17 June 2019

South32 Limited
(Incorporated in Australia under the *Corporations Act 2001* (Cth))
(ACN 093 732 597)
ASX / LSE / JSE Share Code: S32 ADR: SOUHY
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HERMOSA PROJECT - MINERAL RESOURCE DECLARATION

South32 Limited (ASX, LSE, JSE: S32; ADR: SOUHY) (South32) is pleased to report for the first time a Mineral Resources estimate for the Taylor Deposit which forms part of its 100% owned Hermosa Project located in Arizona, USA (Appendix 1 – Figure 1). The Mineral Resource (Table A) is reported in accordance with the JORC Code (2012)[1] guidelines at 155 million tonnes, averaging 3.39% zinc, 3.67% lead and 69 g/t silver with a contained 5.3 million tonnes of zinc, 5.7 million tonnes of lead and 344 million ounces of silver. The Mineral Resource remains open at depth and laterally, with multiple targets to be tested as we continue our extensive surface drilling program.

72% of the Mineral Resource is in the Measured and Indicated categories (Table A), including 21 million tonnes in the Measured category at 4.07% zinc, 3.61% lead and 51 g/t silver, providing a compelling base from which to advance the Hermosa Project's pre-feasibility study and target additional mineralisation. To demonstrate the deposit's optionality, a range of tonnages and grades for the Mineral Resource at different NSR[2] cut-offs is included in Table B. The Mineral Resource estimate does not include the zinc-manganese-silver oxide Clark Deposit[3].

South32 Chief Executive Officer, Graham Kerr said "Our declaration of a Mineral Resource for the Taylor Deposit for the first time in accordance with the JORC Code represents a key milestone as we progress one of the most exciting base metals projects in the industry. The ongoing drilling program, and the resampling and relogging activity undertaken since our acquisition of the Taylor Deposit has significantly de-risked our investment, increased our confidence in the project and confirmed its ability to deliver strong returns to our shareholders over many decades. We expect to conclude our pre-feasibility study for the project before the end of the 2020 financial year."

The Hermosa Project is a polymetallic development option located in Santa Cruz county, Arizona which is 100% owned by South32. It comprises the zinc-lead-silver Taylor Deposit, the zinc-manganese-silver oxide Clark Deposit and an extensive, highly prospective land package with potential for discovery of polymetallic and copper mineralisation.

Full details of this update are contained in the attached report.

About South32

South32 is a globally diversified mining and metals company. We produce bauxite, alumina, aluminium, energy and metallurgical coal, manganese, nickel, silver, lead and zinc at our operations in Australia, Southern Africa and South America. We are also the owner of the high-grade zinc, lead and silver Hermosa development option in North America and have several partnerships with junior explorers with a focus on base metals. Our purpose is to make a difference by developing natural resources, improving people's lives now and for generations to come, and to be trusted by our owners and partners to realise the potential of their resources.

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1 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012.
2 Net smelter return.
3 Formerly known as the Central Deposit.

Foreign Estimate for the Clark Deposit

Information that relates to estimates of Mineral Resources for the Clark Deposit (Arizona Mining Inc) are foreign estimates under ASX Listing Rules and are not reported in accordance with the JORC Code. Reference should be made to the clarifying statement on Mineral Resources in the market announcement "South32 to acquire Arizona Mining in agreed all cash offer" dated 18 June 2018, in accordance with ASX Listing Rule 5.12. South32 is not in possession of any new information or data relating to the foreign estimate that materially impacts on the reliability of the estimates or has the ability to verify foreign estimate as Mineral Resources in accordance with the JORC Code. South32 confirms that the supporting information contained in the clarifying statement in the 18 June 2018 market announcement continues to apply and has not materially changed. Competent Persons have not done sufficient work to classify the foreign estimates as Mineral Resources in accordance with JORC Code. It is uncertain that following evaluation and further exploration that the foreign estimates will be able to be reported as Mineral Resources or Ore Reserves in accordance with the JORC Code. South32 intends to conduct a work program to increase confidence in the resource to ensure that resources are reported in accordance with the JORC Code.

Further Information

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JSE Sponsor: UBS South Africa (Pty) Ltd
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Table A: Mineral Resources for the Taylor Deposit as at 31 May 2019 in 100% terms[2]

Ore Type	Measured Mineral Resources				Indicated Mineral Resources				Inferred Mineral Resources				Total Mineral Resources			
	Mt[2]	% Zn	% Pb	g/t Ag	Mt[2]	% Zn	% Pb	g/t Ag	Mt[2]	% Zn	% Pb	g/t Ag	Mt[2]	% Zn	% Pb	g/t Ag
UG Sulphide[1]	21	4.07	3.61	51	86	3.14	3.73	75	42	3.30	3.56	67	149	3.32	3.66	70
UG Transition[1]	-	-	-	-	5.2	5.41	3.85	55	1.0	4.25	3.65	71	6.2	5.22	3.82	57
Total Sulphides	**21**	**4.07**	**3.61**	**51**	**91**	**3.27**	**3.73**	**74**	**43**	**3.32**	**3.56**	**67**	**155**	**3.39**	**3.67**	**69**

Million dry metric tonnes[2], % Zn- Percent zinc, % Pb- Percent lead, g/t Ag- grams per tonne of silver.

Table B: Mineral Resources for the Taylor Deposit as at 31 May 2019 in 100% terms[2]

NSR[1]	Measured Mineral Resources				Indicated Mineral Resources				Inferred Mineral Resources				Total Mineral Resources			
	Mt[2]	% Zn	% Pb	g/t Ag	Mt[2]	% Zn	% Pb	g/t Ag	Mt[2]	% Zn	% Pb	g/t Ag	Mt[2]	% Zn	% Pb	g/t Ag
70	26	3.54	3.16	45	113	2.87	3.28	66	53	2.93	3.12	61	192	2.98	3.22	62
90	**21**	**4.07**	**3.61**	**51**	**91**	**3.27**	**3.73**	**74**	**43**	**3.32**	**3.56**	**67**	**155**	**3.39**	**3.67**	**69**
110	17	4.57	4.03	57	75	3.64	4.17	82	37	3.63	3.90	72	129	3.76	4.07	76
130	14	5.06	4.43	62	63	4.00	4.57	90	31	3.95	4.23	77	108	4.12	4.46	83
150	12	5.56	4.85	67	54	4.32	4.95	97	27	4.27	4.54	82	92	4.46	4.82	89

Notes:

1. Cut-off grade: NSR of US90$/t for both UG Sulphide and UG Transition.
   Input parameters for the NSR calculation are based on South32's long term forecasts for zinc, lead and silver pricing; haulage, treatment, shipping, handling and refining charges. Metallurgical recovery assumptions differ for geological domains and vary from 85% to 92% for zinc, 90% to 94% for lead, and 75% to 83% for silver.
2. All masses are reported as dry metric tonnes (dmt). All tonnes and grade information have been rounded to reflect relative uncertainty of the estimate, hence small differences may be present in the totals.

Estimate of Mineral Resources for Hermosa

South32 confirms the first time reporting of the Mineral Resource estimate for the Taylor carbonate replacement deposit (CRD) as at 31 May 2019 (Table A).

The estimates of Mineral Resources are 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 Rules. The breakdown of the total estimates 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 in Appendix 1 to this report.

Geology and geological interpretation

The Taylor Deposit within the Hermosa Project is a CRD style zinc-lead-silver massive sulphide deposit. It is hosted in Permian carbonates of the Pennsylvanian Naco Group of south-eastern Arizona (Appendix 1 - Figure 3).

The Taylor Deposit comprises the upper Taylor Sulphide and lower Taylor Deeps domains that have a general northerly dip of 30^{0} and are separated by a low angle thrust fault. Mineralisation within the stacked profile of the thrusted host stratigraphy extends 1200m from near-surface and is open at depth. Mineralisation is modelled for thirteen litho-structural domains for an approximate strike of 2500m and width of 1900m. (Appendix 1 - Figure 5).

Drilling techniques

The Mineral Resource estimate is based on data from 251 surface diamond drill holes of HQ (95.6mm) or NQ (75.3mm) diameter (Appendix 1 - Figure 4). Vertical drilling was undertaken for 146 of 251 holes used in this resource estimate. Since August 2018, holes have been drilled between 60^{0} and 75^{0} dip to maximise the angle at which mineralisation is intersected. Oriented drilling was introduced in October 2018 to incorporate structural measurements into geological modelling for stratigraphy and fault interpretation.

