Monitoring Program</li> <li>• Aquatic Monitoring Program</li> <li>• Permafrost Monitoring Program</li> <li>• Wildlife Monitoring Program</li> <li>• Reclamation Monitoring Program.</li> </ul>		
<b>Surface, Geology Terrains and Soils</b>			
18	Where possible, CMC will realign or relocate footprint features to avoid removing/destroying thaw lakes, tors, and pingos.	<ul style="list-style-type: none"> <li>• Loss, damage to terrain features</li> </ul>	6
<b>Water Quality</b>			
19	All construction activities will adhere to CMC's Erosion and Sediment Control Plan, Air Quality Management Plan and Water Management Plan and Transport Canada Aerodrome Standards and Recommended Practices.	<ul style="list-style-type: none"> <li>• Effects on water quality (general)</li> </ul>	7.4 Appendix A.22C Sediment and Erosion Control Management Plan
20	CMC will incorporate Best Management Practices (BMPs) such as: <ul style="list-style-type: none"> <li>• Minimizing disturbances in and near watercourses (e.g., clearing, grubbing, grading)</li> <li>• Monitoring of TSS and turbidity during construction to ensure compliance with applicable guidelines and permit conditions</li> <li>• Stabilizing and re-vegetating disturbed areas following construction</li> </ul>	<ul style="list-style-type: none"> <li>• Effects on water quality (general)</li> </ul>	7.4

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<ul style="list-style-type: none"> <li>• Designing appropriate sediment settling ponds that conform to applicable guidelines</li> <li>• Designing appropriate diversion ditching system upstream of ore stockpiles</li> <li>• Sediment control fencing installed around down-gradient perimeter sections of the ore stockpiles</li> <li>• Dust suppressants and enforced traffic speed limits along all access roads.</li> </ul>		
21	An environmental monitoring plan will be designed and implemented to monitor water quality, fish habitat, and biological communities in the Water Quality LSA.	<ul style="list-style-type: none"> <li>• Effects on water quality (general)</li> </ul>	7.4
22	CMC will include design criteria for the various sediment control elements that will be based on industry standard guidance documents (BC MELP, 2001; MEMNG, 1998). Sediment mobilization and erosion will be managed throughout the site by installing sediment controls prior to construction activities, limiting the disturbance as much as possible and reducing water velocity across the ground.	<ul style="list-style-type: none"> <li>• Effects on water quality (general)</li> </ul>	7.4 Appendix A.22C Sediment and Erosion Control Management Plan
23	During operations, CMC will: establish diversion ditches and implement progressive rehabilitation of disturbed land to minimize erosion; construct drainage controls and sediment control devices; and restrict access to rehabilitated areas.	<ul style="list-style-type: none"> <li>• Effects on water quality (general)</li> </ul>	7.4 Appendix A.22C Sediment and Erosion Control Management Plan
24	A coffer dam will be constructed within the TMF starter footprint to capture all runoff from the upstream areas and route it to the sediment pond downstream.	<ul style="list-style-type: none"> <li>• Water quality</li> </ul>	7.4
25	Typical BMPs that will be used at the project are runoff collection ditches, energy dissipaters, sediment traps, slope drains, surface roughening, filter bags, water bars, diversion structures, silt fences, sediment basins,	<ul style="list-style-type: none"> <li>• Effects on water quality (general)</li> </ul>	7.4 Appendix A.22C Sediment and Erosion Control Management Plan

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	temporary seeding, and mulching.		
26	Temporary sediment settling ponds will be constructed downstream of all construction activities to treat sediment laden water and discharge to existing channels via energy dissipating structures.	<ul style="list-style-type: none"> <li>Effects on water quality (general)</li> </ul>	7.4
29	The Reclamation Plan will include construction of two engineered wetlands: North TMF wetland and South TMF wetland.	<ul style="list-style-type: none"> <li>Change in surface water quality in Casino Creek and Dip Creek due to project discharge</li> </ul>	Table 7.4-5
30	CMC will divert all contact water to the TMF and implement BMPs for drilling, handling and loading ore; traffic speed limits, dust suppressants.	<ul style="list-style-type: none"> <li>Changes in surface water quality due to atmospheric deposition</li> </ul>	Table 7.4-5
31	CMC will implement water management measures and BMPs for sediment mobilization and erosion as outlined in the Erosion and Sediment Control Plan; and modify culvert and bridge design for areas with increased sensitivity to disturbances.	<ul style="list-style-type: none"> <li>Change in surface water quality from increased erosion and sedimentation</li> </ul>	Table 7.4-5 Appendix A.22C Sediment and Erosion Control Management Plan
32	Control contaminated discharge from the historic adit in upper Casino Creek.	<ul style="list-style-type: none"> <li>Reduced water quality in Casino Creek due to adit discharge and TMF discharge</li> </ul>	7.5 Table 7.5.4
<b>Air Quality</b>			
33	Adhere to Occupational Health and Safety Act.	<ul style="list-style-type: none"> <li>Exceedance of Yukon Ambient Air Quality Standards for SO<sub>2</sub>, NO<sub>2</sub>, CO</li> </ul>	8.4. Table 8.4-7
34	Use ultra-low sulphur content fuel.	<ul style="list-style-type: none"> <li>Exceedance of Yukon Ambient Air Quality Standards for SO<sub>2</sub>, NO<sub>2</sub>, CO</li> </ul>	8.4 Table 8.4-7
35	Use construction and mining equipment that meets the latest applicable Canadian emissions standards at the time of purchase.	<ul style="list-style-type: none"> <li>Exceedance of Yukon Ambient Air Quality Standards for SO<sub>2</sub>, NO<sub>2</sub>.</li> </ul>	8.4 Table 8.4-7
36	Ensure regular equipment maintenance recommended by manufacturers.	<ul style="list-style-type: none"> <li>Exceedance of Yukon Ambient Air Quality Standards for SO<sub>2</sub>, NO<sub>2</sub>, CO.</li> </ul>	8.4 Table 8.4-7
37	Institute a policy for all equipment and vehicles to reduce and limit idling.	<ul style="list-style-type: none"> <li>Exceedance of Yukon Ambient Air Quality Standards for SO<sub>2</sub>, NO<sub>2</sub>, CO.</li> </ul>	8.4 Table 8.4-7

