

ASX Announcement | 19 February 2024 Variscan Mines Limited (ASX:VAR)

REVISED STRUCTURAL AND GEOLOGICAL ASSESSMENT HIGHLIGHTS CONTINUITY AND NEW DRILL TARGETS AT SAN JOSE MINE

Highlights

- Comprehensive geological assessment and structural targeting study completed by worldrenowned expert, Dr. Brett Davis
- Work has resulted in a significantly improved understanding of the controls on multi-phase Zn-Pb mineralization at San Jose
- Outcomes confirm orientation of dominant structural trends as a highly effective vectoring tool for ongoing drilling and future exploration
- Newly identified targets within the San Jose Mine are already being drill-tested as part of the ongoing underground drilling campaign
- Study has also identified numerous target zones within the broader Novales San Jose Udias corridor
- High-priority regional targets will be tested as part of the planned surface drilling campaign for 2024

Variscan Mines Limited (ASX:VAR) ("Variscan" or "the Company") is pleased to report the findings of a comprehensively updated structural geological assessment at the San Jose Mine and surrounding Novales Trend, located in Cantabria, northern Spain.

In December of 2023, Variscan commissioned Dr. Brett Davis, a highly respected independent consultant, who is widely regarded in the exploration and mining industry for his application of applied structural geology, to work alongside the Company's in-country technical team as well as Dr. Frank Bierlein, a Variscan Non-Executive Director.

Geological and structural controls point to new targets within the San Jose Mine

The fieldwork identified four principal elements that are critical in controlling fluid ingress and mineralization at San Jose, in addition to the favorable composition of the ore-hosting dolostone sequence. As illustrated in Figures 1 to 3, these are:

- Bedding orientation
- S1 the axial plane of conspicuous macroscale folds (products of the D1 stress regime)
- D2 faults, in particular E-W trending transfer-style structures
- S2 (typically a fracture cleavage)

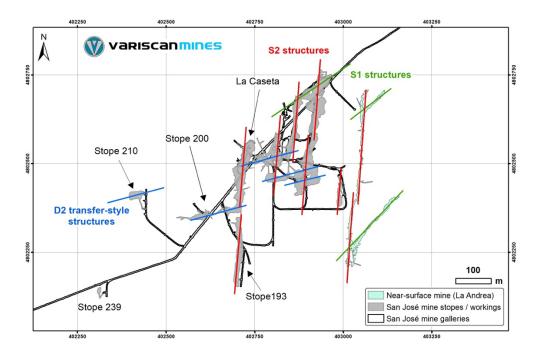
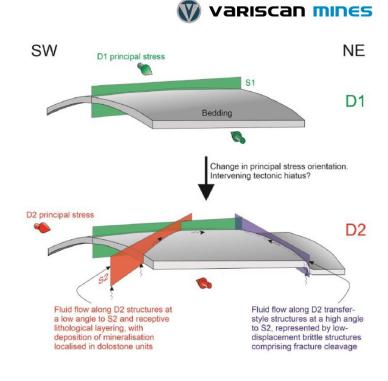


Figure 1. Approximate orientation of the dominant D1 and D2 structures overlaid with existing mine development at the San Jose Mine

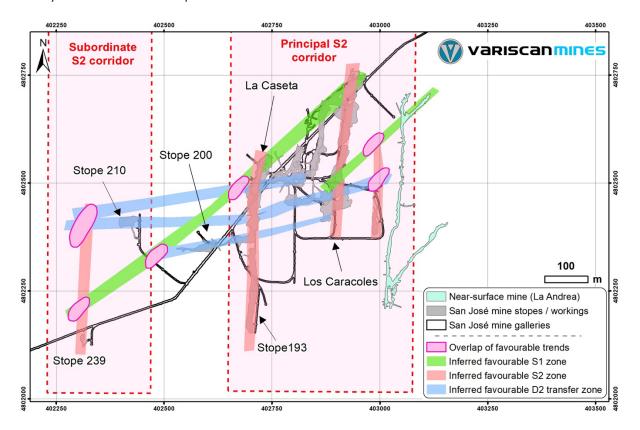
Figure 2. Interpreted tectonic evolution of the structurally controlled -mineralization-fluid flow system at San Jose





The extrapolation of structural trends highlights priority exploration targets, in particular where D1 and D2 structures intersect. These zones of increased permeability favoured the deposition of Zn-Pb mineralization and as such are considered a high priority target for in-mine drill-testing (see Figure 3).

