



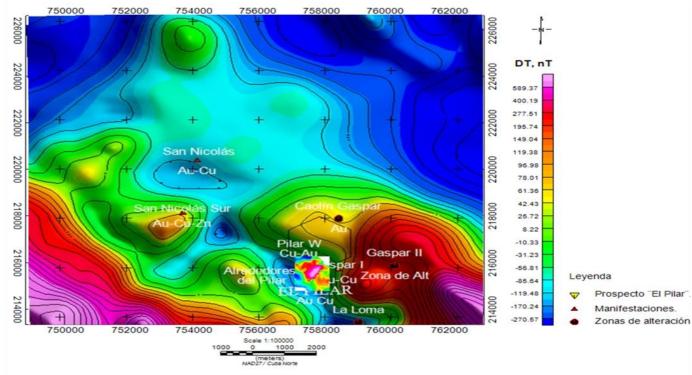
4 May 2023

# FINALISED 3D GEOPHYSICAL MODEL INDICATES LARGE SCALE COPPER-GOLD PORPHYRY POTENTIAL AT EL PILAR, CUBA

Antilles Gold Limited ("Antilles Gold" or the "Company") (ASX Code: AAU, OTCQB: ANTMF, FSE Code: PTJ) advises that interpretation of recently completed ground magnetics and induced polarisation ("IP") surveys over part of the El Pilar copper-gold porphyry system in central Cuba has produced 3D models that indicate multiple drill targets, including a cluster of three interpreted porphyry intrusives, El Pilar, Gaspar, and newly discovered Camilo.

### **HIGHLIGHTS**

- The potential scale of the three porphyry intrusives, and associated indicative alteration zones could present a significant mining project if results from an upcoming drilling program replicate, or proximate, the single hole drilled by Antilles Gold in 2022 into the outer zone of the El Pilar porphyry intrusive. (Hole PHD-004A assayed 134m @ 1.23% Cu from 49m, and open at depth reported to ASX on 3 March 2023)
- The extensive coincident IP chargeability and resistivity anomalous zone extends for over 1,350m strike length from where it outcrops at the El Pilar oxide zone through the Gaspar target to the newly defined Camilo target, where the largest anomaly is located.
- Five holes to a vertical depth of 600m will be drilled into each of the three porphyry intrusives in a program commencing around 15 May 2023, to provide an indication of Cu and Au grades.



**Aeromagnetic Survey - El Pilar Porphyry System** 

- All three porphyry targets are related to significant surficial hydrothermal alteration indicative of porphyry systems. El Pilar and Gaspar are also defined by copper-gold mineralization in historic, and recent rock chip sampling, and previous shallow drilling.
- A 752ha Exploration Concession covering the cluster of porphyry intrusives has been
  excised from a 1,700ha Reconaissance Concession held by Gold Caribbean Mining SA,
  which is a subsidiary of the Cuban Government's mining company GeoMinera SA, and the
  partner of Antilles Gold's subsidiary, Antilles Gold Inc ("AGI"), in its activities in Cuba.
- Both the Exploration Concession and Reconaissance Concessions are listed in the Los Llanos International Economic Association ("IEA") ("Exploration Agreement") between Antilles Gold Inc, and Gold Caribbean Mining.
- The Exploration Agreement permits Antilles Gold Inc to undertake the upcoming initial drilling program, preliminary metallurgical test work, and financial modelling before requiring Gold Caribbean Mining to transfer the Exploration Concession to a joint venture with Antilles Gold Inc.
- The joint venture will reimburse Antilles Gold's expenditure on the copper prospects that occur prior to the transfer of the Concession.

Antilles Gold will not hold a direct beneficial economic interest in the El Pilar Exploration Concession until it is transferred to the joint venture, as is the intention of both Antilles Gold, and GeoMinera.

Mr Brian Johnson, Executive Chairman of Antilles Gold said that the joint venture company to be established to hold the El Pilar porphyry system would be a separate entity to the existing joint venture company, Minera La Victoria SA, which is focussed on developing near term gold mines, La Demajagua, and New Sabanas (the recently named gold-copper mine proposed to exploit the El Pilar oxide deposit).

The second joint venture company will focus on exploring and potentially developing copper prospects in Cuba. In addition to the El Pilar copper-gold porphyry system, the copper joint venture is also expected to include deposits within the Sierra Maestra copper belt in south east Cuba that will initially be included in the Los Llanos Exploration Agreement for preliminary evaluation. (refer ASX announcement 20 April 2023)

Consideration is being given by Cuban authorities to permit a majority foreign ownership in the joint venture, with the partners agreeing that this could encourage participation by a major mining company in the El Pilar project, at some time in the future.