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
38	Cover or use water sprays at dust generating areas.	<ul style="list-style-type: none"> <li>Exceedance of Yukon Ambient Air Quality Standards for TSP, PM<sub>10</sub>, PM<sub>2.5</sub>.</li> </ul>	8.4 Table 8.4-7
39	Reduce drop heights for process plants.	<ul style="list-style-type: none"> <li>Exceedance of Yukon Ambient Air Quality Standards for TSP, PM<sub>10</sub>, PM<sub>2.5</sub>.</li> </ul>	8.4 Table 8.4-7
40	Cover or use water sprays at dust generating areas.	<ul style="list-style-type: none"> <li>Exceedance of BC Air Quality Objectives for dustfall.</li> </ul>	8.4 Table 8.4-7
41	Minimize wind exposure at conveyors, drop-off points and truck load/unload locations.	<ul style="list-style-type: none"> <li>Exceedance of BC Air Quality Objectives for dustfall.</li> </ul>	8.4 Table 8.4-7
42	Establish blasting procedures for open pit activities to minimize dust.	<ul style="list-style-type: none"> <li>Exceedance of BC Air Quality Objectives for dustfall.</li> </ul>	8.4 Table 8.4-7
43	Reduce drop heights for process plants.	<ul style="list-style-type: none"> <li>Exceedance of BC Air Quality Objectives for dustfall.</li> </ul>	8.4 Table 8.4-7
44	Use construction and mining equipment that meets the latest applicable Canadian emissions standards at the time of purchase. Ensure regular equipment maintenance.	<ul style="list-style-type: none"> <li>Contribute to global greenhouse gasses.</li> </ul>	8.4 Table 8.4-7
<b>Noise</b>			
45	Ensure regular equipment maintenance, including lubrication and replacement of parts.	<ul style="list-style-type: none"> <li>Increase in baseline noise level conditions.</li> </ul>	9.4 Table 9.4-4
46	Keep noisy equipment inside of buildings and sheds whenever possible.	<ul style="list-style-type: none"> <li>Increase in baseline noise level conditions.</li> </ul>	9.4 Table 9.4-4
47	Equipment will be operated with covers, shields, and hoods if provided by their manufacturer.	<ul style="list-style-type: none"> <li>Increase in baseline noise level conditions.</li> </ul>	9.4 Table 9.4-4
48	Adhere to a blasting plan developed by an explosives contractor that implements controlled blasting procedures.	<ul style="list-style-type: none"> <li>Increase in baseline noise level conditions.</li> </ul>	9.4 Table 9.4-4
49	Optimisation of blasting operations by licensed staff which maximise localised rock breakage within the ore body of interest, while minimising non-productive noise, vibration.	<ul style="list-style-type: none"> <li>Increase in baseline noise level conditions.</li> </ul>	9.4 Table 9.4-4

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
50	Impose speed limits for all vehicles.	<ul style="list-style-type: none"> <li>Increase in baseline noise level conditions.</li> </ul>	9.4 Table 9.4-4
51	Institute a policy for all equipment and vehicles to reduce and limit idling.	<ul style="list-style-type: none"> <li>Increase in baseline noise level conditions.</li> </ul>	9.4 Table 9.4-4
52	Wherever practicable, noisy equipment will be located near ground level to minimize noise propagation.	<ul style="list-style-type: none"> <li>Increase in baseline noise level conditions.</li> </ul>	9.4 Table 9.4-4
<b>Fish and Aquatic Resources</b>			
53	All construction activities will adhere to CMC's Erosion and Sediment Control Plan, Environmental Management Plan and Water Management Plan.	<ul style="list-style-type: none"> <li>Lethal and non-lethal effects to fish and aquatic organisms.</li> </ul>	10.4 Table 10.4-10 Table 10.4-11 Table 10.4-12 Appendix A.22C Spill Contingency Management Plan
54	<p>CMC will incorporate BMPs into all work, including:</p> <ul style="list-style-type: none"> <li>Minimizing disturbances in and near watercourses (e.g., clearing, grubbing, grading)</li> <li>The use of cofferdams or stream diversions to de-water construction areas</li> <li>Diverting clean water around stream and river crossings during construction to maintain sufficient flows downstream</li> <li>Monitoring of TSS and turbidity during construction to ensure compliance with regulatory requirements</li> <li>Stabilizing and re-vegetating disturbed areas following construction</li> <li>Dust suppressants and enforced traffic speed limits along all access roads to reduce any potential contamination of nearby watercourses</li> </ul>	<ul style="list-style-type: none"> <li>Lethal and non-lethal effects to fish and aquatic organisms .</li> </ul>	10.4 Table 10.4-11 Table 10.4-12

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<ul style="list-style-type: none"> <li>• Best Management Practices for dust and other air contaminants as outlined in the Air Quality Management Plan</li> <li>• Completing fish salvages prior to any in-stream activities in fish-bearing watercourses</li> <li>• Following DFO guidelines for:                             <ul style="list-style-type: none"> <li>○ Timing windows for the protection of fish and fish habitat during critical life history stages</li> <li>○ Freshwater Intake End-of-Pipe Fish Screen (DFO 1995), to avoid fish impingement and entrainment while pumping water during construction</li> <li>○ The Use of Explosives In or Near Canadian Fisheries Waters (Wright and Hopky 1998)</li> </ul> </li> </ul>		
55	<p>An environmental monitoring plan will be designed and implemented to monitor water quality, fish habitat, and aquatic biological communities in the LSA. Additional mitigation or compensation measures will be incorporated on an as-needed basis.</p> <p>A site-specific risk assessment is proposed to determine local toxicity thresholds for selenium: fish eggs will be collected and analyzed where possible to develop local guidelines.</p>	<ul style="list-style-type: none"> <li>• Lethal and non-lethal effects to fish and aquatic organisms .</li> </ul>	10.4
56	<ul style="list-style-type: none"> <li>• Bridges will be installed on all fish-bearing creeks where reasonably possible.</li> <li>• Single-lane clear-span bridges designed for a minimal footprint within the stream channel will be used at all crossings with the exception of the Nordenskiold River Bridge, which will be two-span with a pier located in the river channel.</li> <li>• Clear-span bridge installation on fish-bearing</li> </ul>	<ul style="list-style-type: none"> <li>• Lethal effects on fish and aquatic organisms.</li> </ul>	10.4 Table 10.4-10 Table 10.4-11 Table 10.4-12

