
GLOSSARY

The glossary contains certain definitions and other terms related to our business and used in this document. The terms and their meanings may not correspond to the standard industry meaning or usage of these terms.

"Al ₂ O ₃ "	the chemical symbol for aluminium oxide
"anatase"	one at the mineral forms of titanium dioxide, TiO ₂ , found in nature
"beneficiation"	a process to upgrade the mineralized content of an ore or of ore concentrates typically through flotation, gravity or magnetic separation
"ball mill"	a rotating cylindrical mill that uses heavy iron balls to grind ore into fine particle powder
"concentrates"	the product of ore processing plants that contain higher concentrations of the minerals and are suitable for smelting
"crusher"	a machine for crushing solids to smaller grain sizes
"drilling"	in mineral exploration, boring a hole to recover core or rock chip samples to obtain geological information as well as for use as samples for grade determination and other analyses
"flotation"	a mineral concentrating process in which, water and frothing reagents are mixed with ground ore to separate types of ore
"gangue"	waste rock
"grade"	the concentration, commonly expressed as percentage or grams per tonne, of useful elements, minerals or their components in any ore or concentrate
"gravity (tabling) separation"	a mineral process using shaking tables to separate useful mineral from gangue in crushed or ground ore based on differences in their density
"gravity titanium tail"	waste materials produced under the titanium mineral concentrating process by using the gravity separation method

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"high-intensity magnetic separation"	a mineral concentrating process to separate weak magnetic minerals such as titanium dioxide from non-magnetic materials in ground ore
"ilmenite"	a weak magnetic titanium-iron oxide mineral that is a crystalline iron titanium oxide (FeTiO ₃)
"indicated resource"	part of the iron ore resource for which tonnage, densities, shape, physical characteristics, quality 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, quality and mineral content can be estimated with a low level of confidence as defined by the JORC Code
"in-situ"	in its natural position
"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"	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
"iron ore products"	iron concentrates or iron pellets
"iron concentrates"	concentrates whose main mineral content (by value) is iron
"iron pellet"	a round hardened clump of iron-rich material suitable for application in blast furnaces
"JORC"	the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy
"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

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"km"	kilometer(s), a metric unit measure of distance
"Kt"	thousand tonnes
"kwh"	kilowatt hours
"low-intensity magnetic separation"	a mineral concentrating process to separate strong magnetic minerals such as magnetite from weak magnetic and 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 in areas where mining activities are licensed
"MPa"	million pascal; a pascal is a measure of force per unit area, defined as one newton per square meter
"Mt"	million tonnes
"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"	the process which in general refers to the extraction of usable portions of ores by using physical and chemical extraction 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

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"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
"pelletizing"	a process to compress the iron ore into the shape of a pellet
"pigment", "titanium pigment", or "titanium powder"	powder whose main content (by value) is titanium dioxide, TiO_2 ; a substance used as coloring
"proved and probable reserves"	reserves that have been based after application of mining recovery and dilution facts, on an in-situ identified resource which has been categorized as "indicated" and "measured" under the JORC Code
"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 the raw iron ore is extracted
"recovery rate"	the percentage of valuable mineral resource that is able to be recovered from mining and processing activities
"rutile"	a mineral composed primarily of titanium oxide, TiO_2 ; rutile is the most common natural form of TiO_2
"sinter" or "sintering"	a heat treatment for mineral powder that applies a temperature below the melting point, the purpose of which is to combine the component particles in order to increase size and strength
" SiO_2 "	the chemical symbol for silicon dioxide
"slag"	a by-product of smelting ore to purify metals and a mixture of metal oxides and contain metal sulphides and metal atoms in the elemental form
"specialty steel"	a class of steel including stainless, tool, and silicon electrical steels

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“sponge titanium”	a chemical product made from titanium and commonly used in the production of titanium ingots and titanium slabs
“sq.km.”	square kilometer
“sq. m.” or “m ² ”	square meter
“stockpile”	material mined and stored for future use
“sulfides”	any type of chemical compound containing sulfur in its lowest oxidation number
“sulfides flotation”	the flotation process for the purpose of the separation of sulfides
“synthetic rutile”	near-colorless titania oxide, which is sold as diamond substitute under the name Titania
“tail”	waste materials that are produced after processing of ore for extracting target minerals
“TFe”	the symbol for denoting total iron
“TiO ₂ ”	the chemical symbol for titanium dioxide
“titanium”	a light, strong, lustrous, corrosion-resistant transition metal with a white-silvery-metallic color
“titanium concentrates”	concentrates whose main content (by value) is titanium dioxide
“titanium metals”	metallic materials which contain a mixture of titanium and other chemical elements, also known as titanium alloys
“titanium slag”	a slag containing the metal atoms of titanium
“titanomagnetite”	one of the four main types of iron ore deposits mined by current iron ore mining methods
“tonne”	metric ton
“V ₂ O ₅ ”	the chemical symbol for vanadium pentoxide
“vanadium”	a rare, soft and ductile element, vanadium is found combined in certain minerals and is used mainly to produce certain alloys

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“vanadium-bearing titanomagnetite”	a type of iron ore that contains oxides of vanadium and titanium, in addition to iron oxide
“waste stripping”	the process by which waste material above the ore layer is removed to allow the mining of ore in the open pit