Figure 3. Extrapolation of structural trends in the San Jose Mine, based on the relative timing of mineralization associated with the development of S1 and S2 planes, respectively; these features are major contributors to the permeability network, and are delineated by structures exposed in mine development and by zones of historical exploitation.



Structural geology informing current underground drilling, with new targets already being drilltested

Variscan continues to execute its underground drilling campaign at the San Jose Mine.

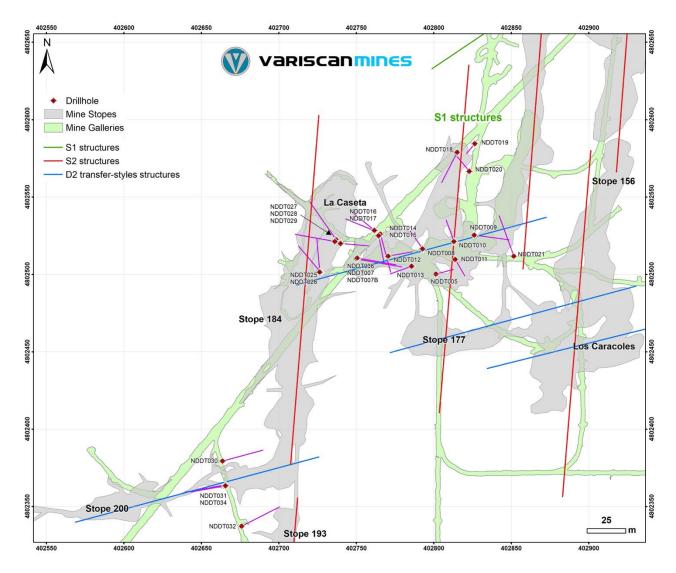
The drilling currently being conducted and planned for this campaign is testing the new targets identified and outcomes from the structural geological work (see Figures 4 and 5).

Assay results from drilling conducted in Q4 2023 are pending.



Figure 4. Underground drilling at the San Jose Mine testing new targets

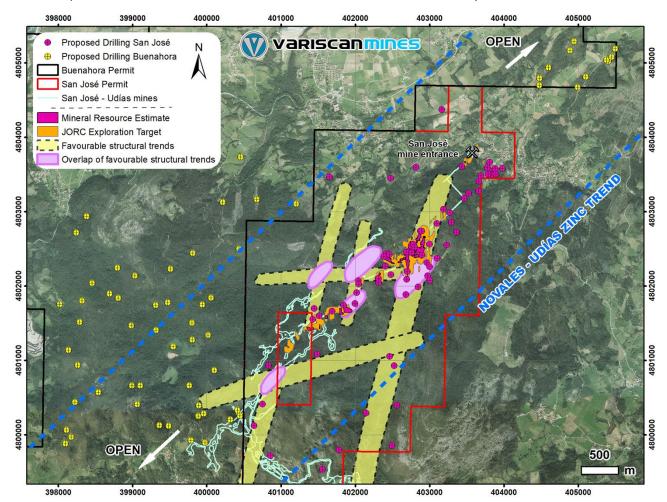
Figure 5. Collar locations of Phase 3 underground drilling (in pink) overlaid on the orientation of newly interpreted structural controls and historical mine development at the San Jose Mine.



Regional drill targeting strategy informed by newly interpreted structural controls on Zn-Pb mineralization in Udias – San Jose – Novales corridor

Regional structural trends identified from the structural geological assessment have generated new targets (see Figure 6) and indicate significant upside to the current JORC-compliant Exploration Target (see ASX announcement 28 November 2023). Variscan's proposed regional drill program aligns well with the structural trends interpreted to control Zn-Pb mineralization and will test the regional prospectivity along strike from the San Jose Mine. Variscan's planning and permitting is well advanced to conduct a surface drilling campaign over the 9km Udias – San Jose – Novales Trend in Q2 of 2024.

Figure 6. Regional-scale structures overlaid on JORC Exploration Target and proposed surface drillhole locations proximal and further afield to the Udias – San Jose – Novales mine system and Zinc Trend.