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<p>watercourses will avoid any stream bed alteration, and rip rap will be installed below bridges to minimize the risk of slope failure.</p> <ul style="list-style-type: none"> <li>• Rip rap will be placed flush with the stream bank to avoid changes in channel volume or flows.</li> <li>• Any required temporary crossing structures will comply with measures outlined in DFO operational statements.</li> <li>• Bridge construction will occur in the winter, where technically and economically feasible and reasonably practical.</li> <li>• All major culvert construction will be completed during the summer months.</li> <li>• Any temporary ice bridges will be removed prior to full spring break-up to prevent unnatural ice jamming and flooding.</li> <li>• Final crossing structure sites, orientations and spans will be designed for sensitive sites to mitigate any potential impacts on aquatic habitat.</li> </ul>		
57	<p>TMF spillway overflow to Casino Creek will follow a discharge schedule that will distribute flow increases across the summer months to limit downstream impact.</p>	<ul style="list-style-type: none"> <li>• Fish habitat – increased flows</li> </ul>	<p>10.4 Table 10.4-10</p>
58	<p>Site-specific surveys will be conducted during detailed design to determine whether any minor channel modifications are needed in Casino Creek to mitigate increased flow from the TMF spillway.</p>	<ul style="list-style-type: none"> <li>• Fish habitat – increased flows</li> </ul>	<p>10.4 Table 10.4-10</p>
59	<p>Erosion and suspended sediment will be monitored within the Project area watercourses to ensure control measures have been effectively implemented as outlined in the Erosion and Sediment Control Plan.</p>	<ul style="list-style-type: none"> <li>• Increased erosion and sedimentation causing habitat loss and alteration and potential changes to habitat productive capacity.</li> </ul>	<p>10.4 Appendix A.22C Sediment and Erosion Control Management Plan</p>

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
60	<p>A water quality monitoring plan will be designed and implemented to ensure that water quality threshold objectives are met downstream of the TMF.</p> <p>Mitigation as built into design of the TMF, including the construction of wetlands both upstream and downstream of the TMF pond, a winter seepage mitigation pond (WSMP), strategic placement of waste rock in TMF, and protection of the dam shell with rip rap.</p>	<ul style="list-style-type: none"> <li>Changes to Water quality - Lethal effects on fish and aquatic organisms</li> </ul>	<p>10.4 Table 10.4-11 Table 10.4-12</p>
61	<p>Monitoring of biological communities in the Fish and Aquatic Resources LSA to identify any changes relative to baseline conditions. Mitigation may include habitat remediation or additional compensation.</p>	<ul style="list-style-type: none"> <li>Lethal effects on fish and aquatic organisms due to stranding or winter kill following reduced flows</li> </ul>	<p>Table 10.4-11 Table 10.4-12</p>
62	<p>CMC will provide a Fish Habitat Offsetting Plan for serious harm to Arctic grayling habitat.</p> <p>CMC will ensure post construction monitoring of compensation works to assess the effectiveness of the compensation measures.</p>	<ul style="list-style-type: none"> <li>Fish-bearing in-stream and riparian habitat loss ; Reduced stream flows, winter kills, fish stranding</li> </ul>	<p>10.4 Table 10.4-10 Appendix A.10A Updated Fish Habitat Offsetting Plan</p>
63	<p>CMC will work to minimize effects of instream works in fish and aquatic habitats:</p> <ul style="list-style-type: none"> <li>Isolate all instream works where there is potential to affect downstream habitats</li> <li>Limit duration and time activities to avoid high risk fisheries windows, weather or flow conditions</li> <li>Structures and materials will be placed in a manner that does not impede fish passage or migration</li> <li>Manage flow diversions and water abstraction to ensure adequate flows for fish</li> <li>Conduct fish salvages before instream work is</li> </ul>	<ul style="list-style-type: none"> <li>Lethal effects to fish and aquatic organisms</li> <li>Sub-lethal effects on fish and aquatic organisms due to change in habitat productive capacity</li> </ul>	<p>Table 10.4-11 Table 10.4-12</p>



Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	undertaken in areas where fish stranding could occur.		
64	CMC will adhere to Fisheries and Oceans Canada (DFO) Freshwater Intake End-of-Pipe Fish Screen Guideline when using pumps or intake structures in fish bearing waters.	<ul style="list-style-type: none"> <li>Lethal and sub-lethal effects to fish and aquatic organisms</li> </ul>	Table 10.4-11
65	CMC will adhere to Fisheries and Oceans Canada (DFO) guidelines for the Use of Explosives in or near Canadian Fisheries Waters when blasting in or near fish bearing waters.	<ul style="list-style-type: none"> <li>Lethal and non-lethal effects to fish and aquatic organisms</li> </ul>	Table 10.4-11 Table 10.4-12
66	CMC will implement a No fishing policy for CMC workforce.	<ul style="list-style-type: none"> <li>Lethal effects on local fish populations due to increased fishing pressure</li> </ul>	Table 10.4-11
67	Instream and riparian construction will be within working windows established by DFO to avoid destroying incubating fish eggs.	<ul style="list-style-type: none"> <li>Direct mortality of periphyton, benthic invertebrates, and fish eggs due to infilling</li> </ul>	Table 10.4-11 Table 10.4-12
68	CMC will implement traffic speed limits, dust suppressants, sediment and erosion control plan; Best Management Practices for dust and other air contaminants as outlined in the Air Quality Management Plan.	<ul style="list-style-type: none"> <li>Lethal effects on fish and aquatic organisms due to contamination from dust, emissions, and road runoff</li> </ul>	10.4 Table 10.4-10 Table 10.4-11 Table 10.4-12
69	ML/ARD risk assessment and management plan.	<ul style="list-style-type: none"> <li>Lethal effects on fish and aquatic organisms due to ML/ARD</li> </ul>	Table 10.4-11 Table 10.4-12 Appendix A.22H ML/ARD Management Plan
70	Divert contaminated water from the open pit into the TMF; Best Management Practices for explosives selection, drilling, handling and loading; environmental effects monitoring.	<ul style="list-style-type: none"> <li>Lethal effects on fish and aquatic organisms due to blasting residue contamination</li> </ul>	Table 10.4-11 Table 10.4-12
79	An erosion and sediment control plan will be developed as part of an overall environmental management plan,	<ul style="list-style-type: none"> <li>Habitat loss</li> </ul>	5.2 Fish Habitat

