

24 AUGUST 2023

South32 Limited (Incorporated in Australia under the *Corporations Act 2001* (Cth))

(ACN 093 732 597)

ASX / LSE / JSE Share Code: S32; ADR: SOUHY ISIN: AU0000005320

south32.net

SIERRA GORDA COPPER MINE - MINERAL RESOURCE DECLARATION

South32 Limited (ASX, LSE, JSE: S32; ADR: SOUHY) (South32) is pleased to report a first time Mineral Resource estimate for the Sierra Gorda copper mine. South32 acquired a 45% interest in Sierra Gorda in February 2022 and has joint control alongside 55% joint venture (JV) partner KGHM Polska Miedź.

The sulphide Mineral Resource estimate (Table A) is reported in accordance with the JORC Code (2012)¹ guidelines at 1.89 billion tonnes, averaging 0.36% total copper, 0.016% total molybdenum and 0.06 g/t gold, with a contained 6.81 million tonnes of copper, 296 thousand tonnes of molybdenum and 3.58 million ounces of gold, at a total copper equivalent² grade of 0.41%.

Sierra Gorda's first time Mineral Resource estimate has confirmed a large scale, long-life copper deposit with significant growth potential. We are investing to unlock this value and grow future copper production, executing the capital efficient plant de-bottlenecking project and progressing study work for the fourth grinding line expansion. The fourth grinding line has the potential to increase copper output by 15 to 20%, with a final investment decision for this expansion planned in H2 FY24.

The exploration opportunity at Sierra Gorda remains significant, including near-mine and regional opportunities. The Mineral Resource remains open at depth, with further drilling campaigns planned to test the potential for further growth. Separately, an exploration drilling campaign is underway at the priority Catabela Northeast copper porphyry prospect, located approximately three kilometres from Sierra Gorda's current operations.

We are also studying options to realise value from oxide material³ that is stockpiled at surface.

Sierra Gorda is a large, conventional, open pit copper mine located in the Antofagasta region of northern Chile. Sierra Gorda benefits from high quality, modern processing equipment, with significant historical capital investment. The operation is serviced by established infrastructure, including renewable power and a seawater pipeline, with freight rail and a national highway connecting it to the ports of Antofagasta and Angamos. The copper concentrate produced at the operation is transported by truck and rail to the ports of Antofagasta and Angamos for international export to end markets.

Full details of the update are contained in this announcement.

 $^{^{1}}$ Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012

² CuEq (%) is copper equivalent which accounts for combined grade of copper, molybdenum and gold. Metals are converted to CuEq via unit value calculations using long term consensus metal price assumptions and relative metallurgical recovery assumptions. The metal price is commercially sensitive and is not disclosed here. The average metallurgical recoveries are 85% for copper (Cu), 55% for molybdenum (Mo), and 39% for gold (Au). The formula used for calculation of copper equivalent is CuEq = Cu (%) + 2.3 * Mo (%) + 0.275 * Au (g/t).

³ The stockpiled oxide material referred to in this announcement is not included as Mineral Resource and South32 cannot confirm whether the estimate has been compiled using an appropriate foreign reporting code.

Competent Person Statement

Mineral Resource estimate

The information in this report that relates to Mineral Resources for the Sierra Gorda deposit is presented on a 100% basis, represents an estimate as at 30 June 2023 and is based on information compiled by Ian Glacken and Omar Enrique Cortes Castro. Mr Glacken is a full-time employee of Snowden Optiro and Mr Cortes is a full-time employee of Sierra Gorda SCM. Mr Glacken is a Fellow and Mr Cortes is a Member of the Australasian Institute of Mining and Metallurgy. Mr Glacken and Mr Cortes each have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken, to qualify as Competent Persons as defined in the 2012 Edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code). The Competent Persons consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.

About us

South32 is a globally diversified mining and metals company. Our purpose is to make a difference by developing natural resources, improving people's lives now and for generations to come. We are trusted by our owners and partners to realise the potential of their resources. We produce commodities including bauxite, alumina, aluminium, copper, silver, lead, zinc, nickel, metallurgical coal and manganese from our operations in Australia, Southern Africa and South America. With a focus on growing our base metals exposure, we also have two development options in North America and several partnerships with junior explorers around the world.

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Approved for release to the market by Graham Kerr, Chief Executive Officer

JSE Sponsor: The Standard Bank of South Africa Limited

24 August 2023

Table A: Mineral Resources for the Sierra Gorda Deposit as at 30 June 2023 in 100% terms

					Contained Metal		
Classification	Mt²	% CuT	% MoT	g/t Au	Mt Cu	Kt Mo	Moz Au
Measured Mineral Resources	418	0.39	0.024	0.07	1.62	102	0.89
Indicated Mineral Resources	562	0.33	0.013	0.06	1.87	73	1.04
Inferred Mineral Resources	906	0.37	0.013	0.06	3.32	120	1.65
Total Mineral Resources	1,890	0.36	0.016	0.06	6.81	296	3.58

Million dry metric tonnes², % CuT- per cent total copper; %MoT- per cent total molybdenum; g/t Au- grams/tonne of gold; Kt-Kilo tonnes; Mt- Million tonnes; Moz- Million ounces

Notes

- Cut-off grade: NSR of >0 US\$/t. Input parameters for the NSR calculation are based on long term price forecasts for copper, molybdenum and gold as estimated by JV Partners; mining, haulage, processing, shipping, handling and G&A charges. Metallurgical recovery assumptions differ for geological domains with an average of 85% copper, 55% for molybdenum and 39% for gold. The prices are commercially sensitive and are not disclosed.
- 2. All volumes are reported as dry metric tonnes.
- 3. All tonnes and grade information have been rounded to reflect the relative uncertainty of the estimate, hence small differences may be present in the totals.

ESTIMATE OF MINERAL RESOURCE FOR SIERRA GORDA

South32 confirms the first-time reporting of a Mineral Resource estimate for the Sierra Gorda copper deposit as at 30 June 2023 (Table A).

