TREASURY METALS

INCORPORATED

# GOLIATH GOLD PROJECT
# DRYDEN, ON
# ENVIRONMENTAL IMPACT STATEMENT

Treasury Metals Incorporated
130 King Street West, Suite 3680
Toronto, Ontario M5X 1B1
T: (416) 214-4654
F: (416) 599-4959

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amec foster wheeler

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## ACKNOWLEDGEMENTS

This document was prepared by Treasury Metals Inc. with the assistance of Amec Foster Wheeler (Amec Foster Wheeler). Document sections were authored as follows:

| No. | EIS Section | Primary Author |
|---|---|---|
| 1.0 | Introduction and Project Overview | Treasury Metals / Amec Foster Wheeler |
| 2.0 | Assessment of Alternatives | Treasury Metals / Amec Foster Wheeler |
| 3.0 | Project Description | Treasury Metals / Amec Foster Wheeler |
| 4.0 | Accidents and Malfunctions | Treasury Metals |
| 5.0 | Existing Environment | Treasury Metals |
| 6.0 | Description of Project Effects | Amec Foster Wheeler |
| 7.0 | Cumulative Effects | Amec Foster Wheeler |
| 8.0 | Determination of Significance of Residual Effects | Amec Foster Wheeler |
| 9.0 | Aboriginal and Public Engagement | Treasury Metals |
| 10.0 | Summary of Commitments | Treasury Metals / Amec Foster Wheeler |
| 11.0 | Benefits to Canadians | Treasury Metals / Amec Foster Wheeler |
| 12.0 | Environmental Management Plans | Amec Foster Wheeler |
| 13.0 | Environmental Monitoring Program | Amec Foster Wheeler |
| 14.0 | Conclusions | Amec Foster Wheeler |
| 15.0 | References | Treasury / Amec Foster Wheeler |

Technical studies and the resulting supporting documents appended to the revised EIS were conducted and prepared by the following:

| Appendix | | Primary Author |
|---|---|---|
| Appendix B | Optimization Study | Lycopodium Minerals Canada Ltd. |
| Appendix C | Mining Study | P&E Mining Consultants Inc. |
| Appendix D-1 | Tailings Storage Facility | WSP |
| Appendix D-2 | Multiple Account Analysis | Amec Foster Wheeler |
| Appendix E | Traffic Study | Keewatin-Aski Ltd. |
| Appendix F | Conceptual Water Balance | WSP |
| Appendix H | Acoustic Environment | RWDI Air Inc. |
| Appendix I | Light Environment | RWDI Air Inc. |
| Appendix J | Air Quality | RWDI Air Inc. |
| Appendix K | Geochemistry | EcoMetrix Incorporated |
| Appendix M | Hydrogeology | Amec Foster Wheeler |
| Appendix N | Surface Hydrology | DST Consulting Engineers Inc. |
| Appendix P | Aquatics Baseline Study | DST Consulting Engineers Inc. |
| Appendix Q | Summary Fisheries Baseline Report (2011–2016) | KBM Resource Group |
| Appendix R | Summary Wildlife Baseline Report (2011–2016) | KBM Resource Group |

| Appendix | | Primary Author |
|---|---|---|
| Appendix S | Wetlands Baseline Study (2016) | KBM Resource Group |
| Appendix T | Socio-economic Baseline | GCK Consulting |
| Appendix U | Heritage Resources | Boreal Heritage Consulting |
| Appendix V | Public Engagement | Treasury Metals |
| Appendix W | Screening Level Risk Assessment | Tetra Tech Inc. |
| Appendix X | Alternatives Matrices | Tetra Tech Inc. |
| Appendix BB | Preliminary Economic Assessment | A.C.A. Howe International Limited |
| Appendix DD | Aboriginal Engagement Report | Treasury Metals |
| Appendix EE | Country Foods Assessment | Treasury Metals |
| Appendix GG | Tailings Storage Facility Failure Modeling | Tetra Tech WEI Inc. |
| Appendix HH | Failure Modes and Effects Analysis | Tetra Tech Inc. |
| Appendix II | Fisheries Compensation Strategy and Plans | Treasury Metals |
| Appendix JJ | Water Report | Amec Foster Wheeler |