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	prior to initiation of habitat compensation activities.		Offsetting Plan Appendix A.10A Appendix A.22C
80	<p>Two main types of monitoring will be conducted to ensure success of the Fish Habitat Compensation Plan:</p> <ul style="list-style-type: none"> <li>• Construction monitoring</li> <li>• Effectiveness monitoring: A monitoring program will be established that focuses on the biological effectiveness of compensation works (channel morphology and fish habitat features, water quality monitoring, fish sampling, assessment of riparian vegetation)</li> </ul>	<ul style="list-style-type: none"> <li>• Habitat loss</li> </ul>	<p>5.1 Fish Habitat Offsetting Plan Appendix A.10A</p>
<b>Rare Plants and Vegetation Health</b>			
81	<ul style="list-style-type: none"> <li>• Planning and conducting Project activities such that the Project footprint will be minimized to the extent possible.</li> <li>• Using established roads within the PDA during operation thereby limiting new disturbance to the PDA.</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of vegetation</li> </ul>	<p>11.4</p>
82	<ul style="list-style-type: none"> <li>• Using equipment clean of soils from other sites;</li> <li>• For reclamation, using only local soil and rock material, or ensure that it is clean fill;</li> <li>• Re-vegetating terrestrial habitat naturally, unless it is determined during progressive rehabilitation studies that re-seeding with native species is preferable and can be accomplished without introducing invasive, non-native plant species; and</li> <li>• Establishing a program for invasive plant detection on-site with a follow-up control and removal program, if required, in accordance with the recommendations of the Yukon Invasive Species</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of invasive species</li> </ul>	<p>11.4 Appendix A.22D Invasive Species Management Plan</p>

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	Council for invasive plant control.		
83	Implementing dust control measures, as per the air quality management guidelines.	<ul style="list-style-type: none"> <li>Dust deposition on vegetation, particularly rare plants</li> </ul>	11.4
84	Site selection to consider potential for rare plants, realign or in extreme circumstances transplant.	<ul style="list-style-type: none"> <li>Loss of rare plants and rare plant habitat</li> </ul>	11.4
85	<ul style="list-style-type: none"> <li>Use clean equipment.</li> <li>Allow vegetation to re-establish naturally or by using native seed mixes.</li> <li>Establish a program for invasive plant detection.</li> </ul>	<ul style="list-style-type: none"> <li>Loss of rare plant habitat due to introduction or expansion of invasive species</li> </ul>	11.4
<b>Wildlife</b>			
86	CMC commits to all of the mitigations listed in the Wildlife Mitigation and Monitoring Plan.	<ul style="list-style-type: none"> <li>Loss of wildlife habitat</li> <li>Restrictions on wildlife movement</li> <li>Wildlife mortality</li> </ul>	Appendix A.12A Wildlife Mitigation and Monitoring Plan
87	<p>To minimize effects on wildlife from mine site infrastructure and activity, CMC will:</p> <ul style="list-style-type: none"> <li>Minimize the Project footprint;</li> <li>Not damage or interfere with active dens of any species;</li> <li>Implement a no-hunting policy for Project employees while working on site, mitigating mortality risk;</li> <li>Implement a zero tolerance policy for wildlife harassment by Project-related employees and contractors, mitigating mortality risk and habitat loss;</li> <li>Suppress dust on the road and at mine site during dry conditions to reduce the extent of dispersal into adjacent environments, mitigating habitat loss;</li> <li>Give wildlife the right-of-way when on all roads,</li> </ul>	<ul style="list-style-type: none"> <li>Loss of wildlife habitat</li> <li>Restrictions on wildlife movement</li> <li>Wildlife mortality</li> </ul>	12.3

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<p>mitigating mortality risk and habitat loss; and</p> <ul style="list-style-type: none"> <li>Freshwater pipeline to well system will be constructed to allow animal movement across (over or under).</li> </ul>		
88	<p>To mitigate potential effects on wildlife from construction, operation and closure and decommissioning of the Freegold Road upgrade and extension, CMC will:</p> <ul style="list-style-type: none"> <li>Design road embankment heights and materials to allow for wildlife movement;</li> <li>Manage snow embankments along the road to allow wildlife easier crossing of the Freegold road and reduce the likelihood of wildlife getting trapped between embankments, mitigating potential barrier effects and mortality risk;</li> <li>Control access of non-project personnel to the road by installing and manning a gate, mitigating mortality risk;</li> <li>Radio communication among drivers to warn others when wildlife are observed along the road, mitigating mortality risk; and</li> <li>Implement measures to prevent and manage spills to reduce the potential for wildlife exposure to contaminants, mitigating reduced health.</li> </ul>	<ul style="list-style-type: none"> <li>Loss of wildlife habitat</li> <li>Restrict wildlife movement</li> <li>Increased wildlife mortality</li> </ul>	12.3
89	<p>CMC will partially mitigate the risk of reduced caribou habitat availability within the winter range of the KCH by:</p> <ul style="list-style-type: none"> <li>Timing road construction activities to minimize or avoid disturbance during the late-winter period (1 February to 30 April) within the KCH winter range high quality habitat;</li> <li>Implementing a policy to ensure caribou approaching the road are given the right-of-way;</li> </ul>	<ul style="list-style-type: none"> <li>Loss of caribou habitat</li> <li>Restrict caribou movement</li> </ul>	12.3

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<ul style="list-style-type: none"> <li>• Implementing snow bank management measures to facilitate caribou movement across the roadway;</li> <li>• Designing road embankment heights and materials to allow for caribou movement; and</li> <li>• Placing construction camps and borrow pits to minimize or avoid disturbance to the KCH.</li> </ul>		
90	<p>CMC will partially mitigate the risk of increased caribou mortality due to collisions with vehicles travelling the road by:</p> <ul style="list-style-type: none"> <li>• Installing signage that warns drivers of known caribou crossing or foraging areas along the road;</li> <li>• Reducing speed limits where caribou interact with the road during the winter;</li> <li>• Enforcing road speed limits by remotely tracking (e.g., GPS tracing) truck traffic;</li> <li>• Snow plowing escape routes for caribou;</li> <li>• Reporting of caribou sightings along the road to a wildlife monitor;</li> <li>• Ensuring constant radio communication among trucks to identify wildlife locations on an ongoing basis;</li> <li>• Employing a seasonal wildlife monitor to coordinate implementing caribou mitigations;</li> <li>• Reporting and investigating all Project-related caribou near-misses and mortalities; and</li> <li>• Triggering adaptive management strategies if there is a Project-related caribou mortality.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased caribou mortality</li> </ul>	12.3
91	<p>CMC will mitigate the risk of increased caribou mortality from harvest by managing the Freegold Road extension</p>	<ul style="list-style-type: none"> <li>• Increased caribou mortality</li> </ul>	12.3