Sampling and sub-sampling techniques

All 289,660m of drilling used for geology, geometallurgy and geotechnical purposes is diamond core. The drill half cores were sampled at either 1.5m (5’) intervals or terminated at litho-structural boundaries. Samples were submitted for preparation at an external ISO-17025 certified laboratory, Australian Laboratory Services (ALS), in Tucson. Preparation involved crushing to 2mm, a rotary split to 250g and pulverisation to 85% passing 75µm from which a 25g pulp was measured for assay. The mineralised intersections were verified by geologists throughout each drilling program and reviewed independently against core photos by an alternate geologist prior to geological interpretation.

Sample analysis method

Samples of 1g taken from 25g pulp were processed at ALS in Vancouver where they were digested using a four-acid leach method. This was followed by Inductively Coupled Plasma – Atomic Emission Spectroscopy (ICP-AES) determination for 33 elements. A range of certified reference materials (CRM) were routinely submitted to monitor assay accuracy, with low failure rates within expected ranges for this deposit style, demonstrating reliable laboratory accuracy.

External third-party laboratory pulp duplicate and CRM checks indicate no significant bias was determined for the primary assay laboratory. Results of routinely submitted field duplicates to monitor sample representivity, coarse crush and laboratory pulp duplicates to quality control sample preparation homogeneity, and certified blank submissions to detect cross-contamination were all within an acceptable range for resource modelling.

Estimation methodology

Resource estimation was performed by ordinary kriging interpolation for four elements of economic interest (Zn, Pb, Ag, Cu), two potentially deleterious elements (As, Mn) and four tonnage estimation elements (Fe, Ca, S, Mg). Search estimation criteria are consistent with geostatistical models developed for each estimation domain according to the appropriate geological controls. Validation includes statistical analysis, swath plots and visual inspection.

Specific gravity measurements from drill cores were used as the basis for estimating dry bulk density in tonnage calculations for both mineralised and non-mineralised material.

Mineral Resource classification

Mineral Resource classification criteria are based on the level of data informing both the geological model and grade estimation. Grade estimation confidence is overlain on the geological modelling classification criteria whereby kriging variance is matched to block estimation conditions - that relates to the number and distance of data informing the estimate in relation to semivariogram models for Zn, Pb and Ag. Measured Resources are interpolated from data within a range equivalent to a likely grade control drill spacing of 30m to 50m. Indicated Resources are estimated from data spacing within approximately 180m, 120m and 15m in the maximum, intermediate and short-range grade continuity directions. Inferred Resources are constrained by the reporting of estimates to within demonstrated grade and geological continuity ranges, and generally to a maximum of 400m beyond data.

Mining and metallurgical methods and parameters

Reasonable prospects for eventual economic extraction have been determined through assessment of the Mineral Resource at a scoping study level for processes, ranging from stope optimisation and mine scheduling through to mineral processing and detailed financial modelling. Underground mining factors and assumptions for longhole stoping on a sub- or full-level basis with subsequent paste backfill are made based on industry benchmark mining production and project related studies, calibrated against South32’s Cannington zinc, lead and silver mine production.

Cut-off grade

The Taylor Deposit of the Hermosa Project is a polymetallic deposit which uses an equivalent net smelter return (NSR) value as a grade descriptor. Input parameters for the NSR calculation are based on South32’s long term forecasts for zinc, lead and silver pricing; haulage, treatment, shipping, handling and refining charges. Metallurgical recovery assumptions differ for geological domains and vary from 85% to 92% for zinc, 90% to 94% for lead, and 75% to 83% for silver.

A dollar equivalent cut-off of NSR US$90/dmt forms the basis of assessment for reasonable prospects for eventual economic extraction, supported by scoping level studies.

Competent Person's Statement

The information in this report that relates to Mineral Resources for the Taylor Deposit is presented on a 100% basis, represents an estimate as at 31 May 2019, and is based on information compiled by Matthew Readford.

Mr. Readford is a full-time employee of South32 and is a member and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr. Readford has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activities being undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. The Competent Person consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Additional information is contained in Appendix 1.

Appendix 1

JORC Code Table 1

Hermosa Project – Taylor Deposit

The following table provides a summary of important assessment and reporting criteria used at the Hermosa Project for the reporting of the Taylor Deposit Mineral Resource 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 FY2019 Taylor Deposit Mineral Resource estimate is based on a sampling of 251 surface drill holes. All 289,660m of drilling used for geology, geometallurgy and geotechnical purposes is diamond core, sampled at predominantly 1.5m (5') intervals on a half-core basis. • A heterogeneity study is yet to be undertaken to determine sample representivity. Core is highly competent and sample representivity is monitored using predominantly quarter core field duplicates submitted at a rate of approximately 1:40 samples. Field duplicates located within mineralisation envelopes are within expected assay ranges for the duplicate sample size and deposit style. • Core assembly, interval mark up, recovery estimation (over the 3m drill string) and photography all occur prior to sampling and follow documented procedures. • Sample size reduction during preparation involves crushing of HQ (95.6mm) or NQ (75.3mm) half core to 2mm. The <2mm fraction is rotary split to 250g and pulverised to 75µm from which a 25g pulp is collected for assay.
Drilling techniques	• Data used for estimation is based on logging and sampling of HQ diamond core, reduced to NQ in areas of difficult drilling. • Three oriented holes were drilled for geotechnical analysis but not assayed prior to October 2018. All drill core have since been oriented using the Boart Longyear 'Trucore' system, 12 of these holes are used in this resource estimate. Structural measurements from oriented drilling have been incorporated in geological modelling to assist with fault interpretation.
Drill sample recovery	• Prior to October 2018, core recovery was determined by summation of individual core pieces within each 3m drill string (239 holes). Recovery for the drill string has since been measured after oriented core alignment and mark up. • Core recovery is recorded for all the 251 diamond drill holes used for grade estimation. Less than 5% of drill recovery is below 80%. Samples with less than 80% core recovery are not used for grade estimation. • Poor core recovery can occur when drilling overlying oxide material and in major fault zones. To maximise recovery drillers vary speed, pressure and composition of drilling muds, reduce HQ to NQ core size and use triple tube and '3 series' drill bits. • When core recovery is compared to Zn, Pb and Ag grades for both a whole data set and within individual lithology there is no discernible relationship. • Correlation analysis suggests there is no relationship between core recovery and depth except where structure is considered. There are isolated cases where lower recovery is localised at intersections of the Taylor Sulphide carbonates with a major low-angle thrust structure.
Logging	• The entire length of core is photographed and logged for lithology, alteration, structure, rock quality designation (RQD), and mineralisation. • Detailed geotechnical feature logging ('Q System') was completed for 163 holes used in the Mineral Resource. Logging of oriented core commenced in October 2018 and included a change to validated digital data entry. • Logging is both quantitative and qualitative; there are a number of examples including estimation of mineralisation percentages and association of preliminary interpretative assumptions with observations. • All logging is peer reviewed against core photos and in the context of current geological interpretation and surrounding drill holes during geological model updates. • Logging is to a level of detail to support appropriate Mineral Resource estimation.