Mr Johnson also said that the next few months will be an important period in the Company's progress in Cuba with drilling results becoming available from the El Pilar, Gaspar, and Camilo porphyry deposits, and the El Pilar oxide deposit which is currently being drilled to establish Mineral Resource Estimates for the proposed New Sabanas gold-copper mine.

### NOTES FROM ANTILLES GOLD'S EXPLORATION DIRECTOR, DR CHRISTIAN GRAINGER

### **El Pilar Geophysical Survey Interpretations**

On receival of the completed ground IP and magnetics survey data, an IP Inversion/3D model has been developed, from which it is interpreted that a number of potentially copper-gold mineralized porphyry intrusives, and late porphyry-related overprinting copper-gold zones are apparent, and will be immediately tested with the up coming drilling program as high priority targets.

A series of subvertical porphyry intrusives are clearly evident in the IP data as moderate chargeability zones, possibly related to sulphide (chalcopyrite > pyrite) mineralized zones, as seen in previous El Pilar drillhole PDH-004A, that interrupt higher chargeability zones that are interpreted as being pyrite-rich.

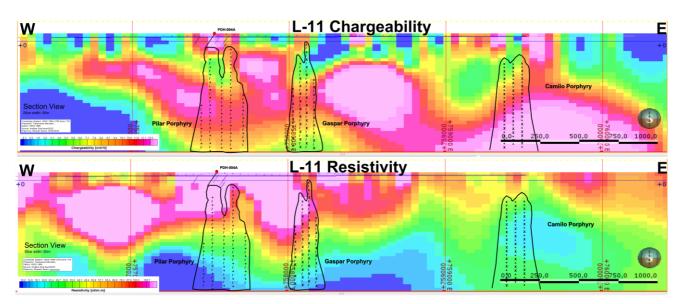
This is typical of porphyry systems metal and hydrothermal alteration zonation. The interpreted porphyry intrusives are all clearly identified on numerous coincident geophysical lines and align well with surficial mapping and sampling of porphyry style alteration and veining, and also previous shallow drilling.

At El Pilar, the intrusive appears to be roughly NNE trending and elongate, and is evident over +300m strike length and 200m width, and at Gaspar the interpreted intrusive is also elongate and appears to be NNW trending over +200m strike length with 150m to 200m width.

At both targets the anomalous zones are subvertical and evident vertically to the lower limits of the survey resolution levels (+800m vertically). These dimensions are typical of porphyry systems that occur as clusters of related porphyry intrusive 'finger-like' bodies.

Additional to the El Pilar and Gaspar targets, a new eastern target, Camilo, has been detected in both geophysics and surface sampling and mapping. This target is associated with a very high chargeability and low resistivity zone at depth and warrants drill testing.

The surface copper-gold mineralization and intense hydrothermal alteration at El Pilar and Gaspar are part of the same porphyry related hydrothermal and metalliferous system. At El Pilar, the mineralized dioritic porphyry intrusive(s) is located immediately below the surficial oxide copper-gold mineralization.



Ground IP survey interpretation showing both Chargeability and Resistivity profiles, location of interpreted subvertical porphyry intrusives related to shallow drilling and surficial hydrothermal alteration and mineralization. The East dipping chargeability zone extending from El Pilar, through Gaspar and to the new Camilo target being visually extensive

The sub horizontal and intense resistivity high zones, that are evident on almost all sections of the geophysical survey, relate to a late-porphyry style overprint that occurs immediately above and on the flanks of the interpreted porphyry intrusives.

The high resistivity nature is related to the strong sericite-illite-silica hydrothermal alteration assemblage. These resistive zones that are coincident with high chargeability zones represent sulphide rich areas (pyrite and chalcopyrite) that appear to have only been partly tested in previous shallow drilling.

This overprint shows an extensive and strong shallow easterly dipping morphology and extends from surface (El Pilar) to subsurface at Gaspar, where it remains untested by drilling, and then extends to the very strong chargeable zone at depth at the new Camilo target. This consistent geophysically anomalous zone is evident over a very large area, that is common in porphyry systems, and is seen as highly prospective for both coppergold porphyry style mineralization and copper-gold overprint style mineralizing events.

In conclusion, the geophysical survey has been highly successful in locating the three subvertical porphyry targets, of moderate chargeability zones (chalcopyrite > pyrite) that are located immediately below mapped and sampled zones of extensive porphyry style hydrothermal alteration and surface anomalism.