Objectives & description of fieldwork

The principal aims of the structural study were to provide:

- 1. an improved understanding of the principal controls on Zn-Pb mineralisation within the Novales-Udias Trend.
- 2. insight into the potential for extensions of the known ore trends, both within the mine area (i.e., proximal ore trends, extensions below the level of the main gallery, etc.) and beyond (e.g., on the NE side of Novales and towards Udias).

The structural study consisted of a very detailed underground mapping of overprinting and geological relationships along the full strike of the San Jose mine development (c. 2600m), as well as in a number of mine drifts and stopes. This exercise has constrained the structural and geological history of the San Jose zinc deposit, resulting in a significantly improved understanding of the complex sequence of structural events and the discrete populations of structures associated with them.

The work materially advanced previous understanding by including geological overprinting relationships and structural evolution, thereby enabling consideration of the orientation, location, geometry and relative timing of mineralization relative to one or more of the structural elements.

Having a working geological history has identified the principal controls on Zn-Pb mineralization at San Jose. In turn, this has allowed for recognition of structures important for localizing mineralization and that can be used as important criteria for targeting.



Figure 7. Structural geology fieldwork

Variscan's Managing Director & CEO, Stewart Dickson said,

"It has been a pleasure to work with the world renowned Dr. Brett Davis on this valuable piece of work. The findings provide a more complete understanding of the influences giving rise to the ore bodies within the San Jose and Udias mine systems. The outputs from this work are valuable exploration vectoring tools for the discovery of additional mineralized lenses along and across strike.

We are already applying the findings and have commenced drill-testing the new targets identified within the San Jose Mine.

We have assay results pending from underground drilling conducted in Q4 2023 and look forward to releasing them as soon as practicable with further drilling results to follow thereafter".

This ASX announcement has been approved by the Board and authorised for issue by Mr Stewart Dickson, Managing Director and CEO, Variscan Mines Limited

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About Variscan Mines Limited (ASX:VAR)

Variscan Mines Limited (ASX:VAR) is a growth oriented, natural resources company focused on the acquisition, exploration and development of high-quality strategic mineral projects. The Company has compiled a portfolio of high-impact base-metal interests in Spain, Chile and Australia. Its primary focus is the development of its advanced zinc projects in Spain. The Company's name is derived from the Variscan orogeny, which was a geologic mountain building event caused by Late Paleozoic continental collision between Euramerica (Laurussia) and Gondwana to form the supercontinent of Pangea.

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Competent Person Statement

The information in this document that relates to technical information about the Novales-Udias project is based on, and fairly represents information and supporting documentation compiled and reviewed by Dr. Mike Mlynarczyk, Principal of the Redstone Exploration Services, a geological consultancy acting as an external consultant for Variscan Mines. Dr. Mlynarczyk is a Professional Geologist (PGeo) of the Institute of Geologists of Ireland, and European Geologist (EurGeol) of the European Federation of Geologists, as well as Fellow of the Society of Economic Geologists (SEG). With over 10 years of full-time exploration experience in MVT-style zinc-lead systems in several of the world's leading MVT provinces, Dr. Mlynarczyk has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the December 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" ('JORC Code'). Dr. Mlynarczyk consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

Where Company refers to exploration results and historical data previously advised to the ASX it confirms that it is not aware of any new information or data that materially affects the information included in previous announcements and all material assumptions and technical parameters disclosed in those announcements continue to apply and have not materially changed.

Forward Looking Statements

Forward-looking statements are only predictions and are not guaranteed. They are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of the Company. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. The occurrence of events in the future are subject to risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to differ from those referred to in this announcement. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, the Company, its directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of the events referred to in this announcement will occur as contemplated.



Project Summary

The Novales-Udias Project is located in the Basque-Cantabrian Basin, some 30km southwest from the regional capital, Santander. The project is centred around the former producing San Jose underground mine with a large surrounding area of exploration opportunities which include a number of satellite underground and surface workings and areas of zinc anomalism identified from recent and historic geochemical surveys. Variscan has delineated a significant 9km mineralised trend and a sub-parallel 3km trend from contemporary and historical data across both the Buenahora exploration and Novales mining permits.

The San Jose Mine is nearby (~9km) to the world class Reocin Mine which is the largest known strata-bound carbonate-hosted Zn-Pb deposit in Spain¹ and one of the world's richest MVT deposits². Further it is within trucking distance (~80km) from the San Juan de Nieva zinc smelter operated by Asturiana de Zinc (100% owned by Glencore).

