



Physical, Biological and Socio-Economic Effects Assessment: Lupin Mine Winter Access

Table 1 Potential physical, biological and socio-economic effects and proposed mitigation measures.

Valued Component	Activity	Effect	Proposed Mitigation Measure	Residual Impacts	Implementation Schedule	Proposed Monitoring Schedule	Reporting Schedule
Physical Components							
Air Quality	Winter road construction, operation, and seasonal closure	Negative and mitigable	Conduct routine preventative maintenance on engines. Implement <i>Environmental and Cultural Heritage Resources Protection Management Plan</i> .	None predicted.	Ongoing from the commencement of Construction until Closure.	In accordance with NIRB Screening Decision Report and Land Use Permit.	In accordance with NIRB Screening Decision Report and Land Use Permit.
Ground Stability	Winter road construction, operation, and seasonal closure	Negative and mitigable	Move equipment overland only when conditions are such that rutting or gouging will not occur. Utilize existing winter road corridor. Implement <i>Environmental and Cultural Heritage Resources Protection Management Plan</i> .	None predicted.	Ongoing from the commencement of Construction until Closure.	In accordance with NIRB Screening Decision Report and Land Use Permit.	In accordance with NIRB Screening Decision Report and Land Use Permit.
Hydrology	Winter road construction	Negative and mitigable	Water use in accordance with NWB approval and permit.	None predicted.	Throughout construction, as needed.	In accordance with NWB Approval terms and conditions.	In accordance with NWB Approval terms and conditions.

			Implement <i>Environmental and Cultural Heritage Resources Protection Management Plan</i> .				
Noise Levels	Winter road construction, operation, and seasonal closure	Negative and mitigable	<p>Conduct routine preventative maintenance on engines.</p> <p>Ensure mufflers are in use, as required by manufacturers.</p> <p>Implement <i>Environmental and Cultural Heritage Resources Protection Management Plan</i>.</p>	None predicted.	Ongoing from the commencement of Construction until Closure.	As required by manufacturer.	In accordance with NIRB Screening Decision Report and Land Use Permit.
Water Quality	Winter road construction, operation, and seasonal closure	Negative and mitigable	<p>Activate the <i>Spill Contingency Management Plan</i> where required.</p> <p>Implement the <i>Environmental and Cultural Heritage Resources Management Plan</i>.</p>	None predicted.	Ongoing from the commencement of Construction until Closure.	In accordance with NIRB Screening Decision Report and Land Use Permit.	In accordance with NIRB Screening Decision Report, Land Use Permit and NWB Approval terms and conditions.
Biological Components							
Aquatic Species	Winter road construction	Negative and mitigable	Equip water intake hoses with appropriately sized mesh screens.	None predicted.	During periods of water withdrawal.	In accordance with NIRB Screening Decision Report and NWB Approval.	In accordance with NIRB Screening Decision Report and

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Archaeological and Historical Sites	Winter road construction	Negative and mitigable	<p>Utilize existing winter road corridor.</p> <p>Where possible, avoid interaction with known archaeological sites.</p> <p>Where not possible to avoid interaction with known archaeological sites, proceed with direction from the territorial Archaeologist.</p> <p>Implement the <i>Environmental and Cultural Heritage Resources Protection Management Plan</i>.</p>	None predicted.	During construction.	As required, in consultation with the project archaeologist and the Territorial Archaeologist.	As required, in consultation with the project archaeologist and the Territorial Archaeologist.
Employment	Engagement, winter road construction, operating and seasonal closure	Positive	Utilize local personal wherever possible.	Positive: economic benefits for Kitikmeot employed, directly or indirectly, by the Project.	Ongoing from pre-construction engagement, through to the commencement of Construction until Closure.	In accordance with NIRB Screening Decision Report.	In accordance with NIRB Screening Decision Report.