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## GLOSSARY OF TECHNICAL TERMS

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“agglomeration”	a process by which particles of smaller materials are brought together to form larger particles by sticking them together
“apparent iron ore products consumption”	the volume of iron ore products produced and imported less the volume exported
“assessed production capacity”	the output of a mine as listed on the mining permit for the mine, which is based on an assessment by an official regulatory or oversight body
“ball mill”	a rotating cylindrical mill that uses heavy steel balls to grind ore into fine particle powder
“beneficiation”	to treat ore to make more suitable for smelting
“BFI”	metallic iron that collects at the bottom of a blast furnace during its operations. During a blast furnaces operation, iron ore, coke and limestone are heated, resulting in the formation of slag through the bonding of the calcium in limestone, with silicates present in the mixture. Liquid iron simultaneously collects at the bottom underneath the slag
“concentrates”	the product of ore processing plants that contain higher concentrations of the minerals and are suitable for smelting
“COREX”	an ironmaking technology which, unlike the blast furnace, uses steaming (non-coking) coals. It is a two-stage process where lump ore, pellets, sintered iron ore, or a mixture of these, is firstly charged to a reduction shaft where it is transformed into DRI by a reducing gas. The hot DRI then enters a melter/gasifier, along with coal and oxygen, where liquid iron and slag are produced and periodically tapped off
“crusher”	a machine for crushing solids to smaller grain sizes
“designed production capacity”	the theoretical output that a mine is designed to produce during its operation over a specific measurement of time as decided by a qualified design institute, based on various factors such as mining conditions, geological conditions and the capabilities and limitations of equipment
“DRI”	a metallic iron product used in electric arc furnace steelmaking. It is produced from iron ore in a thermal, natural gas or coal based process. DRI is principally used as part of a furnace charge when electric arc furnace steelmakers need a high quality raw material to dilute undesirable elements in their main scrap feed

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“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
“FINEX”	an ironmaking technology where molten iron is produced directly using iron ore fines and non-coking coal rather than processing through the traditional blast furnace model of sintering and coke making
“footwall”	the rock stratum underlying a vein or orebody
“gangue”	rocks and minerals of no economic value that occur with valuable minerals in ore
“grade”	the concentration, commonly expressed as percentage or grams per ton, of useful elements, minerals or their components in any ore or concentrate
“hanging wall”	the rock stratum overlying a vein or orebody
“HISmelt”	an ironmaking process where fine iron ores and non-coking coals are injected directly into a molten iron bath, contained within a smelt reduction vessel, to produce high quality molten pig iron
“indicated resource”	part of the iron ore resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence as defined by the JORC Code
“inferred resource”	part of the iron ore resource for which tonnage, grade and mineral content can be estimated with a low level of confidence as defined by the JORC Code
“iron”	a silvery-white, lustrous, malleable, ductile, magnetic or magnetizable, metallic element occurring abundantly in combined forms, notably in hematite, limonite, magnetite, and taconite, and alloyed for use in a wide range of important structural materials
“iron ore concentrates”	concentrates whose main mineral content (by value) is iron
“iron ore”	compounds of iron and oxygen (iron oxides) mixed with impurities (gangue); it is a mineral which when heated in the presence of a reductant will yield metallic iron
“JORC”	the Australasian Joint Ore Reserves Committee

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“JORC Code”	the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2004 edition published by JORC and used to determine resources and reserves
“km”	kilometer(s), a metric unit measure of distance
“Kt”	thousand tons
“magnetic separation”	a mineral concentrating process to separate magnetic minerals from non-magnetic materials in ground ore
“measured resource”	mineral resource that has been intersected and tested by drill holes or sampling procedures at locations close enough to confirm continuity
“mine life”	the number of years that a mine is expected to continue operations based on the current mine plan
“mineral resource”	an identified in-situ mineral occurrence from which valuable or useful minerals may be recovered
“mining rights”	the rights to mine mineral resources and obtain mineral products
“Mt”	million tons
“open pit”	surface mining where the ore is extracted from a pit open to the surface
“ore”	mineral-bearing rock that contains one or more minerals
“ore processing” or “processing”	the process which in general refers to the extraction of usable portions of ores by using physical and/or chemical methods
“ore reserve(s)” or “reserve(s)”	the part of a measured and/or indicated resource which could be mined and from which valuable or useful minerals could be recovered economically under conditions reasonably assumed at the time of estimation
“ore resource(s)” or “resource(s)”	a concentration or occurrence of iron ore of intrinsic economic interest in or on the Earth’s crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction
“orebodies”	natural mineral accumulations which can be extracted for use under existing economic conditions and using existing extraction techniques
“overburden”	earth and/or weathering rock covering a mineral deposit

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“pelletisation”	the process of making or forming concentrated ore into pellets
“probable reserves”	the economically mineable part of an indicated resource, and in some circumstances, a measured resource, as defined by the JORC Code, which includes diluting materials and allowances for losses which may occur when the material is mined
“reclamation”	in the context of mining, the process of returning the land to another productive use after mining has been completed or the restoration of land and environmental values to a surface mine site after extraction has been completed
“recovery rate”	the percentage of valuable mineral resource recovered from mining or processing activities, a measure of mining or processing efficiency
“sinter”	to bring about agglomeration in ore by heating
“sq.km.”	square kilometer
“sq.m.” or “m <sup>2</sup> ”	square meter
“stripping ratio”	the ratio of the amount of rock removed to the amount of ore recovered
“tailings”	waste materials that are produced after ore processing
“tailing pond”	a storage facility for tailings
“TFe”	total iron content by mass
“ton”	metric ton
“underground mine”	a mine where the ore is mined from below the surface via shafts and tunnels without removing the overburden
“wet ton”	a ton of the material in its wet state which contains a certain amount of water