

21 JUNE 2022

Sunstone expands landholding near its large El Palmar gold-copper find in Ecuador

Key Points

- Sunstone is set to quadruple its land position west of its significant El Palmar gold-copper porphyry discovery in northern Ecuador
- Under the signed binding Letter of Intent, Sunstone will acquire the Verde Chico property through a Staged Acquisition Agreement
- Limited exploration at Verde Chico in the 1990's identified high-grade gold in veins and broad zones of lower-grade gold within a system more than 1km-long
- Sunstone is well funded with ~A\$27m in cash and equities

Sunstone Metals Ltd (ASX: STM) is pleased to announce that it has agreed to acquire the Verde Chico Project in northern Ecuador through a Staged Acquisition Agreement from the Verde Chico Group.

The Verde Chico project is located to the west of Sunstone's El Palmar gold-copper porphyry discovery and quadruples Sunstone's land position in this prospective belt in northern Ecuador to 3,672ha (Figures 1 - 4).

Sunstone Managing Director Malcolm Norris said: "This is an exceptional opportunity for Sunstone to secure a large, highly prospective landholding close to our El Palmar gold-copper discovery.

"The area is extremely prospective for both epithermal gold and porphyry gold-copper mineralisation. We will embark on a systematic exploration program, as we have done with considerable success at our El Palmar and Bramaderos projects".

The Verde Chico project was explored by the Rio Tinto group (then called RTZ) in 1992-1995, and by Canadian junior Balaclava Mines in 1998. No exploration has been undertaken on the land since 1998. The historical exploration identified a 1.1km-long gold-in-soil anomaly that is open to the north and south, and which includes several high-grade gold-bearing veins at surface and wide lower grade zones of gold mineralisation in some drill holes. A total of 12 trenches for 683m were opened and sampled following mineralised structures. A total of 28 drill holes for 4,436m were drilled by RTZ and Balaclava. The area of initial effective exploration only covers approximately 10% of the concession (Figure 2).

Historical exploration comprised regional stream sediment sampling, soil sampling, limited geophysics (CSAMT), trench sampling, and diamond drilling. The soil sampling by Rio Tinto defined a >1.1km long gold-insoil anomaly (Figure 3), coincident with a CSAMT resistivity anomaly. This area was drilled at several locations (Figure 3) and returned significant intervals of gold mineralisation including 68.5m at 1.05g/t gold from surface in hole RVC-08, including 1m at 11.3g/t gold from 40.5m.



Trenching (Figure 3) delivered locally very high grades across and along multiple veins at surface including.

Perdida vein - 6.5m @ 25.11 g/t Au

Peligrosa vein - 24m @ 21.2 g/t Au, 19m @ 7.72 g/t Au, 25m @ 10.24 g/t Au

Gato vein - 39m @ 3.08 g/t Au

Pavas vein - 26.5 @ 2.28 g/t Au, 10m @ 11.72 g/t Au
Oso Hormiguero vein - 29m @ 8.26 g/t Au, 11m @ 9.08 g/t Au

Falla vein - 8m @ 7.28 g/t Au

During technical due diligence nothing has come to the attention of Sunstone that causes it to question the accuracy or reliability of the historical exploration results.

Sunstone will undertake a systematic exploration program commencing once the full Staged Acquisition Agreement is signed, and once all access approvals and permits are in place.

The terms of the Letter of Intent are outlined below.

Terms of the Letter of Intent

- Verde Chico Group (VCG) have agreed to transfer the Concession to MinVCH ('COMPAÑÍA MINERA VERDE CHICO MINVERDECHICO CIA. LTDA.' a new entity which will hold the Verde Chico concession)
- Staged Acquisition Agreement between Sunstone, VCG, and MinVCH whereby Sunstone will ultimately own 100% of MinVCH
- Cash payments to VCG linked to specific time frames and milestones
 - Cash payments totalling \$100,000 prior to commencement of drilling, linked to signing of agreements
 - At commencement of drilling a payment of \$100,000
 - Up to 1 year after start of drilling a payment of \$150, 000 at which time a 25% equity interest in MinVCH will be transferred to Sunstone
 - Up to 2 years after start of drilling a payment of \$250,000 + \$50,000 in Sunstone shares (subject to any required shareholder approval to satisfy ASX) and Sunstone receives additional 26% equity, taking its ownership in MinVCH to 51%
 - Within 4 years of Sunstone holding 51% equity in MinVCH make a payment of \$1,500,000 + \$300,000 in Sunstone shares (subject to any required shareholder approval to satisfy ASX), and Sunstone receives an additional 34% equity, taking its ownership in MinVCH to 85%
 - Within 1 year of Sunstone holding 85% equity in MinVCH making a payment of \$1,500,000 and make a one-off inaugural Mineral Resource Estimate linked payment of 1/1000 of the current value of each ounce of gold equivalent estimated within the Measured and Indicated Resources in the inaugural Mineral Resource Estimate up to a maximum payment of \$3,000,000. Sunstone receives additional 15% equity taking its equity to 100% of MinVCH.
- An ongoing 1% NSR royalty from production, with a buyback option to Sunstone of ¾ for \$1,000,000
- A firm commitment for community funding through MinVCH

