

# GEOCHEMISTRY HIGHLIGHTS MULTIPLE ZINC ANOMALIES AT NOVALES-UDIAS PROJECT

#### Key highlights:

Review and analysis of historic geochemistry data carried out in conjunction with the School of Mines at the University of Cantabria

- Regional soil geochemistry identifies multiple significant zinc anomalies across and adjacent to historical zinc occurrences and small-scale underground mining highlighting the potential scale of the project
- In the Brinia area, a peak soil geochemistry value of 17% Zn was recorded near former workings
- In the Bustablado area, particularly around Minas de Duña, soil values reached up to 7% Zn and substantial zones with +0.5% Zn. The anomalies around Mines de Duña are up to 1km long and 0.5km wide
- Extensive zinc soil anomalies over 2km long and close to 1km wide are located in the Magdelena to Motilos areas with a peak value of 4.5% Zn with large areas of anomalism +0.5% Zn suggest there is strong potential for underlying primary zinc mineralisation
- Excellent potential for soil sampling to be extended and infill areas through the licence area to highlight new zones of mineralisation

Variscan Mines Limited ("Variscan" or the "Company") (ASX:VAR) is pleased to announce that the Company's understanding of the Novales-Udias project located in Cantabria, northern Spain has continued to gather pace in advance of the formal completion of the proposed acquisition.

In July 2019, Variscan announced that it had agreed to acquire two advanced zinc projects in Spain, including Novales-Udias, which includes granted mining tenements located in established mining areas, complementing the Company's existing portfolio of high-impact base metals interests. Variscan's CEO, Stewart Dickson said Variscan is pleased that the review of historic geochemistry data under the cooperation agreement with the School of Mines at the University of Cantabria has validated the dataset. Moreover, it confirms the significant potential of the Novales-Udias project.

"This work highlights the multiple, large geochemical anomalies identified at surface across the tenement area. In turn, this illustrates the potential scale of the opportunity in an area with a proven history of mining. The extent and the quality of the information have further substantiated our decision to acquire the asset. Additionally, by being able to transfer this information into a digital dataset we are now in a better position to progress our exploration and development work".



#### Review of historic geochemistry

Between 1983-4, Asturiana de Zinc SAU ("AZSA") which was subsequently acquired by Xstrata and Glencore, conducted a regional soil sampling programme around the Reocín Mine, located near Torrelavega (Cantabria), which it owned and operated.

#### Key findings

Variscan has acquired access to the dataset and found that soil sampling has been an effective technique in highlighting anomalous Zinc-Lead areas. Key findings arising are:

- High dispersion of Zinc and Lead over significant areas of the licence area
- Strong relationship between the soil geochemistry and the underlying dolomite (which commonly has high levels of zinc anomalism)
- Stratigraphy that hosted the Reocín Mine (62Mt @8.7%Zn and 1.0%Pb1) covers much of the Novales and Udias licence areas
- Soil sampling to be extended along with infill sampling in priority areas through the licences to highlight new zones of mineralisation
- In the Bustablado area, particularly around Minas de Duña, soil values reached up to 7% Zn and substantial zones with +0.5% Zn
  - The anomalies across and around Minas de Duna are in the order of 1km long and 0.5km wide and remain open along strike
- Extensive zinc soil anomalies over 2km long and close to 1km wide are located in the Magdelena to Motilos areas and contain numerous small workings
  - A peak value of 4.5% Zn with large areas of anomalism +0.5% Zn suggest there is strong potential for underlying zones of primary zinc mineralisation
- Some of the historic soil sampling programs were restricted due to tenement boundaries.
  - The current tenement holding acquired by Variscan is significantly larger enabling potential strike extensions and the possible linking of successive zones of mineralisation

<sup>&</sup>lt;sup>1</sup> Velasco et al., Geology and Geochemistry of the Reocín Zinc-Lead Deposit, Basque-Cantabrian Basin, *Economic Geology*. Vol. 98, 2003, pp. 1371-1396



