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24 – CONCLUSION

The development of the Casino Project Proposal has relied upon many years of study, analysis, interpretation, and consultation in order to present findings with a high degree of understanding. The content and format of the Proposal was guided by input from YESAB, as well as from First Nations and other stakeholders. The Proposal is in accordance with the requirements specified in paragraph 42(1) of the *Yukon Environmental and Socio-economic Assessment Act*.

Fourteen Valued Components were identified and assessed with due consideration of the temporal and geographic boundaries. Wherever possible, impacts to each VC were eliminated or reduced through Project design. Where this proved unfeasible, mitigation was proposed such that none of the identified residual adverse effects were assessed as Significant. A summary of the effects assessment for each Valued Component is provided in Table 24.1-1. An analysis of potential Accidents and Malfunctions likewise revealed no areas of High Risk to any of the identified Valued Components.

Several positive effects were identified, including employment opportunities with an expected \$43 million in annual wages during operations. It is anticipated that approximately \$274 million of the Yukon GDP will be generated by the Casino Project.

Casino Mining Corporation believes that the Project will be developed and operated in an environmental and socially acceptable manner. As the Project progresses, CMC will uphold its commitments to undertake comprehensive monitoring and management to ensure avoidance of unacceptable project effects. A summary of the commitments upon which the Proposal relies is provided in Table 24.1-2.

Table 24.1-1 Summary of Effects Assessments

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
Surficial Geology, Terrain, and Soils												
	Loss of or damage to terrain features. (C, O, CD)	Avoidance, realignment, minimize footprint	Yes	Adverse	High	Localized	Permanent	Infrequent	Irreversible	Low Resilience	High	Not significant
	Covering terrain features. (C, O, CD)	Avoidance, minimize footprint	Yes	Adverse	Medium	Localized	Permanent	Infrequent	Irreversible	Low Resilience	High	Not significant
Water and Sediment Quality												
	Change in surface water quality in Casino Creek and Dip Creek from unrecovered seepage. (O, CD)	Water management pond will intercept 90-95% of seepage and pump it back to the TMF	Yes	Adverse	Medium	Local	Short term	Frequent	Irreversible	Low Resilience	Moderate	Not Significant
	Change in surface water quality in Casino Creek and Dip Creek from project discharge. (PC)	Water Management, including a Reclamation Plan (i.e. Construction of two engineering wetlands: North TMF wetland and South TMF wetland, construction of a WSMP to contain seepage during December to April and release during higher flows)	Yes	Adverse	Medium	Local	Permanent	Frequent	Irreversible	Low Resilience	High	Not Significant
Air Quality												
	Exceedance of Yukon Ambient Air Quality Standards for NO ₂ at the mine site. (C, O, CD)	Adherence to Occupational Health and Safety Act Use construction and mining equipment that meets the latest applicable Canadian emissions standards. Ensure regular equipment maintenance. Institute a "no idling" policy for all equipment and vehicles.	Yes	Adverse	High	Local	Short Term	Frequent	Reversible	High Resilience	High	Not Significant
	Exceedance of Canadian Air Quality Objectives for PM ₁₀ at the mine site. (C, O, CD)	Adherence to Occupational Health and Safety Act Cover or use water sprays at dust generating areas. Reduce drop heights for process plants.	Yes	Adverse	Medium	Local	Short Term	Frequent	Reversible	High Resilience	High	Not Significant
	Exceedance of Canadian Air Quality Objectives for PM _{2.5} at the mine site. (C, O, CD)	Adherence to Occupational Health and Safety Act Cover or use water sprays at dust	Yes	Adverse	Medium	Local	Short Term	Frequent	Reversible	High Resilience	High	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect	
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)		
		generating areas. Reduce drop heights for process plants.											
	Exceedance of Yukon Ambient Air Quality Standards for NO ₂ at the road. (C, O, CD)	Use construction equipment that meets the latest applicable Canadian emissions standards. Ensure regular equipment maintenance. Institute a "no idling" policy for all equipment and vehicles. Use well maintained vehicles to minimize air emissions	Yes	Adverse	High	Local	Short Term	Frequent	Reversible	High Resilience	High	Not Significant	
	Exceedance of Canadian Air Quality Objectives for PM ₁₀ at the road. (C, O, CD)	Minimize land disturbance, grubbing and clearing activities Water unpaved portions of the road to minimize fugitive dust.	Yes	Adverse	Low	Local	Short Term	Frequent	Reversible	High Resilience	High	Not Significant	
	Exceedance of Canadian Air Quality Objectives for PM _{2.5} at the road. (C, O, CD)	Minimize land disturbance, grubbing and clearing activities Water unpaved portions of the road to minimize fugitive dust.	Yes	Adverse	Low	Local	Short Term	Frequent	Reversible	High Resilience	High	Not Significant	
	Contribution to global greenhouse gases. (C, O,CD)	Use construction and mining equipment that meets the latest applicable Canadian emissions standards. Ensure regular equipment maintenance. Institute a "no idling" policy for all equipment and vehicles.	Yes	Adverse	Medium	Widespread	Long Term	Frequent	Reversible	High Resilience	High	Not Significant	

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
Noise												
	Increase in baseline noise level conditions during construction. (C)	Ensure regular equipment maintenance, including lubrication and replacement of parts. Keep noisy equipment inside of buildings and sheds whenever possible. Equipment will be operated with covers, shields, and hoods if provided by their manufacturer. Site workers will be trained in proper machine use and maintenance.	Yes	Adverse	Medium	Localized	Short Term	Frequent	Reversible	High Resilience	High	Not Significant
	Increase in baseline noise level conditions during operations. (O)	Ensure regular equipment maintenance, including lubrication and replacement of parts by following manufacturer's recommendations. Keep noisy equipment inside of buildings and sheds whenever possible. Adhere to a blasting plan developed by an explosives contractor that implements controlled blasting procedures. Optimisation of blasting operations by licensed staff which maximise localised rock breakage within the ore body of interest, while minimising non-productive noise, vibration and fly rock effects. Impose speed limits for all vehicles. Implement a "no idling" policy for mobile equipment. Wherever practicable, noisy equipment will be located near ground level to minimize noise propagation.	Yes	Adverse	Medium	Localized	Long Term	Infrequent	Reversible	High Resilience	High	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
Fish and Fish Habitat												
	Non-fish-bearing in-stream habitat loss and riparian habitat loss at airstrip access road crossings. (C)	No mitigation required, refer to Section 10.4.3 (Significance of Residual Effects) for details.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Fish-bearing in-stream and riparian habitat loss within the airstrip footprint. (C)	Fish habitat compensation.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Increased erosion and sedimentation causing habitat loss and alteration within airstrip footprint. (C)	Sediment and erosion control plan, modify culvert and bridge design for areas with increased sensitivity to disturbances.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Medium	Not Significant
	Direct mortality of periphyton, benthic invertebrates, and fish eggs due to infilling within the airstrip footprint. (C)	Fisheries working windows to avoid destroying incubating fish eggs.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Lethal effects on fish and aquatic organisms due to increased erosion and sedimentation within the airstrip footprint. (C, O, CD, PC)	Sediment and erosion control plan, fisheries working windows, fish salvage, modify culvert and bridge design for areas with increased sensitivity to disturbances, airstrip diversion channel.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to increased erosion and sedimentation within the airstrip footprint. (C, O, CD, PC)	Sediment and erosion control plan, fisheries working windows, fish salvage, modify culvert and bridge design for areas with increased sensitivity to disturbances, airstrip diversion channel.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to change in habitat productive capacity within the airstrip footprint. (C, O, CD, PC)	Monitoring of fish habitat and biological communities to identify any changes relative to baseline conditions. Mitigation may include habitat remediation or additional compensation.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	High resilience	Low	Not Significant
	Non-fish-bearing in-stream and riparian habitat loss within the open pit footprint in upper Canadian Creek. (O)	No mitigation required, refer to Section 10.4.3 (Significance of Residual Effects) for details.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant

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				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/ High Resilience)	Probability of Occurrence (Low/Moderate /High)	
	Reduced stream flows, nutrients, food, woody debris in lower Canadian Creek due to loss of surface drainage to the open pit. (O)	Fish habitat compensation for usable Arctic grayling habitat loss.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	High resilience	High	Not Significant
	Increased erosion and sedimentation causing habitat loss and alteration in Canadian Creek Diversion. (O, CD)	Sediment and erosion control plan	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Medium	Not Significant
	Non-fish-bearing habitat loss (e.g., nutrients, food) in upper Canadian Creek. (CD)	No mitigation required, refer to Section 10.4.3 (Significance of Residual Effects) for details.	Yes	Adverse	Medium	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Reduced stream flows, nutrients, food, woody debris in lower Canadian Creek due to decommissioning of the Canadian Creek Diversion. (CD, PC)	Fish habitat compensation for usable Arctic grayling habitat loss.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	High resilience	High	Not Significant
	Lethal effects on fish and aquatic organisms due to increased erosion and sedimentation in due to the Canadian Creek Diversion. (O, CD)	Sediment and erosion control plan.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Direct mortality of periphyton, benthic invertebrates, and fish eggs in the Canadian Creek Diversion due to infilling in the open pit footprint, and loss of habitat area downstream following reduced stream flows due to the Canadian Creek Diversion. (O, CD)	Fisheries working windows to avoid destroying incubating fish eggs.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to increased erosion and sedimentation due to the Canadian Creek Diversion. (C, O, CD, PC)	Sediment and erosion control plan.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/ High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Sub-lethal effects on fish and aquatic organisms due to change in habitat productive capacity due to the Canadian Creek Diversion. (C, O, CD, PC)	Monitoring of fish habitat and biological communities to identify any changes relative to baseline conditions. Mitigation may include habitat remediation or additional compensation.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	High resilience	Low	Not Significant
	Sub-lethal impacts (e.g. stress, habitat avoidance) on fish and incubating eggs from Drilling and Blasting (Noise, Fly Rock, Vibration). (C)	Adhere to DFO guidelines for The Use of Explosives In or Near Canadian Fisheries Waters	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Fish-bearing in-stream and riparian habitat loss in lower Britannia Creek due to Fish Habitat Compensation Construction. (C)	Fish habitat compensation for usable Arctic grayling habitat loss.	Yes	Adverse	Medium	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Increased erosion and sedimentation causing habitat loss and alteration due to Fish Habitat Compensation Construction. (C)	Sediment and erosion control plan.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Medium	Not Significant
	Direct mortality of periphyton, benthic invertebrates, and fish eggs due to diversion of lower Britannia Creek. (C)	Fisheries working windows to avoid destroying incubating eggs.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Lethal effects on fish and aquatic organisms due to increased erosion and sedimentation from Fish Habitat Compensation Construction. (C)	Sediment and erosion control plan, fisheries working windows, fish salvage	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to increased erosion and sedimentation from Fish Habitat Compensation Construction, (C)	Sediment and erosion control plan, fisheries working windows, fish salvage	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Sub-lethal effects on fish and aquatic organisms due to change in habitat productive capacity from Fish Habitat Compensation Construction. (C, O, CD, PC)	Monitoring of fish habitat and biological communities to identify any changes relative to baseline conditions. Mitigation may include habitat remediation or additional compensation.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	High resilience	Low	Not Significant
	Non-fish-bearing in-stream habitat loss and riparian habitat loss at Freegold access road crossings due to Freegold Road Extension. (C, O)	No mitigation required, refer to Section 10.4.3 (Significance of Residual Effects) for details.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Increased erosion and sedimentation causing habitat loss and alteration due to Freegold Road Extension. (C, O, CD)	Sediment and erosion control plan, modify culvert and bridge design for areas with increased sensitivity to disturbances.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Medium	Not Significant
	Direct mortality of periphyton and benthic invertebrates due to infilling from construction of the Freegold Road Extension. (C)	Minimize disruption of fish food production by installation culverts on non-fish bearing streams only.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Lethal effects on fish and aquatic organisms due to increased erosion and sedimentation from the Freegold Road Extension. (C, O, CD)	Sediment and erosion control plan, fisheries working windows, modify culvert and bridge design for areas with increased sensitivity to disturbances.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to increased erosion and sedimentation from the Freegold Road Extension. (C, O, CD)	Sediment and erosion control plan, fisheries working windows, modify culvert and bridge design for areas with increased sensitivity to disturbances.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to change in habitat productive capacity from the Freegold Road Extension. (C, O, CD)	Monitoring of fish habitat to identify any changes relative to baseline conditions. Mitigation may include habitat remediation or additional compensation.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	High resilience	Low	Not Significant

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				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Non-fish-bearing in-stream habitat loss and riparian habitat loss at Freegold access road crossings due to Freegold Road Upgrade. (C)	No mitigation required, refer to Section 10.4.3 (Significance of Residual Effects) for details.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Increased erosion and sedimentation causing habitat loss and alteration due to Freegold Road Upgrade. (C, O, CD)	Sediment and erosion control plan, modify culvert and bridge design for areas with increased sensitivity to disturbances.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Medium	Not Significant
	Direct mortality of periphyton, benthic invertebrates, and fish eggs due to infilling from construction of the Freegold Road Upgrade. (C)	Minimize disruption of aquatic biota by installing culverts on non-fish bearing streams only. Fisheries working windows to avoid destroying incubating fish eggs around Nordenskiöld Bridge.	Yes	Adverse	Medium	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Lethal effects on fish and aquatic organisms due to increased erosion and sedimentation from the Freegold Road Upgrade. (C, O, CD)	Sediment and erosion control plan, modify culvert and bridge design for areas with increased sensitivity to disturbances. For the Nordenskiöld Bridge installation: fisheries working windows, fish salvage.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to increased erosion and sedimentation from the Freegold Road Upgrade. (C, O, CD)	Sediment and erosion control plan, modify culvert and bridge design for areas with increased sensitivity to disturbances. For the Nordenskiöld Bridge installation: fisheries working windows, fish salvage.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to change in habitat productive capacity from the Freegold Road Upgrade. (C, O, CD)	Monitoring of fish habitat to identify any changes relative to baseline conditions. Mitigation may include habitat remediation or additional compensation.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	High resilience	Low	Not Significant
	Fish-bearing in-stream and riparian habitat loss within TMF footprint in mid-upper Casino Creek due to TMF construction. (C)	Fish habitat compensation.	Yes	Adverse	Medium	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
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	Non-fish-bearing in-stream and riparian habitat loss within TMF footprint in mid-upper Casino Creek due to TMF construction. (C)	No mitigation required, refer to Section 10.4.3 (Significance of Residual Effects) for details.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Increased erosion and sedimentation causing habitat loss and alteration due to TMF construction. (C)	Sediment and erosion control plan.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Medium	Not Significant
	Change in water temperature in lower Casino Creek due to reduced flows from TMF construction and operation. (C, O)	No mitigation required, refer to Section 10.4.3 (Significance of Residual Effects) for details.	Yes	Adverse	Low	Localized	Long term	Frequent	Reversible	High resilience	Medium	Not Significant
	Reduced stream flows, nutrients, food, woody debris in lower Casino Creek due to the TMF. (C, O, CD, PC)	Fish habitat compensation for usable Arctic grayling habitat loss.	Yes	Adverse	Medium	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Change in stream morphology from flow decreases due to TMF construction and operation. (C, O)	No mitigation required, refer to Section 10.4.3 (Significance of Residual Effects) for details.	Yes	Adverse	Low	Localized	Long term	Frequent	Irreversible	High resilience	Medium	Not Significant
	Change in water temperature in lower Casino Creek due to release of TMF pond. (CD, PC)	No mitigation required, refer to Section 10.4.3 (Significance of Residual Effects) for details.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	High resilience	Medium	Not Significant
	Increased stream flows due to TMF closure spillway. (CD, PC)	Modification of closure spillway location, magnitude and timing.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Change in stream morphology from flow increases due to the TMF. (CD, PC)	Site-specific fluvial geomorphology studies.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Direct mortality of periphyton, benthic invertebrates, and fish eggs due to infilling and reduction of wetted habitat area from TMF construction. (C)	Fisheries working windows to avoid destroying incubating fish eggs.	Yes	Adverse	Medium	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Lethal effects on fish and aquatic organisms due to increased erosion and sedimentation from TMF construction. (C)	Sediment and erosion control plan, fisheries working windows, fish salvage.	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Lethal effect of change in water quality due to the TMF. (O, CD, PC)	Water Management, including a Reclamation Plan (i.e. construction of two engineering wetlands: North TMF wetland and South TMF, construction of a Winter Seepage Mitigation Pond to contain seepage during December to April and release during higher flows).	Yes	Adverse	Medium	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Lethal effects on fish and aquatic organisms due to stranding or winter kill following reduced flows due to the TMF. (C, O, CD, PC)	Monitoring of biological communities to identify any changes relative to baseline conditions. Mitigation may include habitat remediation or additional compensation.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to increased erosion and sedimentation from TMF construction. (C)	Sediment and erosion control plan, fisheries working windows, fish salvage.	Yes	Adverse	Medium	Localized	Permanent	Frequent	Irreversible	Low resilience	High	Not Significant
	Sub-lethal effect of change in water quality due to the TMF. (O, CD, PC)	Water Management, including a Reclamation Plan (i.e. construction of two engineering wetlands: North TMF wetland and South TMF, construction of a Winter Seepage Mitigation Pond to contain seepage during December to April and release during higher flows).	Yes	Adverse	Low	Localized	Short Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Sub-lethal effects on fish and aquatic organisms due to change in habitat productive capacity due to the TMF. (C, O, CD, PC)	Monitoring of fish habitat and biological communities to identify any changes relative to baseline conditions. Mitigation may include habitat remediation or additional compensation.	Yes	Adverse	Low	Localized	Permanent	Frequent	Irreversible	Low resilience	Moderate	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
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Rare Plants and Vegetation Health												
	Loss of rare plants and rare plant habitat. (C, O)	Site selection to consider potential for rare plants, realign or in extreme circumstances transplant.	Yes	Adverse	Low	Localized	Long Term	Infrequent	Reversible	Low Resilience	High	Low significance
	Deposition of dust and emissions on vegetation, particularly rare plants. (CD, PC)	Dust control measures will be implemented as per the Air Quality Management Plan.	Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	Low Resilience	High	Low significance
Wildlife												
	Habitat availability (loss) for Klaza Caribou. (C)	Placing construction camps outside of the KCH winter range, and borrow pits outside of KCH winter range where possible	Yes	Adverse	Low (4.75% of high quality habitat or 2.75% of all habitat combined)	Localized	Permanent	Infrequent	Reversible	High resilience	High	Not significant
	Habitat availability (reduced effectiveness) for Klaza Caribou. (C, O)	Timing road construction activities to minimize or avoid disturbance during the late-winter period (1 February to 30 April) within the KCH winter range	Yes	Adverse	Low	Widespread	Long term	Frequent	Reversible	High resilience	Moderate	Not significant
	Movement for Klaza Caribou. (O)	Implementing a policy to ensure caribou approaching the road are given the right-of-way Implementing snow bank management measures to facilitate caribou movement across the roadway; Designing road embankment heights and materials to allow for caribou movement	No	Adverse	Low	Widespread	Long-term	Infrequent	Reversible	Low resilience	Moderate	Not significant
	Mortality risk for Klaza Caribou. (O, CD, PC)	Restricting access to the road during operation by installing a continuously manned gate at Big Creek	No	Adverse	Low	Widespread	Long term	Infrequent	Reversible	High resilience	Low	Not significant
	Habitat availability (loss) for Moose. (C)	Placing construction camps outside of the KCH winter range, and borrow pits outside of KCH winter range where possible Manage roadside vegetation along Project roads to discourage moose foraging	Yes	Adverse	Low (0.80% of high and 2.72% of moderate quality habitat)	Localized	Permanent	Infrequent	Reversible	High resilience	High	Not significant

