**GLOSSARY**

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| **Acanthite** | Silver sulphide mineral ($Ag_2S$) |
| **Adit** | Tunnel excavated to access underground or for exploration purposes |
| **Ag** | Silver |
| **Agglomerate** | A breccia or conglomerate formed during volcanic activity |
| **Alluvial fan** | Unconsolidated terrestrial sediment composed of sorted or unsorted sand, gravel, and clay that has been deposited by water |
| **Alumite** | Hydrous potassium aluminium sulphate |
| **Andesite** | Igneous rock with 52% to 66% silica |
| **Anticline** | A fold or fold system in geological strata in the form of an arch. |
| **Argentiferous** | Containing silver |
| **Argillic alteration** | A type of wall rock alteration forming clay minerals in a host rock containing mineralisation |
| **Arsenopyrite** | An iron arsenic sulphide, FeAsS |
| **Artisanal workings** | Small scale mine workings excavated by local miners using mainly manual methods |
| **As** | Arsenic |
| **Au** | Gold |
| **Azurite** | An azure blue copper carbonate mineral often associated with other oxidised copper minerals and in copper ores |
| **Ba** | Barium |
| **Basalt** | A find grained, sometimes glassy basic igneous rock |
| **Base metal** | A mining industry term for copper, lead, tin or zinc |
| **Biotite mica** | A dark coloured sheet silicate mineral |
| **Bornite** | A purplish-brown copper-iron sulphide mineral often associated with other oxidised copper minerals and in copper ores |
| **Breccia/Brecciated** | A clastic rock composed of particles more than 2 millimetres in diameter and marked by the angularity of its component grains and rock fragments |
| **Ca** | Calcium |
| **Calcite** | Calcium carbonate mineral, common in altered basic igneous rocks and veins. |
| **Calcareous** | Refers to materials containing significant amounts of calcium carbonate |
| **Caldera** | A very large crater which may arise by the coalescence of several small craters, repeated explosion, collapse, or the stoping of surface rocks by a large underground magma chamber |
| **Chalcedony** | A micro crystalline form of silica |
| **Chalcocite** | A black/lead grey copper sulphide mineral |
| **Chalcopyrite** | A bright brass-yellow tetragonal sulphide mineral CuFeS, |
| **Chlorite** | A platy hydrous silicate related to mica |

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| **Chrysocolla** | A hydrated copper silicate found in the oxidised zones of copper deposits |
| **Clastic rocks** | Rocks built up of fragments of pre-existing rocks which have been produced by the processes of weathering and erosion, and in general transported to a point of deposition |
| **Co** | Cobalt |
| **Conglomerate** | Sedimentary rock with rounded or sub-rounded fragments of rock within a finer matrix |
| **Covellite** | An indigo-blue copper sulphide mineral often found in zones of secondary enrichment in copper |
| **Cretaceous** | A geological stratigraphic period of approximately 72 million years in duration, running between 136 and 64 million years ago |
| **Cu** | Copper |
| **Cu-Ni sulphide** | A sulphide of copper and nickel |
| **Cuprite** | Copper oxide mineral often found in weathering zones of copper deposits |
| **Dacite** | A fine-grained acid volcanic rock |
| **Dextral** | The apparent movement of a fault block to the right along the fault relative to the other side |
| **Diamond drilling (DD)** | Drilling method that obtains a cylindrical core of rock by drilling with an annular bit impregnated with diamonds |
| **Digenite** | A copper-iron sulphide mineral |
| **Dip** | The angle formed by the inclined plane of a geological structure and the horizontal plane of the Earth's surface |
| **Drill core** | Rock samples recovered by diamond drilling |
| **Dyke** | A sheet like body of igneous rock which cuts across the bedding or structural planes of the host rock |
| **Epithermal** | Low temperature (100-200°C) hydrothermal processes |
| **Fault** | A fracture in rock along which there has been an observable amount of displacement |
| **Fe** | Iron |
| **Ferruginous** | Containing iron |
| **Flotation mill** | Processing plant that concentrates economic mineral by flotation |
| **g/t** | Grammes per tonne |
| **Galena** | Lead sulphide |
| **Geochemical** | The study of abundance of chemical elements in overburden or rock |
| **Graben** | A downthrown block between two parallel faults |
| **Greywackes** | Arenaceous rocks composed of fine to coarse rock fragments. |
| **Haematite**<br>**Mercury** | An oxide of iron, and one of that metal's most common ore minerals Hg |
| **Hydrothermal processes** | |

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| | The name given to any processes associated with igneous activity which involve heated or superheated water |
| **Ignimbrite (Welded tuff)** | |
| | A pyroclastic rock consisting of layers of tuff material in which the edges of fragments have welded together due to the high temperature at the time of deposition |
| **Jarosite** | A hydrous sulphate of iron and potash |
| **Limonite** | The omnibus term used for a range of mixtures of hydrated iron oxides and iron hydroxides |
| **Malachite** | A bright green copper carbonate mineral occurring in oxidised zones of copper deposits and copper ores |
| **Mafic** | Descriptive of rocks composed predominantly of magnesium and iron rock-forming silicates |
| **Metamorphic grade** | Degree of alteration due to conditions of high pressure, temperature and / or chemically active fluid |
| **Mica** | Platy silicate minerals (phyllosillicates) |
| **Mineralisation** | This term is used almost exclusively for the introduction of ore minerals and gangue minerals into pre-existing rocks whether by veins, replacement, or in a disseminated fashion. |
| **Mn** | Manganese |
| **Mo** | Molybdenum |
| **Multi-episodic** | Occurring over several episodes |
| **Ni** | Nickel |
| **Oolite** | Limestone made of small spherical rock particles that have grown around nuclei |
| **Open pit** | A mine working or excavation open to the surface |
| **Ordovician** | The geological period between 500 and 435 million years ago, a duration of 65 million years |
| **Ore** | Material which can be mined and/or treated as a profit |
| **Orogeny** | A period of mountain building |
| **Orogensis** | The process of mountain building |
| **Outcrop** | A rock exposure |
| **Oxidised** | Decomposition near surface by exposure to the atmosphere and water |
| **Pb** | Lead |
| **Pleistocene** | A geological epoch in the Quaternary Period from 1.65 to 0.01 million years before present |
| **Pliocene** | Final epoch of the Tertiary period spanning the time between 5.3 and 1.8 million years ago |
| **Porphyry** | Term applied to medium-grained rocks containing phenocrysts of any mineral (strictly alkali feldspar phenocrysts) |