Criteria	Commentary
Sub-sampling techniques and sample preparation	• Sawn half core samples are taken on predominantly 1.5m intervals for the entire drill hole. Mineralisation is highly visual. Sampling is also terminated at litho-structural and mineralogical boundaries to reduce the potential for boundary/dilution effects at a local scale. Sample lengths can vary between 0.75m and 2.3m. • The selection of the sub-sample size is not supported by sampling studies. • Field duplicates within mineralisation envelopes are within expected ranges for the deposit style and indicate reasonable correlation with 68% to 80% within 30% Absolute Mean Paired Relative Difference (AMPRD). Greater variability is evident in silver due to a lower degree of accuracy in low grade values (<15g/t) resulting from the Inductively Coupled Plasma – Atomic Emission Spectroscopy (ICP-AES) analytical method. • Sample preparation has occurred offsite at an ISO17025 certified laboratory since the Taylor sulphide deposit discovery. This was initially undertaken by Skyline in Tucson until 2012, then by Australian Laboratory Services (ALS) in Tucson. Half core samples are crushed and rotary split in preparation for pulverisation. Fine crushing occurs until 70% of the sample passes <2mm mesh. Pulverisation occurs until 85% of the material is less than 75µm. 250g pulp samples are prepared for assay. The laboratory performs granulometry tests on a regular basis to ensure that rejects and pulps pass specifications. • Sample preparation precision is monitored with laboratory duplicates assayed at a rate of 1:50 submissions. Results for all lithology indicate acceptable homogenisation of samples is achieved in sample preparation: • Coarse crush duplicate pairs, less similar than pulp duplicates due to the duplicate being taken from a coarser sample fraction, show that the majority (58% to 85%, most commonly above 70%) of Zn, Pb and Ag pairs for sulphide mineralisation report within 10% assay precision bounding limits. • Typically, 85% to 100% of pulp duplicates report within a 10% variance for Zn, Pb and Ag. • Sub-sampling techniques and sample preparation are adequate for providing quality assay data for resource estimation but will benefit from planned studies to optimise sample selectivity and quality control procedures.
Quality of assay data and laboratory tests	• Samples of 1g from pulps are processed at ALS Vancouver where they are totally digested using a four-acid method followed by Inductively Coupled Plasma – Atomic Emission Spectroscopy (ICP-AES) determination for 33 elements. • Coarse and fine-grained certified silica blank material submissions, inserted at the beginning and end of every work order of approximately 200 samples, indicate a lack of systematic sample contamination in sample preparation and ICP solution carry over. Isolated failures, greater than 10 times detection limit for any analyte, are typically in the order of 2% of submissions. • A range of certified reference materials (CRM) are submitted at a rate of 1:40 samples to monitor assay accuracy. The CRM failure rate is low, typically within 0.5% to 2.4% and within expected ranges for Zn, Pb and Ag, demonstrating reliable laboratory accuracy. • External laboratory pulp duplicates and CRM checks have been submitted to the Inspectorate (Bureau Veritas) laboratory in Reno since November 2017 at a rate of 1:100 to monitor procedural bias. Between 83% and 86% of samples for Zn, Pb and Ag were within expected tolerances of 25% when comparing three-acid (Inspectorate) and four-acid (ALS) digest methods. No significant bias has been determined. • The nature and quality of assaying and laboratory procedures are appropriate for supporting grade estimation of the Taylor Deposit mineralisation.
Verification of sampling and assaying	• Core photos of the entire hole are reviewed by alternative company personnel (modelling geologists) to verify significant intersections and finalise geological interpretation of core logging. • Intentionally twinned holes are yet to be drilled in the deposit. A high degree of interpretive consistency, low nugget effects and the lengths of short-range grade continuity ranges modelled in variography contribute to supporting confidence in predictability of drill hole results at short to medium distances. • Sampling is recorded digitally and submitted as comma separated (csv) data files uploaded to a South32 commercial database (Datamine Fusion) and the external laboratory information management system (LIMS). Digital transmitted assay results are reconciled upon upload to the database. • No adjustment to assay data has been undertaken.
Location of data points	• Drill hole collar locations are surveyed by registered surveyors using a GPS Real Time Kinematic (RTK) rover station correlating with the Hermosa Project RTK base station and Global Navigation Satellite Systems with up to 1cm accuracy.

Criteria	Commentary
	• Down-hole surveys prior to mid-August 2018 were taken with a 'TruShot' single shot survey tool every 76m and at the bottom of the hole. From 20 June 2018 to 14 August 2018 surveys were taken at the same interval with both the single shot and a Reflex EZ-Gyro, before the Reflex EZ-Gyro was used exclusively. • The Hermosa Project uses the Arizona State Plane (grid) Coordinate System, Arizona Central Zone, International Feet. The datum is NAD83 with the vertical heights converted from the ellipsoidal heights to NAVD88 using GEOID12B. • All drill hole collar and down-hole survey data was audited against source data. • Survey collars have been compared against a one-foot topographic aerial map. Discrepancies exceeding 1.8m were assessed against a current aerial flyover and the differences attributed to surface disturbance from construction development and/or road building. • Survey procedures and practices result in data location accuracy suitable for mine planning.
Data spacing and distribution	• No exploration results are reported. • Geological modelling and geostatistical analysis have determined that drill spacing is sufficient to establish the degree of geological and grade continuity necessary to support the reported Mineral Resource as qualified through classification. • Length-weighted grade compositing of drill hole data to 1.5m within litho-structural domains was undertaken as part of preparation for resource estimation.
Orientation of data in relation to geological structure	• Mineralisation varies in dip between 30°NW in the upper Taylor Sulphide domain and between 20°N and 30°N in the lower Taylor Deeps domain. Most drilling is oriented vertically and at a sufficiently high angle to allow for accurate representation of grade and tonnage using three-dimensional modelling methods. • There is indication of sub-vertical structures, possibly conduits for or offsetting mineralisation, which have been accounted for at a regional scale through the integration of mapping and drilling data. Angled, oriented core drilling introduced from October 2018 is designed to improve understanding of the relevance of these structures to mineralisation in future estimates. To date, no sample bias has been detected in the data analysis or estimation.
Sample security	• Samples are tracked and reconciled through a sample numbering and dispatch system from site to the ALS sample preparation facility in Tucson. The ALS LIMS assay management system provides an additional layer of sample tracking from the point of sample receipt. All movement of sample material from site through to Tucson and Vancouver is managed by ALS dedicated transport. • Assays are reconciled and results processed in a Datamine Fusion which has password and user level security. • Core is stored in secured shipping containers prior to processing. After sampling, the remaining half core, returned sample rejects and pulps are stored on site at a purpose-built facility that has secured access. • All sampling, assaying and reporting of results are managed with procedures that provide adequate sample security.
Audits or reviews	• AMC Consultants completed a data review and verification for a National Instrument 43-101 Technical report in 2016 and concluded that, for the sulphide mineralisation, "sample preparation, security and analytical procedures are all industry standard and produce analytical results for silver and base metals with accuracy and precision that is suitable for Mineral Resource estimation." • A similar conclusion was made by AMC Consultants in an updated Mineral Resource estimate for the Hermosa Preliminary Economic Assessment (PEA) of January 2018 - "In the opinion of the QPs, the sample preparation, security and analytical procedures for all assay data since 2010 are adequate for use in Mineral Resource estimation." • An internal database audit was undertaken in February 2019 for approximately 10% of all drilling intersecting sulphide mineralisation (24 of 251 holes). Data was validated against original data sources for collar, survey, lithology, alteration, mineralisation, structure, RQD and assay (main and check assays). The overall error rates across the database were found to be very low. Isolated issues included the absence of individual survey intervals and minor errors in collar survey precision. All were found to have minimal impact on resource estimation.