The estimate of Mineral Resource is reported in accordance with the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves*, 2012 (JORC Code) and the Australian Securities Exchange Listing (ASX) Rules. The breakdown of the estimate of Mineral Resources into the specific JORC Code categories is contained in Table A. This report summarises the information contained in the JORC Code Table 1, which is included as Annexure 1.

Geology and geological interpretation

The Sierra Gorda deposit is in the plain of the intermediate valleys between the Cordillera de la Costa and the source of the Cordillera de Los Andes. Exploration and research identified three metallogenic belts from different ages related to hydrothermal systems, with copper, molybdenum and gold mineralisation. Most of the world-class copper porphyries that exist in northern Chile are located within the three belts. Sierra Gorda is located in the central belt.

Regionally, a sequence of Early Cretaceous volcanic rocks that were intruded by a granitic complex of Palaeocene age and a series of smaller younger intrusions have served as host rock for numerous hydrothermal mineralisation systems of copper, molybdenum and gold. The main structural systems are defined by regional faults in north-south and northwest directions, which control and serve as flow channels for systems of alteration and economic mineralisation.

Drilling techniques

The Mineral Resource estimate for the Sierra Gorda deposit was completed using a total of 403 diamond drill holes (DD) (151,243m) with HQ (core diameter-63.5mm), 1,366 reverse circulation (RC) drill holes (261,147m) with a hole diameter of 139.7mm and 366 holes with RC pre-collar to cover the supergene zone, followed by diamond drilling (173,185m). Most of the drill holes were orientated in the east-west direction, with variable dips. A small number of holes were drilled in an east-northeast direction and some of the shallower drill holes in the active open pit area have a radial pattern.

Sampling and sub-sampling techniques

Logging data from 2,135 drill holes were used for geological interpretation and assay results from 1,750 drill holes were used for resource estimation.

Until 2021, drill half cores were sampled at 2m intervals. The current practice is to use quarter cores for sampling. For RC drilling, a 2m sample (up to 80kg) is reduced to 10kg using three-stage splitting with a riffle splitter before being sent to the laboratory. Historically, different laboratories were used for sample preparation and chemical analysis. Since 2018, GeoAssay in Antofagasta, an ISO 9001:2000 certified external laboratory, has been engaged for sample preparation and chemical analysis. Preparation for both DD and RC involves crushing to 90% passing 1.65mm. The crushed samples are reduced using a riffle splitter to 1,000g and then pulverised to 95% passing 100µm. All logging was verified by geologists throughout each drilling program and reviewed independently against core photos or RC chips by an alternate geologist prior to geological interpretation.

Sample analysis method

Samples of 1g taken from 1,000g pulp were processed at the GeoAssay laboratory, where the samples were digested in a mixture of nitric (95%) and hydrochloric (5%) acid and the concentration of total molybdenum (MoT) and total copper (CuT) was measured using Atomic Absorption Spectroscopy (AAS). A 30g to 50g charge was used to determine gold (Au) grade using the fire assay method, followed by AAS. A range of certified reference materials (CRMs) was routinely submitted to monitor assay accuracy, with low failure rates within expected ranges for this deposit style, demonstrating reliable laboratory accuracy.

Results of routinely submitted field duplicates to monitor sample representativity, coarse crush precision and laboratory pulp duplicates to monitor quality control sample preparation homogeneity, and certified blank insertions to detect cross-contamination were all within an acceptable range for resource modelling.

Estimation methodology

Resource estimation was performed by ordinary kriging interpolation for the three elements of economic interest (CuT, MoT and Au). Search estimation criteria were consistent with geostatistical models developed for each estimation domain according to the appropriate geological controls. Validation included statistical analysis, swath plots and visual inspection. A discrete gaussian 'change of support' model was developed to analyse the level of smoothing after comparison with the resource model.

Specific gravity measurements from drill cores were used as the basis for calculating average densities for each estimation domain and oxidation style (i.e. oxide, supergene and hypogene). Average specific gravities from all samples from a domain were used for the domain tonnage conversion factors when calculating tonnage for both mineralised and non-mineralised material.

Mineral Resource classification

A multi-criteria approach was used to classify the Mineral Resource. The classification category outcome from the complete assessment is as below.

- Measured Mineral Resources: Applied to blocks where there is 90% confidence that the block grade is within 15% on a quarterly tonnage parcel and the average distance of the three nearest samples is less than 50m.
- Indicated Mineral Resources: Applied to blocks where there is a 90% chance that the block grade is within 15% on an annual tonnage basis, the slope of regression from ordinary kriging is greater than 0.6 and the average distance of the three nearest samples is more than 50m.
- Inferred Mineral Resources: Blocks within the variogram range, but which failed the above criteria.

Mining and metallurgical methods and parameters

A pit optimisation (using the Lerchs-Grossman algorithm) was completed to evaluate Reasonable Prospects for Eventual Economic Extraction (RPEEE) for constraining the resource boundary (both laterally and vertically) using the parameters in the Life of Mine Plan and JV partner agreed price protocols.

Metallurgical recoveries were derived based on current operational performance and test work. The grade recovery curve was then derived from the inputs and has been incorporated in the resource model for all paying elements (CuT, MoT and Au). Metallurgical recovery assumptions differ between geological and weathering domains and vary considerably. Average process recovery for copper was 85%, for molybdenum was 55% and for gold was 39%.

Cut-off grade

Sierra Gorda is a copper deposit with molybdenum and gold which uses an equivalent Net Smelter Return (NSR) value as the grade descriptor.

Input parameters for the NSR calculation are based on long-term JV partner forecasts for Cu, Mo and Au pricing, after considering all costs related to mining, haulage, processing, shipping, handling and G&A charges.

As all costs are included in the NSR calculation, all blocks reporting a positive NSR value satisfied the assessment of reasonable prospects for eventual economic extraction and were reported as Mineral Resources.

Additional information is detailed in Annexure 1.

