

## Reclamation Challenges at Usibelli Coal Mine In Healy, Alaska

by

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**Abstract.** Successful reclamation in the Interior of Alaska requires planning in order to avoid major setbacks. Usibelli Coal Mine is located at a North Latitude of approximately 64 degrees. Temperature extremes in the Interior of Alaska range from a high of 90 degrees Fahrenheit to a low of minus 60 degrees Fahrenheit. The challenges in this sub-arctic climate are many. Several unique reclamation challenges are present due to the cold climate. Discontinuous permafrost is prevalent on north facing slopes. This presents stability problems if placed in inappropriate locations. Very detailed planning is required to assure that no stability problems occur. The construction of drainage channels in ice-rich permafrost areas also requires extra care to assure that water flows along the surface rather than down into the spoil. Mineral topsoil is often not present on the areas to be mined. Often non-salvageable organic permafrost soils are present. These require special handling and must be isolated to avoid stability problems. Since the ground is frozen for 7-8 months a year the reestablishment of vegetation requires a very aggressive planting schedule. Grass seed is applied by fixed wing aircraft and shrubs are planted from locally collected seed. By planning properly prior to mining successful reclamation can take place in the Interior of Alaska.

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