Figure 1. Soil geochemistry contours for the Novales-Udias Project

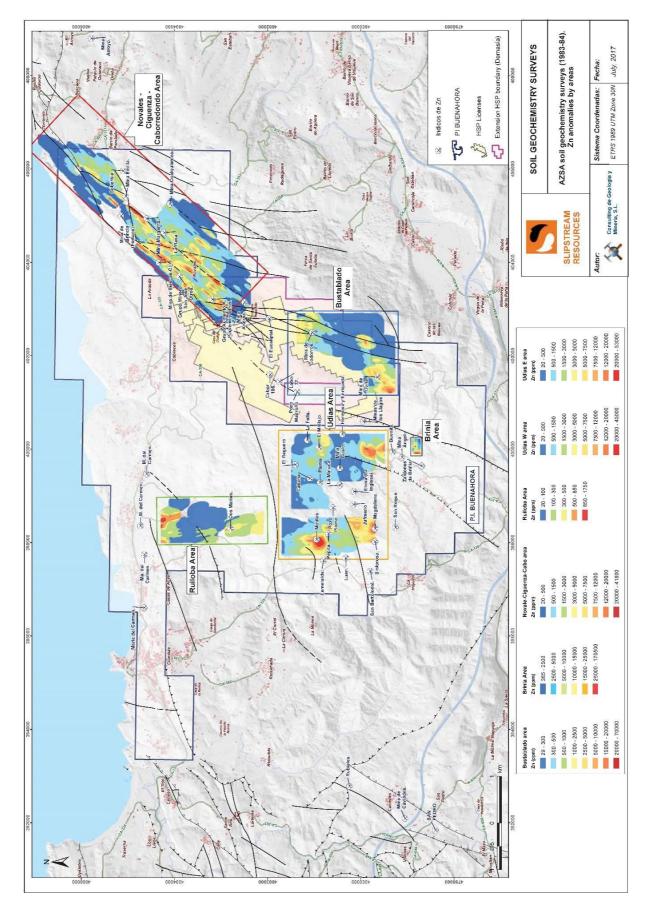




Figure 2. Soil geochemistry >500ppm for the Novales and Udias areas

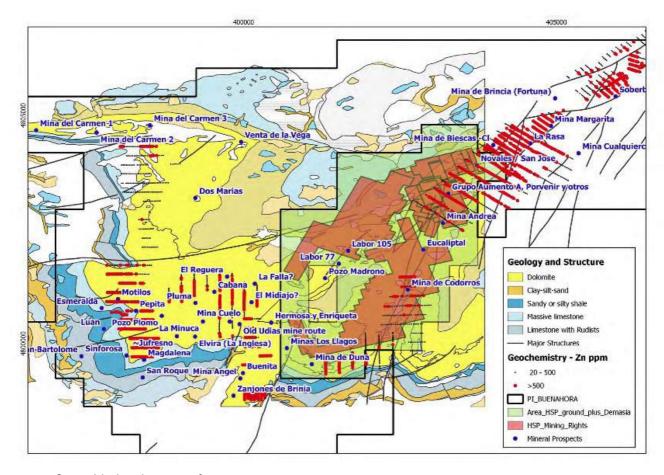
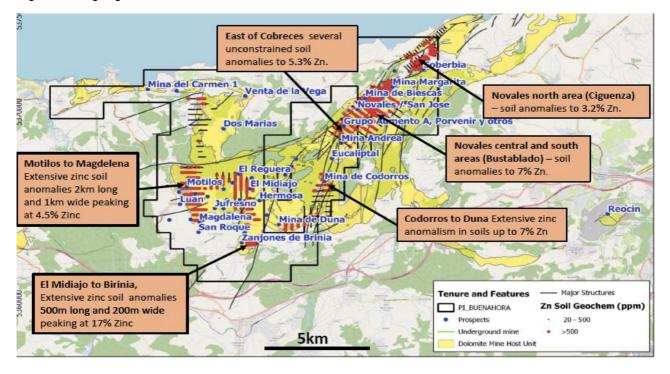


Figure 3. Highlighted zones of interest





mineralisation to be linked untested

Figure 4. Large untested areas for potential exploration activity

#### **Project Summary:**

The Novales-Udias Project is located in the Basque-Cantabrian Basin, some 30km south west from the regional capital, Santander. The advanced zinc project is centred around the former producing Novales underground mine with a large surrounding area of exploration opportunities which include zinc soil anomalies over 2km long and close to 1km wide and up to 17% Zn. Significantly, the Novales-Udias Project includes a number of granted mining tenements (refer ASX announcement 29 July 2019).



