



# Drilling Results Confirm Copper Mineralisation

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Arc Minerals Limited

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**Arc Minerals Ltd**

**('Arc' or the 'Company')**

## Drilling Results Confirm Copper Mineralisation

Arc Minerals (LSE: ARCM), an exploration company forging partnerships to discover and develop Tier 1 copper deposits, is pleased to announce results from the recently completed drilling programme at its PL135/2017 license that forms part of its Virgo Project within the highly prospective Central Structural Corridor of the Kalahari Copper Belt ('KCB') in the Republic of Botswana.

### Highlights

- First phase drill programme completed with a total of 3,000m drilled
- Copper-Silver Mineralisation Intersected
- Diamond drill hole ALV-DD-004 - 3m @ 1.29% CuEq within a broader 6m @ 0.82% CuEq
- Geological, Stratigraphic and Structural setting similar to MMG's Zone 5

### Nick von Schirnding, Executive Chairman of Arc Minerals, commented:

"I am very pleased to report that assay results from the first phase of drilling at our Botswana project identified good copper mineralisation and similar geological settings to neighbouring MMG's Zone 5. These results confirm our view that we have economic grades of copper mineralisation especially in the context of increasing interest by majors in our license. We will continue our drill programme to target the inner copper zone, presenting what we believe to be a further 5km strike along which to drill."

### Background

The initial aim for the first phase drill campaign was to test for extensions of the mineralisation intersected by MMG in their adjacent license, where 4.3m @ 1.65% CuEq and 6.10m @ 2.56% CuEq were reported in holes HA-1393-D and HA-1394-D (see Figure 1 and Appendix A.).

The Company completed eight holes for 3,000m drilled with diamond drill hole ALV-DD-004 intersecting 3m @ 1.29% CuEq within a broader 6m @ 0.82% CuEq. Six of the remaining seven holes drilled intersected elevated to anomalous copper mineralisation with initial observations of the core displaying similar geological, stratigraphic and structural settings to that of MMG's operating Zone 5 underground mine.

Further review of the assay data and drill core suggests that the first phase drill programme intersected mineralisation laterally on the fringe of the copper zone, in the iron rich zone, the interpreted outer halo of the main mineralised zone.

All the data is currently being assessed and planning put in place for a second phase drill programme, that will vector away from the iron rich zone, targeting the interpreted inner copper sulphide zone.

Figure 1. Virgo Project Licence PL 135/2017 First Phase Drill Plan

#### Qualified Persons

Mr Vassilios Carellas (BSc (Hons), MAusIMM) is the Chief Operating Officer for Arc Minerals and has sufficient experience 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 under the JORC Code (2012). Mr Carellas consents to the inclusion in this announcement of the technical matters based on his information in the form and context in which it appears.

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#### Forward-looking Statements

*This news release contains forward-looking statements that are based on the Company's current expectations and estimates. Forward-looking statements are frequently characterised by words such as "plan", "expect", "project", "intend", "believe", "anticipate", "estimate", "suggest", "indicate" and other similar words or statements that certain events or conditions "may" or "will" occur. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that could cause actual events or results to differ materially from estimated or anticipated events or results implied or expressed in such forward-looking statements. Such factors include, among others: the actual results of current exploration activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; possible variations in ore grade or recovery rates; accidents, labour disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing; and fluctuations in metal prices. There may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Any forward-looking statement speaks only as of the date on which it is made and, except as may be required by applicable securities laws, the Company disclaims any intent or obligation to update any forward-looking statement, whether as a result of new information, future events or results or otherwise. Forward-looking statements are not guarantees of future performance and accordingly undue reliance should not be put on such statements due to the inherent uncertainty therein.*

#### Background on the Virgo Licences

Licence PL 135/2017

The Company's prospecting licence PL135/2017 is surrounded on three sides by the prospecting licences of Khoemacau Copper Mining Limited ("Khoemacau"), who have recently been acquired by MMG for c.\$1.9 billion.

This licence is located towards the south-eastern margin of the Kalahari Copper Belt occupying a similar geological setting to that recently drilled by Khoemacau at their recent Mawana Fold Discovery and the Zone 9 exploration target, where economic grades of copper mineralisation have already been intersected by drilling. These discoveries are located at the north-western and south-eastern margins of the Company's prospecting licence, respectively.