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<p>as a private industrial road by:</p> <ul style="list-style-type: none"> <li>• Restricting access to the road during operation by installing a continuously manned gate at Big Creek;</li> <li>• Decommissioning the road during the reclamation and closure phase; and</li> <li>• Development of a wildlife management working group, including regulators and stakeholders, to provide advice to governments on mitigation, monitoring and adaptive management strategies.</li> </ul>		
92	<p>To reduce Project effects on moose, CMC will:</p> <ul style="list-style-type: none"> <li>• Manage roadside vegetation along Project roads to discourage moose foraging (e.g., cutting roadside vegetation in spring, not mid-summer; and</li> <li>• The 17 km long water pipeline will be designed to allow for moose, and other wildlife to move across the pipeline (i.e. pipeline clearance (distance from bottom of pipeline to ground) will be a minimum of 180 cm every 400 to 700 m to allow for moose passage under the pipeline or will be completely buried to allow for moose passage over the pipeline. Pipeline crossing structures may be constructed in high density/movement areas where the pipeline cannot be raised or buried sufficiently.</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of moose habitat</li> <li>• Reduced movement</li> </ul>	12.3
93	<p>To reduce Project effects on grizzly bears, such as loss of habitat or increased mortality, CMC will:</p> <ul style="list-style-type: none"> <li>• Assess any new den sites identified during construction or operation to determine if they are currently utilized;</li> <li>• Avoid blasting within 500 m of known den sites</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of grizzly bear denning habitat</li> <li>• Increased grizzly bear mortality</li> </ul>	12.3

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<p>when bears are likely to be present;</p> <ul style="list-style-type: none"> <li>• Avoid known, active bear dens during the denning season November through to mid-April; and</li> <li>• Incorporate Best Management Practices for food, waste and fuel management into the design on the Project.</li> </ul>		
<b>Employment and Income</b>			
94	<p>CMC commits to the continued recruitment, training, and advancement of Yukon workers and will work to increase the number of Yukon resident workers over the lifetime of the mine</p> <p>CMC will enhance these positive effects by:</p> <ul style="list-style-type: none"> <li>• Implementing a hiring policy that encourages the employment of workers from Yukon and in particular the rural communities within the LSA;</li> <li>• Implementing a procurement process that, where economically feasible, gives preferences to suppliers from the RSA and in particular from rural communities within the LSA;</li> <li>• Requiring cultural awareness training for Project-related employees and contractors;</li> <li>• Monitoring Project socio-economic effects and adapting management measures where required;</li> <li>• Providing on-the-job training to assist local and regional workers to develop mining-specific skills;</li> <li>• Providing training and education for potential employees from Yukon and in particular the rural communities within the LSA;</li> <li>• Partnering with First Nation communities to access additional funding for training;</li> </ul>	<ul style="list-style-type: none"> <li>• Project workforce demands would increase local and regional employment</li> <li>• Increased employment during construction and operations would positively affect labour income for LSA and RSA residents</li> </ul>	13.4

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<ul style="list-style-type: none"> <li>Supporting non-mining training and entrepreneurial initiatives; and</li> <li>Implementing career training and development opportunities for employees once hired.</li> </ul>		
95	CMC will work with other mining companies within the RSA to attract local workers set to be laid-off as other mines reach their end-of-life.	<ul style="list-style-type: none"> <li>Project competition for local labour may result in shortages in other sectors and industries</li> </ul>	13.4
96	CMC will use reasonable best efforts to draw workers from the existing unemployed or underemployed regional labour pool.	<ul style="list-style-type: none"> <li>Project purchases would generate employment opportunities for LSA and RSA residents</li> </ul>	13.4
<b>Employability</b>			
99	After Project production ends CMC will, for a reasonable amount of time, assist Project-related employees to enhance their employability and find new employment in the mining industry.	<ul style="list-style-type: none"> <li>Loss of operational employment at closure resulting in a large net decrease in local and regional employment</li> </ul>	14.4
100	CMC will implement a Recruitment, Training, and Employment Plan to encourage recruitment and retention of local/regional/territorial residents for Project-related employment.	<ul style="list-style-type: none"> <li>Training programs during operations would enhance the local and regional skills profile and employment levels</li> <li>Employment opportunities will increase incentive for educational attainment and training of local residents</li> <li>Project employment will improve capacity and industry experience of workers</li> </ul>	14.4
101	CMC will implement a procurement process that, where feasible, gives preference to suppliers from the RSA and LSA; Contractors would be encouraged to hire local/regional/territorial residents to the extent practical.	<ul style="list-style-type: none"> <li>Improved capacity and industry experience of contractors</li> </ul>	14.4
<b>Economic Development and Business Sector</b>			
102	CMC will encourage contractors to hire local/regional residents to the extent practical.	<ul style="list-style-type: none"> <li>Project purchases of goods and services would increase Yukon GDP and</li> </ul>	15.4



Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
		employment	
103	CMC will seek to recruit local/regional/territorial residents to the extent practical for Project-related employment.	<ul style="list-style-type: none"> <li>• Project workforce demands would increase Yukon GDP and employment</li> <li>• Re-spending by households of additional income that has been derived directly or indirectly from the mine employment will increase economic activity and businesses</li> <li>• Direct and indirect taxes paid by Project, contractors and individuals will positively contribute to the Yukon tax revenues and will increase government revenues</li> </ul>	15.4
104	CMC will use local and regional suppliers when these suppliers can provide products and services at competitive prices and timeframes.	<ul style="list-style-type: none"> <li>• Re-spending by households of additional income that has been derived directly or indirectly from the mine employment will increase economic activity and businesses</li> <li>• Proposed Project purchases will create contract and business opportunities across the Yukon</li> <li>• Direct and indirect taxes paid by Project, contractors and individuals will positively contribute to the Yukon tax revenues</li> <li>• Additional direct and indirect taxes paid by Project employees will increase government revenues</li> </ul>	15.4
<b>Community Vitality</b>			
105	CMC commits to: <ul style="list-style-type: none"> <li>• Priority hiring for qualified local residents</li> <li>• Encourage workers hired from outside Yukon to re-locate into the territory</li> <li>• Employing a community liaison staff member who focuses on community relationships and working with community staff on</li> </ul>	<ul style="list-style-type: none"> <li>• Population changes from out-of-territory mine workers and their dependents moving residency to RSA</li> </ul>	16.4