In addition to the studies appended to the revised EIS, The following technical studies were commissioned by Treasury Metals to support the early phases of the EA process, and had been appended to the original EIS:

| Appendix | Primary Author |
|---|---|
| Environmental Baseline Study | KBM Resource Group |
| Geochemical Modeling | Tetra Tech WEI Inc. |
| Hydrogeology Modelling | Tetra Tech WEI Inc. |

# GLOSSARY

| | |
|---|---|
| Acid Rock Drainage | The acidic water that is created when sulphide minerals are exposed to air and water and produce sulphuric acid |
| AARL Method | Anglo American Research Laboratory Method of Carbon elution for metallurgical gold recovery |
| Alienation | An area of Crown land that has been withdrawn from staking or other use for surface rights, mining rights or both under various legislative authorities |
| Aggregate | Crushed rock or gravel screen to sizes for uses in road surfaces, concrete, and construction mixes |
| Anthropogenic | Generated by humans |
| Baseline | Conditions that would prevail if no actions were taken |
| Baseline Conditions | Pre-project environmental conditions |
| Bedrock | Solid rock that underlies loose material such as soil, sand, clay, or gravel |
| Bench | Horizontal surface which is used to provide an area from which the Open Pit machinery can dig down to the subsequent level |
| Berm | A constructed shelf that breaks the continuity of a slope, or artificial ridge of earth, with the purpose of reducing erosion, or to increase the thickness of the embankment at a point of change in a slope or defined water surface elevation, or to direct surface water runoff |
| Blanket Drain | Drainage method using a horizontally placed layer (blanket) of permeable material to allow for the drainage of water |
| Canadian Council of Ministers of the Environment (CCME) | A council made up of environmental ministers from provincial and federal levels of government that proposes nationally consistent environmental standards and objectives to achieve high levels of environmental quality for waste management, air pollution, and toxic chemicals across Canada |

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|---|---|
| Canadian Environmental Assessment Act, 2012 | Federal legislation respecting the environmental assessment of certain activities and the prevention of significant adverse environmental effects. Catchment Area – The area of land which drains into a body of water |
| Carcinogen | A substance directly involved in the promotion of cancer |
| Chemical of Potential Concern | Project-related chemicals, elements and compounds that have the potential to elicit adverse human or ecological health effects |
| Claims to Lease | Process of converting a mining claim into a lease. A mining claim grants its owner the exclusive rights to explore for minerals on a designated piece of land. The owner of a mining claim is not granted title or ownership to the land and cannot extract or sell any resources removed from the land. A mining claim can be converted into a lease. A lease grants its owner title and ownership to the land, permits the extracting and sale of extracted resources and removes the requirement to perform yearly assessment work. |
| Collection System | A series of constructed and maintained connected ditches and ponds that collect surface runoff and groundwater seepage that has come in contact with Project components |
| Crown Land | Land belonging to the province of Ontario. It does not include: (a) land, the surface rights, mining rights or the mining and surface rights of which are under lease or licence of occupation from the Crown; (b) land in the actual use or occupation of the Crown, the Crown in right of Canada, or of a department of the Government of Canada or a ministry of the Government of Ontario; (c) land the use of which is withdrawn or set apart or appropriated for a public purpose; or (d) land held by a ministry of the Government of Ontario (“terre de la Couronne”) |
| Crown Timber | Timber on public lands or timber that is the property of the Crown under the management of the Minister of Natural Resources on lands other than public lands |
| Crusher | A machine used to break down aggregate into smaller pieces |