Khoemacau's Mawana fold discovery has defined a possible economic zone of copper mineralisation that appears to trend towards and into the Company's licence PL 135/2017 (Figure 2.). The Company's recent scout drill holes intersected anomalous grades of copper mineralisation close to this apparent trend and confirmed an east-west trending DKF-NPF contact position approximately 5km long running through the licence.

*Figure 2. Image showing Khoemacau licence holding, operations, exploration and expansion projects, in relation to Virgo Licences.*

In November 2021, Arc Minerals Limited acquired a 75% interest in Alvis-Crest (Proprietary) Limited, the holder of two prospecting licences (PL 135/2017 & PL 162/2017) in Botswana's Kalahari Copper Belt ("KCB"), colloquially called the Virgo Project/Licences. Licence PL 135/2017 is approximately 10km south-east of the large underground Khoemacau Copper mine recently commissioned by Cupric Canyon Capital LP.

A map of the licences is available here:

[http://www.rns-pdf.londonstockexchange.com/rns/3027T\\_1-2021-3-24.pdf](http://www.rns-pdf.londonstockexchange.com/rns/3027T_1-2021-3-24.pdf)

The Virgo Licences cover an area of over 210km<sup>2</sup> and lie within (PL 165/2017) and adjacent (PL 135/2017) to the highly prospective Central Structural Corridor and within 10km and 50km of the Zone 5 and Banana Zone copper projects respectively, known as the two largest copper projects on the KCB.

Historically, two copper-nickel soil anomalies have already been recorded on PL 135/2017 and PL 162/2017 and are approximately 3km and 2.5km in strike length, respectively. The largest of the two anomalies, located on PL 135/2017, overlays an interpreted DKF-NPF contact, while a second, more intermittent, anomaly may be linked to extensional faulting around the dome edge. The large coherent anomaly on PL 162/2017 also appears to overlay the interpreted DKF-NPF contact on the northern limb of a syncline.

**\*\*ENDS\*\***

Appendix A

**JORC Code, 2012 Edition - Table 1 Report**

**Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <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>	<p>Exploration work involved Reverse Circulation ('RC') and Diamond Drilling ('DD'). Drilling conditions are well understood and double tube core recovery was used as ground is competent enough for better core recoveries.</p> <p>Half core samples (split core) were taken over the zones of interest, which were confirmed visually as well as by pXRF, in 1m intervals from the drill core. Samples were taken consistently from the same side of the core cutting line.</p> <p>DD Core samples were processed using Industry standard practices of drying, crushing, splitting and pulverization at the ALS Laboratory in South Africa.</p> <p>Split core samples received by ALS are dried, weighed, finely crushed to 70% -2mm, following which a 250g split is pulverised to better than 85% passing 75 microns.</p> <p>A total of 309 samples were analysed with ALS's High Grade Aqua Regia ICP-AES for 30 elements with code ME-ICP41a with ore grade elements by Aqua Regia digestion and ICP-AES (ME-OG46 method).</p> <p>Ag by fire assay and gravimetric finish, 30g nominal weight (Ag-GRA21 method).</p>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <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>	<p>Holes were collared with the RC drill using a Tricone through the Kalahari Sands followed by a button-bit hammer down to above the zone of interest in the D'Kar Formation.</p> <p>DD drilling using a double tube core barrel extended the hole with NQ diameter coring further into the D'Kar Formation and down through the contact and into the Ngwako Pan Formation.</p> <p>Core was routinely oriented using a Reflex core orientation tool.</p> <p>-</p>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <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>	<p>Core recoveries were measured after each drill run and any losses recorded on a standard log sheet. Core recoveries were generally greater than 90% .</p> <p>Samples were taken consistently from the same side of the core cutting line to avoid any bias. During the core cutting process, geologists frequently checked on procedures to ensure the core cutter splits the core correctly in half.</p> <p>Core samples are selected on 1m lengths from logged core.</p> <p>Sample recovery was generally very good and as such it is not expected that any bias exists.</p>
<i>Logging</i>	<ul style="list-style-type: none"> <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>	<p>RC chip samples were analysed with a pXRF and logged from the RC chip trays even though they were not expected to contain any mineralisation of interest.</p> <p>Diamond drill core was geologically and geotechnically logged by a suitably qualified geologist using predefined lithological, mineralogical and physical (alteration, weathering, colour etc.) logging codes. Logged intervals are based on both qualitative identifications of geological characteristics and semi-quantitative estimates of mineral abundance.</p> <p>The detail of information captured would be sufficient to support appropriate Mineral Resource Estimation as the geologists on site followed industry best practice and standard operating procedures for diamond drill core processes.</p>