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				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Habitat availability (reduced effectiveness) for Moose. (C, O)	Timing road construction activities to minimize or avoid disturbance during the late-winter period (1 February to 30 April) within the KCH winter range Manage roadside vegetation along Project roads to discourage moose foraging; minimize Project footprint.	Yes	Adverse	Low	Widespread	Long term	Frequent	Reversible	High resilience	Moderate	Not significant
	Movement for Moose (C, O)	Pipeline clearance (distance from bottom of pipeline to ground) could be a minimum of 180 cm every 400 to 700 m (depending on terrain) Portions of the pipeline could be completely buried (not visible aboveground) to prevent a barrier to movement. Pipeline crossing structures (made of vegetated fill or soil) may be constructed in high density crossing/ movement areas or areas where the pipeline cannot be raised to sufficient height or buried completely	Yes	Adverse	Low	Widespread	Long-term	Infrequent	Reversible	High resilience	Moderate	Not significant
	Mortality risk for Moose. (O, CD, PC)	Implement a no-hunting policy for Project employees while on site. Implement a zero tolerance policy for wildlife harassment by employees and contractors. Give wildlife right-of-way on all roads Radio communication among drivers to warn when wildlife are observed along roads. Restricting access to the road during operation by installing a continuously manned gate at Big Creek.	No	Adverse	Low	Widespread	Long term	Infrequent	Reversible	High resilience	Low	Not significant

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				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Habitat effectiveness for Grizzly Bear. (C, O)	Active den sites will be avoided during the denning season (November to May) Blasting within 500 m of active bear dens will be avoided Active bear dens will be avoided on a case by case basis	Yes	Adverse	Low	Localized	Long term	Frequent	Irreversible	Low resilience	Moderate	Not significant
	Security habitat for Grizzly Bear (C)	Active den sites will be avoided during the denning season (November to May) Blasting within 500 m of active bear dens will be avoided Active bear dens will be avoided on a case by case basis	Yes	Adverse	Low	Localized	Long term	Frequent	Reversible	Low resilience	Moderate	Not significant
	Denning habitat for Grizzly Bear. (C)	Active den sites will be avoided during the denning season (November to May) Blasting within 500 m of active bear dens will be avoided Active bear dens will be avoided on a case by case basis	Yes	Adverse	Low	Localized	Long term	Frequent	Reversible	Low resilience	Moderate	Not significant
	Linkage habitat for Grizzly Bear. (C)	Active den sites will be avoided during the denning season (November to May) Blasting within 500 m of active bear dens will be avoided Active bear dens will be avoided on a case by case basis	Yes	Adverse	Low	Localized	Long term	Frequent	Reversible	Low resilience	Moderate	Not significant
	Mortality risk for Grizzly Bear. (O, CD, PC)	Incorporating Best Management Practices for food, waste and fuel management into the design on the Project. Implement a no-hunting policy for Project employees while on site. Radio communication among drivers to warn when wildlife are observed along roads.	No	Adverse	Low	Localized	Long term	Infrequent	Reversible	Low resilience	Low	Not significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Habitat availability (loss) for Collared Pika. (C)	Minimize Project footprint. Avoid interfering with active dens. Implement a zero tolerance policy for wildlife harassment by employees and contractors.	Yes	Adverse	Low	Localized	Permanent	Infrequent	Reversible	Low resilience	High	Not significant
	Habitat availability (direct loss) for birds. (C)	Where possible given the terrain and other site-specific features, Project design will incorporate a minimum 100 m buffer between Project infrastructure and any ponds or open-water wetlands (e.g. marsh, fen etc.). Dust suppression methods will be employed along roads during dry summer periods.	Yes	Adverse	Low (less than 10% of high quality habitats lost to PDA)	Localized	Permanent	Infrequent	Reversible	High resilience	Moderate	Not significant
	Habitat availability (reduced effectiveness) for birds. (C, O)	Where possible given the terrain and other site-specific features, Project design will incorporate a minimum 100 m buffer between Project infrastructure and any ponds or open-water wetlands (e.g. marsh, fen etc.). Dust suppression methods will be employed along roads during dry summer periods.	Yes	Adverse	High within the LSA, but Low within the region	Localized	Long term	Frequent	Reversible	High resilience	Moderate	Not significant
	Physical loss of nest sites for cliff-nesting raptors. (C, O)	Nest-specific management plans within 500 m of PDA, wherever possible, a 500 m no-disturbance buffer around nests, annual occupancy surveys.	Yes	Adverse	High to individuals	Localized	Permanent	Infrequent	Reversible	Low Resilience	Low	Not Significant
	Sensory disturbance at nest sites for cliff-nesting raptors. (C, O)	Nest-specific management plans within 500 m of PDA, wherever possible, a 500 m no-disturbance buffer around nests, annual occupancy surveys.	Yes	Adverse	High to individuals	Localized	Long term	Frequent	Reversible	Low Resilience	Moderate	Not Significant

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				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Health Effects on waterfowl. (O, CD, PC)	Water quality monitoring, and if necessary, potential water quality mitigation, wildlife monitoring of tailings, and wildlife deterrence.	Yes	Adverse	Medium	Localized	Permanent	Infrequent	Reversible	High Resilience	Moderate	Not Significant
Employment and Income												
	Project purchases and Project workforce demands would generate employment opportunities for LSA and RSA residents. (C, O, CD)	Implementing a procurement process that gives preferences to suppliers from the RSA and in particular rural communities within the LSA; requiring cultural awareness training for employees and contractors.	Yes	Beneficial	High	Localized	Long Term	Continuous	Reversible	High resilience	High	Significant
	Increased employment opportunities would positively affect labour income for LSA and RSA residents. (C, O, CD)	Encouraging training and education so that workers can maximize incomes through: providing on-the-job training to assist local and regional workers to develop mining-specific skills; providing training and education for potential employees from Yukon and in particular the rural communities within the LSA; partnering with First Nation communities to access additional funding for training; implementing career training and development opportunities for employees once hired; and providing continuous, on the job safety training.	Yes	Beneficial	High	Localized	Long Term	Continuous	Reversible	High resilience	High	Significant
	Project competition for local labour may result in shortages in other sectors and industries. (C, O, CD)	Work with closing mines to transfer workers; target unemployed for trainable positions	Uncertain	Adverse	Low	Localized	Long Term	Continuous	Reversible	High resilience	Moderate	Not Significant
Employability												
	Training programs during operations would enhance the local and regional skills profile and employment levels. (C, O, CD)	Implementation of a Recruitment, Training, and Employment Plan that would seek to encourage recruitment of local/regional/territorial residents to the extent practical	Yes	Beneficial	High	Localized	Long Term	Continuous	Irreversible	High resilience	High	Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
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	Employment opportunities will increase incentive for educational attainment and training of local residents. (C, O, CD)	Implementation of a Recruitment, Training, and Employment Plan that would seek to encourage recruitment of local/regional/territorial residents to the extent practical	Yes	Beneficial	Medium	Localized	Long Term	Continuous	Irreversible	High resilience	Moderate	Not Significant
	Project employment will improve capacity and industry experience of workers. (C, O, CD)	Implementation of a Recruitment, Training, and Employment Plan that would seek to encourage recruitment of local/regional/territorial residents to the extent practical	Yes	Beneficial	High	Localized	Long Term	Continuous	Irreversible	High resilience	High	Significant
	Improved capacity and industry experience of contractors. (C, O, CD)	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	Yes	Beneficial	Medium	Localized	Long Term	Continuous	Irreversible	High resilience	Moderate	Not Significant
Economic Development and Business Sector												
	Economic Growth											
	Project purchases would increase Yukon's GDP and employment. (C, O, CD)	Contractors would be encouraged to hire local/regional residents to the extent practical.	Yes	Beneficial	High	Localized	Long Term	Continuous	Reversible	High resilience	High	Significant
	Project workforce demands would increase Yukon's GDP and employment. (C, O, CD)	CMC would seek to recruit local/regional/territorial residents to the extent practical (Section 14 Employment and Income).	Yes	Beneficial	High	Localized	Long Term	Continuous	Reversible	High resilience	High	Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Increased access from Freegold Road Upgrade may provide opportunities for more exploration activities, which in turn will increase Yukon's GDP and employment. (C, O, CD)	Local community members may enjoy enhanced access to recreational opportunities along this section of the road.	Yes	Beneficial	Medium	Localized	Long Term	Continuous	Reversible	High resilience	Moderate	Not Significant
	Re-spending by households of additional income that has been derived directly or indirectly from the mine employment will increase economic activity and businesses. (C, O, CD)	CMC would use local and regional suppliers when these suppliers can provide products and services at competitive prices and timeframes. The proponent would seek to recruit local/regional/territorial residents to the extent practical.	Yes	Beneficial	High	Localized	Long Term	Continuous	Reversible	High resilience	High	Significant
	Business Opportunities											
	Proposed Project purchases will create contract and business opportunities across the Yukon. (C, O, CD)	CMC would use local and regional suppliers when these suppliers can provide products and services at competitive prices and timeframes.	Yes	Beneficial	High	Localized	Long Term	Continuous	Reversible	High resilience	High	Significant
	Government Revenue											
	Direct and indirect taxes by Project, contractors and individuals will positively contribute to the Yukon tax revenues. (C, O, CD)	CMC would use local and regional suppliers when these suppliers can provide products and services at competitive prices and timeframes. The proponent would seek to recruit local/regional/territorial residents to the extent practical.	Yes	Beneficial	High	Localized	Long Term	Continuous	Reversible	High resilience	High	Significant
	During operations Project will pay royalties/Yukon Mining Tax to Yukon resulting in increased Government revenue. (O)	None	Yes	Beneficial	High	Localized	Long Term	Continuous	Reversible	High resilience	High	Significant