| | |
|---|---|
| Cumulative Effects | The environment effects that are likely to result from a project in combination with other physical activities that have or will be carried out |
| Cyanidation | The addition of cyanide to the ground slurry consisting of mineralized rock material and water which forms a water soluble complex of gold |
| Cyanide Detoxification | The process of removing cyanide from tailings using a sulphur dioxide/air oxidation process |
| Coagulant | An agent added to induce a process of contact and adhesion whereby the particles of a dispersion form larger-size clusters |
| Decibel (dB) | A logarithmic measure of any measured physical quantity and commonly used in the measurement of sound |
| Dewatering | To remove groundwater or surface water from an area for construction purposes. |
| Doré | A semi-pure alloy of gold and silver created at the mine site and then transported to a refinery for further purification |
| Drawdown | The drop in the water table or level of water in the ground when water is being pumped |
| Drive | An underground tunnel or development drift created for access to the underground mining areas |
| Effluent | Partially or completely treated wastewater flowing out of a treatment facility |
| Electrowinning | The process in which a current is passed from an inert anode through a liquid solution containing the metal so that the metal is extracted as it is deposited onto the cathode |
| Flocculation | A process of contact and adhesion whereby the particles of dispersion form larger-size clusters |
| Grubbing | The removal and disposal of stumps and roots remaining after vegetation clearing |

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|---|---|
| Hazard | A substance or other condition which that has the potential to cause harm to human, ecological or environmental receptors |
| Hazard Potential Classification (HPC) | A classification system defined by Ontario's Ministry of Natural Resources and Forestry that is used to determine the potential for flooding of dams |
| Illuminance | The total luminous flux (the perceived power of light) incident on a surface per unit area |
| Lowest Effect Level (LEL) | Indicating a level of sediment contamination that can be tolerated by the majority of benthic organisms |
| Luminance | Luminance is the luminous intensity (i.e., the power of light energy emitted) per unit area projected in a given direction. Luminance is measured in candela per square metre ($cd/m^2$). |
| Lux | The unit of measure for light incidence either in or outside the facility is a lux. A lux is equal to 1 lumen per square metre (lumen/$^2$) where a lumen is a measure of total quantity of visible light emitted by a source, weighted according to the human eye. |
| Mineralization | The process by which minerals of interest are geographically or organically formed |
| Mining Claim | A parcel of land, including land under water, that has been staked and recorded in accordance with the Mining Act, 1990 and the regulations |
| Mining Rights | The rights to minerals located in, on or under the land. Also referred to as mineral rights |
| Mitigation Measures | Measures taken to reduce, eliminate, or control effects on the environment |
| Monitoring | Periodic or continuous surveillance or testing to determine the characteristics of a substance or the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, plants, and animals |

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| Ore | Rock or earth containing workable quantities of a mineral or minerals of commercial value |
| Overburden | Soil or other consolidated materials overlying bedrock |
| Phreatic | The uppermost level at which the groundwater can be found |
| Preg robbing | The absorption by carbonaceous components which preferentially absorbs gold and gold-cyanide complexes |
| Point of Impingement (POI) | A defined point or points set at a defined distance from a facility (usually between the facility and special community receptors) at which a specific limit for air pollutants must be met |
| Potable water | Water suitable for drinking |
| Portal | Ramp entrance to the underground from surface |
| Progressive Rehabilitation | Rehabilitation done continually and sequentially during the entire period that a project or mine hazard exists |
| Provincial Water Quality Objectives (PWQO) | Document published by the Ontario Ministry of Environment and Energy that establishes permitted levels of contaminants/ parameters in water in order to protect aquatic life and recreation |
| Jumbo | Drilling machine typically used for the development (drilling and blasting) of underground tunnels and infrastructure |
| Runoff | The portion of precipitation or melt water that flows over the soil making its way to surface water supplies |
| SAG mill | Semi Autogenous Mill that uses steel balls and the rock itself turned inside a cylinder to crush the rock to a finer particle size |
| Seepage | The slow movement of water though soil or rock |
| Severe Effect Level (SEL) | Indicating the level at which pronounced disturbance of the sediment dwelling community can be expected. This is the sediment concentration of a compound that would be detrimental to the majority of benthic species |