Criteria	JORC Code explanation	Commentary
		<p>All core is photographed as wet and dry and stored as digital records before and after sampling.</p> <p>Logging intervals are based on geological boundaries and or assigned nominal length of one or one and half metres. The geological log incorporates geotechnical parameters, lithology, weathering, alteration, veining and geophysical magnetic susceptibility.</p> <p>Electronic geological logs are created using Microsoft Excel logging templates on laptop computers and saved. All geological logging to be stored in an appropriate database software.</p>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <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>	<p>Selected intervals of core were cut in half with a core cutting saw, with one half selected for further analysis and the other half place back in the core box at the exact same location that it was taken.</p> <p>Split line is always checked that it is consistent with respect to orientation marks.</p> <p>Samples undergo sample preparation (Drying, crushing, splitting and pulverizing) carried out by ALS Laboratories protocols.</p> <p>QAQC procedures include the insertion of blanks, a selection of standards, field duplicates along with the insertion of the laboratories standards and blanks.</p> <p>Sampling is deemed appropriate for the type of equipment used.</p>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <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>	<p>All DD drill samples were assayed for Copper and Silver using ALS's High Grade Aqua Regia ICP-AES for 30 elements with code ME-ICP41a with ore grade elements by Aqua Regia digestion and ICP-AES (ME-OG46 method).</p> <p>Ag by fire assay and gravimetric finish, 30g nominal weight (Ag-GRA21 method).</p> <p>These analytical techniques are considered appropriate for assaying.</p> <p>During sampling Blanks and CRM's were inserted for QAQC protocols. These were inserted on 1:20 samples. The Laboratories have also standard QAQC protocols they employ when processing and analysing the samples.</p>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <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>	<p>There are strong visual indications for the presence of minerals in the samples and the general geology in the area has been thoroughly studied to give indications of formations that host mineralization. Significant intersections are visually validated and the core and chip samples are sent to an independent consultant who has been in the area for a long time to give his opinion as a check.</p> <p>To date no twinning of holes has been done</p> <p>All assay data is stored in a database on Laptops in an as is received basis with no adjustment made to the returned data.</p> <p>Data storage on partitioned drives and backed up on a company cloud server</p>
<i>Location of data points</i>	<ul style="list-style-type: none"> <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>	<p>The Botswana Map Grid system is utilized for all map generations.</p> <p>Drill holes were all surveyed with a gyro instrument and collar positions recorded.</p> <p>At the time of public disclosure of the assay results, there were irregularities picked up with the down hole survey data that suggested an error and were in the process of being re-surveyed.</p> <p>Down hole surveys were done every 30m down the hole.</p> <p>The LIDAR data system provides all the topographic contour data in the area whose resolution is considered to be acceptable.</p>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <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>	<p>Drilling was conducted along two profile lines spaced roughly 1km apart. Exploration on this license is still in the early stages with the drill hole spacing along the profile line still quite broad as can be expected at this stage of exploration, and not yet at a density sufficient for Mineral Resource Estimation.</p> <p>No compositing of samples is being applied currently.</p>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <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>	<p>This was the first phase exploration drilling programme, with broad spaced drilling and hole orientation aimed at intersecting the bedding of the host stratigraphy as perpendicular as practically possible. This is considered appropriate for the geological setting and for the known mineralisation styles in the Kalahari Copperbelt.</p> <p>Existence, and orientation, of preferentially mineralised structures is not yet fully understood but current available data indicates that the mineralisation is relatively flat dipping (20 - 30 degrees) structures that are more or less parallel to the bedding planes.</p> <p>No significant bias is expected, but mineralised intervals are reported as down hole intersection rather than true widths for now.</p>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<p>Appointed persons are the only ones allowed to access samples and permission is obtained for anyone wanting to review samples. The sample load is still small for a tighter security currently.</p>