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	Additional direct and indirect taxes paid by Project employees will increase government revenues. (C, O, CD)	CMC would use local and regional suppliers when these suppliers can provide products and services at competitive prices and timeframes; The proponent would seek to recruit local/regional/territorial residents to the extent practical.	Yes	Beneficial	High	Localized	Long Term	Continuous	Reversible	High resilience	High	Significant
Community Vitality												
	Population changes from out-of-territory mine workers and their dependents moving residency to RSA. (C, O, CD)	Priority hiring for qualified local residents. employing a community liaison staff member who focuses on community relationships and working with community staff on housing/planning issues related to mine staff	Yes	Beneficial	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Population changes from migration to the RSA to take advantage of higher incomes and employment rates generated by the Project. (C, O, CD)	Implementing a hiring policy that encourages the employment of workers from Yukon and in particular the rural communities within the LSA; implementing a procurement process that gives preference to suppliers from the RSA and LSA.	Yes	Beneficial	Low	Localized	Long Term	Frequent	Reversible	High resilience	Moderate	Not Significant
	Employment opportunities and increased income would reduce economic hardship and improve well-being of local families. (C, O, CD)	None	Yes	Beneficial	Medium	Localized	Long Term	Frequent	Reversible	High Resilience	High	Not Significant
	Potential lack of employment and income equity for women, Aboriginal peoples, people with disabilities, and visible minorities. (C, O, CD)	Implementing a hiring policy that encourages the employment of workers from rural communities within the LSA; Work with Yukon Government agencies and Yukon College to identify barriers to employment and offer training programs to improve local hire and retention of staff	Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	High Resilience	Low	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	Positive spending decisions would enhance family and community wellbeing (i.e. positive spending on education)/ Negative spending decisions would reduce family and community wellbeing (i.e. crime, addictions). (C, O, CD)	Offer to deposit workers' salaries in their bank accounts. Identify money management training opportunities as required to those employees who do not have experience with high wage earnings and working in mines. Implement a zero tolerance policy with respect to drug and alcohol at the Project site for Project employees and contractors. Work with local agencies to monitoring Project socio-economic effects and to take corrective actions where appropriate	Yes	Beneficial/ Adverse	Low	Localized	Long Term	Frequent	Reversible	High Resilience	Moderate	Not Significant
	Influx of workers and their families could create negative behavioural changes and reduce family and community well-being if transient population engages in socially disruptive or illegal activities (i.e. crime, alcoholism). (C, O, CD)	The project will have a self-contained camp on site to house workers. A zero tolerance policy with respect to drug and alcohol use will be implemented at the Project site for Project employees and contractors. Identify money management training opportunities as required to those employees who do not have experience with high wage earnings and working in mines. Work with local agencies to monitoring Project socio-economic effects and to take corrective actions where appropriate	Yes	Adverse	Low	Localized	Short Term	Frequent	Reversible	High Resilience	Moderate	Not Significant
	Separation of workers from family and dependants for extended periods of time could lead to deterioration of family relationships. (C, O, CD)	Facilitate communication between workers and their families by providing phone and Internet services on-site. Explore shift schedules that meet the needs of the operation and that are attractive to local hires. Identify money management training opportunities as required to those employees who do not	Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	High Resilience	High	Not Significant

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				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)		
		have experience with high wage earnings and working in mines. Work with local agencies to monitor Project socio-economic effects and to take corrective actions where appropriate.											
	Loss of jobs and income at the end of operations and potential out-migration could negatively affect family and community well-being. (C, O, CD, PC)	CMC will work with the community to develop a plan that identifies strategies and actions to help minimize potential adverse effects from closing the mine. Provide training opportunities to help employees get employment elsewhere.	Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	High Resilience	High	Not Significant	
Community Infrastructure and Services													
	Increase in demands for municipal infrastructure that are within the current LSA capacity and approved expansion plans. (C, O)	Providing a fly in/fly out camp. The pioneer camp will have local water and power supply and on-site sewage treatment plant and indoor and outdoor recreation services, which will offset Project's demand for municipal infrastructure; Employing a community liaison staff member who focuses on community relationships and working with community staff on infrastructure and services/planning issues related to mine staff; Monitoring project socio-economic effects and adapting management measures where required.	Yes	Adverse	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	
	Increase in housing demands that are within the current LSA capacity and approved expansion plans. (C, O)	Implementing priority hiring for qualified local residents; Providing incentives for workers hired from outside Yukon to relocate; Employing a community liaison staff member who focuses on community relationships and working with community staff on housing/planning issues	Yes	Adverse / Beneficial	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	

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		related to mine staff; Providing a fly in/fly out camp to partially offset Project's demands for housing services; Monitoring project socio-economic effects and adapting management measures where required.											
	Increases in demands for education services that are within the current LSA capacity; Project will expand education supply and enhance local qualifications. (C, O)	Providing a fly in/fly out camp; Providing support programs and initiatives at local schools and Yukon College; Implementing a Recruitment, Training, and Employment Plan; Monitoring project socio-economic effects and adapting management measures where required.	Yes	Adverse / Beneficial	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	
	Increase in demands for health services that are within the current LSA capacity. (C, O)	Providing a camp will partially offset Project's demands for regional health services; Employing a community liaison staff member who focuses on community relationships and working with community staff on infrastructure and services/planning issues related to mine staff; Monitoring project socio-economic effects and adapting management measures where required.	Yes	Adverse	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	
	Accidents at worksite could increase demand for regional health services and emergency services. (C, O)	Requiring all construction and operation activities to follow best practices as outlined in CMC's Environmental Health and Safety (EHS) Management System; Providing, 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 within the LSA;	Yes	Adverse	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	

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				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)		
		Providing full firefighting equipment and trained personnel to meet all on-site fire and rescue needs; Providing, at the mine site, trained mine rescue personnel and mine rescue equipment security; Monitoring project socio-economic effects and adapting management measures where required.											
	The arrival of workers and their families to the LSA will create additional demand on protective services. (C, O)	Committing to work closely on an ongoing basis with WGH, local fire departments, RCMP, and Yukon Ambulance to ensure that the appropriate information on the changes in area transportation volumes, and the change to the local population are considered; Providing contracted security services that will focus on ensuring a secure and safe work site with the following policies: no alcohol or drugs on-site, a respectful workplace, no harassment, safety and security, multi-cultural workforce considerations, and Aboriginal awareness training; Monitoring project socio-economic effects and adapting management measures where required.	Yes	Adverse	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	
	The arrival of workers and their families to the LSA will create additional pressure on traffic and transportation infrastructure. (C,O)	Monitoring ground and air transportation infrastructure traffic and mitigation measures; Employing a community liaison staff member who focuses on community relationships and working with community staff on infrastructure and services planning issues related to mine staff; Monitoring project socio-	Yes	Adverse	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	

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		economic effects and adapting management measures where required.											
	Traffic volumes to and from mine site would increase demand for health services and protective services (RCMP, fire department, ambulance) along the access road if accidents occur. (C, O)	Developing a Materials Transport Plan and Emergency Response Plan; Controlling speed limits; Committing to perform regular vehicle maintenance and regular road maintenance to reduce risk to motor vehicle safety; Monitoring project socio-economic effects and adapting management measures where required.	Yes	Adverse	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	
	Commuting workers from outside the LSA will create additional air passenger volumes and demands on air transportation infrastructure. (C, O)	Socioeconomic monitoring including monitoring ground and air transportation infrastructure traffic and mitigation measures; Liaising with Whitehorse Airport authority re. Worker Transportation Plan and evaluate peak passenger/aircraft volumes; as necessary, stagger work rotation schedule to minimize airport and passenger congestion; Monitoring project socio-economic effects and adapting management measures where required.	Yes	Adverse	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	
	Project transportation activities will increase traffic, road wear, and risk of accidents (e.g., collisions, spills, etc.) along the access road. (C, O)	Implementation of Casino Traffic Management Plan that includes: <ul style="list-style-type: none"> Adherence to posted speed limits Regular truck inspection and maintenance Signage and verbal and written notification about wildlife crossings Truck traffic communications and codes on access road Travelling in convoys in extreme 	Yes	Adverse	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant	

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		<ul style="list-style-type: none"> winter conditions Regular inspection, maintenance, dust suppression, and snow removal on Freegold Road and extension Implementation of Emergency Response and Spill Management Plan Carriers of dangerous goods will be in compliance with all international and territorial guidelines, acts, and regulation and will carry appropriate documentation Drivers of dangerous goods vehicles will be required to be familiar with all aspects of the Emergency Response and Spill Management Plan Monitoring of ground and air transportation infrastructure traffic and mitigation measures Building a new airstrip/access road at mine site and bussing workers from airstrip to onsite camp. 										
	Road extension and upgrades will improve transportation infrastructure. (C, O)	A 24/7 manned security and gate at start of Freegold Road Extension to control access to permitted users	Yes	Beneficial	Low	Local	Long Term	Continuous	Reversible	High Resilience	High	Not Significant
Cultural Continuity												
	Loss of or decreased area for recreational or subsistence hunting. (C, O, CD)	Reclamation and Closure Plan; compact Project footprint; Access Management Strategy	Yes	Adverse	Low	Localized	Long Term/ Permanent	Infrequent	Reversible	High Resilience	High	Not Significant
	Loss of or decreased area for recreational or subsistence plant harvesting. (C, O, CD)	Reclamation and Closure Plan; compact Project footprint; Access Management Strategy	Yes	Adverse	Low	Localized	Long Term	Infrequent	Reversible	High Resilience	Unknown	Not Significant