Significantly, the Novales-Udias Project includes a number of granted mining tenements³.

Novales-Udias Project Highlights

- Near term zinc production opportunity (subject to positive exploratory work)
- Large tenement holding of 68.3 km² (including a number of granted mining tenements)
- Regional exploration potential for another discovery analogous to Reocin (total past production and remaining resource 62Mt @ 8.7% Zn and 1.0% Pb⁴⁵)
- Novales Mine is within trucking distance (~ 80km) from the zinc smelter in Asturias
- Classic MVT carbonate hosted Zn-Pb deposits
- Historic production of high-grade zinc; average grade reported as ~7% Zn⁶
- Simple mineralogy of sphalerite galena calamine
- Mineralisation is strata-bound, epigenetic, lenticular and sub-horizontal
- Reported historic production of super high grade 'bolsas' (mineralised pods and lenses) commonly 10-20% Zn and in some instances +30% Zn⁷
- Assay results of recent targeted grab samples taken from within the underground Novales Mine recorded 31.83% Zn and 62.3% Pb⁸
- Access and infrastructure all in place
- Local community and government support due to historic mining activity

¹ Velasco, F., Herrero, J.M., Yusta, I., Alonso, J.A., Seebold, I. and Leach, D., (2003) 'Geology and Geochemistry of the Reocin Zinc-Lead Deposit, Basque-Cantabrian Basin, Northern Spain' Econ. Geol. v.98, pp. 1371-1396.

² Leach, D.L., Sangster, D.F., Kelley, K.D., Large, R.R., Garven, G., Allen, C.R., Gutzner, J., Walters, S., (2005) 'Sedimenthosted lead-zinc deposits: a global perspective'. Econ. Geol. 100th Anniversary Special Paper 561 607 ³ Refer to ASX announcement of 29 July 2019

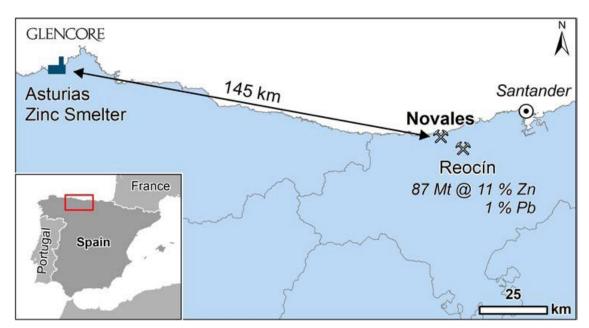
⁴ Velasco, F., Herrero, J.M., Yusta, I., Alonso, J.A., Seebold, I. and Leach, D., 2003 - Geology and Geochemistry of the Reocin Zinc-Lead Deposit, Basque-Cantabrian Basin, Northern Spain: in Econ. Geol. v.98, pp. 1371-1396.

⁵ Cautionary Statement: references in this announcement to the publicly quoted resource tonnes and grade of the Project are historical and foreign in nature and not reported in accordance with the JORC Code 2012, or the categories of mineralisation as defined in the JORC Code 2012. A competent person has not completed sufficient work to classify the resource estimate as mineral resources or ore reserves in accordance with the JORC Code 2012. It is uncertain that following evaluation and/or further exploration work that the foreign/historic resource estimates of mineralisation will be able to be reported as mineral resources or ore reserves in accordance with the JORC Code 2012.

⁶ These figures have been taken from historical production data from the School of Mines in Torrelavega historical archives.

⁷ Reports of the super high-grade mineralisation are supported with historical production data from the School of Mines in Torrelavega historical archives. (Refer ASX release 29 July 2019)

⁸ Refer to ASX Announcement of 19 December 2020



San Jose Mine site proximal to San Juan Smelter and regional capital, Santander

JORC Table 1, Sections 1 and 2

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public News release. In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information. 	No new samples are presented in this report.
Drilling techniques	 Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc). 	• No new drillholes are reported here.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to 	No new drillholes are reported here.