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| Sky Glow | Refers to the illumination of the sky and/or clouds by light sources on the surface of the earth such as street lighting |
| Spillway | A gated or ungated hydraulic structure used to discharge water from a reservoir. An emergency spillway is a spillway that is designed to provide additional protection against overtopping of dams and is intended for use under extreme flood conditions or malfunction of the service spillway. |
| Surface Rights | Every right to land other than the mining rights |
| Spigotting | The placement or deposition of tailings material using the end of the pipe from the top of the tailings embankment |
| Tailings | Crushed or ground rock and process effluents that are generated in a mine processing plant |
| Thermostatically | Method of control using a thermostat to regulate airflow and temperature |
| Total Suspended Particulate (TSP) | Airborne particles that are less than 100 micrometres in size. They are used as a parameter to assess air quality |
| Total Suspended Solids (TSS) | Solid materials, including organic and inorganic, that are suspended in the water. They are used as a parameter to assess water quality. |
| Watercourse | Any flowing water including rivers, streams and overland flow paths |
| Watershed | A catchment basin or area including all of the land that is drained by a watercourse and its tributaries. Watershed boundaries are defined by heights of land. Boundaries are set where a height of land causes water to flow away from the watercourse. |
| Wildlife Management Unit (WMU) | An area identified by the Ontario Ministry of Natural Resources and Forestry that designates customized hunting regulations. There are 95 WMUs in Ontario. |
| Zone of Influence | The area of land within or adjacent to a construction site that potentially may be affected by vibrations emanating from a construction activity where the peak particle velocity measured at the point of reception is equal to or greater than 5 mm/sec at any frequency |

## ACRONYMS, ABBREVIATIONS AND SYMBOLS

| | |
|---|---|
| % | Percentage |
| # | Number |
| AARL | Anglo American Research Laboratories |
| ABA | Acid-base accounting |
| ABBO | Atlas of Breeding Birds in Ontario |
| AES | Atmospheric Environment Service |
| Ag | Silver |
| Al | Aluminum |
| ALS | ALS Laboratories |
| a.m. | Ante meridiem |
| AM | Amphibian station |
| ANFO | Ammonium nitrate/fuel oil |
| AP | Acid potential |
| Apr | April |
| ARD | Acid rock drainage |
| As | Arsenic |
| Au | Gold |
| Aug | August |
| Avg | Average |
| B | Boron |
| Ba | Barium |
| BACI | Before/after, control/impact |

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|---|---|
| BBS | Breeding Bird Survey |
| BC | Sediment sampling site BC |
| Be | Beryllium |
| Bi | Bismuth |
| BMS | Biotite muscovite schist |
| Bq/L | Becquerel per litre |
| Br | Bromine |
| BS | Basal sand |
| BS | Biotite schist |
| °C | Degrees celsius |
| Ca | Calcium |
| CA | Catchment area |
| CAAQS | Canadian Ambient Air Quality Standards |
| $CaCO_3$ | Calcium carbonate |
| $CaCO_3$ NP | Calcium carbonate neutralization potential |
| Carb-NP | Carbonate neutralization potential |
| CBC | Christmas Bird Count |
| CCL | Cumming Cockburn Limited |
| CCME | Canadian Council of Ministers of the Environment |
| CCD | Counter Current Decantation |
| CCTV | Closed caption television |
| Cd | Cadmium |
| CDA | Canadian Dam Association |

| | |
|---|---|
| Ce | Cerium |
| CEC | Cation exchange capacity |
| CEAA | Canadian Environmental Assessment Agency |
| CIP | Carbon-in-pulp |
| CIL | Carbon-in-leach |
| Cl | Chloride |
| cm | Centimetres |
| CN | Cyanide |
| Cn | Curve number |
| CNR | Canadian National Railway |
| Co | Cobalt |
| CO | Carbon monoxide |
| COA | Canada-Ontario Agreement |
| CofA | Certificate of Approval for Discharge from Industrial Sewage Works |
| COC | Contaminants of concern |
| COPC | Constituents of potential concern |
| COSSARO | Committee on the Status of Species at Risk in Ontario |
| COSEWIC | Committee on the Status of Endangered Wildlife in Canada |
| Cr | Chromium |
| Cs | Caesium |
| Cu | Copper |
| CVAAS | Cold vapour atomic absorption spectrophotometry |
| CWQG | Canadian Water Quality Guidelines |