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	Access for recreational and subsistence hunting. (C, O, CD)	Access Management Strategy; Project employees and contractors will be restricted from hunting and fishing while on the job at any time	Yes	Adverse/ Beneficial	Low	Widespread	Long Term	Frequent	Reversible	High Resilience	High	Not Significant
	Access for recreational and subsistence plant harvesting. (C, O, CD)	Access Management Strategy; Project employees and contractors will be restricted from hunting and fishing while on the job at any time	Yes	Adverse/ Beneficial	Low	Localized	Long Term	Infrequent	Reversible	High Resilience	Moderate	Not Significant
	Increased noise, emissions and traffic (C, O, CD)	Implement appropriate EMPs (i.e. Air Quality Management Plan); equipment maintenance; sound buffering equipment/buildings; employees flown to site; Communications Plan (ensuring ongoing communications with First Nations and local stakeholders)	Yes	Adverse	Medium	Localized	Long Term	Frequent	Reversible	Low Resilience	High	Not Significant
Land Use and Tenure												
	Loss of area available for traditional land use activities (C,O, CD)	Limit mine footprint; implement appropriate best management practices and reclamation and closure measures; ensure ongoing communication with FN and local stakeholders.	Yes	Adverse	Low	Localized	Long Term / permanent	Infrequent	Reversible / Irreversible	High resilience	High	Not Significant
	Loss of available area for quartz and placer mining activities (C,O, CD)		Yes	Adverse	Medium	Localized	Long Term / permanent	Infrequent	Reversible / Irreversible	High resilience	High	Not Significant
	Loss of area available for trapping and outfitting activities (C, O, CD)		Yes	Adverse	Low	Localized	Long Term / permanent	Infrequent	Reversible / Irreversible	High resilience	High	Not Significant

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	Easier access to area for others whose activities may conflict with FN traditional land use activities (Freegold Road Upgrade). (C, O, CD)	Existing tenure and individual access arrangements will be negotiated under the Freegold Road Extension Access Management Agreement. Implement access management measures and associated monitoring and communication plans. Ensure ongoing communication with FN and local stakeholders. Limit mine footprint; implement appropriate EMPs (i.e. Air Quality Management Plan) and reclamation and closure measures; ensure ongoing communication with local stakeholders.	Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	High resilience	Low / Moderate	Not Significant
	Reduced access to Traditional Territory due to road construction and traffic during construction, operations and decommissioning / closure (Freegold Road Upgrade). (C, O, CD)		Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Negotiated road access to Traditional Territory (Freegold Road Extension). (C, O, CD)		Yes/No	Adverse / Neutral / Positive	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Easier access to area for traditional land use activities. (Freegold Road Upgrade). (C, O, CD)		Yes	Beneficial	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Reduced road access to permitted tenure areas due to road construction and traffic during construction, operations and decommissioning /closure (Freegold Road Upgrade). (C, O, CD)		Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Negotiated road access to area for existing mineral tenure holders (Freegold Road Extension). (C, O, CD)		Yes/No	Adverse / Neutral / Positive	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Easier access to existing tenure areas and new permitted exploration activities (Freegold Road Upgrade). (C, O, CD)		Yes	Beneficial	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/High Resilience)	Probability of Occurrence (Low/Moderate/High)	
	No road access to area for recreational activities (Freegold Road Extension). (C, O, CD)	Existing tenure and individual access arrangements will be negotiated under the Freegold Road Extension Access Management Agreement. Implement access management measures and associated monitoring and communication plans. Ensure ongoing communication with FN and local stakeholders. Limit mine footprint; implement appropriate EMPs (i.e. Air Quality Management Plan) and reclamation and closure measures; ensure ongoing communication with local stakeholders.	Yes	Adverse	Low	Localized	Long Term	Infrequent	Reversible	High resilience	Low	Not Significant
	Reduced access to recreational areas due to road construction and traffic during construction, operations and decommissioning / closure (Freegold Road Upgrade). (C, O, CD)		Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Easier access to area for recreational activities (Freegold Road Upgrade). (C, O, CD)		Yes	Beneficial	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Negotiated road access to area for existing trappers and guide outfitters (Freegold Road Extension). (C, O, CD)		Yes/No	Adverse / Neutral	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Easier access to permitted concession areas for trappers and guide outfitters (Freegold Road Upgrade). (C, O, CD)		Yes	Beneficial	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Reduced access to trapping and guide outfitting concession areas due to road construction and traffic during construction, operations and decommissioning /closure (Freegold Road Upgrade). (C, O, CD)		Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	High resilience	High	Not Significant
	Easier access to area for others whose activities may conflict with trappers and guide outfitters (Freegold Road Upgrade). (C, O, CD)		Yes	Adverse	Low	Localized	Long Term	Frequent	Reversible	High resilience	Low / Moderate	Not Significant

VC Affected	Potential Effect	Proposed Mitigation	Residual Effect (Yes/No)	Potential Degree of Effect after Mitigation								Significance of Residual Effect
				Direction	Magnitude (Low/Medium/High)	Geographic Extent (Localized/Widespread)	Duration (Short Term/Long Term/ Permanent)	Frequency (Infrequent/Frequent)	Reversibility (Reversible/Irreversible)	Context (Low Resilience/ High Resilience)	Probability of Occurrence (Low/Moderate /High)	
	Reduced wilderness experience for FN traditional land use activities (mine site, Freegold Road Upgrade and extension). (C, O, CD)	Limit mine footprint; implement appropriate EMPs (i.e. Air Quality Management Plan) and reclamation and closure measures; ensure ongoing communication with local stakeholders.	No	Adverse	Low	Localized	Long Term	Infrequent	Reversible	High resilience	High	Not Significant
	Reduced wilderness experience for trappers and guide outfitters utilizing the area (mine site, Freegold Road Upgrade and extension). (C, O, CD)		Yes	Adverse	Low	Localized	Long Term	Infrequent	Reversible	High resilience	Low / Moderate	Not Significant
	Reduced wilderness experience for recreational land use activities (Freegold Road Upgrade). (C, O, CD)		Yes	Adverse	Low	Localized	Long Term	Infrequent	Reversible	High resilience	High	Not Significant

Table 24.1–2 Table of Commitments

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

Number	Commitment	Adverse Residual Effect	Proposal Section
		<p>subsistence hunting, fishing and harvesting.</p> <ul style="list-style-type: none"> Engagement of the whole Selkirk First Nation community in the preparation of the environmental assessment, including the socioeconomic effects assessment. Have you yet performed a Failure Modes Effects Analysis (FMEA)? 	
4	CMC will monitor project socio-economic effects and adapt management measures where required.	<ul style="list-style-type: none"> Development and use of spur roads off of the primary Casino project access road. 	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"> First Nations need capacity to participate in the assessment process. 	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"> Increased traffic and spur roads. 	2
Environmental Management Plans			
7	<p>Erosion and Sediment Control Management Plan</p> <ul style="list-style-type: none"> CMC will develop a final plan prior to construction and operations. The Plan will describe the measures to be undertaken to manage erosion and sedimentation during all phases. 	<ul style="list-style-type: none"> As described in Section 7.4. 	22.3
8	<p>Air Quality Management Plan</p> <ul style="list-style-type: none"> CMC will develop a final plan prior to construction and operations. 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. 	<ul style="list-style-type: none"> As described in Section 8.4. 	22.3

Number	Commitment	Adverse Residual Effect	Proposal Section
9	<p>Waste Management Plan</p> <ul style="list-style-type: none"> • CMC will develop a final plan prior to construction and operations. • The Waste Management Plan will describe the type of waste generated and related management strategies to responsibly handle, store, transport, and dispose of waste. 	N/A	22.3
10	<p>Wildlife Management Plan</p> <ul style="list-style-type: none"> • CMC will develop a final plan prior to construction and operations. • 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. 	<ul style="list-style-type: none"> • As described in Section 12.4 	22.3.2 Appendix 23A
11	<p>Heritage Resource Protection Plan</p> <ul style="list-style-type: none"> • CMC will develop a final plan prior to construction and operations. • Key components of the Heritage Resources Protection Plan will include: <ul style="list-style-type: none"> • Heritage resource protection policy; • Heritage resource overview; • Summary of the heritage resource impact assessment conducted as part of this Proposal; • Methods for identification, reporting, and protection of heritage resources; • Reporting requirements and contact list; and • Employee training. 	<ul style="list-style-type: none"> • As described in Section 18.4 	22.3
12	<p>Spills Contingency Management Plan</p> <ul style="list-style-type: none"> • CMC will develop a final plan prior to construction and operations; 	N/A	22.3 Appendix 22B

Number	Commitment	Adverse Residual Effect	Proposal Section
	<ul style="list-style-type: none"> • The following components will be included in the Spills Contingency Management Plan: <ul style="list-style-type: none"> ○ Spill categories ○ Spill prevention procedures ○ Spill response plan ○ Roles and responsibilities ○ Training ○ Internal and external reporting ○ Monitoring 		
13	<p>Occupational Health and Safety Management Plan</p> <ul style="list-style-type: none"> • CMC will develop a final plan prior to construction and operations. • 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. • 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. 	N/A	22.3
14	<p>Emergency Response Plan</p> <ul style="list-style-type: none"> • CMC will develop a final plan prior to construction and operations. 	N/A	22.3 Appendix 22A
15	<p>Hazardous Materials Management Plan</p> <ul style="list-style-type: none"> • CMC will develop a final plan prior to construction and operations. • 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. 	N/A	22.3 Appendix 22B

Number	Commitment	Adverse Residual Effect	Proposal Section
	<ul style="list-style-type: none"> A separate Cyanide Management Plan will be developed and implemented in recognition of the higher level of public concern associated with this substance. 		
16	<p>Road Use Plan</p> <ul style="list-style-type: none"> CMC will develop a final plan prior to construction and operations. 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. 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. 	N/A	22.3 Appendix 22A
Monitoring Programs			
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 mitigation measures. The Plan will be comprised of the following components:</p> <ul style="list-style-type: none"> Water Monitoring Program Air Quality and Fugitive Dust Monitoring 		23