Criteria	JORC Code explanation	Commentary
		Drill core is stored in a locked facility.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	An independent consultant has reviewed the sampling techniques and data and suggested that future sampling is marked up from the D'Kar - Ngwako Pan contact upwards, using sample sizes appropriate to the type and style of mineralisation with veins being sampled down to 20cm lengths, mineralisation in the fabric sampled down to 50cm lengths and disseminated or unmineralised intervals at 1m lengths.

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <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>	<p>Arc Minerals Limited acquired a 75% interest in Alvis-Crest (Proprietary) Limited, the holder of two prospecting licenses (PL 135/2017 &amp; PL 162/2017) in Botswana's Kalahari Copper Belt ("KCB"), colloquially called the Virgo Project/Licenses. The Virgo project is located in an emerging copper district of the Kalahari Copperbelt in close proximity of some larger discoveries and cover an area of over 210km<sup>2</sup>. The Virgo licenses lie within (PL 162 /2017) and (PL 135/2017) adjacent to the highly prospective Central Structural Corridor and within 10km and 50km of the Zone 5 and Banana Zone copper projects respectively, known as the two largest copper projects on the KCB.</p> <p>Historically, two copper-nickel soil anomalies have already been recorded on PL 135/2017 and PL 162/2017 and are approximately 3km and 2.5km in strike length respectively. The largest of the two anomalies, located on PL 135/2017, overlays an interpreted DKF-NPF contact, while a second more intermittent anomaly may be linked to extensional faulting around the dome edge. The large coherent anomaly on PL 162/2017, also appears to overlay the interpreted DKF-NPF contact on the northern limb of a syncline.</p> <p>The two prospects are situated in the Northwest District within the Kalahari Copperbelt of Northwestern Botswana.</p>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>Former Anglo American prospective ground covered by widely spaced soil sampling that picked up copper in soils resulting in the Boseto-Khoemacau mines that are operated by MMG today.</p> <p>Several deposits exist within the vicinity and surrounding areas where future mining might take place.</p> <p>Acquiring the Virgo Prospecting licenses from Kopore Metals is the beginning of a long journey for Alvis Crest in the Kalahari Copperbelt.</p> <p>Within 20 kilometres is the Zone 5 deposit for MMG Khoemacau Copper Mines to a tune of 92 Million tonnes of copper ore at 2.2%Cu.</p> <p>Within 120 kilometres is the Sandfire Motheo Project being developed with 67 Million tonnes of copper ore at 0.85%Cu.</p> <p>Within 70 kilometres is the Banana deposit for MMG Khoemacau Copper Mines with 187 million tonnes of copper ore at 0.80%Cu.</p> <p>The Virgo project lie within highly prospective ground of the Kalahari Copperbelt and needs to be explored further to realize the potential of copper ore in the area.</p>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralization..</li> </ul>	<p>The Alvis Crest deposits are characterised as a structurally controlled strata-bound sediment-hosted copper deposit. Copper-silver mineralisation typically occurs at the stratigraphic and/or structural boundary between the contact of the oxidised Ngwako Pan Sandstone Formation and reduced D'Kar siltstone Formation. The boundary is both a chemically reduced and structurally controlled trap environment. Host rocks are unconformably overlain by unconsolidated Kalahari Sand and calcrete up to 60m thick. The lower ductile siltstones and carbonaceous units of the D'Kar Formation are the main host for most of the copper and silver mineralisation. The D'Kar rocks are composed of shallow marine sediments deposited &gt;981 +/- 3 Ma (millions of years ago) and consist of finely laminated and chemically reduced mudstones and siltstones intercalated with carbon rich limestone and thin lagoonal black shale.</p> <p>Economic grades are dominantly related to shearing, folding and tensional failure along and close to the Ngwako Pan and D'Kar redox contact. Disseminated and hydrothermal vein-hosted sulphide mineralisation styles combine to produce continuity of high-grade copper and silver mineralisation over tens of kilometres. These higher-grade copper sulphide zones typically contain disseminated cleavage parallel lenticles and massive quartz-carbonate and breccia veins hosting chalcopryrite, bornite and chalcocite mineralisation. Sulphide assemblages are commonly zoned. The sequence is developed vertically upward from the base of the D'Kar Formation and can be seen to develop horizontally along strike at some deposits. The typical zonation</p>