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	• The Hermosa Project mineral tenure (Figure 2) is secured by 29 patented mining claims totalling 224 hectares that have full surface and mineral rights owned fee simple. These claims are retained in perpetuity by annual real property tax payments to Santa Cruz County in Arizona and have been verified to be in good standing until 31 December 2019. • The patented land is surrounded by 1,480 unpatented lode mining claims totalling 10,551 hectares. These claims are retained through payment of federal annual maintenance fees to the Bureau of Land Management (BLM) and filing record of payment with the Santa Cruz County Recorder. Payments for these claims have been made for the period up to their annual renewal on or before 1 September 2019. • Title to the mineral rights is vested in South32's wholly owned subsidiary Arizona Minerals Incorporated (AMI).
Exploration done by other parties	• ASARCO LLC (ASARCO) acquired the Property in 1939 and completed intermittent drill programs between 1940 and 1991. ASARCO initially targeted silver and lead mineralisation near historical workings of the late 19th century. ASARCO identified silver-lead-zinc bearing manganese oxides in the manto zone of the overlying Clark Deposit between 1946 and 1953. • Follow up rotary air hammer drilling, geophysical surveying, detailed geological, and metallurgical studies on the manganese oxide manto mineralisation between the mid-1960's and continuing to 1991 defined a heap leach amenable, low-grade manganese and silver resource reported in 1968, updated in 1975, 1979 and 1984. • In March 2006 AMI purchased the ASARCO property and completed a re-assay of pulps and preliminary SO2 leach tests on the manto mineralisation to report a Preliminary Economic Assessment (PEA) in February 2007. Drilling of RC and diamond holes between 2006 and 2012 focused on the Clark Deposit (235 holes) and early definition of the of the Taylor Deposit sulphide mineralisation (16 holes), first intersected in 2010. Data collected from the AMI 2006 campaign is the earliest information contributing to estimation of the Taylor Deposit Mineral Resource. • AMI drill programs between 2014 and August 2018 (217 diamond holes) focused on delineating Taylor Deposit sulphide mineralisation, for which Mineral Resource estimates were reported in compliance to NI 43-101 (Foreign Estimate) in November 2016 and January 2018.
Geology	• The regional geology is set within Lower-Permian carbonates, underlain by Cambrian sediments and Proterozoic granodiorites. The carbonates are unconformably overlain by Triassic to late-Cretaceous volcanics (Figure 3). The regional structure and stratigraphy are a result of late-Precambrian to early-Palaeozoic rifting, subsequent widespread sedimentary aerial and shallow marine deposition through the Palaeozoic Era, followed by Mesozoic volcanism and late batholitic intrusions of the Laramide Orogeny. Mineral deposits associated with the Laramide Orogeny tend to align along regional NW structural trends. • Cretaceous-age intermediate and felsic volcanic and intrusive rocks cover much of the Hermosa Project area and host low-grade disseminated silver mineralisation, epithermal veins and silicified breccia zones that have been the source of historic silver and lead production. • Mineralisation styles in the immediate vicinity of the Hermosa Project include the carbonate replacement deposit (CRD) style zinc-lead-silver base metal sulphides of the Taylor Deposit (this Mineral Resource estimate) and an overlying manganese-silver oxide manto deposit of the Clark Deposit. • The Taylor Deposit comprises the overlying Taylor Sulphide, and Taylor Deeps domains that are separated by a low angle thrust fault (Figure 4 and 5). • The Taylor Sulphide Deposit extends to a depth of around 1000m and is hosted within approximately a 450m thickness of Palaeozoic carbonates that dip 30°NW, identified as the Concha, Scherrer and Epitaph Formations. There is a general 50°W plunge in grade continuity within the stratigraphic plane. • Taylor Sulphide mineralisation is potentially constrained within an inverted triangular prism of tilted stratigraphy, yet to be fully drill tested along strike and up-dip. The southern, up-dip edge of the prism is defined by the east-west trending, steep northerly dipping Taylor Arc Fault that has an apparent normal sense of displacement. Sulphide mineralisation can also be constrained up-dip where it contacts the overlying oxide manto mineralisation of the Clark Deposit. • The north-bounding and down-dip side of the 'prism' is marked by the Lower Thrust Fault where it ramps up over the Jurassic/Triassic 'Older Volcanics', as well as appearing to be a

Criteria	Commentary
	mineralisation conduit. The Lower Thrust creates a repetition of the carbonate formations below the Taylor Sulphide domain which host the Taylor Deeps mineralisation. • The Taylor Deeps mineralisation dips 10°N to 30°N, is approximately 100m thick, and primarily localised near the upper contact of the Concha Formation and unconformably overlying Older Volcanics. Some of the higher-grade mineralisation is also accumulated along a westerly plunging lineation intersection where the Concha Formation contacts the Lower Thrust. Mineralisation has not been closed off down-dip or along strike.
Drill hole Information	• A drill hole plan (Figure 4) provides a summary of exploration relative to the Mineral Resource. All drill hole information, including tabulations of drill hole positions and lengths for this reported Taylor Deposit Mineral Resource is stored within project data files created for this estimate on a secure company server.
Data aggregation methods	• Data is not aggregated other than length-weighted compositing for grade estimation. • Metal equivalents are not reported for exploration results.
Relationship between mineralisation widths and intercept lengths	• Vertical drilling amounts to 146 of 251 holes used in the resource estimate. Where they intersect the low to moderately dipping (30°) stratigraphy the intersection length can be up to 15% longer than true-width. Since August 2018 drilling has been intentionally angled between 60° and 75° to maximise the angle at which mineralisation is intersected.
Diagrams	• Relevant maps and sections are included with this market announcement.
Balanced reporting	• Exploration results are not specifically reported as part of this Mineral Resource report.
Other substantive exploration data	• Aside from drilling, the geological model is compiled from local and regional mapping, geochemistry sampling and analysis, geophysical surveys. Metallurgical test work, specific gravity sampling and preliminary geotechnical logging have contributed to evaluating the potential for reasonable economic extraction at a scoping study level.
Further work	• Planned elements of the resource development strategy include extensional and infill drilling, all oriented and logged for detailed structural and geotechnical analysis, sample representivity determination, comprehensive specific gravity sampling and moisture analysis, further geophysical, geochemical and geotechnical analysis, structural and paragenesis studies.

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	Commentary
Database integrity	• Drill hole data is stored in a Datamine Fusion database. Collar, survey, sample dispatch data and analytical results are uploaded from csv files as they become available. The upload process includes validation checks for consistency and anomalous values. Drill logs have been entered directly into Fusion from paper-based records. This process was improved by the introduction of digital logging in October 2018 whereby this data is also generated as csv files for upload and validation. • Company network security and database user access security profiles limit levels of access for viewing or editing data. • All logging is peer reviewed by experienced geologists against core photos and in the context of surrounding geological interpretation as part of update of the geological model.
Site visits	• The Competent Person reporting this Taylor Deposit Mineral Resource has visited site several times each month since project acquisition in August 2018. • A specific visit with an external auditor occurred in March 2019 as estimation was being carried out. This visit included auditing the ALS sample preparation and assay laboratories in Tucson and Vancouver. • The site visit objectives have been to review and improve all inputs and processes contributing to the FY2019 Mineral Resource and have included introduction of angled and oriented core drilling as a standard; changes in core logging procedures, introduction of digital core logging, database audits and resampling programs to improve confidence in geological interpretation, density estimation and geometallurgical inputs. • The findings of site visits indicate the data and procedures are of sufficient quality for Mineral Resource estimation and reporting.

Criteria	Commentary
Geological interpretation	• The Taylor Deposit is modelled as one the first CRD occurrences in the region and all the geological and geochemical information acquired to date is consistent with this model, which provides additional confidence in the geological interpretation. • Regional and local scale interpretation of litho-structural boundaries and stratigraphical sub-units was carried out explicitly on drill holes in 3D in Leapfrog modelling software using geological logging that had been reviewed and validated against core photos. Contact surfaces were then implicitly interpolated between drill hole points with litho-structural trending that incorporates geological mapping and core orientation measurements. • A mineralisation boundary control of the sulphide/oxide manto interface in the upper carbonate sequences was refined using the same modelling approach as for litho-structural boundaries. A 'transition' zone between sulphide and oxide mineralisation has been introduced into resource modelling after re-logging all oxidation boundaries between September and December 2018. The objective was to improve confidence in the definition of this material for mining and metallurgical studies. • Visual checks were made in 3D, plan and section views and anomalies were reviewed and modified as appropriate. Apparent minor offset in contacts and variations in stratigraphic thickness, possibly due to localised faulting or folding, were accepted with the assumption that infill drilling will enable resolution in future updates. • 'Mineralisation domains' were created within bounding lithological zones using indicator modelling methods and structural trending to constrain the projection of grade estimates beyond what is interpreted to be consistent with the overall modelling approach for a CRD style of mineralisation.
Dimensions	• The Taylor Deposit Mineral Resource has an approximate strike length of 2500m and width of 1900m. The stacked profile of the thrusted host stratigraphy extends 1200m from near-surface and is open at depth (Figure 5).
Estimation and modelling techniques	• Estimation and modelling techniques address the interpreted structural and lithological controls on mineralisation apparent in the core and in data. These align with the current understanding of the formation of CRD style mineralisation. Key assumptions include: ○ The relative importance of structure and lithology in either facilitating or constraining the deposition of mineralisation; ○ Geological domaining according to these controls; and ○ Individual application of 'soft' or 'hard' estimation boundaries interpreted from the analysis of grade trends across each domain boundary for each of the four elements of economic interest (Zn, Pb, Ag, Cu), two deleterious elements (As, Mn) and four tonnage estimation elements (Fe, Ca, S, Mg). • The rotation of mineralisation geometry is modelled though 'dynamic anisotropy' where search and variography parameters are interpolated into cubic 'parent' blocks of 9m from trend lines digitised in strike, dip and plunge orientations. • Assay data was composited to the dominant sample interval of 1.5m within mineralisation domains for the exploratory data analysis used to derive estimation parameters for ordinary kriging. These were later refined during several iterations of grade estimation and validation to produce a representative and unbiased resource estimate. ○ Top-caps applied to positively skewed data were determined from statistical assessment and applied on an estimation domain basis to manage potential bias from extreme values. Not bottom caps were required. ○ The outputs of geostatistical analysis, including variography and quantitative kriging neighbourhood analysis (QKNA), were used to optimise grade estimation parameters. This includes a cubic parent block estimation size of 9m, relative to a data spacing of between 25m and 150m and typically around 50m within the core of mineralisation. ○ Sub-cells to a 1.5m minimum are built into the volume model to allow for mining study selectivity within the minimum selective mining unit (SMU) dimension. ○ The dimensions of anisotropic search ellipses were generally matched to ranges of grade continuity for the first major structure of the zinc variogram models. The search ellipse ranges vary between estimation domains but remained the same for all elements within individual domains. Whilst related elements (mainly Pb-Ag, Pb-Zn, Ag-Zn) were not co-kriged, their correlated nature was validated to be preserved in block estimates. ○ Minimum and maximum sample criteria, an octant search strategy and a restriction of the number of samples used from each drill hole were applied to assist with reduction of local grade bias. A second search pass, set at twice the dimensions of the first, was used to estimate lower confidence areas of the model. ○ Kriging tests with visual and statistical validation of results provided an indication of the appropriateness of the initial top cap applied, which was then adjusted up and down to counter any introduced global bias. The degree of grade smoothing between data and