Annexure 1: JORC Code Table 1 - Mineral Resource estimate for Sierra Gorda deposit

The following tables provide a summary of important assessment and reporting criteria used at the Sierra Gorda deposit for the reporting of Mineral Resources in accordance with the Table 1 checklist in *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code*, 2012 Edition) on an 'if not, why not' basis.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Sampling techniques	 The Mineral Resource estimate for the Sierra Gorda copper deposit was completed using a total of 1,750 diamond drill holes (DD) and reverse circulation (RC) drill holes. A total of 2,135 drill holes were used for geological interpretation.
	 A heterogeneity study, to determine the appropriate sample size was undertaken by Sierra Gorda SCM in 2014. The sample reduction and preparation is in line with the study.
	 A quarter of the RC sample volume and quarter cores were processed and analysed for every twentieth sample (duplicate) to assess sample representativity. The analytical results were within +/- 10% for more than 98% of the samples for 2,022 drilling results.
	• Samples from DD and RC drilling were collected at 2m intervals. For RC drilling, the samples collected from 2m intervals (up to 80kg) were reduced by riffle splitter to 10kg and sent to the laboratory. At the laboratory, 10kg samples were crushed to 90% passing 1.65mm. The crushed samples were reduced to 1,000g using a lineal cutter (CRC, Crushing Robotic Cell) and the 1,000g samples were pulverised to 95% passing 100µm. For DD, prior to 2021, half cores were used for sub-sampling for chemical analysis. Since 2021, only quarter cores have been used; the other quarter is used for geometallurgical assessment. Half and quarter DD core samples from 2m intervals (approx. 3kg to 4kg) were crushed to 90% passing 1.65mm. The crushed samples were reduced to 1,000g using a riffle splitter and then pulverised to 95% passing 100µm. Finally, 1g pulp samples were subjected to chemical analysis using acid digestion (nitric acid at 95% concentration and hydrochloric acid) followed by Atomic Absorption Spectroscopy (AAS). A 30g to 50g charge was used to determine gold (Au) grade using the fire assay method, followed by AAS.
Drilling techniques	 A total of 403 diamond drill holes (DD) (151,243m) with HQ core (hole diameter of 63.5mm), 1,366 reverse circulation (RC) drill holes (261,147m) with a hole diameter of 139.7mm and 366 holes with RC pre-collar to cover the supergene zone, followed by diamond drilling (173,185m) have been included in the reported resource estimation (Figure 3).
Drill sample recovery	 Core recovery was measured for each 3m run at the drill site for all DD holes. The average recovery exceeded 95%.
	 The recovery of RC drilling was determined by weighing a sample and comparing it with the theoretical weight determined from the hole diameter. The average recovery for all RC drilling was more than 93%.
	 Recovery drops when drilling encounter fault zones. Recovery was therefore maximised by managing speed of rotation and optimising drilling fluid density.
	 Given that the overall recovery was very high, correlation analysis between core recovery and grade was not performed.
Logging	 All DD cores were logged for lithology, alteration, mineralisation, veins and structures. Selected drill holes were logged for geotechnical data, which includes rock quality designation (RQD), fracture frequency (FF), type of fault and fill. Representative RC chips were collected from each RC drill interval in a sample tray and were logged for lithology, alteration and mineralisation.
	 The geological parameters required for developing a geology and mineralisation model are pre-defined in the logging software. For consistency, the pre-defined codes are used for logging when entering information in the centralised database.
	 Geological logging is both qualitative and quantitative in nature. The quantitative assessment reflected the prediction of the occurrence and abundance of

Criteria

Commentary

mineralisation.

- The DD cores were photographed in their entirety.
- The geological description has the appropriate level of detail to properly support the development of a geology and mineralisation model.

Sub-sampling techniques and sample preparation

- The sampling interval of 2m was based on the nature of mineralisation and method of mining. No formal study was completed to support the sampling interval.
- All DD cores for every 2m interval were longitudinally cut into equal halves. One
 half of each core was further sub-divided into two equal quarters; one to be used
 for chemical analysis and the other for geometallurgical testing. The other half
 was stored in the core library. The approximate weight of a 2m quarter core
 sample is between 3kg and 4kg. The whole quarter core samples were sent to an
 external laboratory for processing and chemical analysis.
- Until 2021, DD cores were cut into two equal parts at intervals of 2m, with one half used for chemical analysis and the other stored in the core library.
- A 2m RC interval weighs approximately 80kg. Samples are reduced to 10kg using a riffle splitter and sent to an external laboratory for processing.
- Different laboratories have been used from time to time for preparation and chemical analysis of drill samples. Chemex was used in 2004 and in 2005 Acme and Andes Analytical Assay Ltda were used. Between 2006 and 2010 Andes prepared and analysed all drilling samples. Between 2010 and 2018, SGS (Société Génerale de Surveillance), AAA, (Andes Analytical Assay) and ALS (Laboratory Group) were used for sample preparation and analysis. Since 2018, GeoAssay has been engaged to do the preparation and chemical analysis of drilling samples. All laboratories used to date are ISO 9001:2000 certified.
- Sample reduction and preparation for chemical analysis is summarised below.
 - o RC samples are weighed to confirm the weight received and then dried in an oven at 105°C (±5°C) for approximately 6 to 10 hours. For RC drilling, a 2m sample (up to 80kg) is reduced to 10kg with a riffle splitter and sent to the laboratory. At the laboratory, the 10kg samples are crushed to 90% passing 1.65mm and reduced to 1,000g using a lineal cutter (crushing robotic cell (CRC)). The 1,000g samples are pulverised to 95% passing 100μm.
 - O Core samples: For DD, prior to 2021, half cores were used for sample preparation and chemical analysis. Since 2021, only a quarter of the core has been used; the other quarter is used for geometallurgical assessment. Quarter core samples from 2m intervals (approx. 3kg to 4kg) are crushed to 90 passing 1.65mm. The samples are then dried in an oven at 105°C (±5°C) for approximately 6 to 10 hours. The crushed samples are reduced to 1,000g using a riffle splitter and then pulverised to 95% passing 100μm.
 - The pulverised samples are passed through a rotary divider to obtain three pulps of 200g each. One of the portions is used for chemical analysis by AAS and the remaining two are stored as duplicates for future reference.
 - At the secondary crushing stage, the laboratory inserts 5% duplicates and reports on them in each report as part of its internal quality control process. The duplicate samples are processed and analysed. The results show that 98% of the duplicate samples are within 10% of the original samples. Sierra Gorda SCM (SGSCM) does not keep a formal account of the results.
- Sub-sampling and sample preparation techniques are adequate for the declaration of Mineral Resources.