| | |
|---|---|
| Cyanide-WAD | Weak acid dissociable cyanide |
| D | Simpson's Diversity Index |
| DCBC | Dryden Christmas Bird Count |
| dBA | Decibel (A-weighted) |
| DDC | Dryden Development Corporation |
| Dec | December |
| DEM | Digital elevation model |
| DFMC | Dryden Forest Management Company |
| DFO | Department of Fisheries and Oceans Canada |
| DO | Dissolved oxygen |
| dtpd | Dry tonnes per day |
| Dup | Duplicate sample |
| E | Endangered |
| EA | Environmental assessment |
| EAQA | Environmental air quality assessment |
| EC | Environment Canada |
| ECA | Environmental Compliance Approval |
| EDS | Environmental design storm |
| EEM | Environmental Effects Monitoring |
| e.g. | Example gratia |
| EIS | Environmental impact statement |
| El | Elevation |
| ELC | Ecological Land Classification |
| EMP | Environmental management plan |

| | |
|---|---|
| EPA | Ontario Environmental Protection Act |
| EPP | Environmental preparedness plan |
| EPT | Ephemeroptera, Plecoptera and Trichoptera |
| ES | Ecosite |
| ESA | Environmental site assessment |
| Eu | Europium |
| FBMP | Forest Bird Monitoring Program |
| FDP | Final discharge point |
| Fe | Iron |
| Feb | February |
| FEL | Front-end loader |
| FL | Fork length |
| FLT | Fault zone |
| FMP | Forest management plan |
| FMU | Forest Management Unit |
| FMZ | Ontario Fisheries Management Zone |
| FoS | Factor of safety |
| FRI | Forest Resources Inventory |
| g | Gram |
| Ga | Gallium |
| GARD | Global acid rock drainage |
| GDE | Groundwater dependent ecosystems |
| GDP | Gross domestic product |

| | |
|---|---|
| Ge | Germanium |
| GHG | Greenhouse Gases |
| Goliath Gold Project | The Project |
| Gov | Government |
| H | Hydrogen |
| ha | Hectare |
| HCl | Hydrochloric acid |
| HCN | Hydrogen cyanide |
| HCT | Humidity cell tests |
| HDPE | High density polyethylene |
| Hf | Hafnium |
| Hg | Mercury |
| HMANA | Hawk Migration Association of North America |
| HPC | Hazard potential classification |
| HQ | Hazard quotient |
| Hr | Hour |
| HVAC | Heating, ventilation and air condition |
| HWR | Hanging wall rocks |
| Hwy | Highway |
| ICP-MS | Inductively coupled plasma mass spectroscopy |
| ID | Identification |
| IDF | Inflow design flood |
| IES | Illuminating Engineering Society |
| IESO | Independent electrical services operator |

| | |
|---|---|
| ILR | Intensive leach reactor |
| In | Indium |
| INAP | International Network for Acid Prevention |
| I/O | Input/output |
| IPWQO | Interim Provincial Water Quality Objectives |
| Ir | Iridium |
| Jan | January |
| JCTa | Sediment sampling site JCTa |
| K | Potassium |
| KCB | Klohn Crippen Berger |
| Kg | Kilogram |
| kHz | Kilohertz |
| Km | Kilometre |
| km/h | Kilometres per hour |
| $km^2$ | Square kilometre |
| kV | Kilovolt |
| kW | Kilowatt |
| L | Litre |
| La | Lanthanum |
| Lat | Latitude |
| lb | Pound |
| LEED | Leadership in Energy and Environmental Design |
| LEL | Low effect level |
| LHD | Load haul dump vehicles |

| | |
|---|---|
| LGO | Low-grade ore |
| Li | Lithium |
| Long. | Longitude |
| L/s | Litres per second |
| LSA | Local Study Area |
| Lu | Lutetium |
| LHD | Load haul dump |
| LWD | Large woody debris |
| m | Metre |
| M | Molar |
| $m^2$ | Square metre |
| $m^3$ | Cubic metre |
| $m^3/d$ | Cubic metres per day |
| $m^3/h$ | Cubic metres per hour |
| $m^3/s$ | Cubic metres per second |
| m/s | Metres per second |
| Mar | March |
| masl | Metres above sea level |
| Max | Maximum |
| mbg | Metres below grade |
| MCC | Motor control centers |
| MD | Mafic dyke |
| MDL | Method detection limit |