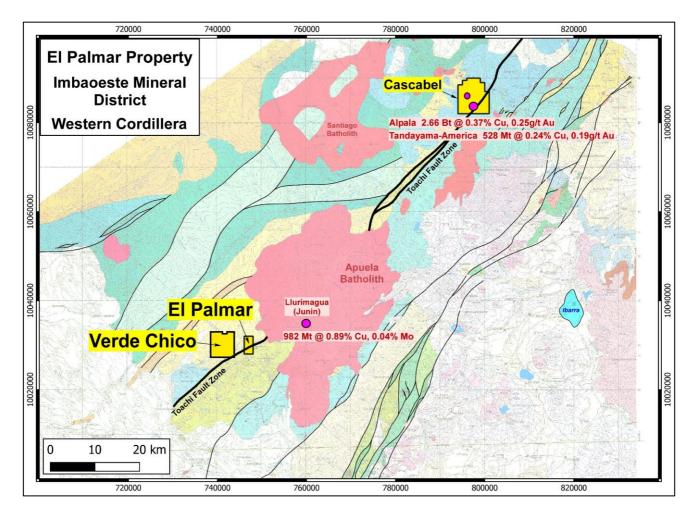


Figure 1: Location of the Verde Chico property relative to El Palmar, and to the Toachi fault zone which is considered important for the localisation of porphyry copper-gold-molybdenum mineralisation in northern Ecuador.



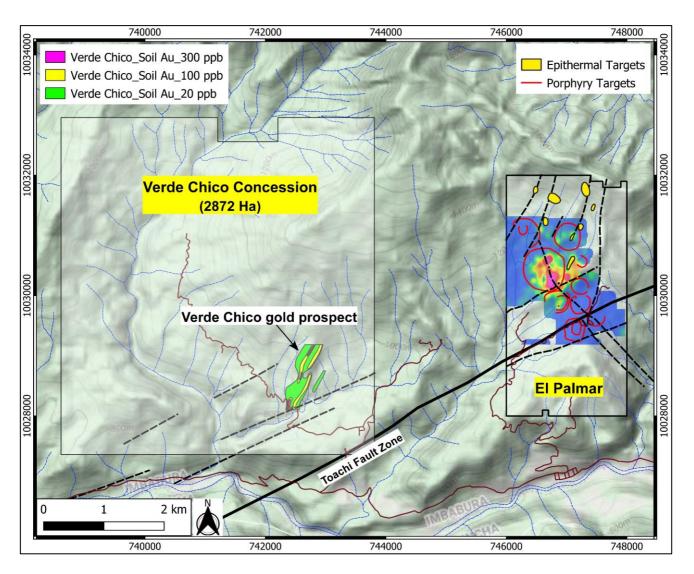


Figure 2: The Verde Chico gold prospect shown within the Verde Chico concession. The Verde Chico gold prospect outline is based on historical exploration. The remainder of the concession is poorly explored.



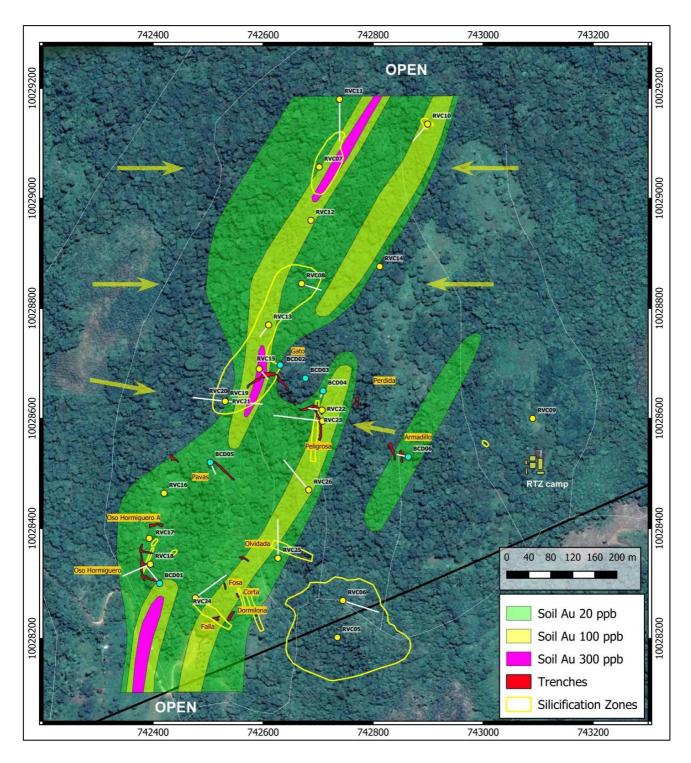


Figure 3: The Verde Chico gold prospect showing the distribution of the gold-in-soil geochemical anomaly. The location of trenches and the location of historical drill holes are also shown.