Quality of assay data and laboratory tests

- A 1g pulp sample is digested using nitric acid and hydrochloric acid and thereafter quantified using AAS. This is considered appropriate for the type of mineralisation. The method is used to determine CuT and MoT percentages. A 30g to 50g charge is used to determine gold (Au) grade using the fire assay method followed by AAS.
- Samples are analysed in batches of 25. A batch contains 20 samples, one certified reference material (CRM), one pulp duplicate, one field duplicate and two blank samples.
- The analytical laboratory manages an internal quality control protocol that is performed on each batch analysed. The protocol includes analysis of three each

Criteria

Commentary

- of CRMs, duplicate samples and blank samples per batch. The results from the laboratory's internal control samples are reported on each certificate of analysis delivered
- An analytical accuracy assessment is performed by the SGSCM team in accordance with the 'Westgard' control rules (control/reject/warning). A maximum of 30% relative error (RE) is accepted for the sample duplicate, a maximum of 20% RE for the laboratory duplicate and a maximum of 10% RE for the pulp duplicate. The acceptance limit for contamination is the equivalent of five times the lower detection limit (5 LDD) reported by the chemical analysis laboratory for the method and analyte of interest.
- All QA/QC samples submitted by SGSCM are reviewed immediately on receipt of analytical results. Quality control standards are essentially defined for CuT and MoT. No significant bias in the data has been identified from the QA/QC results.
- Currently, duplicate pulp samples are not sent to another independent laboratory (check or umpire analysis) to assess whether there is procedural bias at GeoAssay, the primary laboratory.
- The Competent Persons consider that the nature and quality of the chemical analysis and laboratory procedures are appropriate to support estimation of the mineralisation grades of the Sierra Gorda deposit (Figure 6).

Verification of sampling and assaying

- All logging and chemical analysis is peer reviewed to confirm the geology (using core photographs) and mineralisation match with the analytical outcome. Once verification is complete, the data is authorised for inclusion in the central database
- Drill holes have not been twinned due to the disseminated nature of mineralisation and the low 'nugget' effect. The assessment is confirmed on review of semi-variogram models and provides confidence in the predictability of drilling results over short and long ranges.
- The logging is performed on digital tablets, which are loaded as CSV files directly
 to the database. The results of chemical analyses are digitally recorded (in CSV
 files) and uploaded to a database in the SQL server.
- SGSCM has procedures in place for periodic back up of all information, including storing periodic backup offsite.
- No adjustment has been made to the analytical data. For estimation purposes, values reported as less than the detection limit by the laboratory were assigned a value of half of the detection limit.

Location of data points

- The mining concessions allow mining exploitation and exploration in Chile and are regulated by the Mining Code, which establishes the UTM coordinate system in Datum PSAD56 to be used as the official coordinate system. The local coordinate system developed by the mine is linked to the official coordinate system. The location of drill hole collars is surveyed by the survey department, using Trimble R12i equipment (global navigation satellite system), with a real-time kinematic accuracy of 8mm (horizontal) and 15mm (vertical).
- Geodetic satellite positioning equipment (GPS) (TOPCON brand GR3 model, double frequency, with accuracy of 5 mm) is used for geographical location and planimetry. A Total Topcon Station model 7501 is used to determine surface distances and an electronic LEICA level, model DNA3, is used to define precision elevations in the mining area.
- Downhole surveys are performed with a gyroscope (model STO Gyro Master). The
 measurement is taken at downhole intervals between 20m and 50m from the end
 of the hole. The company conducting the downhole survey (Datawell) provides
 the data for each hole, which is then lodged in the database. SGSCM is in the
 process of preparing a procedure to validate all survey and depth information.
- Surveying procedures and practices are adequate and can be used for mine planning purposes.

Data spacing and distribution

- · No exploration results are reported.
- Due to the variable orientations of the drill holes, data spacing may vary with depth. In general, drill hole collars are spaced between 50m and 100m. Infill drilling is spaced between 30m and 60m (Figure 3).

Criteria	Commentary
	 The scheduling of twin drilling will be considered by SGSCM team during future campaigns.
	 Drill spacing is considered sufficient by the Competent Persons to establish geological and grade continuity necessary to support a reliable resource estimate.
	 All samples are composited to 8m along the drill hole. The composite length is appropriate for panel grade estimation with a block height of 16m.
Orientation of data in relation to geological structure	 Most of the drill holes are orientated in the east-west direction, with variable dip. However, there are also a small number of east-northeast orientated drill holes, and some of the shallower drill holes in the active open pit area have a radial pattern.
	 The general orientation of mineralisation within the hypogene zone is subvertical, with a north-northeast orientation in plan view. The drilling holes are planned with an orientation that allows lateral recognition of the main body, to enable edge variability to be controlled. Within the mineralised body drilling confirms the mineralised zones and provides reasonable confidence in defining the mineralisation.
	 Even though the mineralisation is structurally controlled, the structures radiate in all directions, which means that drill cores are not generally oriented.
Sample security	Each sample generated is assigned a number by an automated numbering system which allows traceability at all stages of the process.
	 The samples are sent to the GeoAssay laboratory in Antofagasta for preparation and chemical analysis according to a defined procedure as described above. Transport is adequate to maintain the integrity and safety of the samples. The results are received and are verified for storage in a custom SQL server database.
	 The SQL database has user-level security and there are periodic backups of the server according to SGSCM procedure.
	 Half cores are kept in a safe place before being processed. After sampling, crushed cores and duplicate samples are stored in a dedicated facility with controlled access.
Audits or reviews	 Between 6 and 10 March 2023, Snowden Optiro was commissioned by South32 to conduct an independent audit of the Mineral Resource estimate. The review identified a requirement to collect additional density data and minor improvements to QA/QC processes.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria

Commentary

Mineral tenement and land tenure status

- SGSCM is owned by KGHM Polska Miedź SA (55%) and South32 Ltd (45%).
- The Sierra Gorda deposit is backed by a solid mining tenure guarantee, granted through 249 mining concessions. Exploration of minerals is allowed across the effective area covered by the mining concessions, which is a total of 17,560.99 hectares. The Mining Code, which regulates mining concession activity in Chile, establishes that mining concessions grant the right to explore and exploit metallic and non-metallic mineral substances. The concessions are perpetual and are maintained indefinitely through the annual payment of the mining patent to the General Treasury of the Republic of Chile. Until the date of verification, their validity extends until 28 February 2024 (Figure 1). Seven mining easements have also been established, which grant the right to occupy the surface and establish infrastructure necessary for the extraction and processing of minerals, covering a total area of 33,748.94 hectares and including the water pipeline. A corresponding payment has been made for the mining easements and renewal of two of them will take place on 31 December 2023, with the remaining five to be renewed before 5 January 2024. The annual payment of the mining easement keeps the right to occupy surface land belonging to the State of Chile in force. Currently, there are five mining easements granted for an indefinite term, while the remaining two have definite expiry dates:
 - a) Rol 2837-2013 expires 22 March 2034 and
 - b) Rol 3123-2010 expires 12 July 2025.

For the latter easement, the renewal process has already been initiated.

- Operations are carried out in compliance with the regulations and payments established to guarantee the viability and continuity of mining activities.
- Royalties Law 20,026 of 2005, modified by Law 20,469 of 2010 requires mining companies to pay a royalty to the State of Chile, with variable rates on mining operating income. The royalty rate varies from 5% to 34.5%, based on mining operating margin.

Exploration done by other parties

• The historical drilling of the Sierra Gorda deposit began in 1966 with the first surveys by ITT, Cimma Mines and Chevron. The companies drilled 108 drill holes (95RC-13DD) before 1987. Between 1991 and 1996, Outokumpu began the first formal exploration campaign, completing 238 drill holes (109RC-48DD-81 mixed). Between 1997 and 2003, RTZ drilled 61 holes (53RC-8DD). Two companies, Teck-Cominco and SOQUIMICH, drilled 61 holes (44RC-8DD-17 mixed) between 1997 and 2011 on the Pampa Lina property. In parallel, Quadra drilled 1,069 holes between 2004 and 2012. Finally, SGSCM drilled 589 holes between 2013 and 2022.

Geology

- The Sierra Gorda deposit is located in the plain of the Intermediate Depression or the Intermediate Valleys located between the Cordillera de la Costa and the headwaters of the Cordillera de Los Andes.
- Exploration and research associated with Andean metallogenesis identified three metallogenic belts from different ages related to hydrothermal systems, with copper, molybdenum and gold mineralisation, between 20° and 27° south latitude. Metallogenic belts are differentiated by an area to the west located in the coastal zone of Cretaceous age (130Ma), a central zone of Paleocene-Early Eocene age (66Ma to 55Ma) and an eastern belt of Upper Oligocene age (42Ma to 31Ma). All the world-class copper porphyry deposits that exist in northern Chile are located at the source of the Cordillera de Domeyko and its continuation to the north.
- Sierra Gorda is located in the Palaeocene-Early Eocene metallogenic belt, located at the western edge of the Domeyko range in the second region of northern Chile.
- Regionally, a sequence of Early Cretaceous volcanic rocks that were intruded by a granitic complex of Palaeocene age and a series of smaller, younger intrusions, have served as host rocks for numerous hydrothermal mineralisation systems of copper, molybdenum and gold (Figure 2).
- The main structural systems are defined by regional faults of north-south and northwest direction, which control and serve as conduits for fluid for alteration of the host rock and for deposition of economic mineralisation.

Criteria	Commentary
	 Figure 4 shows a cross section of the chalcopyrite mineralisation main body and drilling information used for the modelling and estimation processes.
Drill hole information	 Exploration results are not reported as part of the Mineral Resource estimate. Figure 3 shows the collar location of the drilling information used to develop the Mineral Resource estimate. A metal equivalent has been used for reporting the Mineral Resource estimate.
Data aggregation methods	 Data is not aggregated, other than being composited to 8m using a length weighted average for geostatistical analysis and estimation. The composite length of 8m is considered appropriate based on the nature of mineralisation and the method of mining (including bench height).
Relationship between mineralisation widths and intercept lengths	• The main ore body is vertical and the dominant drilling orientation is east-west, with variable dips (vertical to 65°) depending on the location of the drill hole collar. Where mineralisation is disseminated or stockwork in nature, drilling also uses a variety of dip angles (vertical to 65°).
Diagrams	Relevant maps and sections are appended to this document.
Balanced reporting	 Exploration results are not specifically reported as part of the Mineral Resource estimate.
Other substantive exploration data	 SGSCM is currently conducting a geological survey (lithology, alteration and structural system) of the entire mining property and geophysics studies (IP- MIMDAS and magnetometry).
Further work	 SGSCM is completing annual infill drilling programs to improve confidence in the Mineral Resource estimate within the Catabela Pit and to identify potential extensions to the deposit. In parallel, exploration is ongoing outside the existing pit shell to assess the continuity of mineralisation laterally, with emphasis on known structural trends and other potential satellite deposits.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1 and where relevant in section 2, also apply to this section.)

Criteria	Comment
Database integrity	 The analytical results, once received, are verified and stored in a custom SQI server database. Since the start of mining in 2014, data on collars, downhole surveys, geological logging and analytical results have been loaded from CSV files as it becomes available. The upload process includes validation checks fo consistency, including assessment of anomalous values.

- As part of updating the geological model, all records are reviewed by experienced geologists against core photos in the context of the surrounding geological interpretation.
- Measures are taken to ensure that data has not been modified, for example, due
 to transcription or typing errors, between initial collection and use for Mineral
 Resource estimation purposes. The process of validation is repeated annually.