| | |
|---|---|
| MED | Median |
| MEND | Mine Environmental Neutral Drainage |
| meq/100g | Milliequivalents per 100 grams |
| mg | Milligrams |
| Mg | Magnesium |
| mg/kg | Milligrams per kilogram |
| mg/L | Milligrams per litre |
| min | Minutes |
| MISA | Municipal Industrial Strategy for Abatement |
| ML | Metal leaching |
| mm | Millimetre |
| MMER | Metal Mining Effluent Regulations |
| MMP | Marsh Monitoring Program |
| Mn | Manganese |
| MNDM | Ministry of Northern Development and Mines |
| Mo | Molybdenum |
| MOE | Ministry of the Environment |
| MOECC | Ministry of the Environment and Climate Change |
| MoELP | Ministry of Environment, Lands and Parks |
| MRA | Mine rock area |
| mS-NP | Modified Sobek Neutralization Potential |
| MSDS | Material Safety Data Sheet |
| MSED | Metasediments |

| | |
|---|---|
| MSS | Muscovite sericite schist |
| Mt | Megatonne |
| MTO | Ministry of Transportation |
| MTVOL | Metavolcanics |
| MZ | Main zone |
| N | North |
| Na | Sodium |
| NAAQO | National Ambient Air Quality Objectives |
| NAG | Non-acid generating |
| NaOH | Sodium hydroxide |
| NAR | Not at Risk |
| Nb | Niobium |
| Nd | Neodymium |
| NE | Northeast |
| NEL | No effect level |
| NG | Natural gas |
| NHIC | Natural Heritage Information Centre |
| NH4 | Ammonium |
| Ni | Nickel |
| NMWL | Nominal molecular weight limit |
| NNP | Net neutralization potential |
| Nov | November |
| No | Number |

| | |
|---|---|
| $NO_2$ | Nitrogen dioxide |
| $NO_2$- | Nitrite |
| $NO_3$ | Nitrate |
| NP | Neutralization potential |
| NPAG | Non-potentially acid generating |
| NPR | Neutralization potential ratio |
| NRCan | Natural Resources Canada |
| NTS | National Topographic System |
| NTU | Nephelometric Turbidity Unit |
| NW | Northwest |
| $O_2$ | Oxygen |
| OAAQC | Ontario Ambient Air Quality Criteria |
| OAHI | Ontario Aquatic Habitat Inventory |
| OB | Overburden |
| OBBA | Ontario Breeding Birds Atlas |
| OBM | Ontario Base Mapper |
| ODWS | Ontario Drinking Water Standards |
| OHSP | Occupational Health & Safety Plan |
| Oct | October |
| OH | Hydroxide |
| OIP | Ontario Institute of Pedology |
| OM | Organic matter |
| MNRF | Ontario Ministry of Natural Resources and Forestry |

| | |
|---|---|
| OMS | Operations, Maintenance and Surveillance |
| ON | Ontario |
| OOA | Ontario Odonata Atlas |
| OP | Ontario Parks |
| OPP | Ontario Provincial Police |
| OPSQG | Ontario Provincial Sediment Quality Guidelines |
| O.Reg | Ontario Regulation |
| OWES | Ontario Wetland Evaluation System |
| OWRA | Ontario Water Resources Act |
| P | Phosphorus |
| $P_5$ | 5$^{th}$ Percentile |
| $P_{80}$ | 80$^{th}$ Percentile |
| $P_{95}$ | 95$^{th}$ Percentile |
| PAG | Potentially acid generating |
| PAHs | Polycyclic Aromatic Hydrocarbons |
| Pb | Lead |
| PCS | Plant control system |
| PD | Project description |
| PM | Particulate matter |
| $PM_{2.5}$ | Particulate matter <2.5 microns |
| $PM_{10}$ | Particulate matter <10 microns |
| PP | Provincial Park |
| ppm | Parts per million |