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	housing/planning issues related to mine staff.		
106	CMC commits to: <ul style="list-style-type: none"> <li>• Implementing a hiring policy that encourages the employment of workers from Yukon and in particular the rural communities within the LSA</li> <li>• Implementing a procurement process that gives preference to suppliers from the RSA and LSA.</li> </ul>	<ul style="list-style-type: none"> <li>• Population changes from migration to the RSA to take advantage of higher incomes and employment rates generated by the Project</li> </ul>	16.4
107	CMC commits to: <ul style="list-style-type: none"> <li>• Pursuing employment opportunities in negotiation of cooperation agreements with First Nations.</li> <li>• Implementing a hiring policy that encourages the hiring of Project-related employees from rural communities within the LSA.</li> </ul>	<ul style="list-style-type: none"> <li>• Potential lack of employment and income equity for women, Aboriginal peoples, people with disabilities, and visible minorities</li> </ul>	16.4
108	CMC commits to: <ul style="list-style-type: none"> <li>• Offer to deposit employees' salaries directly into their bank accounts</li> <li>• Assist Project-related employees to find counseling services where needed</li> <li>• Facilitate money management training as required to those employees who do not have experience with high wage earnings and working in mines</li> <li>• Implement a zero tolerance policy with respect to drug and alcohol at the Project site for Project employees and contractors</li> <li>• Work with local agencies in monitoring Project socio-economic effects and to take corrective actions where appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>• Spending decisions in relation to disposable income could affect family and community well-being</li> </ul>	16.4
109	CMC commits to: <ul style="list-style-type: none"> <li>• A self-contained camp on site to house workers</li> </ul>	<ul style="list-style-type: none"> <li>• Influx of workers and their families could create negative behavioural changes and</li> </ul>	16.4

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	<ul style="list-style-type: none"> <li>Implementing a zero tolerance policy with respect to drug and alcohol use at the Project site for Project employees and contractors</li> <li>CMC will help identify counseling services to its employees if needed</li> <li>CMC will provide money management training as required to those employees who do not have experience with high wage earnings and working in mines</li> <li>CMC will work with local agencies to monitor Project socio-economic effects and to develop and implement corresponding measures as appropriate.</li> </ul>	reduce family and community well-being	
<b>Community Infrastructure and Services</b>			
110	<p>To decrease potential Project effects on community infrastructure and services in the LSA, CMC will:</p> <ul style="list-style-type: none"> <li>Provide a local fresh water supply, sewage treatment plant and power supply at the mine site</li> <li>A permanent waste management facility will be established at the mine site during the construction phase</li> <li>The camp will have indoor and outdoor recreation services</li> <li>All construction activities will follow best practices and will be outlined in the Environmental Health and Safety (EHS) Management System</li> <li>CMC will provide, at the site and the camp, health and medical equipment and personnel as well as arrangements to med-evac workers with life-threatening illnesses or injuries to the nearest appropriate facility.</li> </ul>	<ul style="list-style-type: none"> <li>Population change will alter demand for health and social services.</li> </ul>	17.4.2

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
111	CMC will work closely on an ongoing basis with Whitehorse General Hospital, local fire departments, RCMP and Yukon Ambulance to ensure that the appropriate information on the changes in area transportation volumes, mine operations and the change to the local population are considered.	<ul style="list-style-type: none"> <li>Population change will alter demand for Protective Services</li> </ul>	17.4.2
112	CMC will provide contracted security services that will focus on ensuring a secure and safe work site.	<ul style="list-style-type: none"> <li>Infrastructure and service capacity</li> </ul>	17.4.2
113	CMC will provide a fly in/fly out camp to offset project demands for housing and temporary accommodation.	<ul style="list-style-type: none"> <li>Population change will alter demand for housing and temporary accommodation</li> </ul>	17.4.2
114	<p>Casino Mining Corporation will provide on-the-job training to assist local and regional workers to develop mining-specific skills.</p> <p>CMC will support programs and initiatives at local schools and Yukon College.</p> <p>CMC will implement a Recruitment, Training and Employment Plan.</p>	<ul style="list-style-type: none"> <li>Increase demand for educational services</li> </ul>	17.4.2
115	<p>CMC will implement a Road Use Plan and an Emergency Response and Spill Management Plan.</p> <p>CMC will enforce speed limits on roads under its control.</p> <p>CMC will perform regular vehicle maintenance on its own vehicles and will perform regular road maintenance to reduce risk to motor vehicle safety.</p> <p>CMC will consult with Transport Branch of YG to ensure compliance with transport regulations.</p>	<ul style="list-style-type: none"> <li>Increased traffic and risk for motor vehicle collisions on the Klondike Highway and Freegold Road</li> </ul>	17.4.2
116	CMC will discuss Worker Transportation Plan with Whitehorse Airport authority i.e. evaluate peak passenger/aircraft volumes and, as necessary, schedule work rotation schedules to minimize airport and	<ul style="list-style-type: none"> <li>Demands on air transportation infrastructure</li> </ul>	17.4.2 Table 17.4-3

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	passenger congestion.		
117	CMC will work with communities in the LSA to develop a mine closure plan that identifies strategies and actions to help minimize the potential adverse effects of closing the mine.	<ul style="list-style-type: none"> <li>decrease demand for housing and temporary accommodation and local services</li> </ul>	17.4.2
<b>Cultural Continuity</b>			
118	CMC will develop a socio-economic monitoring plan jointly with community and regional partner organizations such as training institutions, economic development agencies, and municipal and provincial/territorial government agencies.	<ul style="list-style-type: none"> <li>General cultural effects</li> </ul>	18.4
119	CMC will design the Project to have as compact a mine site footprint as practicable.	<ul style="list-style-type: none"> <li>General cultural effects</li> </ul>	18.4 Table 18.4-4
120	CMC commits to progressive reclamation of the Maximum Disturbance Area (with the exception of the open pit and TMF).	<ul style="list-style-type: none"> <li>General cultural effects</li> </ul>	18.4
121	A Heritage Resource Protection Plan will be developed to detail the methods for avoiding, mitigating, reporting, and recovering any heritage resources that are found during Project development activities.	<ul style="list-style-type: none"> <li>General cultural effects</li> </ul>	18.4 22
122	Mitigation measures include avoidance of known or suspected historical, cultural, or archaeological places; if avoidance is not possible, archaeological mitigation will be completed following the Yukon Heritage Policy.	<ul style="list-style-type: none"> <li>General cultural effects in Maximum Disturbance Area</li> </ul>	18.4 Table 18.4-4
123	<p>Access Mitigation - A Road Use Plan (Section 22) will be developed for the Project in coordination with First Nations and the Yukon Government which will include:</p> <ul style="list-style-type: none"> <li>No public access on the Freegold Road Extension or access by permit, as directed and agreed by the Yukon and First Nation governments.</li> <li>Controlled, gated, manned access at the new</li> </ul>	<ul style="list-style-type: none"> <li>General cultural effects related to access as the result of the use of the Freegold Road Extension.</li> </ul>	18.4 22 Appendix A.22E Road Use Plan