Site visits

- Mr Ian Glacken from Snowden Optiro visited the Sierra Gorda mine from 1 to 6
 March 2023 and reviewed geology and mineralisation in drill cores. Mr Glacken
 visited the open pit, the active DD site and the core logging facility. Discussions
 on site included review of QA/QC information, geological model, domain
 definition, database procedures, Mineral Resource modelling and model
 validation. Review of the GeoAssay laboratory in La Negra, Antofagasta was also
 completed.
- Mr Omar Cortes, an employee of SGSCM, regularly visits all facilities and reviews all informing data and conducts regular assessments to ensure that relevant procedures are followed when collecting, assessing and interpreting data.
- The findings of site visits indicate that data and procedures are of sufficient quality for Mineral Resource estimation and reporting.

Geological interpretation

- The geological model has been developed using lithology, mineralisation and alteration. Leapfrog software is used in developing 3-D volumes for geology and mineralisation.
- The interpretation criteria considered for the lithological units is based on the
 conceptual model of the deposit, which considers a volcanic sequence (Quebrada
 Mala Formation, Maastrichtian; 73Ma to 65Ma), which is in contact with the Sierra
 Gorda intrusive complex (71Ma to 65Ma). Both units host porphyry bodies (Figure
 2).
- The alteration considers the interpretation of four main units (biotite, propylitic, sericite quartz and argillic), with biotite alteration being dominant. Biotite alteration is mainly characterised by pervasive replacement of mafic minerals by secondary biotite. The propylitic alteration is located in the periphery of the deposit. The sericite quartz alteration corresponds to the main hydrothermal alteration, presenting a wide spatial distribution affecting intrusives, volcanic rocks and intra-mineral porphyries. The argillic alteration is identified in the most supergene zone of the deposit and has a close genetic relationship with the secondary processes of sulphide leaching.
- Copper mineralisation is defined on the basis of consideration of the following criteria.
 - A hypogene zone is defined, which corresponds to the mineralisation of primary sulphides formed by the zones of primary pyrite and primary chalcopyrite.
 - The supergene zone is formed by a process of rebalancing from hypogenic (hydrothermal) mineralogy to oxidising conditions near the earth's surface.
 The supergene event has generated three zones; leached, oxides and secondary enrichment.
- Hypogene sulphide mineralisation forms most of the mineralisation, both in terms
 of volume and metal content. Hypogene copper sulphides consist predominantly
 of chalcopyrite.
- Visual checks were made in 3D, plan and section views and interpretation anomalies were reviewed and modified as appropriate.
- The geology is well understood due to the long history of exploration and mining in the area and alternate interpretations were therefore not considered.

Criteria	Comment
Dimensions	 The morphology and extent of the Mineral Resource of the Sierra Gorda deposit is a sub-vertical body with a diameter varying between 1,600m and 2,000m. Currently, the mineralised system has been extended to a depth of 1,800m.
Estimation and modelling techniques	 Mineralisation domains were developed for each element of economic interest (CuT, MoT and Au). Seven copper domains, six molybdenum domains and three gold domains were defined based on mineral composition, alteration, lithology and grade cut-off. The domains were validated by exploratory data analysis (EDA).
	 Outlier assessment resulted in capping of high-grade values. Probability plots were generated to identify outliers. Composited data for MoT and Au were capped, while no capping was applied to CuT data.
	 Datamine's Supervisor Software was used for EDA, variography, Quantitative Kriging Neighbourhood Analysis (QKNA) and validation of the resource model. Maptek's Vulcan software was used for resource estimation and reporting.
	 QKNA was used to optimise estimation block size and search neighbourhood (i.e. minimum and maximum samples, number of samples per drill hole, octant definition). The parameters reviewed in the optimisation process were the slope of regression and kriging efficiency. A parent block size of 15m in the X direction by 15m in the Y direction by 16m in the Z direction was used for estimation. No sub-blocking was considered due to the bulk scale of mining.
	 Ordinary kriging was used as the estimation method, with search ellipses defined as the full range of the respective variogram model. Three estimation passes were used by varying the minimum number of samples, with the first search representing the outcome from QKNA. The minimum number of samples was reduced in subsequent passes, indicating reduced confidence in the remaining two passes of estimation. Finally, a fourth pass was defined for estimation by considering ten times the original search ellipse to identify potential for future exploration, using current understanding of the behaviour of mineralisation.
	 Kriging efficiency and slope of regression were recorded for each estimation run and for each element, to quantify estimation confidence.
	The estimate was validated by:
	 visual comparison of the block model with informing data in vertical sections and plans (Figure 6);
	 scatter plots to compare estimated block with the nearest neighbour estimate;
	 swath plots in three orthogonal directions (X, Y and Z) with a defined window to compare estimation with informing composited data (Figure 7);
	 a discrete Gaussian change of support assessment to assess the level of smoothing and potential under- or over-estimation of grade; and
	 comparison of the Mineral Resource estimate with a previous estimate which used a different estimation method and reconciliation with production data, indicating a reasonable correlation on a global and local scale.
	 Metallurgical recovery was derived for each block using the metallurgical recovery curve generated from metallurgical test work at different grade intervals.
	 No deleterious elements were considered for estimation.
	 Correlation between different grade elements was not considered in the estimation process. A correlation study will be completed, and the outcome of the study will be implemented in the next resource update.
Moisture	 Based on experience of neighbouring deposits and preliminary assessment of drill cores, the moisture content appears to be minimal.
	 To date, the laboratory does not record sample weights before or after drying. A moisture study will be completed to verify the moisture content and to validate the dry bulk density assumption.
Cut-off parameters	 The Mineral Resource is defined by calculating a Net Smelter Return (NSR) (US\$/tonne) and considering revenue using the JV partner agreed price protocol after accounting for metallurgical recovery and deducting mining, processing, transportation and G&A costs. The NSR formula is provided below.