Criteria	Commentary
	block values was analysed through comparison of mean differences, histograms, q-q plots and swath plots (Figure 6). o Classification criteria constrained the reporting of estimates to within demonstrated grade and geological continuity ranges, and generally to a maximum of 400m beyond data. o The final Mineral Resource model is compared with previous internal estimates and results indicate reasonable correlation on global and local scales when differences in information level, geological modelling and estimation approach were considered. • The appropriateness of estimation techniques contributes to the high confidence estimation outcome that has been achieved in areas of data spacing within the full ranges of grade continuity. • The Mineral Resource is reported for Zn, Pb and Ag without any assumptions relating to recovery of by-products.
Moisture	• Based on logging observations, moisture content of the core appears to be minimal. A dry bulk density is assumed for estimation purposes. The laboratory has not recorded pre-and post-dried sample weights to date. A dedicated study of moisture analysis is required to validate the dry bulk density estimation assumption.
Cut-off parameters	• Net smelter return (NSR) reporting cut-off values are based on relevant bench-mark and project study related operational costs, approximating the potential for economic extraction under current economic modelling for scoping level study. • The calculations for each block are used to determine resource block cut-off according to variability of physical costs such as logistics, treatment and refining costs, and economic factors such as metal pricing. • The NSR cut-off values for reporting the FY2019 Taylor Deposit Mineral Resource are US$90/dmt for material considered extractable by underground open stoping methods. • The input parameters for the NSR calculation include South32 long term forecasts for zinc, lead and silver pricing; haulage, treatment, shipping, handling and refining charges.
Mining factors or assumptions	• Underground mining factors and assumptions are made based on industry benchmark mining production and project related studies, calibrated against South32's Cannington zinc, lead and silver mine production. Longhole stoping on a sub- or full-level basis with subsequent paste backfill is the assumed mining method. • Reasonable prospects for eventual economic extraction have been determined through assessment of the model at scoping study level using processes ranging from stope optimisation and mine scheduling through to detailed financial modelling.
Metallurgical factors or assumptions	• The NSR block value incorporates metallurgical recovery based on test work for composite and individual mineralisation domains. • Input parameters for NSR calculation are based on South32's long term forecasts for zinc, lead and silver pricing; haulage, treatment, shipping, handling and refining charges. Metallurgical recovery assumptions differ for geological domains and vary from 85% to 92% for zinc; 90% to 94% for lead; and 75% to 83% for silver.
Environmental factors or assumptions	• Scoping study level environmental assumptions, including possible waste and process residue disposal options, have been factored into physical and financial modelling used to evaluate reasonable prospects for eventual economic extraction.
Bulk density	• Dry bulk density is estimated for mineralisation domains using Zn, Pb, Ag, Fe, Ca and Mg to create regression formulae derived from 1,500 specific gravity (SG) measurements taken during a dedicated campaign of sampling the full-profile carbonate sequence at 1.5m intervals between September and December 2018. Measurements from previous campaigns, low numbers of which were taken from sulphide mineralisation in carbonates, were excluded from the analysis as assaying did not include the full complement of elements used for the regression formulae. • SG measurements were taken from a representative section of competent core within a 1.5m sample interval. The measurement technique uses the core weight in air and weight immersed in water to determine a specific gravity. Routine calibration of scales and duplicate measurements are undertaken for quality control. • The core was not oven dried or coated to prevent water ingress prior to immersion unless porosity is noted in the sample, in which case the core was coated in plastic film. • The approach to bulk density estimation is an interim one that is intended to progress to interpolation once there is critical mass in sampling achieved from the changes in procedures emplaced in September 2018. This has been considered in the Mineral Resource classification.

Criteria	Commentary
	• Lithology outside of mineralisation domains have a bulk density assigned as a constant value according to averages of SG sampling in that rock type.

Classification	• Mineral Resource classification criteria are based on the level of data informing both the geological model and grade estimation.
	• Grade estimation confidence is overlain on the geological modelling classification criteria whereby kriging variance is matched to block estimation conditions that relate to the number and distance of data informing the estimate in relation to semivariogram models for Zn, Pb and Ag.
	• Classification criteria were determined on an individual estimation domain basis.
	  o A Measured Mineral Resource classification approximates an area of high geological modelling confidence that has block grades for Zn, Pb and Ag informed by a high number of data sourced within first pass search radii. The block is also interpolated from data within a range equivalent to a likely grade control drill spacing of 30m to 50m. This spacing is expected to provide confidence in local grade variability accounting for small scale structures observed indirectly in semivariogram models.
	  o An Indicated Mineral Resource classification meets similar conditions to that of the Measured Mineral Resource except data spacing criteria is increased to ranges matching the first major structure evident in variography. Search ranges constraining this classification are typically around 180m, 120m and 15m in the maximum, intermediate and short-range directions and require at least eight informing data points.
	  o Blocks informed by a second pass estimation of two times the first search radii are classified as an Inferred Mineral Resource to a maximum of 400m beyond data.
	  o Isolated occurrences of Measured and Indicated classification are downgraded using a polygonal approach to block selection and classification re-coding.
	• The requirement for greater knowledge of structural controls (contributed by a large amount of sub-vertical drilling in mineralisation) and variability in bulk density calculation, both being addressed in the FY2020 work plan, have contributed to a greater constraint on the classification of Measured Resources. Fewer SG data (around 80 samples) in Taylor Deeps mineralisation has also led to a downgrade to an Indicated classification for all blocks otherwise meeting other Measured criteria.
	• The Competent Person is satisfied that all relevant factors have been taken into account and the Mineral Resource classification reflects the geological interpretation and the constraints of the deposit.

Audits or reviews	• There are no known audits of previous resource estimates produced by AMI in the period prior to project acquisition by South32 in August 2018.
	• This FY2019 Mineral Resource has been externally audited as the estimate progressed. The conclusion drawn was that, in general, modelling has been up to industry standards and supporting documentation has been comprehensive.
	• Audit findings and recommendations not already addressed in the production of this estimate have been included in the FY2020 work plan. These are:
	  o Increasing SG sampling to allow interpolation for tonnage estimation
	  o Undertaking studies to determine optimum representative sample sizes
	  o Assessing increases in the level of sophistication of estimation methods (e.g. co-kriging) and representing classification objectives (e.g. application of morphological closing algorithms)
	  o Determining the cause of isolated sample preparation anomalies

Discussion of relative accuracy/ confidence	• Geological modelling is at a level where there is a moderate to high degree of predictability of the position and quality of mineralisation where infill drilling is being conducted. Geostatistical analysis indicates a low nugget effect and ranges of grade continuity are beyond drill spacing in Measured and Indicated areas of the deposit. • Measured Resources of the FY2019 Taylor Deposit Mineral Resource global estimate are expected to be within 15% accuracy for tonnes and grade when reconciled over any production quarter using mining assumptions matched to the determination of reasonable prospects for economic extraction. Indicated Mineral Resource uncertainty should be limited to ±30% quarterly to ±15% on an annualised basis. It would be expected Inferred Mineral Resources are converted to higher confidence classifications prior to extraction. • The Competent Person is satisfied that the accuracy and confidence of Mineral Resource estimation is well established and reasonable for the deposit.