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	bridge over Big Creek or as otherwise agreed. <ul style="list-style-type: none"> <li>• A stakeholder communication /engagement plan to ensure concerns are identified and addressed.</li> </ul>		
124	A traffic communication bulletin /update will be circulated in local communities and to key stakeholders on a routine basis to inform users of current road status.	<ul style="list-style-type: none"> <li>• General cultural effects related to access</li> </ul>	18.4 Table 18.4-4
125	An information line will also be established to answer questions regarding the Project status.	<ul style="list-style-type: none"> <li>• General cultural effects related to access</li> </ul>	18.4
126	A monitoring program will be implemented to ensure that local land users are not gaining access to the Freegold Road Extension via alternative routes.	<ul style="list-style-type: none"> <li>• General cultural effects related to access</li> </ul>	18.4
127	At closure, public health and safety assessment will be conducted for the mine site to identify potential risks and develop appropriate, specific long-term mitigation and management measures (such as fencing and signage).	<ul style="list-style-type: none"> <li>• General cultural effects related to access</li> </ul>	18.4 Table 18.4-4
128	Change in local ambience, such as traffic, noise and emissions, and related wilderness experience will be mitigated by: <ul style="list-style-type: none"> <li>• Implement Environmental Management Plans</li> <li>• Minimizing traffic noise and emissions by incorporating accepted best management practices</li> <li>• Ensuring on-site equipment is regularly maintained to control noise and emissions</li> <li>• Proper sound buffering of the ore processing facility on site</li> <li>• Implement an Air Quality Management Plan</li> <li>• On-going communications and engagement with First Nations to document potential effects associated with traffic, emissions and noise along the Freegold Road corridor.</li> </ul>	<ul style="list-style-type: none"> <li>• General cultural effects related to ambience</li> </ul>	18.4.2 & Table 18.4-4

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
129	Mine employees and contractors will be restricted from harvesting within the mine site footprint and while on shift at any time.	General cultural effects related to loss of plant/animal resources	18.4.2 & Table 18.4-4
130	To minimize effects associated with employment at the mine CMC will include: <ul style="list-style-type: none"> <li>• Shift flexibility, when possible, to accommodate subsistence harvesting and participation in cultural activities/events</li> <li>• Supporting efforts to revitalize Northern Tutchone language and incorporate Northern Tutchone language into mine signage in consultation with the SFN and LSCFN;</li> <li>• Incorporating Aboriginal ceremonies at the mine site in consultation with the SFN and LSCFN;</li> <li>• Providing support for community cultural events based on input from SFN and LSCFN and other local communities; and</li> <li>• Conduct cultural awareness training for all employees and contractors working at the mine site.</li> </ul>	General cultural effects related to opportunities to participate in cultural activities	18.4.2 & Table 18.4-4
<b>Land Use and Tenure</b>			
131	CMC will limit the mine footprint; implement appropriate best management practices and reclamation and closure measures; ensure ongoing communication with FN and local stakeholders.	<ul style="list-style-type: none"> <li>• Loss of available area for FN traditional land use activities</li> <li>• Loss of available area for quartz and placer mining</li> <li>• Loss of available area for trapping and outfitting</li> </ul>	19.4.2
132	To mitigate against changes to access to traditional land, mineral tenures, and recreational lands CMC	<ul style="list-style-type: none"> <li>• Changes to access to Traditional Territories, mineral tenures, trapping</li> </ul>	19.4.2

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	commits to: <ul style="list-style-type: none"> <li>• Working with First Nation and Yukon Government to ensure management of the Freegold Road Extension does not interfere with the rights of other existing tenure holders.</li> <li>• Implement access management measures and associated monitoring and communication plans.</li> <li>• ongoing communication with FN and local stakeholders.</li> </ul>	areas, guide outfit concessions and recreational areas	
133	CMC will <ul style="list-style-type: none"> <li>• limit mine footprint;</li> <li>• implement appropriate EMPs (e.g., Air Quality Management Plan) and reclamation and closure measures;</li> <li>• maintain ongoing communication with local stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced wilderness experiences for First Nations, trappers, outfitters and recreational land users</li> </ul>	19.4.2
134	CMC will limit this potential cumulative effect by: <ul style="list-style-type: none"> <li>• Implementing a no public access policy unless directed by the Yukon and First Nations Governments</li> <li>• Manned access at control points</li> <li>• Explore a cooperative approach to management of access to the Freegold Road Extension involving the Casino Mining Corporation, the Yukon government, Selkirk First Nation and Little Salmon/Carmacks First Nation.</li> </ul>	<ul style="list-style-type: none"> <li>• Overall increase in existing and future permitted placer and quartz exploration and mining activities along the Freegold Road Upgrade</li> </ul>	19.4.2
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135	CMC will voluntarily establish an Independent Geotechnical Review Panel for the Casino Project to review and consider the Project's Tailings Management	N/A	A.4



Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	Facility and Heap Leach Facility with a focus on their structural stability and integrity.		
136	Casino Mining Corporation will establish Quality Assurance/Quality Control (QA/QC) procedures to maintain an effective quality control program for the Project prior to commencement and during execution of all works.	N/A	A.4
137	A Professional Engineer representing CMC will carry out periodic independent inspection and testing throughout the construction of the works. For quality assurance the Professional Engineer representing CMC will approve QA/QC testing results prior to proceeding with works. The QA/QC testing results will be recorded and available for inspection on site by regulatory inspectors.	N/A	A.4
138	CMC will undertake a dam breach analysis and inundation modelling consistent with the Canadian Dam Association's dam safety guidelines.	N/A	A.4
139	CMC will conduct additional site investigations during detailed design, including test pits and laboratory testing, to further characterize foundation soils for the TMF embankment.	<ul style="list-style-type: none"> <li>Embankment deformation or weakening due to thaw of frozen foundation materials.</li> </ul>	A.4
140	CMC will conduct appropriate laboratory or field scale studies during operations to finalize the design of the treatment wetlands.	<ul style="list-style-type: none"> <li>Uncertainty and a lack of confidence in the proposed treatment system.</li> </ul>	A.4
141	CMC will conduct a geotechnical site investigation for the Freegold Road Extension which will include the installation of thermistors to monitor ground temperature.	N/A	A.6

