

## GLOSSARY OF CERTAIN TECHNICAL TERMS

*(For a description of proved and probable mining reserves and balance geological reserves, see "Mining Engineers' Report")*

"anode copper" . . . . .	Blister copper which has undergone further refinement to remove impurities. In an anode furnace, the blister copper is blown with air and natural gas or wood to upgrade its purity to approximately 99.0 per cent. copper. It is then cast into slabs that are shipped to a refinery where it acts as the anode in an electrolytic refining process.
"anode slime" . . . . .	The impurities collected at the bottom of the electrolytic cell during the electrolytic refining process which are used for precious metals recovery.
"blister copper" . . . . .	Copper which has been cast after passing through a converter. Blister copper is approximately 98.5 per cent. copper and derives its name from the "blisters" that form on its surface.
"cathode copper" . . . . .	Plates of copper which are produced by an electrolytic refining process. They are the principal copper products produced by the Company.
"concentration" . . . . .	The process by which ore is separated into metal concentrates and reject material through processes such as crushing, grinding and flotation.
"concentrator" . . . . .	A plant where concentration takes place.
"converting" . . . . .	A principal phase of the smelting process, which involves the blowing of air through molten metal, causing oxidation and the removal of sulphur and other impurities from the metal.
"copper concentrate" . . . . .	The product of the concentrator usually containing 20 per cent. to 30 per cent. copper. It is the raw material for smelting.
"cut-off grade" . . . . .	The lowest grade of mineralised material which is considered economic to extract. It is used in the calculation of the ore reserves in a given deposit.
"dilution" . . . . .	The process by which waste is unavoidably mined along with ore in the mining process. It is usually expressed as a percentage of the ore mined.
"electrolytic refining" . . . . .	The process by which copper anodes are placed alternately with refined copper starter sheets in a tank containing copper sulphate and sulphuric acid. A low voltage is then applied, causing copper ions to transfer from the anodes to the copper cathode sheets, producing 99.9 per cent. copper cathodes. Impurities or slime, often containing precious metals, settle to the bottom of the tank.
"flotation" . . . . .	The process by which milled ore is finely ground in water. Minerals in metal concentrates attach themselves to air bubbles forming an oily froth which rises to the top of the mixture where they are skimmed off. This process is used primarily for the concentration of sulphide ores.
"flotation cell" . . . . .	Appliance in which the froth flotation of ores is performed.
"grade" . . . . .	The percentage of metal content of an ore.
"hoisting shaft" . . . . .	A shaft which is used to transport ore and/or waste upward.
"hydraulic backfill" . . . . .	A technique which involves placing a mixture of sand, cement or processing tailings (and water) in underground voids as a fill material.
"mill" . . . . .	Industrial equipment used to grind ore finely after being crushed.
"milling" . . . . .	A treatment process involving fine grinding of ore prior to the extraction of minerals by the next process stage.

<b>"mineral deposit or mineralised material"</b> . . . . .	A mineralised ore body which has been identified by a sufficient number of closely-spaced drill holes and/or underground sampling to contain sufficient tonnage and ore grade to warrant further exploration or development. Mineral deposits or mineralised materials do not qualify as commercially mineable ore body reserves, as prescribed under standards generally applied within the mining industry, until a final and comprehensive economic, technical, and legal feasibility study based upon the test results has been concluded.
<b>"mineralisation"</b> . . . . .	A deposit of rock containing one or more minerals for which the economics of recovery have not yet been established.
<b>"ore"</b> . . . . .	A deposit of rock containing a mineral or aggregate of minerals from which metals can be mined or extracted.
<b>"pillars"</b> . . . . .	Blocks of rock left intact to act as support for shafts or other underground workings. These may be within the ore horizon.
<b>"reclamation"</b> . . . . .	The process of restoring mined land to a condition established by applicable law. Reclamation standards vary widely, but usually address ground and surface water, topsoil, final slope gradients, overburden and revegetation.
<b>"refining"</b> . . . . .	The purification of crude metallic products into saleable metal products.
<b>"rock burst"</b> . . . . .	A phenomenon experienced in the mines when there is either pillar failure in an area after completion of primary extraction or the collapse of the roof or sidewalls in active mining areas. This occurs when a volume of rock is strained beyond the elastic limit.
<b>"smelting"</b> . . . . .	A process of separating metal by fusion from those impurities with which it may be chemically combined or physically mixed.
<b>"tailings"</b> . . . . .	Finely ground rock from which valuable minerals have been extracted by milling and flotation.
<b>"tonnes"</b> . . . . .	Unit of weight equal to 1,000 kg. A metric tonne (MT) equals 2,204.6 pounds.
<b>"troy ounce"</b> . . . . .	A unit of weight used for precious metals. One troy ounce is approximately equal to 0.0311 kg.