

# Mining Matters

## WHEN DO WE MINE?

An exploration project submits assay (test) results to the Securities Commission during a drilling program, but what do those numbers mean in terms of getting a mine up and running? Once the amount of minerals present (a resource calculation) at a property is established, the values of the minerals are calculated using current standardized prices (these vary with the commodities market).

For example, Exploration Project A owned by Mining Company B returns numbers of 0.3% copper (Cu), 0.3g/tonne gold (Au), and 0.04% molybdenum (Mo). Each number is then translated into US dollars/ton (assuming 2000lbs/ton) or:

0.3% Cu = about 6lbs Cu/ton of rock @ \$3.50/lb Cu = \$21.00 of Cu /ton of rock

0.3 g/tonne Au = about 0.01 oz where 1 oz @ \$1200/oz = \$ 12.00 of Au/tonne of rock

0.04% Mo = .8 lbs Mo/ton of rock @ \$14/lb = \$11.20 of Mo/ton of rock

Total value/tonne of rock to be mined: \$44.20

Once the cost of mining is established (this will vary for each site according to access, transportation costs, camp costs, salaries, etc.), it is then decided whether or not to proceed with the project. If the cost of mining and milling is, say, \$20/tonne, then Mining Company B stands to make a gross profit of \$24.20/tonne (assuming 100% recovery, which is never the case!). As long as there is enough tonnage to cover the initial capital costs of building the mine as well as show a profit, Exploration Company A has the positive data it needs to go out and find investors.

And, of course, these are only numbers and don't take into account social and environmental (among other) factors.

*"Mining Matters" is a bi-monthly column written by Anastasia Ledwon, P.Geo., and welcomes your feedback and questions at [general@smithers.ca](mailto:general@smithers.ca).*

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