Number	Commitment	Adverse Residual Effect	Proposal Section
	<ul style="list-style-type: none"> • Geochemical Monitoring Program • Meteorological Monitoring Program • Aquatic Monitoring Program • Permafrost Monitoring Program • Wildlife Monitoring Program • Reclamation Monitoring Program. 		
Surface, Geology Terrains and Soils			
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"> • Loss, damage to terrain features 	6
Water Quality			
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"> • Effects on water quality (general) 	7.4
20	CMC will incorporate Best Management Practices (BMPs) such as: <ul style="list-style-type: none"> • Minimizing disturbances in and near watercourses (e.g., clearing, grubbing, grading) • Monitoring of TSS and turbidity during construction to ensure compliance with applicable guidelines and permit conditions • Stabilizing and re-vegetating disturbed areas following construction • Designing appropriate sediment settling ponds that conform to applicable guidelines • Designing appropriate diversion ditching system upstream of ore stockpiles • Sediment control fencing installed around down- 	<ul style="list-style-type: none"> • Effects on water quality (general) 	7.4

Number	Commitment	Adverse Residual Effect	Proposal Section
	<p>gradient perimeter sections of the ore stockpiles</p> <ul style="list-style-type: none"> Dust suppressants and enforced traffic speed limits along all access roads. 		
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"> Effects on water quality (general) 	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"> Effects on water quality (general) 	7.4
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"> Effects on water quality (general) 	7.4
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"> Water quality 	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, temporary seeding, and mulching.	<ul style="list-style-type: none"> Effects on water quality (general) 	7.4
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"> Effects on water quality (general) 	7.4
27	A water management pond will be constructed that will	<ul style="list-style-type: none"> Change in surface water quality in Casino 	7.4

Number	Commitment	Adverse Residual Effect	Proposal Section
	collect surface runoff and seepage from the TMF embankments during operations and pump the water back to the TMF.	Creek and Dip Creek due to unrecovered seepage	
28	A winter seepage pond will be constructed at closure to hold back water during the winter months (December to April).	<ul style="list-style-type: none"> Change in surface water quality in Casino Creek and Dip Creek due to project discharge 	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"> Change in surface water quality in Casino Creek and Dip Creek due to project discharge 	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"> Changes in surface water quality due to atmospheric deposition 	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"> Change in surface water quality from increased erosion and sedimentation 	Table 7.4-5
32	Control contaminate discharge from the historic adit in upper Casino Creek.	<ul style="list-style-type: none"> Reduced water quality in Casino Creek due to adit discharge and TMF discharge 	7.5 Table 7.5.4
Air Quality			
33	Adhere to Occupational Health and Safety Act.	<ul style="list-style-type: none"> Exceedance of Yukon Ambient Air Quality Standards for SO₂, NO₂, CO 	8.4. Table 8.4-7
34	Use ultra-low sulphur content fuel.	<ul style="list-style-type: none"> Exceedance of Yukon Ambient Air Quality Standards for SO₂, NO₂, CO 	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"> Exceedance of Yukon Ambient Air Quality Standards for SO₂, NO₂. 	8.4 Table 8.4-7
36	Ensure regular equipment maintenance recommended by manufacturers.	<ul style="list-style-type: none"> Exceedance of Yukon Ambient Air Quality Standards for SO₂, NO₂, CO. 	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"> Exceedance of Yukon Ambient Air Quality Standards for SO₂, NO₂, CO. 	8.4 Table 8.4-7

Number	Commitment	Adverse Residual Effect	Proposal Section
38	Cover or use water sprays at dust generating areas.	<ul style="list-style-type: none"> Exceedance of Yukon Ambient Air Quality Standards for TSP, PM₁₀, PM_{2.5}. 	8.4 Table 8.4-7
39	Reduce drop heights for process plants.	<ul style="list-style-type: none"> Exceedance of Yukon Ambient Air Quality Standards for TSP, PM₁₀, PM_{2.5}. 	8.4 Table 8.4-7
40	Cover or use water sprays at dust generating areas.	<ul style="list-style-type: none"> Exceedance of BC Air Quality Objectives for dustfall. 	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"> Exceedance of BC Air Quality Objectives for dustfall. 	8.4 Table 8.4-7
42	Establish blasting procedures for open pit activities to minimize dust.	<ul style="list-style-type: none"> Exceedance of BC Air Quality Objectives for dustfall. 	8.4 Table 8.4-7
43	Reduce drop heights for process plants.	<ul style="list-style-type: none"> Exceedance of BC Air Quality Objectives for dustfall. 	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"> Contribute to global greenhouse gasses. 	8.4 Table 8.4-7
Noise			
45	Ensure regular equipment maintenance, including lubrication and replacement of parts.	<ul style="list-style-type: none"> Increase in baseline noise level conditions. 	9.4 Table 9.4-4
46	Keep noisy equipment inside of buildings and sheds whenever possible.	<ul style="list-style-type: none"> Increase in baseline noise level conditions. 	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"> Increase in baseline noise level conditions. 	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"> Increase in baseline noise level conditions. 	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"> Increase in baseline noise level conditions. 	9.4 Table 9.4-4

Number	Commitment	Adverse Residual Effect	Proposal Section
50	Impose speed limits for all vehicles.	<ul style="list-style-type: none"> Increase in baseline noise level conditions. 	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"> Increase in baseline noise level conditions. 	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"> Increase in baseline noise level conditions. 	9.4 Table 9.4-4
Fish and Aquatic Resources			
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"> Lethal and non-lethal effects to fish and aquatic organisms. 	10.4 Table 10.4-10 Table 10.4-11 Table 10.4-12
54	<p>CMC will incorporate BMPs into all work, including:</p> <ul style="list-style-type: none"> Minimizing disturbances in and near watercourses (e.g., clearing, grubbing, grading) The use of cofferdams or stream diversions to de-water construction areas Diverting clean water around stream and river crossings during construction to maintain sufficient flows downstream Monitoring of TSS and turbidity during construction to ensure compliance with regulatory requirements Stabilizing and re-vegetating disturbed areas following construction Dust suppressants and enforced traffic speed limits along all access roads to reduce any potential contamination of nearby watercourses Best Management Practices for dust and other air contaminants as outlined in the Air Quality Management Plan Completing fish salvages prior to any in-stream activities in fish-bearing watercourses 	<ul style="list-style-type: none"> Lethal and non-lethal effects to fish and aquatic organisms . 	10.4 Table 10.4-11 Table 10.4-12

Number	Commitment	Adverse Residual Effect	Proposal Section
	<ul style="list-style-type: none"> • Following DFO guidelines for: <ul style="list-style-type: none"> ○ Timing windows for the protection of fish and fish habitat during critical life history stages ○ Freshwater Intake End-of-Pipe Fish Screen (DFO 1995), to avoid fish impingement and entrainment while pumping water during construction ○ The Use of Explosives In or Near Canadian Fisheries Waters (Wright and Hopky 1998) 		
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"> • Lethal and non-lethal effects to fish and aquatic organisms . 	10.4
56	<ul style="list-style-type: none"> • Bridges will be installed on all fish-bearing creeks where reasonably possible. • 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. • Clear-span bridge installation on fish-bearing watercourses will avoid any stream bed alteration, and rip rap will be installed below bridges to minimize the risk of slope failure. • Rip rap will be placed flush with the stream bank to avoid changes in channel volume or flows. 	<ul style="list-style-type: none"> • Lethal effects on fish and aquatic organisms. 	10.4 Table 10.4-10 Table 10.4-11 Table 10.4-12

Number	Commitment	Adverse Residual Effect	Proposal Section
	<ul style="list-style-type: none"> Any required temporary crossing structures will comply with measures outlined in DFO operational statements. Bridge construction will occur in the winter, where technically and economically feasible and reasonably practical. All major culvert construction will be completed during the summer months. Any temporary ice bridges will be removed prior to full spring break-up to prevent unnatural ice jamming and flooding. Final crossing structure sites, orientations and spans will be designed for sensitive sites to mitigate any potential impacts on aquatic habitat. 		
57	TMF spillway overflow to Casino Creek will follow a discharge schedule that will distribute flow increases across the summer months to limit downstream impact.	<ul style="list-style-type: none"> Fish habitat – increased flows 	10.4 Table 10.4-10
58	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.	<ul style="list-style-type: none"> Fish habitat – increased flows 	10.4 Table 10.4-10
59	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.	<ul style="list-style-type: none"> Increased erosion and sedimentation causing habitat loss and alteration and potential changes to habitat productive capacity. 	10.4
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</p>	<ul style="list-style-type: none"> Changes to Water quality - Lethal effects on fish and aquatic organisms 	10.4 Table 10.4-11 Table 10.4-12

Number	Commitment	Adverse Residual Effect	Proposal Section
	protection of the dam shell with rip rap.		
61	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.	<ul style="list-style-type: none"> Lethal effects on fish and aquatic organisms due to stranding or winter kill following reduced flows 	<p>Table 10.4-11 Table 10.4-12</p>
62	<p>CMC will provide a Fish Habitat Compensation 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"> Fish-bearing in-stream and riparian habitat loss ; Reduced stream flows, winter kills, fish stranding 	<p>10.4 Table 10.4-10</p>
63	<p>CMC will work to minimize effects of instream works in fish and aquatic habitats:</p> <ul style="list-style-type: none"> Isolate all instream works where there is potential to affect downstream habitats Limit duration and time activities to avoid high risk fisheries windows, weather or flow conditions Structures and materials will be placed in a manner that does not impede fish passage or migration Manage flow diversions and water abstraction to ensure adequate flows for fish Conduct fish salvages before instream work is undertaken in areas where fish stranding could occur. 	<ul style="list-style-type: none"> Lethal effects to fish and aquatic organisms Sub-lethal effects on fish and aquatic organisms due to change in habitat productive capacity 	<p>Table 10.4-11 Table 10.4-12</p>
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"> Lethal and sub-lethal effects to fish and aquatic organisms 	<p>Table 10.4-11</p>
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	<ul style="list-style-type: none"> Lethal and non-lethal effects to fish and aquatic organisms 	<p>Table 10.4-11 Table 10.4-12</p>