#### Novales-Udias Project Highlights

- Near term zinc production opportunity (subject to positive exploratory work)
- Large tenement holding of 68.3 km<sup>2</sup> (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% Pb<sup>2.3</sup>)
- Novales Mine is within trucking distance (~ 80km) from the Asturias zinc smelter
- Classic MVT carbonate hosted Zn-Pb deposits
- Historic production of high-grade zinc; average grade reported as ~7% Zn<sup>4</sup>
- Simple mineralogy of sphalerite galena calamine
- Ore is strata-bound, epigenetic, lenticular and sub-horizontal
- Reported historic production of super high grade 'bolsas' (ore bags) commonly 10-20% Zn and in some instances +30% Zn<sup>5</sup>
- Access and infrastructure all in place
- Local community and government support due to historic mining activity

#### **Next Steps:**

Variscan will now use the results to plan for the next stage of development at the Novales-Udias Project. With an expansive area of highly prospective exploration opportunities, the interpretation of this work will enable the Company to advance the project quickly following shareholder approval. In the interim, this validation of historic geochemistry data and the creation of the digital dataset represent the successful first stage of positioning Variscan to deliver the significant potential of the Novales-Udias project after the formal completion of the proposed acquisition.

#### **ENDS**

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able to be reported as mineral resources or ore reserves in accordance with the JORC Code 2012.

<sup>2</sup> 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.

3 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

<sup>&</sup>lt;sup>4</sup> Anecdotal evidence from original Novales miners interviewed during the WAI Due Diligence.

 $<sup>^{5}</sup>$  Anecdotal evidence from original Novales miners interviewed during the WAI Due Diligence.



#### **Notes**

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.

The Company's name is derived from the Variscan orogeny which was a geologic mountain building event caused by Late Paleozoic continental collusion between Euramerica (Laurussia) and Gondwana to form the supercontinent of Pangea.

#### **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 Mr. Ché Osmond, an employee of Wardell Armstrong International. Mr. Osmond is a Chartered Geologist (CGeol) and Fellow of the Geological Society of London, and European Geologist (EurGeol) of the European Federation of Geologists, and 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'). Mr Osmond consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

Where the Company refers to the Novales-Udías Project and the historic exploration results and production data previously advised to the ASX on 29 July 2019 it confirms that it is not aware of any new information or data that materially affects the information included in that market announcement.



# JORC Table 1, Sections 1 and 2 in reference to Novales Soil Geochemistry:

## Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The specific soil sampling technique is unknown due to age (mostly from 1984 from Asturiana de Zinc who no longer own the licenses).</li> <li>Geochemical analysis technique unknown.</li> <li>Depth and colour of samples recorded on hard copy tabulated results for Zinc and Lead quoted in ppm.</li> <li>Co-ordinates not provided for all samples, just reference number to grid lines specific to planned soil grid also in hard copy maps from historical data.</li> <li>Samples unknown whether measures taken for sample to be fully representative of soil profile</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</li> </ul>	N/A – drilling not conducted
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	N/A – drilling not conducted
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Logging has not been conducted to a level suitable for the estimation of a Mineral Resource.</li> <li>Logging is qualitative.</li> <li>Logging of observations on hard copy tables for each sample only.</li> <li>Details noted are whether sample was deep enough to hit the underlying dolostone or limestone strata.</li> </ul>



Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Sub-sampling and preparation unknown.</li> <li>Unknown as to whether samples were split or reduced in any way.</li> <li>Weight of the samples are not known.</li> <li>Unknown if any quality control procedures were adopted.</li> <li>Unknown whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Unknown whether samples were analysed with the appropriate analytical method.</li> <li>Unknown as to which laboratory and what assay type was utilised, not possible for handheld XRF usage as samples were taken in approximately the mid-1980's.</li> <li>Quality control procedures unknown.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Data has only been verified with occasional overlap of soil sampling grids which do concur.</li> <li>WAI is not aware of any additional sample verification.</li> <li>Primary data is in the form of handwritten tables, no laboratory certificates and no known data entry protocols.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>GPS not used for each point, only a section line with numbers assigned to each sample point along that line, thus a compass must have been used to give a bearing from a single starting point, unknown as to whether this starting point was survey controlled.</li> <li>Original maps are in 1:2,000 scale and are hand drawn with superimposed 2m contour lines, these may have been instrumental in the orientation and location of grid lines and points therein.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> </ul>	<ul> <li>200m x 20m spacing for most soil sample grids</li> <li>Data spacing is deemed sufficient to delineate mineralisation at surface only; however, is not sufficient for Mineral Resource estimation.</li> <li>Unknown whether sample composting was applied.</li> </ul>



Criteria	JORC Code explanation	Commentary
	Whether sample compositing has been applied.	
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>Orientation of soil sample grid lines is varied throughout NW-SE, N-S and E-W.</li> <li>Unknown as to whether there was a sample bias</li> </ul>
Sample security	The measures taken to ensure sample security.	Unknown, due to age of sampling campaign
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	WAl is unaware of any audits of reviews of sampling techniques

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The exploration permit "Buenahora" is currently held by Slipstream Spain and subject to acquisition by Variscan Mines</li> <li>WAI is not aware of any environmental issues that could affect ongoing works within these licences</li> <li>The exploitation permit for the Novales/Udias historic mine area is owned by Slipstream Spain and subject to acquisition by Variscan Mines</li> <li>WAI is not aware, at the time of writing this, of any issues with tenure or permission to operate in this region</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	All exploration to date has been carried out by Hispanibal and Asturiana de Zinc (previous subsidiary of Xstrata / Glencore) and local miners pre-2007, all data quoted in this announcement pertains to historical data gathered by these companies.
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	Mississippi Valley Type Lead-Zinc deposit, hosted in sub- horizontal limestones and dolomites.
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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 report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>No drilling data has been quoted within this announcement, only historical underground channel samples, soil geochemistry and anecdotal evidence from the miners of the Novales and Udias underground mines.</li> <li>The historic drilling data (hard copies) for this project is still in the process of being fully compiled for ongoing geological use</li> </ul>



Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>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</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>All data within this announcement pertains to historical soil and underground channel sampling, the exact nature of the sampling methodology or averaging techniques applied to the values are unknown at this stage.</li> <li>The higher grades quoted for the "bolsas" within this announcement are anecdotal, however, during review of the historical drilling by WAI there have been records of +30% Zinc grades over small intervals (~1 m).</li> <li>No metal equivalent values have been utilised in this report.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>The grades quoted within this announcement pertain to underground channel samples, soil samples and anecdotal ROM grades from the Novales and Udias underground Pb-Zn mine. The length of samples and whether the grades were averaged is not known at this stage.</li> <li>The historical drilling was predominantly vertical or dipping steeply -60° to -90° from surface</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>Locations of soil samples have been displayed in plan view with appropriate scale with a legend for contoured soil anomalies.</li> <li>Tabulations of intercepts are not available as the data does not refer to drilling.</li> </ul>
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.	High grades have been quoted within this report; however, the lower grades from the historical soil samples and some ROM grades are more representative of the typical mineralisation.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical 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.	Historical surface drilling, IP line geophysics and underground drilling data with positive results indicative of mineralisation are currently held at the School of Mine in Torrelavega, these data are currently being digitised for further geological use.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Further exploratory work is currently being planned which will be outlined in a subsequent announcement.