Criteria	JORC Code explanation	Commentary
		sequence consists of low sulphur, low iron, copper sulphides (chalcocite and bornite) and passes upward with increasing iron content (chalcopyrite and pyrite). This sulphide zonation coincides with copper solubility precipitating of low soluble sulphides at the first reductant while chalcopyrite and pyrite remain in solution.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>	

Hole Id	Easting	Northing	RI (m)	Bearing*	Dip*	Depth (m)	Grid	License
ALV-DD-002	727120.296	7703463.802	999.56	50	-65	450	UTM34S	PL135/2017
ALV-DD-003	726944.340	7703312.690	1000.94	50	-65	334	UTM34S	PL135/2017
ALV-DD-004	726854.954	7703238.674	1001.08	50	-65	385	UTM34S	PL135/2017
ALV-DD-005	727030.721	7703388.939	1000.20	50	-65	335	UTM34S	PL135/2017
ALV-DD-006	726420.553	7704259.321	1001.47	50	-65	298	UTM34S	PL135/2017
ALV-DD-007	726231.656	7704094.329	1002.00	50	-65	361	UTM34S	PL135/2017
ALV-DD-008	726722.851	7703126.186	1001.72	50	-65	461	UTM34S	PL135/2017
ALV-DD-009	726036.697	7703939.777	1002.12	50	-65	421	UTM34S	PL135/2017

\* At the time of the announcement of these assay results, a discrepancy with the down hole survey data had been noted. The contractor who carried out the downhole survey acknowledged an instrument error and was in the process of coming back to site to re-survey all the holes.

Downhole Mineralised Lengths						
Hole ID	From	To	Interval (m)	Cu (%)	Ag (g/t)	CuEq (%)
ALV-DD-004	326	332	6.00	0.63	16.67	0.82
	includes from 326m		3.00	0.93	32.33	1.29
Criteria used for reporting: Low Grade Cut-Off of 0.2% Cu and minimum length of 3m						
Six of the remaining seven holes drilled intersected elevated to anomalous copper mineralisation						

**Data aggregation methods on 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 > 0.2% Cu average and with downhole lengths longer than 3m have been averaged and length weighted to determine Copper Equivalent % ('CuEq %') for the downhole length reported.

No aggregation of short lengths of high grade and longer lengths of low grade

Criteria	JORC Code explanation	Commentary
	<p>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.</p> <ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul> <p>grade truncations (grades) and cut-off grades are usually Material and should be stated.</p> <ul style="list-style-type: none"> <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>	<p>has been reported</p> <p>Copper Equivalents have been calculated at current metal prices where 1 g/t Ag = 0.011231% Cu.</p>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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>	<p>Drill intercepts are reported as downhole length. As much as is practical, holes are and will be designed to intersect veins or mineralized horizons at around 60 degrees to the mineralized unit. This will allow a better conversion to true width of the horizon.</p> <p>All measurements state that downhole lengths have been used, as the true width has not been suitably established by the current drilling and down hole survey.</p>
<i>Diagrams</i>	<ul style="list-style-type: none"> <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>	Refer to figures and tables in the body of the release.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <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>	Refer to the drill hole information tabulated above
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	None except plans to continue further drilling to ensure the extent of the intersected mineralised zone exists beyond current boundaries.
<i>Further work</i>	<ul style="list-style-type: none"> <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>	<p>Based upon these announced results, further drilling will be planned as the first phase drill programme appears to have intersected mineralisation laterally on the fringe of the copper zone, in the iron rich zone, the interpreted outer halo of the main mineralised zone.</p> <p>All the data is being assessed following which planning will be put in place for a second phase drill programme, that will vector away from the iron rich zone, targeting the interpreted inner copper sulphide zone. This zone is anticipated to lie East of the current drilling where a strike of roughly 5km of contact geology has yet to be tested.</p>