Criteria	Comment
	NSR (US\$/t) = (Cu Price-Freight Cu Conc.) (US\$/lb)*CuT*RecCu*(2205*lb/t)
	+ (Mo Price - Freight Mo Conc.) (US\$/lb)*MoT*RecMo*(2205*lb/t)
	+ (Au Price - Freight Au Conc.) (US\$/Oz)*AuT*RecAu/(31.1035gm/Oz)
	- ((Process + G&A) (US\$/t) - (Mining (US\$/t))
	t - tonnes
	Cu Conc copper in concentrate
	RecCu - metallurgical recovery of copper Mo Conc molybdenum in concentrate
	RecMo - metallurgical recovery of molybdenum
	Au Conc gold in concentrate
	RecAu – metallurgical recovery of gold
Mining factors or assumptions	 A pit optimisation (using the Lerchs-Grossman algorithm) was completed to determine Reasonable Prospects for Eventual Economic Extraction (RPEEE) for defining the optimised resource boundary (both laterally and vertically) using the parameters in the Life of Mine Plan and JV agreed price protocol. Measured, Indicated and Inferred Resources were all considered as value contributors in the optimisation process.
Metallurgical factors or assumptions	 Metallurgical recovery was assessed based on current operational performance and test work. The grade recovery curve was then derived from the inputs and is incorporated in the resource model for all paying elements (CuT, MoT and Au).
Environmental factors or assumptions	 SGSCM follows a strict guideline of mitigating environmental risks inherent to operations. Some aspects considered in developing the strategic plan include energy and water efficiency, waste reduction, emissions reduction, control of particulate matter and promoting recycling and reuse of materials. There are defined targets which will result in minimising environmental impacts on the operation and within the community.
	 The tailings disposal has appropriate permits in place.
	The waste dumps are designed to ensure slope stability.
Bulk density	 A total of 6,407 density measurements were completed by collecting samples from diamond drill cores. Outlier values (<2.1t/m³ and >3.3t/m³) were removed before deriving average values for each lithology and alteration zone. No major variation is observed in density within each lithology.
	 Samples of 15cm to 20cm in size are selected from drill cores for density measurement. The sample is dried and coated with paraffin. Density is calculated by weighing the sample in air with and without paraffin and in water with paraffin, assuming the specific gravity of water to be 1 t/m³. Average density is assigned per lithology in the resource model.
Classification	 A multi-criteria approach was used to classify the Mineral Resource. Initially an assessment of confidence was completed using the '90:15' method, in which the first number demonstrates confidence and the second number provides accuracy (e.g. a Measured Resource is defined using +/-15% accuracy with 90% confidence over a quarterly production volume). A second phase of assessment was conducted to consider the impacts of data quality, data density and geological uncertainty. Consequently, a combination of modelling criteria was used to refine the classification scheme, including the estimation pass, equivalent sample distance of the closest three samples and the slope of regression. The classification category outcome from complete assessment is as below. Measured: Applied to blocks where there is 90% confidence that the block grade is within 15% on a quarterly tonnage parcel and the average distance of the three nearest samples is less than 50m.
	Indicated: Applied to blocks where there is a 90% chance that the block grade is within 15% on an annual tonnage basis, the slope of regression is greater than 0.6 and the average distance of the three nearest samples is more than 50m.
	 Inferred: Blocks within the variogram range, but which failed the above criteria.
	 The Competent Person is satisfied that the Mineral Resource classification (Figure 8) reflects the geological interpretation and the constraints of the deposit.

Criteria Comment In March 2023, Snowden Optiro was commissioned by South32 to conduct an Audits or reviews audit of the Mineral Resource estimate. The audit did not identify any major shortcomings, and it was concluded that, in general terms, the process of generating the resource model has followed industry standards and the supporting documentation is adequate. The audit suggested exploration of the possibility of further MoT and Au subdomaining and to implement more robust validation process. An assessment of confidence was conducted using a conditional simulation Discussion of relative study. For each domain at the block dimension (15m X 15m X 16m), 70 realisations accuracy/confidence were generated for CuT grades and were validated against the sample information. The realisations were re-blocked to reflect quarterly and annual production tonnage. The block dimensions were oriented to be laterally extensive, to mimic the mining technique at Sierra Gorda. A default average density for sulphide material was applied. The 90% confidence interval was compared to the mean grade of the realisations to derive accuracy +/-15%. annual tonnage assumption - 47Mt quarterly tonnage assumption - 12Mt The Competent Person is satisfied that the accuracy and confidence of Mineral Resource estimation is well established and reasonable for the deposit.

