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## GLOSSARY OF TECHNICAL TERMS

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*This glossary contains definitions of certain terms used in this prospectus in connection with the Group and its business. Some of these may not correspond to standard industry definitions.*

“adit”	a horizontal tunnel or drive from the surface into a mine
“Au9999, Au9995, Au999, Au995”	the common standard for denoting gold purity adopted by the Shanghai Gold Exchange to conform with international practice, in which Au9999 and Au9995 gold denote gold contents of 99.99% and 99.95% or above, respectively, while Au999 and Au995 gold denote gold contents of 99.9% and 99.5% or above, respectively
“chlorination process”	the treatment of the combination with chlorine or a chlorine compound
“comminution”	the crushing and grinding of ore
“concentrate”	a powdery product containing an upgraded mineral content resulting from initial processing of mined ore to remove some waste materials. A concentrate is an intermediary product, which would still be subject to further processing, such as smelting, to effect recovery of metal
“copper concentrate”	concentrate produced from sulphide copper ore, which typically contains around 30% of copper
“crusher”	a machine for crushing rocks to smaller grain size
“cumulative recovery rate”	the ratio of cumulatively recovered gold from the heap leach process to the cumulative gold loaded on the leach pad
“cut-and-fill”	a method of stoping in which ore is removed in slices, or lifts, with the excavation subsequently filled with rock or other waste material (backfill), before the next slice is extracted
“cut-off”	the lowest grade of mineralised material that qualifies as ore that will meet further operating costs in a given deposit
“deposit” or “mineral deposit”	a body of mineralization containing a sufficient average grade of metal or metals to warrant further exploration and/or development expenditure. A deposit may not have a realistic expectation of being mined; therefore it may not be classified as a resource or a reserve

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“dilution”	the reduction of grade for mined ore due to the inclusion of waste material in the mined ore
“dip”	the inclination of a geologic structure from the horizontal; dip is measured downwards at right angles to the strike
“drilling”	a technique or process of making a circular hole in the ground with a drilling machine, which typically occurs to obtain a cylindrical core as a sample of ore. Alternatively, blasthole drilling is where the drilling technique is used to create a hole to house an explosive charge in preparation for blasting a zone of rock
“exploration”	activity to prove the location, volume and quality of an ore body
“ferromolybdenum”	production of the reduction of technical Mo oxide in the presence of iron, with a typical analysis of 60-70% Mo (remainder iron)
“ferrous”	containing iron
“fineness”	the purity of gold, expressed in parts per thousand
“fine troy ounce”	troy ounce
“flotation”	a process by which some mineral particles are induced to become attached to bubbles of froth and float, and others to sink, so that the valuable minerals are concentrated and separated from the remaining rock or mineral material
“foul carbon”	the carbon that is switched out of the processing circuit after the carbon activity drops to an unacceptable point and does not absorb gold efficiently, due to scaling and other effect after numerous reuse and regeneration
“geochemical”	a prospecting technique which measures the chemical content of certain metals in soils and rocks and defines anomalies for further testing
“gold bullion”	refined gold in the form of bars
“gold dore”	a crude gold, silver bullion, usually produced at the mine site and sent to a refiner where the silver and gold are parted and the gold is refined to commercial-grade gold bullion. The gold content in dore is typically between 50% and 90%

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“gold equivalent”	non-gold resources equal to the number of oz of gold aggregated with, without limitation, the monetary value of resources of minerals such as silver and copper expressed in terms of the equivalent number of oz of gold required to record the same monetary value at the then prevailing commodity prices
“gpt”	grams per tonne
“Grade A contract”	a standard copper contract traded on LME, with quality of Electrolytic Copper cathodes Grade A and trading unit of 25 tonnes
“grade”, “grading” or “ore grade”	the relative amount of valuable elements or minerals contained in a parcel of ore material. For gold, grade is commonly expressed in grams per tonne terms
“hornfels-type resource”	a mineral resource hosted by hornfels, which is a metamorphic rock usually formed by heat metamorphism near the contact zone of an igneous intrusion
“hydrometallurgical process”	the treatment of ore by wet processes, such as leaching, resulting in the solution of a metal and its subsequent recovery
“indicated mineral resource(s)” or “indicated resource(s)”	see the definition under both the JORC Code and the CIM Standards in “Summary of the JORC Code and CIM Standards”
“inferred mineral resource(s)” or “inferred resource(s)”	see the definition under both the JORC Code and the CIM Standards in “Summary of the JORC Code and CIM Standards”
“leach”	to dissolve minerals or metals out of ore with chemicals
“lead alloy”	a type of lead product, which typically contains lead and other metals
“lead concentrate”	concentrate whose main mineral content is lead and silver
“measured mineral resource(s)” or “measured resource(s)”	see the definition under both the JORC Code and the CIM Standards in “Summary of the JORC Code and CIM Standards”