### Section 3 Estimation and Reporting of Mineral Resources

Not Applicable

### Section 4 Estimation and Reporting of Ore Reserves

Not Applicable

### Appendix B - Glossary of Technical Terms

"anomaly or anomalous"	something in mineral exploration that geologists interpret as deviating from what is standard, normal, or expected.
"assay"	The laboratory test conducted to determine the proportion of a mineral within a rock or other material. For copper, usually reported as percentage which is equivalent to percentage of the mineral (i.e. copper) per tonne of rock.
"azimuth"	the "compass direction" refers to a geographic bearing or azimuth as measured by a magnetic compass, in true or magnetic north.
"bornite"	Bornite, also known as peacock ore, is a copper sulphide mineral with the formula $Cu_5FeS_4$ .
"breccia"	Breccia is a rock classification, comprises millimetre to metre-scale rock fragments cemented together in a matrix, there are many sub-classifications of breccias.
"chalcocite"	Chalcocite is a copper sulphide mineral with the formula $Cu_2S$ and is an important copper ore mineral. It is opaque and dark-grey to black with a metallic lustre.
"chalcopyrite"	Chalcopyrite is a copper sulphide mineral with formula $CuFeS_2$ . It has

	a brassy to golden yellow colour.
"chargeability"	Chargeability is a physical property related to conductivity. Chargeability is used to characterise the formation and strength of the induced polarisation within a rock, under the influence of an electric field, suggesting sulphide mineralisation at depth.
"covellite"	Covellite is a copper sulphide mineral with the formula CuS. This indigo blue mineral is ubiquitous in some copper ores.
"diamond drilling"	A drilling method in which penetration is achieved through abrasive cutting by rotation of a diamond encrusted drill bit. This drilling method enables collection of tubes of intact rock (core) and when successful gives the best possible quality samples for description, sampling and analysis of an ore body or mineralised structure.
"dip"	A line directed down the steepest axis of a planar structure including a planar ore body or zone of mineralisation. The dip has a measurable direction and inclination from horizontal.
"geochemical"	Refers to geological information using measurements derived from chemical analysis
"geophysical"	Refers to geological information using unit measurements derived from the use of magnetic and electrical readings
"geophysical techniques"	include the exploration of an area by exploiting differences in physical properties of different rock types. Geophysical methods include seismic, magnetic, gravity, induced polarisation and other techniques; geophysical surveys can be undertaken from the ground or from the air
"gossan"	is an iron-bearing weathered product that usually overlies a sulphide deposit
"grab sample"	are samples of rock material collected from a small area, often just a few pieces or even a single piece of rock "grabbed" from a face, dump or outcrop or roughly 2-5kg. These are common types of rock samples collected when conducting mineral exploration. The sample usually consists of material that is taken to be representative of a specific type of rock or mineralisation.
"grade"	The proportion of a mineral within a rock or other material. For copper mineralisation this is usually reported as % of copper per tonne of rock.
"g/t"	grams per tonne; equivalent to parts per million ('ppm')
"hematite"	Hematite is the mineral form of iron(III) oxide (Fe <sub>2</sub> O <sub>3</sub> ), one of several iron oxides. Magnetite alteration is also typically associate with porphyry copper systems, at or close to the central core.
"Indicated Resource"	An "Indicated Mineral Resource" is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.
"Inferred Resource"	An "Inferred Mineral Resource" is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
"Induced Polarisation Geophysics"	Induced polarisation (IP) is a geophysical survey used to identify the electrical chargeability of subsurface materials, such as sulphides. The survey involves an electric current that is transmitted into the subsurface through two electrodes, and voltage is monitored through two other electrodes.
"intercept"	Refers to a sample or sequence of samples taken across the entire width or an ore body or mineralised zone. The intercept is described by the entire thickness and the average grade of mineralisation.
"JORC Code"	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code') is a professional code of practice that sets minimum standards for Public Reporting of minerals Exploration Results, Mineral Resources and Ore Reserves.
"K"	The element potassium, abundance on surface can be inferred from radiometric surveys
"Magnetics"	Rocks are made up of different minerals and the magnetic properties of a rock depends on the amount and type of iron rich minerals it contains. Earth's magnetic field interacts with these iron rich minerals to generate variations in the magnetic field. Measuring and mapping these variations allows remotely mapping of the distribution and patterns of magnetic rocks and, as a result, map the subsurface geology
"magnetite"	Magnetite is main iron ore mineral, with chemical formula Fe <sub>3</sub> O <sub>4</sub> . Magnetite is ferromagnetic, and it is attracted to a magnet and can be magnetized to become a permanent magnet itself.
"massive"	In a geological sense, refers to a zone of mineralisation that is dominated by sulphide minerals. The sulphide-mineral-rich material can occur in centimetre-scale, metre-scale or in tens of metres wide veins, lenses or sheet-like bodies containing sphalerite, galena, and / or chalcopyrite etc.
"Measured Resource"	A "Measured Mineral Resource" is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.
"Mineral Resource"	A "Mineral Resource" is a concentration or occurrence of diamonds,