Number	Commitment	Adverse Residual Effect	Proposal Section
	bearing waters.		
66	CMC will implement a No fishing policy for CMC workforce.	<ul style="list-style-type: none"> Lethal effects on local fish populations due to increased fishing pressure 	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"> Direct mortality of periphyton, benthic invertebrates, and fish eggs due to infilling 	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"> Lethal effects on fish and aquatic organisms due to contamination from dust, emissions, and road runoff 	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"> Lethal effects on fish and aquatic organisms due to ML/ARD 	Table 10.4-11 Table 10.4-12
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"> Lethal effects on fish and aquatic organisms due to blasting residue contamination 	Table 10.4-11 Table 10.4-12
71	Control contaminate discharge from the historic adit in upper Casino Creek.	<ul style="list-style-type: none"> Cumulative effects 	10.5
72	<p>CMC will construct the Lower Britannia Creek Compensation Channel</p> <ul style="list-style-type: none"> reinstatement of the historical channel, to provide 13,643 m² of in-stream habitat and 116,940 m² of riparian habitat restoration of natural morphology free of obstructions re-introduction of flow permanent diversion at the divergence of the existing and historical channel fill and re-vegetate existing channel 	<ul style="list-style-type: none"> Habitat loss 	4.3 Fish Habitat Compensation Plan Appendix 10C

Number	Commitment	Adverse Residual Effect	Proposal Section
73	<p>CMC will construct a Groundwater-fed Pool near the mouth of Britannia Creek - pond will be excavated up to 3 m below the observed groundwater table to provide 2.5 m deep pool beneath a 0.5 m ice cover.</p>	<ul style="list-style-type: none"> Habitat loss 	<p>4.3 Fish Habitat Compensation Plan Appendix 10C</p>
74	<p>CMC will conduct Channel Restoration at seven historical fords:</p> <ul style="list-style-type: none"> accumulations of bar sediment will be removed and used to re-build natural bank morphology Brush layers will be constructed in both banks adjacent areas of floodplain will be replanted using live stakes of native willows. 	<ul style="list-style-type: none"> Habitat loss 	<p>4.3 Fish Habitat Compensation Plan Appendix 10C</p>
75	<p>CMC will construct a naturalized airstrip diversion channel:</p> <ul style="list-style-type: none"> diversion of a small, unnamed tributary of Dip Creek around the Project airstrip habitat area will be increased to 4,753 m², compared to the existing 1,509 m² average gradient will be approximately 2%. placement of gravel-cobble substrates and boulder groups along the straight riffle sections Brush layers will be installed just below the tops of banks Root wads will be embedded in the outer banks of meanders and secured with an anchor logs <p>The existing channel will be filled and replanted upstream of the airstrip</p> <ul style="list-style-type: none"> Specifications on the alignment, dimensions and construction of the airstrip diversion channel will be finalized during detailed design. 	<ul style="list-style-type: none"> Habitat loss 	<p>4.3 Fish Habitat Compensation Plan Appendix 10C</p>

Number	Commitment	Adverse Residual Effect	Proposal Section
76	<p>Chinook Project Contribution</p> <ul style="list-style-type: none"> • CMC is in the process of consulting with SFN and Yukon-based organizations including the Yukon Salmon Sub-Committee and the Yukon River Panel to identify potential opportunities for off-site compensation specifically aimed at restoring, enhancing or creating Chinook habitat for the benefit of current and future generations • CMC commits to identifying, designing, constructing and monitoring at least 9,756 m² of new, enhanced or restored Chinook spawning and rearing habitat, with the option of introducing or re-introducing Chinook salmon to this habitat as appropriate • CMC is also exploring complementary measures, such as investments in data collection and scientific research related to maintaining or enhancing the productivity of commercial, recreational or Aboriginal fisheries. 	<ul style="list-style-type: none"> • Habitat loss 	<p>4.3 Fish Habitat Compensation Plan Appendix 10C</p>
77	<p>Riparian Habitat Compensation</p> <ul style="list-style-type: none"> • Reinstatement of lower Britannia Creek - 116,940 m² of existing mature forest adjacent to historical channel (assumes 30 m buffer) • Groundwater-fed pool near Britannia Creek mouth - 16,200 m² of existing mature forest and replanted shoreline embankments, with large woody debris structures, around perimeter of pool (assumes 30 m buffer) • Britannia Creek ford restoration - 2,400 m² of Replanted riparian vegetation with live willow stakes and brush layers, and native tree seedlings (assumes 15 m buffer) • Naturalized airstrip diversion channel - 57,030 m² 	<ul style="list-style-type: none"> • Habitat loss 	<p>4.3 Fish Habitat Compensation Plan Appendix 10C</p>

Number	Commitment	Adverse Residual Effect	Proposal Section
	<p>of existing mature forest encompassing area of proposed naturalized channel diversion (assumes 15 m buffer)</p> <ul style="list-style-type: none"> Chinook project contribution - 163,400 m² of riparian habitat, details TBD in consultation with Selkirk First Nation, DFO and other organizations. 		
78	<ul style="list-style-type: none"> Proposed habitat restoration and enhancement measures will be completed in accordance with the applicable “reduced risk timing window” for in-water work All channel works will be completed “in the dry”, either by conducting work along sections of channel that are dry or completely frozen or by isolating the work area from flowing water Any fish that become stranded in isolated work areas will be captured, identified and released upstream by a qualified fisheries technician with a collection license Erosion and sediment control measures will be established around the work area of the Groundwater-fed Pool near Britannia Creek Mouth Erosion and sediment control measures will be established along the length of the proposed naturalized airstrip diversion channel 	<ul style="list-style-type: none"> Habitat loss 	<p>5.1 Fish Habitat Compensation Plan Appendix 10C</p>
79	<p>An erosion and sediment control plan will be developed as part of an overall environmental management plan, prior to initiation of habitat compensation activities.</p>	<ul style="list-style-type: none"> Habitat loss 	<p>5.2 Fish Habitat Compensation Plan Appendix 10C</p>
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"> Construction monitoring Effectiveness monitoring: A monitoring program 	<ul style="list-style-type: none"> Habitat loss 	<p>5.1 Fish Habitat Compensation Plan Appendix 10C</p>

Number	Commitment	Adverse Residual Effect	Proposal Section
	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)		
Rare Plants and Vegetation Health			
81	<ul style="list-style-type: none"> • Planning and conducting Project activities that the Project footprint will be minimized to the extent possible. • Using established roads within the PDA during operation thereby limiting new disturbance to the PDA. 	<ul style="list-style-type: none"> • Loss of vegetation 	11.4
82	<ul style="list-style-type: none"> • Using equipment clean of soils from other sites; • For reclamation, using only local soil and rock material, or ensure that it is clean fill; • 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 • 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 Council for invasive plant control (YISC 2011). 	<ul style="list-style-type: none"> • Establishment of invasive species 	11.4
83	Implementing dust control measures, as per the air quality management guidelines.	<ul style="list-style-type: none"> • Dust deposition on vegetation, particularly rare plants 	11.4
84	Site selection to consider potential for rare plants, realign or in extreme circumstances transplant.	<ul style="list-style-type: none"> • Loss of rare plants and rare plant habitat 	11.4
85	<ul style="list-style-type: none"> • Use clean equipment. • Allow vegetation to re-establish naturally or by using native seed mixes. 	<ul style="list-style-type: none"> • Loss of rare plant habitat due to introduction or expansion of invasive species 	11.4

Number	Commitment	Adverse Residual Effect	Proposal Section
	<ul style="list-style-type: none"> Establish a program for invasive plant detection. 		
Wildlife			
86	CMC commits to all of the mitigations listed in the Wildlife Mitigation and Monitoring Plan (Appendix 23A).	<ul style="list-style-type: none"> Loss of wildlife habitat Restrictions on wildlife movement Wildlife mortality 	Appendix 23A
87	<p>To minimize effects on wildlife from mine site infrastructure and activity, CMC will:</p> <ul style="list-style-type: none"> Minimize the Project footprint; Not damage or interfere with active dens of any species; Implement a no-hunting policy for Project employees while working on site, mitigating mortality risk; Implement a zero tolerance policy for wildlife harassment by Project-related employees and contractors, mitigating mortality risk and habitat loss; Suppress dust on the road and at mine site during dry conditions to reduce the extent of dispersal into adjacent environments, mitigating habitat loss; Give wildlife the right-of-way when on all roads, mitigating mortality risk and habitat loss; and Freshwater pipeline to well system will be constructed to allow animal movement across (over or under). 	<ul style="list-style-type: none"> Loss of wildlife habitat Restrictions on wildlife movement Wildlife mortality 	12.3
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"> Design road embankment heights and materials to allow for wildlife movement; Manage snow embankments along the road to 	<ul style="list-style-type: none"> Loss of wildlife habitat Restrict wildlife movement Increased wildlife mortality 	12.3

Number	Commitment	Adverse Residual Effect	Proposal Section
	<p>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;</p> <ul style="list-style-type: none"> • Control access of non-project personnel to the road by installing and manning a gate, mitigating mortality risk; • Radio communication among drivers to warn others when wildlife are observed along the road, mitigating mortality risk; and • Implement measures to prevent and manage spills to reduce the potential for wildlife exposure to contaminants, mitigating reduced health. 		
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"> • 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; • Implementing a policy to ensure caribou approaching the road are given the right-of-way; • Implementing snow bank management measures to facilitate caribou movement across the roadway; • Designing road embankment heights and materials to allow for caribou movement; and • Placing construction camps and borrow pits to minimize or avoid disturbance to the KCH. 	<ul style="list-style-type: none"> • Loss of caribou habitat • Restrict caribou movement 	12.3
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"> • Installing signage that warns drivers of known caribou crossing or foraging areas along the road; 	<ul style="list-style-type: none"> • Increased caribou mortality 	12.3