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“mineral processing”	the treatment of mineral products into concentrate products
“mineral resources”	see the definition under both the JORC Code and the CIM Standards in “Summary of the JORC Code and CIM Standards”
“mineralization”	an area with discontinuous distribution belts of mineralization, including the occurrence of deposits, mine sites and alteration of waste rock, as exploration indicators and under control of same geology conditions. It is a key zone for estimation and further planning of exploration of minerals
“molybdenum concentrate”	concentrate whose main mineral content is molybdenum, usually containing 45-53% of molybdenum
“molybdenum oxide”	roasted molybdenite concentrate, also known as Technical Mo Oxide, which typically contains 56-58% Mo and no more than 0.5% Cu
“Moz”	million ounces
“non-ferrous metals”	metals other than iron and alloys that do not contain appreciable amount of iron
“open-pit mining”	mining of a deposit from a pit open to surface and usually carried out by stripping of overburden materials
“operating cash costs”	includes mining costs, processing costs, general and administration costs, selling costs, environmental protection costs, production taxes, resource compensation levy, interests on loans, and other cash cost items
“ore”	mineral bearing rock which can be mined and treated profitably under current or immediately foreseeable economic conditions
“ore processing” or “processing”	the process which in general refers to the extraction of usable portions of ores by using physical and chemical methods

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“ore reserve(s)”	the economically mineable part of a measured and/or indicated mineral resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, and social and government factors, as defined in the JORC Code. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore reserves are sub-divided in order of increasing confidence into probable ore reserves and proved ore reserves
“price participation”	the involvement of an extra payment to smelters when the price of copper exceeds a certain value (normally 90 cents a pound). The payment is equal to a certain percentage (generally 10 per cent) of the difference between the purchase price and the market price
“primary gold supply”	the largest source of gold, which includes primary gold production and net producer hedging
“probable mineral reserve(s)” or “probable reserve(s)”	see the definition under both the JORC Code and the CIM Standards in “Summary of the JORC Code and CIM Standards”
“proved mineral reserve(s)” or “proved reserve(s)”	see the definition under both the JORC Code and the CIM Standards in “Summary of the JORC Code and CIM Standards”
“pyrometallurgical process”	an ore-refining process, such as smelting, dependent on the action of heat
“recovery rate”	the percentage of metal produced compared to the amount of metal contained in the feed ore in the context of a processing plant, or the percentage of metal produced compared to the amount of metal contained in the feed concentrates in the context of a smelting plant
“refined copper” or “cathode copper”	copper produced from copper ore which can be used to produce copper products or copper alloy

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“refined lead”	refined lead produced from lead-silver concentrate, which can be used to produce lead products or lead alloy
“refining”	the final stage of the metallurgical process of refining crude metal products to a pure or very pure end-product
“refining charge”	the price paid by a mining company to a smelter for refining the contained precious metals (and copper) in their concentrate’s to produce a payable metal
“refractory gold ores” or “refractory concentrates”	gold ores or concentrates which give a relatively low extraction of gold when treated in a conventional process such as leaching in an alkaline cyanide solution without any pre-treatment
“rehabilitation”	revegetation of new disturbed by mining by planting an appropriate mixture of trees, shrubs and ground covers
“ROM” or “run-of-mine”	raw mined material in its natural, unprocessed state
“secondary gold”	gold produced from gold scrap
“secondary refined copper”	refined copper, which is produced from copper scrap
“skarn-type resource”	a mineral resource hosted by skarn, which is a metamorphic rock usually formed by chemical metasomatism in the contact zone of a granitic intrusion with carbonate rocks
“smelting”	a pyro-metallurgical process of separating metal by fusion from those impurities with which it is chemically combined or physically mixed
“sphalerite ZnS”	a mineral composed of zinc sulfide, which typically contains iron and cadmium
“standard gold” and “non-standard gold”	standard gold refers to gold bullion which satisfies both standard content requirements (Au9999, Au9995, Au999, Au995) and standard weight requirements (50 g, 100 g, 1kg, 3 kg, 12.5 kg) set by the Shanghai Gold Exchange, while non-standard gold refers to other gold bullion which does not satisfy such requirements

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“stope”	an underground excavation from which ore is being extracted
“stoping ”	removal of the ore from an underground mine leaving behind an open space known as a stope
“strike”	the course or bearing of the outcrop of an inclined bed on a level surface
“stripping ratio”	the ratio of overburden and segregable waste to ore in an open-pit operation
“sulphide copper”	a main type of copper resource
“tailings”	the waste materials (residue) produced by the processing plant after extraction of valuable minerals
“tailing dam”	a storage facility for tailings
“tonne”	metric ton
“tpa”	tonnes per annum
“treatment charge”	the charge paid by a mining company to have their concentrate treated through a smelter to produce saleable metal
“troy ounce”	a measurement of weight for precious metals; one troy ounce equals 31.1035 grams
“underground mine”	openings in the earth accessed via shafts and adits below the land surface to extract minerals
“vein”	sheet-like body of minerals formed by fracture filling or replacement of host rock
“zinc concentrate”	concentrate whose main mineral content is zinc, which is a widely traded mineral product as refined zinc and zinc alloy products