	natural solid inorganic material, or natural solid fossilised organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.
"mineralisation"	In geology, mineralisation is the deposition of economically important metals (copper, gold, lead, zinc etc) that in some cases can be in sufficient quantity to form mineral ore bodies.
"open pit mining"	A method of extracting minerals from the earth by excavating downwards from the surface such that the ore is extracted in the open air (as opposed to underground mining).
"outcrop"	A section of a rock formation or mineral vein that appears at the surface of the earth. Geologists take direct observations and samples from outcrops, used in geologic analysis and creating geologic maps. In situ (in place) measurements are critical for proper analysis of the geology and mineralisation of the area under investigation.
"polymict"	A geology term, often applied to breccias or conglomerates, which identifies the composition as consisting of fragments of several different rock types.
"Preliminary Economic Assessment"	NI 43-101 defines a PEA as "a study, other than a pre-feasibility study or feasibility study, which includes an economic analysis of the potential viability of mineral resources".
"Pyrrhotite"	Pyrrhotite is an <b>iron sulphide mineral</b> with the formula $Fe(1-x)S$ ( $x = 0$ to $0.2$ ). It is a <b>nonstoichiometric</b> variant of FeS, the mineral known as <b>troilite</b> . Pyrrhotite is also called <b>magnetic pyrite</b> .
"Radiometrics"	The radiometric, or gamma-ray spectrometric method is a geophysical process used to estimate concentrations of the radioelements potassium, uranium and thorium by measuring the gamma-rays which the radioactive isotopes of these elements emit during radioactive decay.
"sediments"	Sedimentary rocks formed by the accumulation of sediments. There are three types, Clastic, Chemical and Organic sedimentary rocks.
"sphalerite"	Sphalerite is a zinc sulphide in crystalline form but almost always contains variable iron, with formula $(Zn,Fe)S$ . It can have a yellowish to honey brown or black colour.
"supergene"	Supergene ore processes occur near surface, and form deposits of secondary minerals, such as malachite, azurite, chalcocite, covellite, digenite, etc.
"surface rock chip samples"	Rock chip samples approximately 2kg in size that are typically collected from surface outcrops exposed along rivers and mountain ridgelines.
"syncline"	a trough of stratified rock in which the beds dip toward each other from either side.
"Th"	The element thorium, abundance on surface can be inferred from radiometric surveys
"U"	The element uranium, abundance on surface can be inferred from radiometric surveys
"veins"	A vein is a sheet-like or anastomosing fracture that has been infilled with mineral ore (chalcopyrite, covellite etc) or mineral gangue (quartz, calcite etc) material, within a rock. Veins form when minerals carried by an aqueous solution within the rock mass are deposited through precipitation and infill or coat the fracture faces.
"volcanics"	Volcanic rock such as andesite or basalt that is formed from magma erupted from a volcano, or hot clastic material that erupts from a volcano and is deposited as volcaniclastic or pyroclastics.
"XRF"	Instrument to determine the chemistry of a sample by measuring the fluorescent (or secondary) X-ray emitted from a sample when it is excited by a primary X-ray source

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