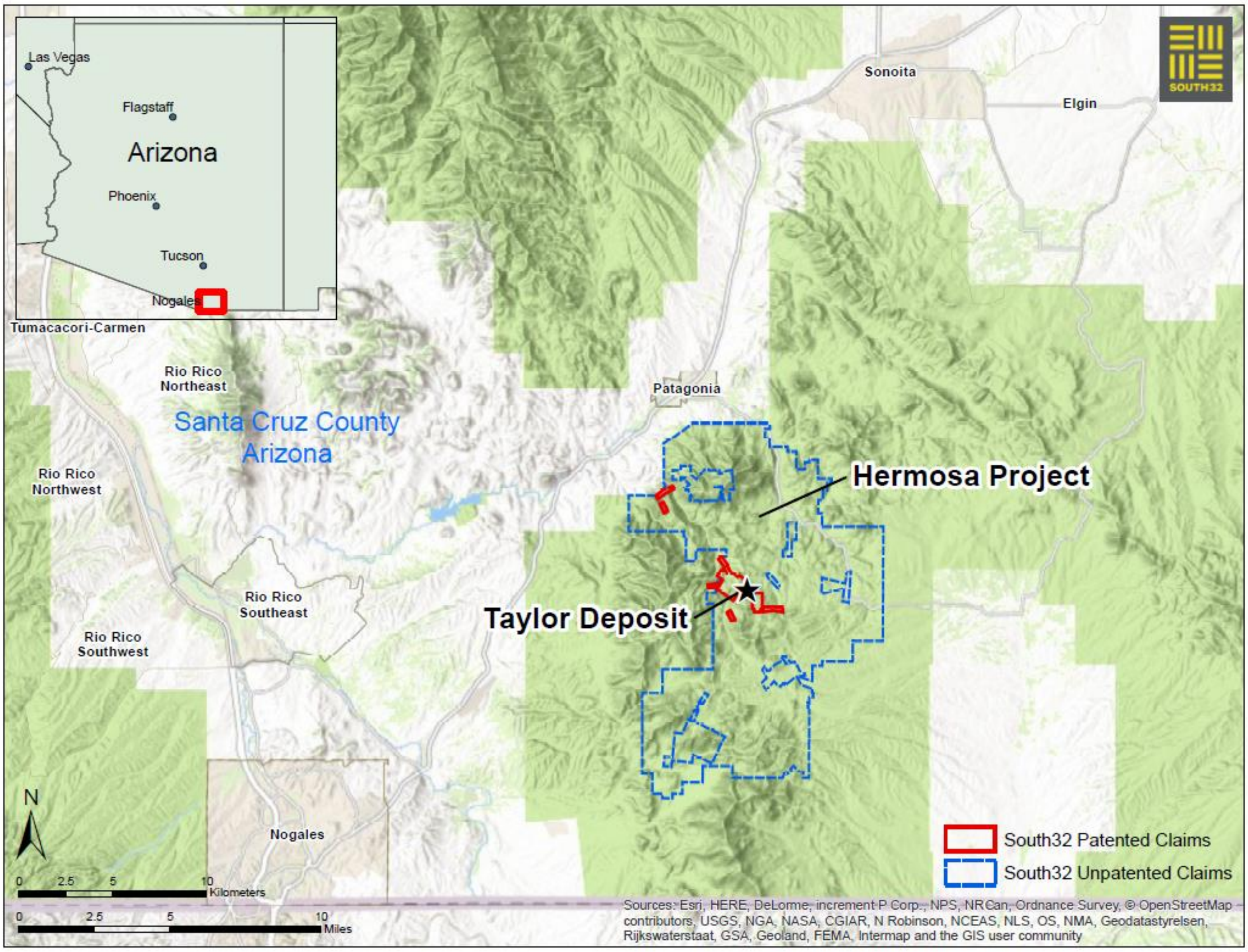

Figure 1: Regional Location Plan

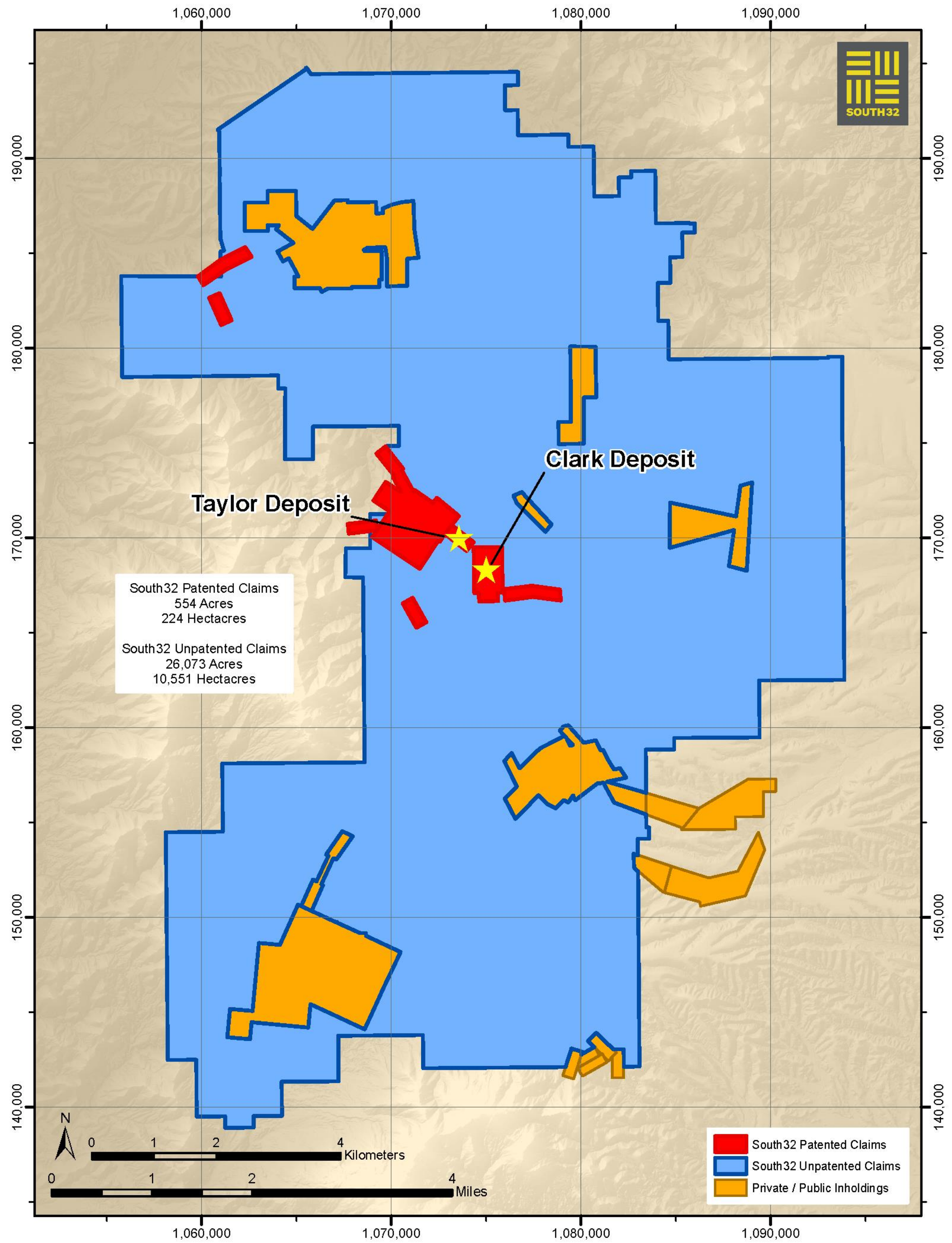

Figure 2: Hermosa Project Tenement Map

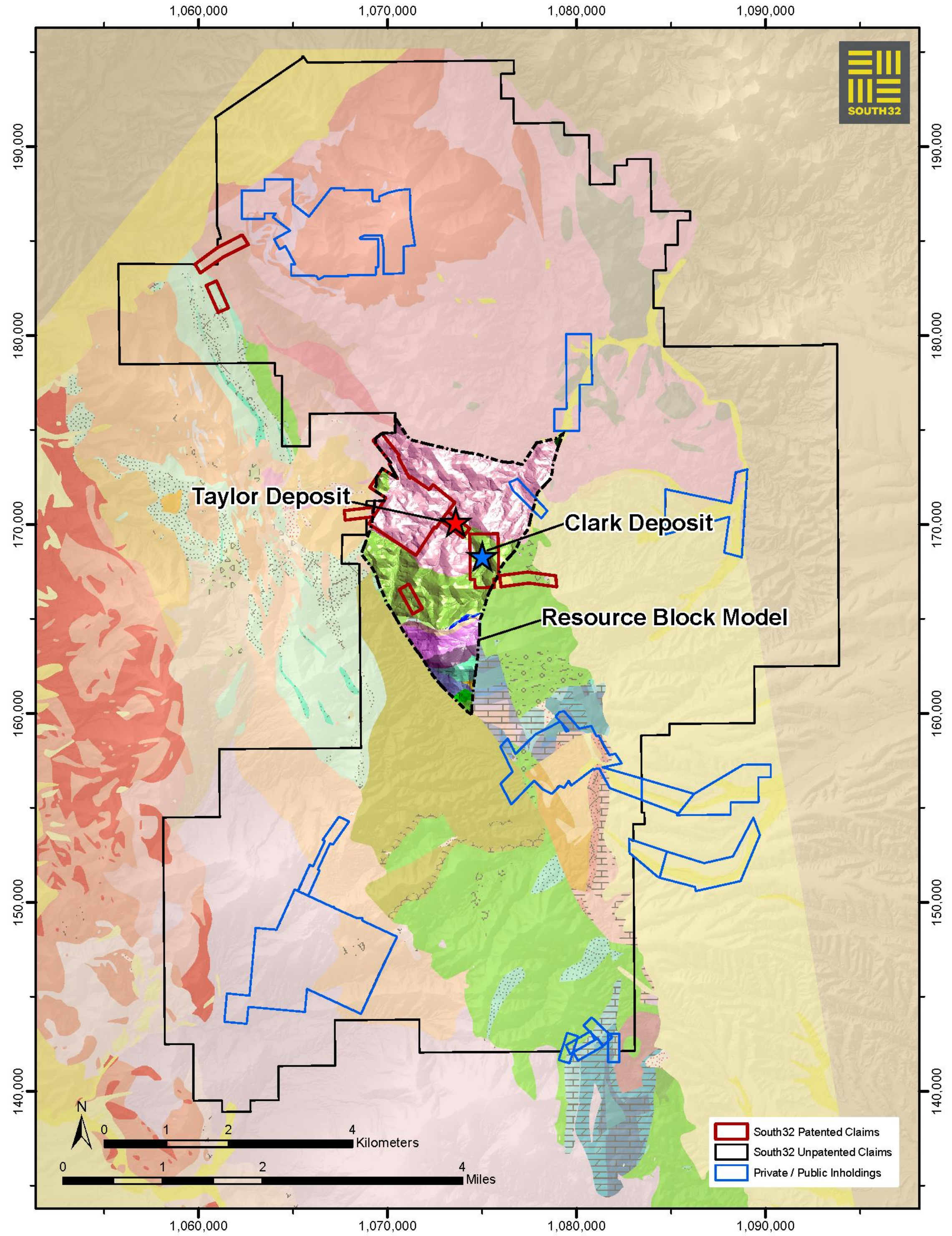

Figure 3: Hermosa Project Regional Geology

Map units

Symbol, Unit name

- Qal—Younger alluvium and talus
- QTal—Older alluvium
- QTg—Gravel and conglomerate
- Tl—Limestone
- Tt—Biotite rhyolite tuff
- si—Silicification
- Tv—Volcaniclastic rocks of middle Alum Gulch
- Tib—Intrusive breccia of middle Alum Gulch
- Tqp—Quartz feldspar porphyry of middle Alum Gulch
- Tqpx—Xenolithic quartz feldspar porphyry of middle Alum Gulch
- Tqmp—Quartz monzonite porphyry, in granodiorite of the Patagonia Mountains
- Tqmpb—Breccia, in quartz monzonite porphyry (unit Tqmp) of granodiorite of the Patagonia Mountains
- Tg—Granodiorite, in granodiorite of the Patagonia Mountains
- Tgb—Breccia, in granodiorite (unit Tg) of granodiorite of the Patagonia Mountains
- Tlp—Latite porphyry, in granodiorite of the Patagonia Mountains
- Tbq—Biotite quartz monzonite, in granodiorite of the Patagonia Mountains
- Tbqb—Breccia, in biotite quartz monzonite (unit Tbq) of granodiorite of the Patagonia Mountains
- Tbg—Biotite granodiorite, in granodiorite of the Patagonia Mountains
- Tibx—Intrusion breccia, in granodiorite of the Patagonia Mountains
- Tsy—Syenodiorite or mangerite, in granodiorite of the Patagonia Mountains
- Tag—Biotite augite quartz diorite, in granodiorite of the Patagonia Mountains
- Tmp—Quartz monzonite porphyry of Red Mountain
- TKr—Rhyolite of Red Mountain
- TKggt—Gringo Gulch Volcanics
- Ka—Trachyandesite
- r—Rhyolite or latite, in trachyandesite (unit Ka)
- Km—Pyroxene monzonite
- Kl—Biotite quartz latite(?)
- Kv—Silicic volcanics
- la—Biotite latite(?), in silicic volcanics (unit Kv)
- Kpg—Porphyritic biotite granodiorite
- Kb—Bisbee Formation