Number	Commitment	Adverse Residual Effect	Proposal Section
	<ul style="list-style-type: none"> • Reducing speed limits where caribou interact with the road during the winter; • Enforcing road speed limits by remotely tracking (e.g., GPS tracing) truck traffic; • Snow plowing escape routes for caribou; • Reporting of caribou sightings along the road to a wildlife monitor; • Ensuring constant radio communication among trucks to identify wildlife locations on an ongoing basis; • Employing a seasonal wildlife monitor to coordinate implementing caribou mitigations; • Reporting and investigating all Project-related caribou near-misses and mortalities; and • Triggering adaptive management strategies if there is a Project-related caribou mortality. 		
91	<p>CMC will mitigate the risk of increased caribou mortality from harvest by managing the Freegold Road extension as a private industrial road by:</p> <ul style="list-style-type: none"> • Restricting access to the road during operation by installing a continuously manned gate at Big Creek; • Decommissioning the road during the reclamation and closure phase; and • Development of a wildlife management working group, including regulators and stakeholders, to provide advice to governments on mitigation, monitoring and adaptive management strategies. 	<ul style="list-style-type: none"> • Increased caribou mortality 	12.3
92	<p>To reduce Project effects on moose, CMC will:</p> <ul style="list-style-type: none"> • Manage roadside vegetation along Project roads to discourage moose foraging (e.g., cutting roadside vegetation in spring, not mid-summer; and 	<ul style="list-style-type: none"> • Loss of moose habitat • Reduced movement 	12.3

Number	Commitment	Adverse Residual Effect	Proposal Section
	<ul style="list-style-type: none"> 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. 		
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"> Assess any new den sites identified during construction or operation to determine if they are currently utilized; Avoid blasting within 500 m of known den sites when bears are likely to be present; Avoid known, active bear dens during the denning season November through to mid-April; and Incorporate Best Management Practices for food, waste and fuel management into the design on the Project. 	<ul style="list-style-type: none"> Loss of grizzly bear denning habitat Increased grizzly bear mortality 	12.3
Employment and Income			
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"> Implementing a hiring policy that encourages the employment of workers from Yukon and in particular the rural communities within the LSA; Implementing a procurement process that, where 	<ul style="list-style-type: none"> Project workforce demands would increase local and regional employment Increased employment during construction and operations would positively affect labour income for LSA and RSA residents 	13.4

Number	Commitment	Adverse Residual Effect	Proposal Section
	<p>economically feasible, gives preferences to suppliers from the RSA and in particular from rural communities within the LSA;</p> <ul style="list-style-type: none"> • Requiring cultural awareness training for Project-related employees and contractors; • Monitoring Project socio-economic effects and adapting management measures where required; • Providing on-the-job training to assist local and regional workers to develop mining-specific skills; • Providing training and education for potential employees from Yukon and in particular the rural communities within the LSA; • Partnering with First Nation communities to access additional funding for training; • Supporting non-mining training and entrepreneurial initiatives; and • Implementing career training and development opportunities for employees once hired. 		
95	<p>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.</p>	<ul style="list-style-type: none"> • Project competition for local labour may result in shortages in other sectors and industries 	13.4
96	<p>CMC will use reasonable best efforts to draw workers from the existing unemployed or underemployed regional labour pool.</p>	<ul style="list-style-type: none"> • Project purchases would generate employment opportunities for LSA and RSA residents 	13.4
97	<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 by:</p> <ul style="list-style-type: none"> • Implementing a hiring policy that encourages the employment of workers from Yukon and in particular the rural communities within the LSA; • Implementing a procurement process that, where 	<ul style="list-style-type: none"> • Project workforce demands would increase local and regional employment • Increased employment during construction and operations would positively affect labour income for LSA and RSA residents 	

Number	Commitment	Adverse Residual Effect	Proposal Section
	<p>economically feasible, gives preferences to suppliers from the RSA and in particular from rural communities within the LSA;</p> <ul style="list-style-type: none"> • Requiring cultural awareness training for Project-related employees and contractors; • Monitoring Project socio-economic effects and adapting management measures where required; • Providing on-the-job training to assist local and regional workers to develop mining-specific skills; • Providing training and education for potential employees from Yukon and in particular the rural communities within the LSA; • Partnering with First Nation communities to access additional funding for training; • Supporting non-mining training and entrepreneurial initiatives; and • Implementing career training and career advancement opportunities for employees once hired. 		
98	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"> • Project competition for local labour may result in shortages in other sectors and industries 	
Employability			
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"> • Loss of operational employment at closure resulting in a large net decrease in local and regional employment 	
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"> • Training programs during operations would enhance the local and regional skills profile and employment levels • Employment opportunities will increase 	14.4

Number	Commitment	Adverse Residual Effect	Proposal Section
		incentive for educational attainment and training of local residents <ul style="list-style-type: none"> • Project employment will improve capacity and industry experience of workers 	
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"> • Improved capacity and industry experience of contractors 	14.4
Economic Development and Business Sector			
102	CMC will encourage contractors to hire local/regional residents to the extent practical.	<ul style="list-style-type: none"> • Project purchases of goods and services would increase Yukon GDP and employment 	15.4

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

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

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

Number	Commitment	Adverse Residual Effect	Proposal Section
	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.	Protective Services	
112	CMC will provide contracted security services that will focus on ensuring a secure and safe work site.	<ul style="list-style-type: none"> Infrastructure and service capacity 	
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"> Population change will alter demand for housing and temporary accommodation 	
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"> Increase demand for educational services 	
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"> Increased traffic and risk for motor vehicle collisions on the Klondike Highway and Fregold Road 	
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 passenger congestion.	<ul style="list-style-type: none"> Demands on air transportation infrastructure 	
117	CMC will work with communities in the LSA to develop a	<ul style="list-style-type: none"> decrease demand for housing and 	

Number	Commitment	Adverse Residual Effect	Proposal Section
	mine closure plan that identifies strategies and actions to help minimize the potential adverse effects of closing the mine.	temporary accommodation and local services	
Cultural Continuity			
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"> General cultural effects 	18.4
119	CMC will design the Project to have as compact a mine site footprint as practicable.	<ul style="list-style-type: none"> General cultural effects 	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"> General cultural effects 	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"> General cultural effects 	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"> General cultural effects in Maximum Disturbance Area 	18.4 Table 18.4-4
123	<p>Access Mitigation - A Road Use Management 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"> No public access on the Freegold Road Extension or access by permit, as directed and agreed by the the Yukon and First Nation governments. Controlled, gated, manned access at the new bridge over Big Creek or as otherwise agreed. A stakeholder communication /engagement plan to 	<ul style="list-style-type: none"> General cultural effects related to access as the result of the use of the Freegold Road Extension. 	18.4 22

Number	Commitment	Adverse Residual Effect	Proposal Section
	ensure concerns are identified and addressed.		
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"> General cultural effects related to access 	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"> General cultural effects related to access 	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"> General cultural effects related to access 	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"> General cultural effects related to access 	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"> Implement Environmental Management Plans Minimizing traffic noise and emissions by incorporating accepted best management practices Ensuring on-site equipment is regularly maintained to control noise and emissions Proper sound buffering of the ore processing facility on site Implement an Air Quality Management Plan On-going communications and engagement with First Nations to document potential effects associated with traffic, emissions and noise along the Freegold Road corridor. 	<ul style="list-style-type: none"> General cultural effects related to ambience 	18.4.2 & Table 18.4-4
129	Mine employees and contractors will be restricted from harvesting within the mine site footprint and while on	General cultural effects related to loss of plant/animal resources	18.4.2 & Table 18.4-4

Number	Commitment	Adverse Residual Effect	Proposal Section
	shift at any time.		
130	<p>To minimize effects associated with employment at the mine CMC will include:</p> <ul style="list-style-type: none"> • Shift flexibility, when possible, to accommodate subsistence harvesting and participation in cultural activities/events • Supporting efforts to revitalize Northern Tutchone language and incorporate Northern Tutchone language into mine signage in consultation with the SFN and LS/CFN; • Incorporating Aboriginal ceremonies at the mine site in consultation with the SFN and LS/CFN; • Providing support for community cultural events based on input from SFN and LS/CFN and other local communities; and • Conduct cultural awareness training for all employees and contractors working at the mine site. 	General cultural effects related to opportunities to participate in cultural activities	18.4.2 & Table 18.4-4
Land Use and Tenure			
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"> • Loss of available area for FN traditional land use activities • Loss of available area for quartz and placer mining • Loss of available area for trapping and outfitting 	
132	To mitigate against changes to access to traditional land, mineral tenures, and recreational lands CMC commits to:	<ul style="list-style-type: none"> • Changes to access to Traditional Territories, mineral tenures, trapping areas, guide outfit concessions and 	

Number	Commitment	Adverse Residual Effect	Proposal Section
	<ul style="list-style-type: none"> • 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. • Implement access management measures and associated monitoring and communication plans. • ongoing communication with FN and local stakeholders. 	recreational areas	
133	CMC will <ul style="list-style-type: none"> • limit mine footprint; • implement appropriate EMPs (e.g., Air Quality Management Plan) and reclamation and closure measures; • maintain ongoing communication with local stakeholders. 	<ul style="list-style-type: none"> • Reduced wilderness experiences for First Nations, trappers, outfitters and recreational land users 	
134	CMC will limit this potential cumulative effect by: <ul style="list-style-type: none"> • Implementing a no public access policy unless directed by the Yukon and First Nations Governments • Manned access at control points • 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. 	<ul style="list-style-type: none"> • Overall increase in existing and future permitted placer and quartz exploration and mining activities along the Freegold Road Upgrade 	