| | |
|---|---|
| PPV | Peak particle velocity |
| psig | Pounds per square inch (gage) |
| PSQG | Provincial Sediment Quality Guidelines |
| PWQO | Provincial Water Quality Objectives |
| Q10,20,100 or 200 respectively | Peak flow expected to occur once every 10, 20, 100 or 200 years |
| QA | Quality Assurance |
| QBS | Quartz biotite schist |
| QC | Quality Control |
| QEG | Quartz eye gneiss |
| QP | Quartz porphyry |
| QSS | Quartz-sericite schist |
| R | Richness |
| Rb | Rubidium |
| REE | Rare Earth Element |
| RISC | Resources Inventory Standards Committee |
| RO | Reverse osmosis |
| ROI | Return on investment |
| ROM | Run of mill |
| RQD | Rock Quality Designation |
| RSA | Regional Study Area |
| S | Sulfur |
| S1,2,3 | Three levels (1, 2, 3) of rarity |
| SAB | SAG and Ball Mill |

| | |
|---|---|
| SAG | Semi-Autogenous Grinding |
| SAR | Species at Risk |
| SARA | Species at Risk Act |
| SARO | Species at Risk in Ontario |
| Sb | Antimony |
| SBR | Shallow bedrock |
| Sc | Scandium |
| SC | Special Concern |
| SCWG | Soil Classification Working Group |
| SCS | Soil Conservation Service |
| S-del | Sulphur by mathematical difference |
| Se | Selenium |
| SEL | Severe Effect Level |
| Sept | September |
| SFE | Shake flask extraction |
| Si | Silicon |
| SLRA | Screening level risk assessment |
| Sm | Samarium |
| Sn | Tin |
| SNPR | Sulphide-sulphur based neutralization potential ratio values |
| $SO_2$ | Sulphur dioxide |
| $SO_4$ | Sulphate |
| SOM | Soil organic matter |

| | |
|---|---|
| Spp. | Species |
| Sr | Strontium |
| SR | Sound Recorder |
| SS | Surficial sand |
| STRAT | Stratigraphy |
| SW | Southwest |
| SW1,SW2, SW3 | Surface Water Sampling Stations |
| SWD | Small woody debris |
| SWE | Snow water equivalent |
| T | Threatened |
| $t/m^3$ | Tonnes per cubic metre |
| Ta | Tantalum |
| TAC | Technical Advisory Committee |
| Tb | Terbium |
| T/D | Total and/or dissolved metal (oids) |
| TDS | Total Dissolved Solids |
| tc | Time of concentration |
| Te | Tellurium |
| Th | Thorium |
| Ti | Titanium |
| TIA | Tailings Impoundment Area |
| Tl | Thallium |
| TL1, TL1a, TL2, TL3 | Sediment sampling sites |

| | |
|---|---|
| TMA | Tailings Management Area |
| TML | Transportable moisture limit |
| TML | Treasury Metals Incorporated |
| TMP | Tailings management plan |
| TOC | Total organic carbon |
| TOC-COMB | Total organic carbon, combined |
| TP | Test pit sites for soil sampling |
| tpd | Tonnes per day |
| TRV | Toxicity reference value |
| Trash | Unwanted material |
| TSF | Tailings storage facility |
| TSP | Total suspended particulates |
| TSS | Total suspended solids |
| U | Uranium |
| µg/g | Microgram per gram |
| µg/m$^3$ | Microgram per cubic metre |
| µm | Micrometre |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| µs | Microsiemens |
| µs/cm | Microsiemens per centimetre |
| UTM | Universal Transverse Mercator |
| V | Vanadium |
| VC | Valued components |

| | |
|---|---|
| VESDA | Very early smoke detection alarm |
| VWP | Vibrating wire piezometer |
| W | Tungsten |
| WAD | Weak acid dissociable |
| WLON | Wabigoon Lake Ojibway Nation |
| WRA | Whole rock analyses |
| WRMA | Waste rock management area |
| WRSA | Waste rock storage area |
| WWIS | Water Well Information System |
| XRD | X-Ray diffraction |
| Yb | Ytterbium |
| YOY | Young of the year |
| Yr | Year |
| Zn | Zinc |
| ZOI | Zone of influence |
| Zr | Zirconium |