Criteria	JORC Code explanation	Commentary
	preferential loss/gain of fine/coarse material.	
Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	• Exploration results are not reported here.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube 	• Exploration results are not reported here.
	 In non-core, when a finited, have sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples. 	
	 Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the 	
	material being sampled.	
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	Exploration results are not reported here.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	• Exploration results are not reported here.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 All the maps and 3D models referenced in this news release have been made with ETRS89. Surface topography was provided by CNIG (IGN) as topographic contours at 25k scale, the contours were used to generate a digital terrain model in 3D after transformation to the local mine grid to conform to the majority of drillhole data in Leapfrog Geo and Datamine StudioRM. It is considered satisfactory for these purposes. The San Jose mine 3D underground laser survey was conducted by 3DMSI using a robotic total station to take the in-situ pre-existing historical survey pin locations to use as reference points. A "Z+F Imager 5050C laser scanner", as well as a "Leica Geosystems TS16 01 total station" for controlling positional accuracy and a "Leica geosystems BLK-2-GO" for detailed mapping of the tunnels and drives were used to capture data inside stopes and drives at San Jose, and these data were registered as a point cloud. The BLK-2-GO was controlled with targets positioned with the TS16 on the corners of the drives. The point cloud was simplified and wireframes created from this data set. The 3D mineralisation and mine development model of the San Jose mine in Novales was prepared using mining software Micromine Origin and Leapfrog Geo.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	• Exploration results are not reported here. Structural measurements were collected along the full length of the mine (c. 2600m) taking care to collect an even density of measurements all along, e.g., one every 5-10 meters.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have 	 The survey reported here was a structural geology study, i.e., consisted of measuring the spatial positions of various populations of geological structures.

Criteria	JORC Code explanation	Commentary
	introduced a sampling bias, this should be assessed and reported if material.	
Sample security	• The measures taken to ensure sample security.	• No new drilling or sampling is reported here.
Audits or reviews	 The results of any audits or reviews of sampling techniques and data. 	 No independent audits have been undertaken on the structural study reported here, however, it was jointly conducted by Dr. Frank Bierlein, also a structural geologist and can be considered reviewed by him.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 The exploitation permit for the Novales-Udias historical mine area that encompasses the San Jose mine is owned by Variscan Mines and is in good standing. The author is not aware, at the time of writing this, of any environmental issues that could affect ongoing works within these licences. The author is not aware, at the time of writing this, of any environmental or social license issues that could affect ongoing works within these licences, nor any issues with tenure or permission to operate in this region. On the contrary, the socially and environmentally responsible mineral development undertaken by Variscan Mines has resulted to date in an outstanding social license to operate.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Exploration results are not reported here.
Geology	• Deposit type, geological setting and style of mineralisation.	 The mineralisation at the project is considered a Mississippi Valley Type Lead-Zinc type deposit with associated structural-and stratigraphy-controlled carbonate dissolution and replacement Lead-Zinc type sulphide mineralisation, where Zinc strongly predominates over Lead. Mineralisation at the project occurs as stratiform, sub-horizontal and lenticular, following sub-vertical trends, and with lateral and vertical extensions, with a significant control by steeply-dipping feeder faults. Mineralisation in this setting presents as 'bags' (pods) composed of 'stacked' sub-horizontal lenses.
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception 	Exploration results are not reported here.

Criteria	JORC Code explanation	Commentary
	 depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the news release, the Competent Person should clearly explain why this is the case. 	
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	Exploration results are not reported here.
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	• Exploration results are not reported here.
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	• The information in this news release does not refer to new exploration results; however, maps and figures have been included to illustrate the orientations of the different geological structure populations with regard to the underground San Jose mine developments, as well as to define prospective drill targeting zones.
Balanced reporting	 Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	• Exploration results are not reported here.
Other substantive	 Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical 	 Exploration results are not reported here. No other exploration data referenced in this news release is considered sufficiently meaningful or material to warrant further reference.

Criteria	JORC Code explanation	Commentary
exploration data	survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 Variscan have exploration plans to advance the Novales-Udias Project. These exploration plans include: Upgrade of the initial JORC-compliant maiden mineral resource estimate for the San Jose mine Drilling campaign from surface to test step out extensions from the San Jose mine, as well as further compelling drill targets identified from historical or Variscan surface drilling. Drilling campaign underground at the San Jose mine to test: Extensions of mineralised lenses vertical extensions infill mineralised lenses infill mineralised lenses, likely to occur at lower elevations.