
TECHNICAL GLOSSARY

The technical glossary contains explanations and definitions of certain terms used in this prospectus in connection with the Group and its business. The terms and their meanings may not correspond to standard industry meaning or usage of these terms.

“beneficiation” or “ore beneficiation”	a process through which the crude ore excavated from mining is reduced to particles that can be separated into mineral and waste
“Chinese Standard”	the mineral resource and reserve classification system used in China known as Solid Minerals Resource Classification (coded GB/T 17766-1999)
“concentrate”	the product of concentration plant which contains higher concentration of the target minerals suitable for further processing
“crusher”	a machine for crushing rocks to smaller grain size
“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
“dilution”	the reduction of grade for mined ore due to the inclusion of waste material in the mined ore
“dmu”	dry metric ton unit
“down-stream processing”	one of two forms of intermediate processing, namely hydrometallurgical treatment or pyrometallurgical treatment
“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
“EMD”	electrolytic manganese dioxide
“EMM”	electrolytic manganese metal
“exploration”	activity to prove the location, volume and quality of an orebody or post-surveying exploration of a mine with proved industrial value

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“GB/T 28001-2001 — Occupational Safety and Health Management System”	international occupational health and safety management system specification or national recommended standards or occupational health and safety; also known as “OHSAS18001:1999 or GB/T28001-2001: Occupational Health and Safety System — Standard and Application Manual”
“grade” or “grading”	the percentage of useful elements or their component in ore
“grinding”	a stage of ore processing operations whereby mineral separated at the concentration stage is ground to produce very fine finishes
“hydrometallurgical processing”	a form of downstream processing whereby manganese is extracted from the ore or mineral into an aqueous solution and subsequently recovered into other valuable forms
“indicated mineral resource(s)” or “indicated resource(s)”	the part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed
“inferred resource(s)”	the part of a mineral resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability
“ISO”	International Organization for Standardization
“JORC”	the Joint Ore Reserves Committee of the Australian Institute of Mining and Metallurgy
“JORC Code”	the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2004 edition, which is used to determine resources and reserves, and is published by JORC of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia

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“Kt”	kilo tonnes
“manganese carbonate ore”	$MnCO_3$, a carbonate of manganese, which decomposes with release of carbon dioxide at 200 centigrade
“manganese oxide ore”	MnO , an oxide of manganese, which is insoluble in water and dissolves in acids
“manganese products”	natural discharging manganese, manganese concentrates, which includes metallurgical manganese concentrate, manganese dioxide concentrate, chemical manganese concentrate and manganese carbonate concentrate, EMM, manganese sulfate, silicomanganese alloy, EMD, manganese tetroxide and lithium manganese oxide
“measured resource(s)”	the part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity
“metal recovery rate”	the percentage of metal produced compared to the amount of metal contained in the feed ore
“mining rights” or “exploitation rights”	the rights to mine mineral resources and obtain mineral products in area where mining activities are licensed
“Mt”	million tonnes
“open-pit” or “open pit mining”	a method of surface mining in which massive, usually metallic deposits, are removed by cutting benches in the walls of a broad, deep funnel-shaped excavation
“ore” or “crude ore”	a naturally occurring solid material from which a metal or valuable mineral can be extracted profitably
“ore body”	a continuous, well-defined mass of material with sufficient ore content to ensure economic feasibility of extraction
“ore processing” or “processing”	the process through which physical or chemical properties, such as density, surface reactivity, magnetism and color, are utilized to separate the desired components of ore from other elements, and which are then concentrated or purified by means of flotation, magnetic selection, electric selection, physical selection, chemical selection, reselection, and combined methods manganese that is mined as a primary product

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“pyrometallurgical processing”	a form of downstream processing involving thermal treatment of manganese ore, which brings about physical and chemical transformations in the ore
“refining”	the process of refining crude metal products to a pure or very pure end-product
“rehabilitation”	revegetation of mining disturbed areas by planting an appropriate mixture of trees, shrubs and ground covers
“reserve(s)” or “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, social and government factors. 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
“resource(s)” or “mineral resource(s)”	concentration or occurrence of material of intrinsic economic interest upon or inside the Earth’s crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge. Resources, or mineral resources, are sub-divided, in order of increasing geological confidence, into “inferred,” “indicated,” and “measured” categories
“roasting”	the process whereby ore is heated and is dehydrated, purified or oxidized before smelting
“smelting”	a pyro-metallurgical process of separating metal by fusion from those impurities with which it is chemically combined or physically mixed
“stope”	a term used to describe a block of ore in an underground mine
“stripping ratio”	the ratio of waste rock or overburden which must be removed to extract ore in an open-pit operation. For example, a 3:1 stripping ratio means that three tonnes of waste rock or overburden need to be removed to extract one tonne of ore

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“tailings”	materials that are produced after processing of ore for extracting target minerals
“tonne”	metric ton
“total materials moved”	the sum of the total ores extracted plus the wastes produced during the same period in the mining operations
“tpa”	tonnes per annum
“tpd”	tonnes per day
“vein”	sheet-like body of minerals formed by fracture filling or replacement of host rock