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
142	CMC will complete additional site investigation and thermal analysis, if the foundations of critical infrastructure are identified as potentially susceptible to the effects of thermal erosion.	<ul style="list-style-type: none"> <li>Thermal erosion from Project activities and climate change.</li> </ul>	A.6
143 Replaces Commitments 27 and 28	The winter seepage management pond and associated seepage collection system will be installed during construction to collect surface runoff and seepage from the TMF embankments during operations and pump the water back to the TMF. A controlled discharge system will control discharge to Casino Creek.	<ul style="list-style-type: none"> <li>Change in surface water quality in Casino Creek and Dip Creek due to unrecovered seepage.</li> <li>Change in surface water quality in Casino Creek and Dip Creek due to project discharge.</li> </ul>	A.7
144	If future field investigations conducted as part of design engineering identify additional structures beneath the TMF, the effect on TMF seepage rates will be assessed.	<ul style="list-style-type: none"> <li>Change in surface water quality in Casino Creek and Dip Creek due to unrecovered seepage.</li> </ul>	A.7
145	CMC will conduct information sessions following the determination of adequacy in the YESAB process to inform interested parties of details of the water balance modelling.	N/A	A.7
146	CMC will update the water balance model in support of the reclamation and closure plan updates as may be required.	<ul style="list-style-type: none"> <li>Change in surface water quality in Casino Creek and Dip Creek due to unrecovered seepage.</li> <li>Change in surface water quality in Casino Creek and Dip Creek due to Project discharge.</li> </ul>	A.7
147	Additional mitigation measures may be considered if concerns arise surrounding the proposed physical barrier to prevent fish passage. CMC will develop and implement an adaptive monitoring plan that evaluates the effectiveness of the barrier, with the inclusion of triggers for implementing further mitigation measures to	<ul style="list-style-type: none"> <li>Fish stranding downstream of the water management pond.</li> </ul>	A.10

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
	protect resident fish. Other mitigation that may be considered may include other physical deterrents or flow management strategies.		
148	Any fish-bearing crossings requiring culverts will be designed to ensure fish passage and habitat losses will be assessed and, if required, offset accordingly in the Fish Habitat Offsetting Plan.	<ul style="list-style-type: none"> <li>Lethal effects on fish and aquatic organisms.</li> <li>Habitat loss.</li> </ul>	A.10 Appendix A.10A Fish Habitat Offsetting Plan
149	In writing the Erosion and Sediment Control Plan (for the Quartz Mining Licence application), the same overall erosion and sedimentation risk assessment will be conducted for all of the Freegold Road Upgrade, Airstrip Access Road and Casino Mine Site. Corresponding mitigation measures will be applied at the areas identified in the risk assessment.	<ul style="list-style-type: none"> <li>Change in surface water quality from increased erosion and sedimentation.</li> </ul>	A.10
150 Replaces Commitments 72, 73, 74, 75, 76, 77 and 78	CMC will implement the compensation measures outlined in the Fish Habitat Offsetting Plan, once approved by DFO, and once the decision has been made to proceed with the Project.	<ul style="list-style-type: none"> <li>Fish and aquatic species habitat loss.</li> </ul>	A.10 Appendix A.10A Fish Habitat Offsetting Plan
151	CMC understands that YG Environment is conducting fire regime scenario-building for the Klaza caribou range. CMC will consider reasonable scenarios and interaction with Project effects if they are developed and made available for review.	<ul style="list-style-type: none"> <li>Wildlife habitat loss.</li> </ul>	A.12
152	CMC will work with SFN to adopt the scope, methodology, VCs and indicators of the Minto Mine Socio-Economic Monitoring Framework and to develop the Socio-economic Effects Monitoring Program for the Project, if mutually-agreed to by First Nations, local communities and Yukon Government.	<ul style="list-style-type: none"> <li>Effects of the Project to community wellbeing and community vitality.</li> </ul>	A.16 Appendix A.22F Socio-economic Management Plan

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
153	CMC is willing to work collaboratively with LSCFN to develop a similar monitoring program (to the program in commitment #154) that reflects the VCs and indicators that arise as a result of their two recent community driven processes for community readiness planning and development of community well-being indicators.	<ul style="list-style-type: none"> <li>Effects of the Project to community wellbeing and community vitality.</li> </ul>	A.16 Appendix A.22F Socio-economic Management Plan
154	CMC is willing to work with the Tr'ondëk Hwëch'in, other First Nations and municipalities to determine the appropriate level of monitoring socio-economic effects of the Project on their respective communities.	<ul style="list-style-type: none"> <li>Effects of the Project to community wellbeing and community vitality.</li> </ul>	A.16 Appendix A.22F Socio-economic Management Plan
155	CMC will incorporate YG and local first responders into the process for finalizing the conceptual Emergency Response Plan.	N/A	A.21
156	CMC will work with Yukon Government Department of Highways and Public Works to monitor, and actively manage if required, potential interactions between Project-related trailer truck traffic and other public highway users.	<ul style="list-style-type: none"> <li>Effects of Project-related traffic on other highway users.</li> </ul>	A.21
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157	CMC will contact the Yukon Quest in early January of each year to establish a process for safe crossing of the Freegold Road during the race.	<ul style="list-style-type: none"> <li>Effects of the Project on the Yukon Quest</li> </ul>	B.2
158	Where the Project has resulted in changes to the typical route charted for its race, CMC will help to establish safe routing for the Yukon Quest. The route shall follow existing linear disturbances (e.g., Freegold Road right-of-way, trails and cutlines) where possible, or result in the cutting of new trail less than 1.5 metres in width.	<ul style="list-style-type: none"> <li>Effects of the Project on the Yukon Quest</li> </ul>	B.2

Number	Commitment	Adverse Residual Effect	Proposal/SIR Section
159	CMC will prepare a Permafrost Management Plan (PMP) that will be submitted as part of the Quartz Mining Licence application	<ul style="list-style-type: none"> <li>• Effects of permafrost on the stability of Project infrastructure</li> <li>• Effects of the Project on permafrost</li> </ul>	B.6
160	In response to these requests and discussion, CMC will conduct a second year of bear surveys. CMC will further engage with Environment Yukon to obtain their input before planning a second year of bear surveys.	<ul style="list-style-type: none"> <li>• Potential effects on bear habitat</li> </ul>	B.12
161	CMC will fly above 8,250 feet (2,512 m) while in transit between the Casino Mine Site and Whitehorse when no conflicts with Canadian Aviation Regulations exist. Other aircraft, such as helicopters or small aircraft, will also fly above 8,250 feet when in transit between the Casino Mine Site and Whitehorse, when there are no conflicts with Canadian Aviation Regulations.	<ul style="list-style-type: none"> <li>• Potential indirect effect on sheep</li> </ul>	B.12
162	Should new studies identify additional aboriginal traditional uses that have not been considered, CMC will review the results and commits to considering the results as part of established adaptive management planning for the Project.	<ul style="list-style-type: none"> <li>• Effects to traditional land use</li> </ul>	B.18
163	CMC will support and assist FNs in gathering Project-related TK and TLU information for consideration and incorporation into the Project Proposal. CMC will consider and, where appropriate, integrate this information into the Project as well as into the socio-economic monitoring program.	<ul style="list-style-type: none"> <li>• Effects to traditional land use</li> </ul>	B.18