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| **Porphyry copper** | A large low-grade stockwork to disseminated deposits of copper which may also contain minor molybdenum gold and silver commonly in a granific host rock |
| **Porphyritic** | An igneous rock texture in which relatively large crystals are set ina finer-grained matrix |
| **ppb** | Parts per billion |
| **Precambrian** | That period of time from the consolidation of the Earth's crust to the base of the Cambrian some 570 million years ago |
| **Prophylitic alteration** | The hydrothermal alteration of a fine-grained igneous rock to a mass of secondary minerals such as chlorite, epidote, quartz, carbonates and sub-micas such as sericite |
| **Pyrite** | The most widespread iron sulphide mineral. An accessory mineral found/produced in igneous rocks; in ore veins; by contact metamorphism; in anaerobic sediments and magmatic segregation |
| **Pyrrhotite** | A magnetic iron sulphide mineral found in basic igneous rocks, pegmatites and contact metamorphic deposits |
| **Quartz** | Silicon dioxide mineral found in acidic igneous rocks, many metamorphic rocks and sedimentary rocks |
| **Quartzite** | Rock composed of interlocking quartz grains usually formed by the metamorphism of arenaceous rocks |
| **Resource** | An identified in situ mineral occurrence which excludes "Pre-Resource" mineralisation, from which valuable or useful minerals may be recovered. A resource may be reported as: an inferred resource; an indicated resource; or a measured resource |
| **Reverse Circulation (RC) Drilling** | |
| | Commonly percussive drilling method in which cuttings are raised to surface by a stream of compressed air inside the drill rods |
| **Rhyolite** | Fine grained to glassy acid mineral rocks |
| **Satellite imagery** | Images of the earth's surface recorded by satellites. Often data is recorded at differing wavelengths in order to enable studies of the differing spectral response of different parts of the landscape |
| **S** | Sulphur |
| **Sb** | Antimony |
| **Sedimentary units** | Pertaining to rocks formed from particles of rock or minerals deposited from suspension in water, wind or ice |
| **Sericite** | An alternation description term for fine grained white micas such as muscovite mica or paragonite mica |
| **Silurian** | The geological period extended from 435 to 395 million years ago,a duration of 40 million years |
| **Shear zone** | A zone in which shearing has occurred on a large scale |
| **Silicification** | The process whereby silica is introduced into a non siliceous rock either by the filling of pore spaces or by replacement of existing minerals |
| **Silicified rock** | Rock which has undergone silicification |

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| **Sinistral** | The apparent movement of a fault block to the left along the fault relative to the other side |
| **Soil anomaly** | Zone of soils that contain anomalous or above ordinary concentrations of an element |
| **Sphalerite** | A zinc sulphide mineral; the most common ore mineral of zinc |
| **Stockworks** | A network of veinlets, usually quartz |
| **Stratigraphic contact** | Plane where one stratigraphic unit meets another |
| **Stratigraphic unit** | Layered sedimentary or metamorphic rocks, especially their relative ages and correlation between different areas |
| **Strike** | Horizontal direction or trend of a bed of rock or a geological structure |
| **Strike slip shear zone** | Shear zone in which the movement has occurred parallel to a structures horizontal trend |
| **Stromatolite** | A fossil form representing the growth habit of an algal mat: concentric spherules, stacked hemispheres, or flat sheets of calcium carbonate and trapped silt encountered in limestones |
| **Stromeyerite** | A rare ore mineral of silver and copper |
| **Sulphide disseminations** | Where sulphide minerals are disseminated or dispersed throughout a rock |
| **Supergene** | Meaning 'from above' it is used almost exclusively for processes involving water, with or without dissolved material, percolating down from the surface. Typical supergene processes are solution, hydration, oxidation, deposition from solution and chemical substitution |
| **Synclinal** | See syncline |
| **Syncline** | A basin shaped fold in which rock are younging upwards |
| **Synform** | A basin shaped fold in which either no younging direction has been determined or in which the rocks young downwards |
| **Te** | Tellurium |
| **Tenantite** | Copper-iron sulphide |
| **Tourmaline** | A complex crystalline silicate containing aluminium, boron, and other elements associated with acid rocks but also occurring in schists and gneisses |
| **Trenches** | Linear excavations typically used by geologists to expose rock beneath shallow overburden |
| **Turbidites** | The sedimentary deposit of a turbidity current, typically showing graded bedding and sedimentary structures on the undersides of the sandstones |
| **Tuff** | Fine grained fragmental rock formed from deposits of volcanic detritus |
| **Tuffaceous** | A sedimentary rock with a significant tuff component |
| **Unconformity** | A surface that separates two strata and represents an interval of time in which deposition stopped, or erosion removed material before deposition resumed |
| **V** | Vanadium |

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| **Vuggy** | Texture of mineral veins containing cavities, or vughs, usually lined with crystals |
| **Volcanoclastics** | Description of a clastic rock containing volcanic material |
| **Zn** | Zinc |