Only El Pilar has been intersected in drilling to date where PDH-004A intersected broad zones of copper-gold mineralization that remains open vertically in primary sulphide mineralization (chalcopyrite dominant).

The laterally extensive sub horizontal east-dipping coincident higher chargeability and resistivity zones are related to the late porphyry overprinting event and host significant copper-gold mineralization where it outcrops at the El Pilar oxide zone and extends for over 1,350m through the Gaspar target to the newly defined Camilo target, where the largest chargeability anomaly is located.

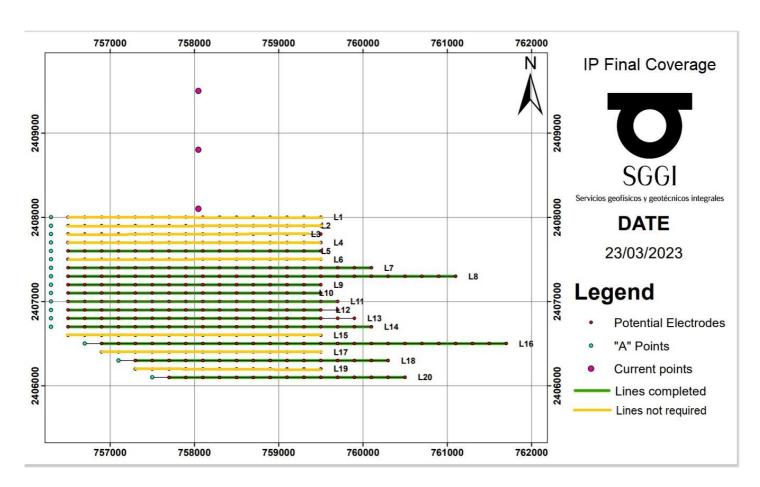
The vast majority of this zone remains completely undrilled and is ranked as a very large high priority drill target.

**FND** 

This announcement has been authorised by the Chairman of Antilles Gold Limited. For further information, please contact:

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IP Lines – El Pilar Porphyry System Cuba

## **JORC Code, 2012 Edition – Table 1**

## **Section 1 Sampling Techniques and Data**

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

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>	Not Applicable – no drilling results reported
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, openhole 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>	Not Applicable – no drilling results reported.
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>	Not Applicable – no drilling results reported

Criteria	JORC Code explanation	Commentary
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>	Not Applicable – no drilling results reported

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>	Not Applicable – no drilling results reported

Criteria	JORC Code explanation	Commentary
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>	Not Applicable – no drilling results reported
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>	Not Applicable – no drilling results reported
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>Two datum points have been established on the site using high precision GPS.</li> <li>All IP lines were surveyed by total station utilizing the local survey datum, on the WGS 84 UTM 17N grid, and location data was collected using high precision GPS</li> </ul>

Criteria	JORC Code explanation	Commentary
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> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Array type: Pole-Dipole</li> <li>Dipole length: 200m</li> <li>Dipole spacing: 200m</li> <li>Line spacing: 100m</li> <li>n factor: n = 1 to 10 - Array length = 2000m (Effective depth of investigation: 850m)</li> <li>Transmitter power: 10KW (2 GDD transmitter in master-slave configuration)</li> <li>Pulse length: 2 seconds</li> <li>Number of stacks: 3 to 6</li> <li>Repeat readings per station: 3 to 5;</li> <li>IP Receiver: IRIS Syscal Pro - 10 channels - 20 chargeability windows;</li> </ul>
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>	Not Applicable for IP Survey
Sample security	The measures taken to ensure sample security.	Not Applicable for IP survey
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not Applicable for IP survey

## **Section 2 Reporting of Exploration Results**

(Critaria listed in the presenting section also

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>	The IP survey is being undertaken on the EI Pilar Reconnaissance Permit, which is registered to the Los Llanos International Economic Association (IEA). The Los Llanos IEA is an agreement between Antilles Gold Inc (a 100% subsidiary of Antilles Gold Limited) and Gold Caribbean Mining SA, which is a subsidiary of the Cuban State owned mining company Geominera SA. The Reconnaissance Permit encompasses 17,839 Ha and is located in the topographic sheets at scale 1: 50 000 Ceballos (4481-I), Gaspar (4481-II), Corojo