- Kbc—Conglomerate, in Bisbee Formation (unit Kb)
- Jtg—Granite of Three R Canyon, in granite of Cumero Canyon
- Jtgb—Breccia, in granite of Three R Canyon (unit Jtg) of granite of Cumero Canyon
- Jcm—Porphyritic granite, in granite of Cumero Canyon
- Jcs—Equigranular alkali syenite, in granite of Cumero Canyon
- Jcsb—Breccia, in equigranular alkalik syenite (unit Jcs) of granite of Cumero Canyon
- Jcg—Equigranular granite, in granite of Cumero Canyon
- Jcgb—Breccia, in equigranular granite (unit Jcg) of granite of Cumero Canyon
- Jhm—Hornblende monzonite of European Canyon
- JTRv—Volcanic rocks, in silicic volcanic rocks
- ha—Hornblende andesite dike and (or) plug, in volcanic rocks (unit JTRv)
- b—Volcanic breccia, in volcanic rocks (unit JTRv)
- s—Sedimentary rocks, in volcanic rocks (unit JTRv)
- cg—Limestone conglomerate, in volcanic rocks (unit JTRv)
- qz—Quartzite, in volcanic rocks (unit JTRv)
- ls—Exotic blocks of upper Paleozoic limestone, in volcanic rocks (unit JTRv)
- w—Rhyolitic welded(?) tuff, in volcanic rocks (unit JTRv)
- lp—Latite(?) porphyry, in volcanic rocks (JTRv)
- JTRvs—Volcanic and sedimentary rocks, in silicic volcanic rocks
- TRm—Mount Wrightson Formation
- q—Quartzite, in Mount Wrightson Formation (unit TRm)
- a—Biotite(?)-albite andesite lava(?), in Mount Wrightson Formation (unit TRm)
- t—Coarse volcaniclastic beds, in Mount Wrightson Formation (unit TRm)
- TRms—Sedimentary rocks, in the Mount Wrightson Formation (unit TRm)
- Pcn—Concha Limestone
- Ps—Scherrer Formation
- Pe—Epitaph Dolomite
- Pc—Colina Limestone
- PPe—Earp Formation
- Ph—Horquilla Limestone
- Me—Escabrosa Limestone
- Dm—Martin Limestone
- Ca—Abrigo Limestone
- Cb—Bolsa Quartzite
- pCq—Biotite or biotite-hornblende quartz monzonite
- pCh—Hornblende-rich metamorphic and igneous rocks
- pCm—Biotite quartz monzonite
- pCd—Hornblende diorite