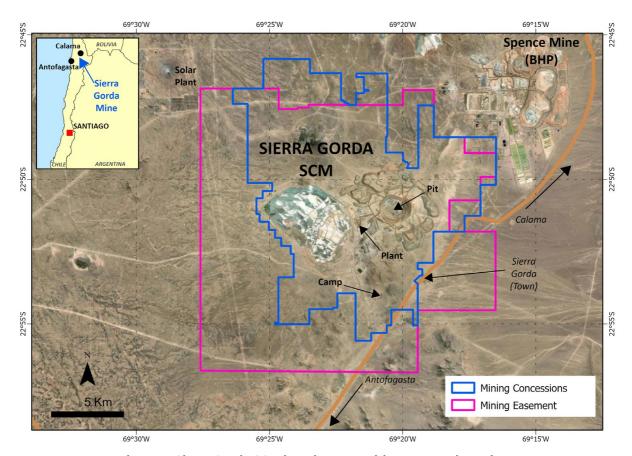


Figure 1: Sierra Gorda SCM location map with tenement boundary

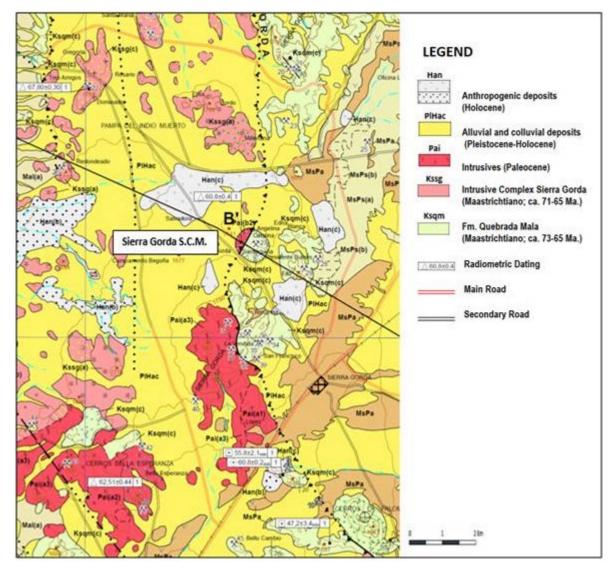


Figure 2: Regional geology map

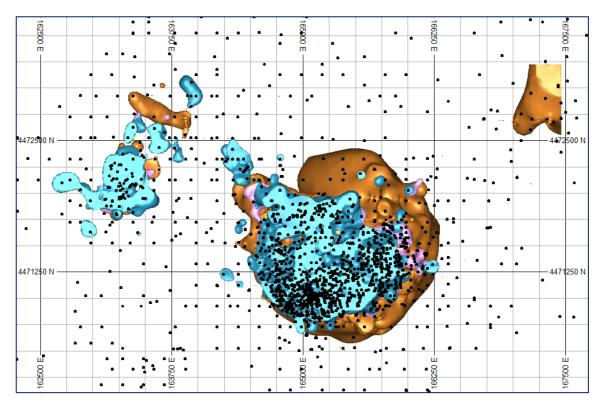


Figure 3: Distribution of drill holes used in the resource estimation

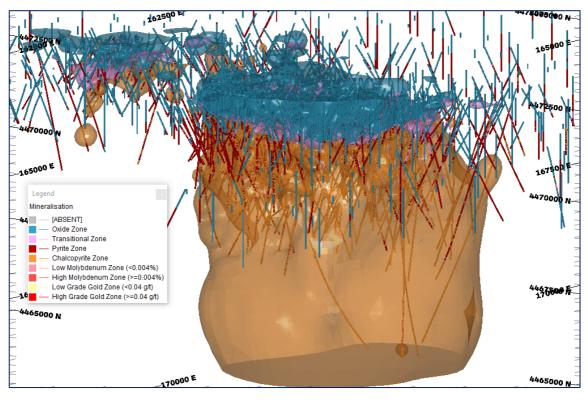


Figure 4: Distribution of drill holes and the chalcopyrite mineralisation zone

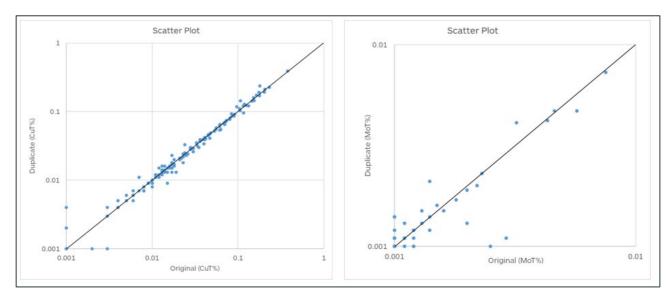


Figure 5. Precision analysis of assay results for CuT% and MoT%

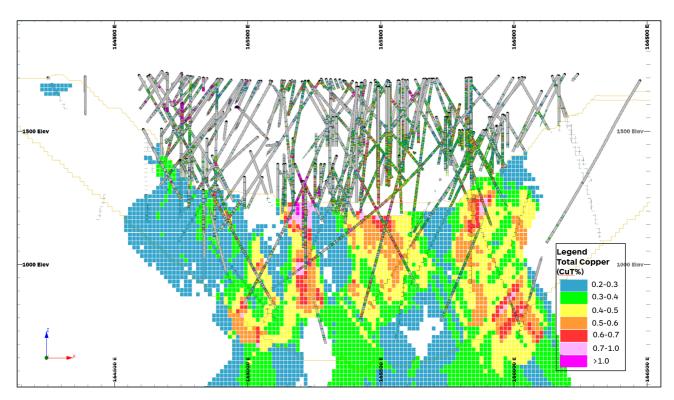


Figure 6: Vertical Section comparing estimation with drilling for CuT (%) at Northing (Y) =4471210m

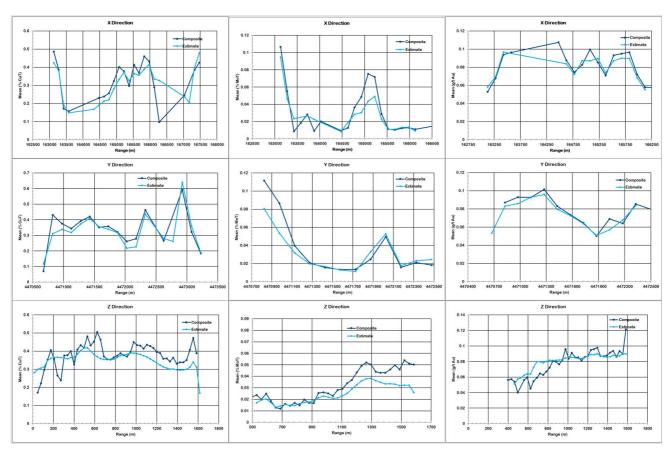


Figure 7: Swath Plots for % MoT, % CuT and g/t Au: in three orthogonal directions

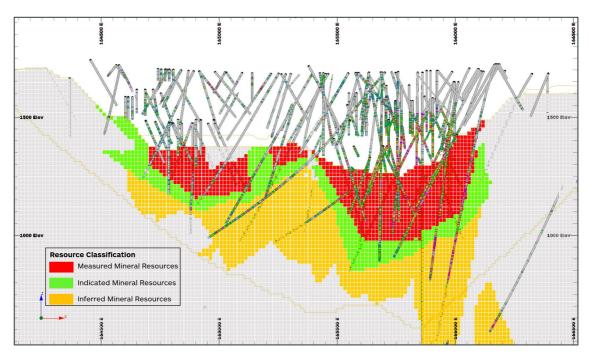


Figure 8: Mineral Resource classification with drilling at Northing (Y) =4471445m at NSR>US\$0/t