Criteria	JORC Code explanation	Commentary
		(4581-III) and Primero de Enero (4581-IV), 25 km east-southeast of the city of Ciego de Ávila, central Cuba.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>The El Pilar prospect was explored most recently by Canadian company KWG, who undertook airborne geophysics, trenching (22 trenches totalling 4640m) and RC and Diamond drilling.</li> <li>Drilling was undertaken between 1994 and 1997, with 159 RC holes drilled for a total of 20,799m and 29 diamond holes drilled for a total of 3,611m.</li> <li>Chemical analysis for Au, Cu and other elements undertaken at Chemex laboratories in Canada. No core samples remain.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The El Pilar copper-gold porphyry system is hosted within a Cretaceous age volcanic island arc setting that is composed of mafic to intermediate composition tuffs, ash and volcanoclastic rocks that are intruded by similar age granodiorite and diorite intrusive stocks.</li> <li>The geological setting is very similar to the many prospective volcanic island arc geological environments that are related to porphyry style mineralisation, and associated vein systems.</li> <li>The El Pilar system has shown to date both overlapping hydrothermal alteration styles, and complex multiple veining events that is common with the emplacement of a mineralized porphyry copper-gold system.</li> </ul>

Criteria	JORC Code explanation	Commentary
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>	Not Applicable – no drilling results being reported
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>	Not Applicable – no drilling results being reported
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>	Not Applicable – no drilling results being reported
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.	Plan showing locations of IP lines included in release.
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>Results for samples have been previously released (see ASX releases dated 8 November 2022, 17 November 2022, 1 December 2022, 15 December 2022, 20 January 2023 and 3 March 2023</li> </ul>

Criteria	JORC Code explanation	Commentary
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.	No other significant unreported exploration data for El Pilar is available at this time.
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>	A diamond drilling program will be undertaken to test the outcomes of the IP survey.

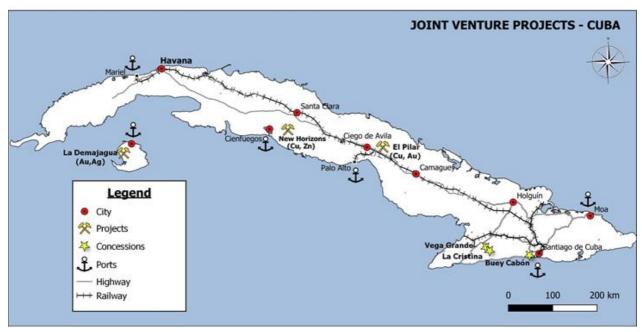
### **Competent Person – Christian Grainger PhD. AIG**

The information in this report that relates to Exploration Results and observations is based on information reviewed by Dr Christian Grainger, a Competent Person who is a member of the Australian Institute of Geoscientists (AIG). Dr Grainger is a Consultant to the Company and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity 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'. Dr Grainger consents to the inclusion of the Exploration Results based on the information and in the form and context in which it appears.

#### **ABOUT ANTILLES GOLD LIMITED:**

Antilles Gold's strategy is to participate in the successive development of previously explored gold, silver, copper, and zinc deposits in mineral rich Cuba.

- The Company is at the forefront of the emerging mining sector in Cuba and expects to be involved in the development of a number of projects through its 49:51 mining joint venture with the Cuban Government's mining company, GeoMinera SA.
- The near-term project of the joint venture company, Minera La Victoria SA, is the proposed development of the La Demajagua open pit mine on the Isle of Youth in south-west Cuba which, based on geological modelling and metallurgical test work, is planned to produce concentrates containing gold, silver, and antimony.



- The current pipeline of additional projects with near-term development potential includes the proposed New Sabanas mine on the El Pilar gold-copper oxide deposit which caps a large coppergold porphyry system in central Cuba. The oxide deposit has been transferred to the existing joint venture with GeoMinera for additional exploration and studies, and anticipated development.
- The joint venture partners intend to invest part of the expected profits from the La Demajagua mine to fund future mine developments, and an extensive exploration program of major targets, including the El Pilar copper-gold porphyry system.
- Antilles Gold is comfortable operating under the applicable law on Foreign Investment in Cuba which protects minority shareholdings, and the realistic Mining and Environmental regulations, and has been granted a generous fiscal regime by the Government which is supportive of its objectives. Also, Antilles Gold nominates all senior management.

- o The joint venture agreement includes the requirement for all funds to be held in a foreign Bank account with the only transfers to Cuba being for local expenses, which will obviate country credit risk for foreign lenders and suppliers.
- Importantly, GeoMinera's 51% shareholding in the joint venture company reflects ownership and does not provide control of decisions at Board or Shareholder Meetings, where the two shareholders have equal votes. The 51:49 arrangement is expected to be adjusted to 50:50 in the near future to better reflect the partnership with GeoMinera.



Exploration Director, Dr Christian Grainger Examining Drill Core – El Pilar