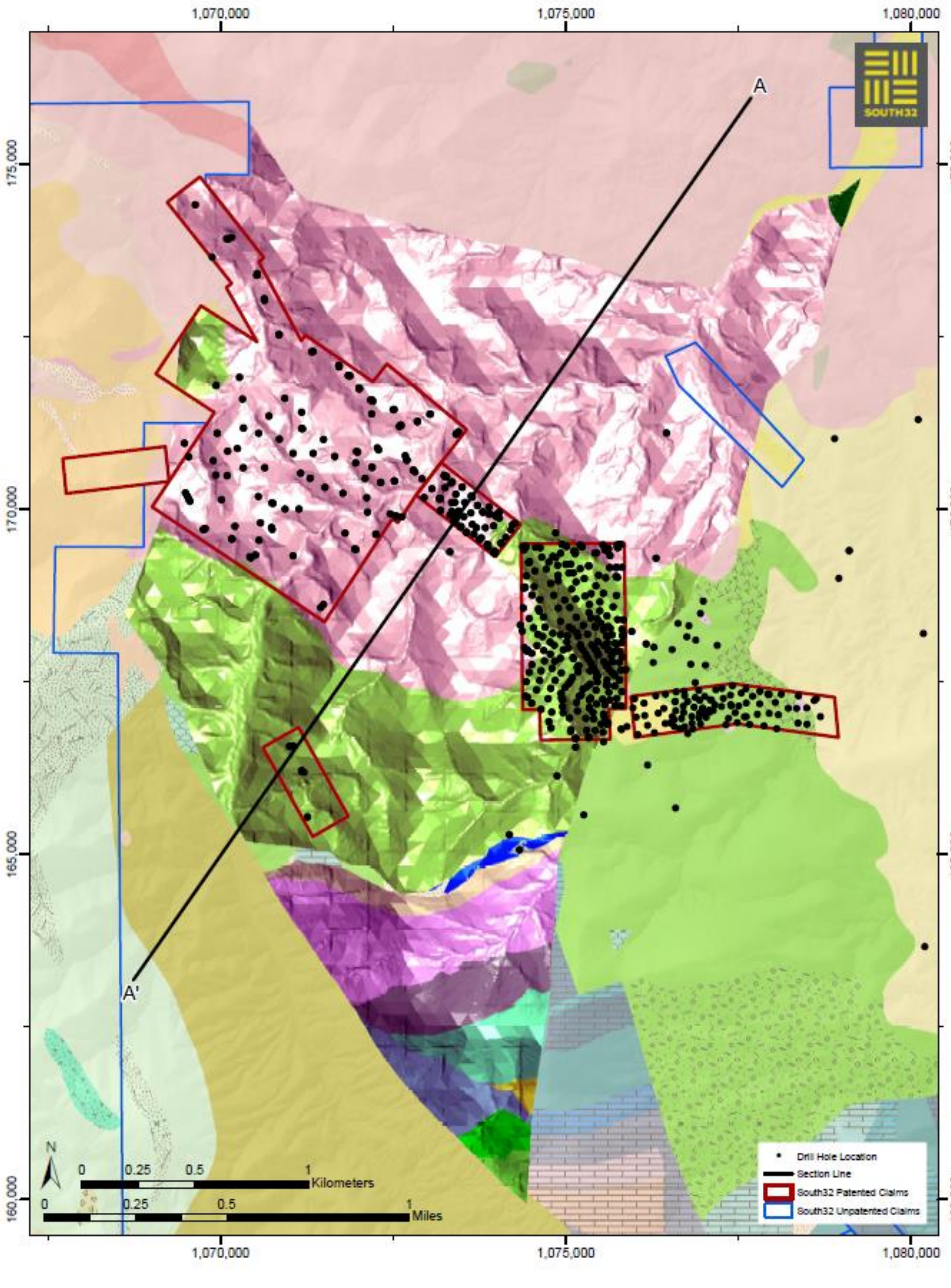

Figure 4: Taylor Deposit Local Geology

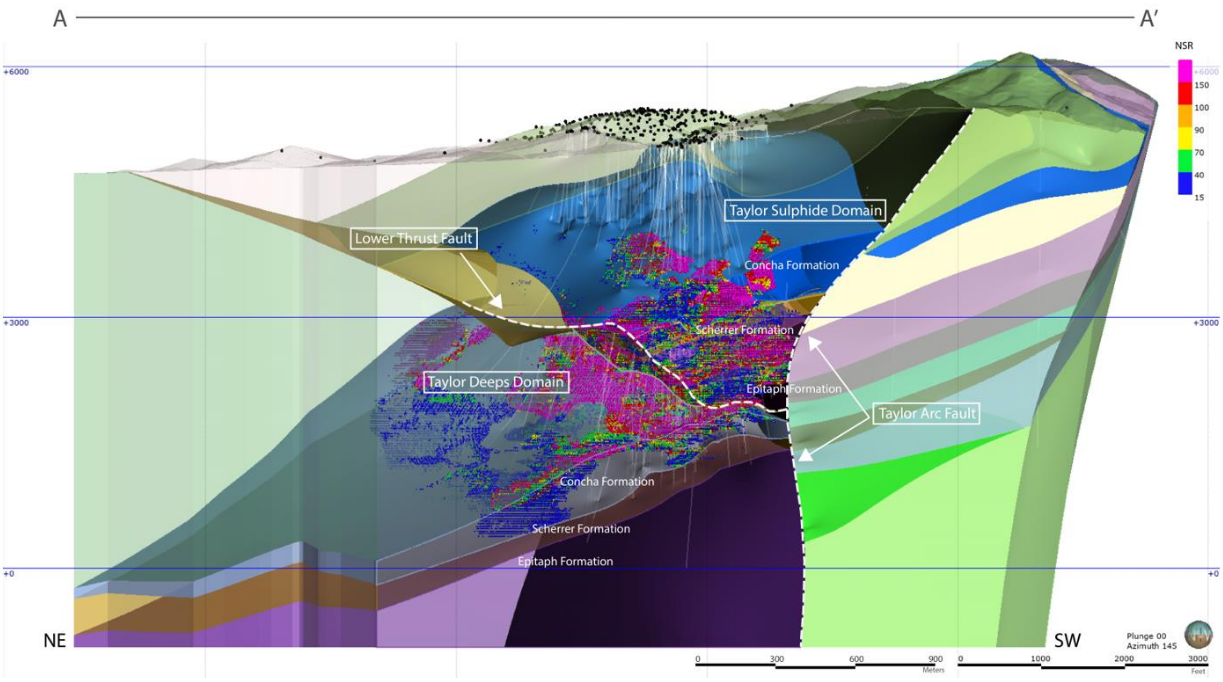

Figure 5: Cross-Section through the Taylor Deposit Geology and Mineralisation - looking southeast

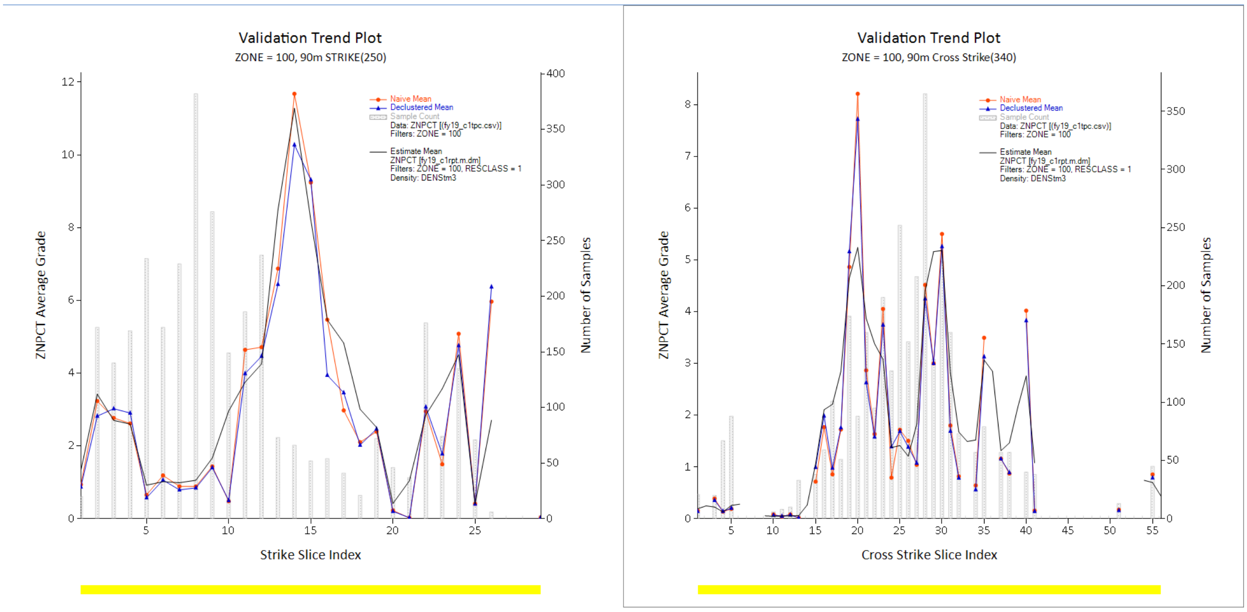

Figure 6: Zinc Grade Estimation Swath Plot Validation for Taylor Sulphide Concha Domain