Figure 4: Location of the Verde Chico and El Palmar projects in northern Ecuador, and the Bramaderos Project in southern Ecuador.



 Table 1: Historical drill hole details (see also Figure 3 for locations in plan)

Hole Number	Core Size	Company	Projection	Easting UTM	Northing UTM	Elevation (masl)	EOH (m)	Azimuth (deg)	Dip (deg)
RVC05	BQ	RTZ	PSA56 11N	742,735	10,028,202	820	52.2	0	90
RVC06	BQ	RTZ	PSA56 11N	742,745	10,028,269	827	208.5	110	70
RVC07	BQ	RTZ	PSA56 11N	742,702	10,029,057	1,052	200.0	0	90
RVC08	BQ	RTZ	PSA56 11N	742,670	10,028,845	958	150.0	110	75
RVC09	BQ	RTZ	PSA56 11N	743,090	10,028,500	875	201.0	0	90
RVC10	BQ	RTZ	PSA56 11N	742,900	10,028,135	990	209.0	220	80
RVC11	BQ	RTZ	PSA56 11N	742,740	10,028,160	1,053	201.5	180	70
RVC12	BQ	RTZ	PSA56 11N	742,687	10,028,860	1,031	171.5	0	90
RVC13	BQ	RTZ	PSA56 11N	742,610	10,028,770	950	106.5	232	90
RVC14	BQ	RTZ	PSA56 11N	742,812	10,028,776	930	252.0	0	90
RVC15	BQ	RTZ	PSA56 11N	742,593	10,028,690	932	54.5	140	80
RVC16	BQ	RTZ	PSA56 11N	742,420	10,028,464	875	112.5	0	90
RVC17	BQ	RTZ	PSA56 11N	742,393	10,028,382	858	195.0	0	90
RVC18	BQ	RTZ	PSA56 11N	742,395	10,028,335	825	168.0	245	70
RVC19	BQ	RTZ	PSA56 11N	742,531	10,028,631	920	223.0	0	90
RVC20	BQ	RTZ	PSA56 11N	742,531	10,028,631	920	232.0	95	70
RVC21	BQ	RTZ	PSA56 11N	742,531	10,028,631	920	168.0	276	70
RVC22	BQ	RTZ	PSA56 11N	742,707	10,028,615	905	69.0	276	70
RVC23	BQ	RTZ	PSA56 11N	742,708	10,028,595	898	258.0	276	70
RVC24	BQ	RTZ	PSA56 11N	742,477	10,028,274	828	252.0	50	70
RVC25	BQ	RTZ	PSA56 11N	742,527	10,028,346	828	210.0	360	70
RVC26	BQ	RTZ	PSA56 11N	742,883	10,028,470	862	201.0	320	70
BCD01	HQ	Balaclava Mines	PSA56 11N	742,412	10,028,300	810	83.0	320	60
BCD02	HQ	Balaclava Mines	PSA56 11N	742,631	10,028,697	920	90.5	0	90
BCD03	HQ	Balaclava Mines	PSA56 11N	742,677	10,028,673	913	73.0	0	90
BCD04	HQ	Balaclava Mines	PSA56 11N	742,709	10,028,650	910	72.5	205	80
BCD05	HQ	Balaclava Mines	PSA56 11N	742,504	10,028,520	880	47.0	150	60
BCD06	HQ	Balaclava Mines	PSA56 11N	742,864	10,028,530	862	72.5	290	70



For further information, please visit www.sunstonemetals.com.au

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About Sunstone Metals

Sunstone has an advanced portfolio of exploration and development projects in Ecuador and Scandinavia. The portfolio comprises:

- 1. **The Bramaderos Gold-Copper Project** where Sunstone owns an 87.5% interest with TSXV listed Cornerstone Capital Resources holding 12.5% (see ASX announcement dated 10th April 2017, 28th August 2019, and 7 January 2020). The Bramaderos gold-copper project is located in Loja province, southern Ecuador, and is highly prospective for the discovery of large porphyry gold-copper systems, and high-grade epithermal gold systems. Historical exploration results from drilling at Bramaderos together with recent exploration by Sunstone and joint venture partner Cornerstone Capital Resources (TSXV:CGP) indicate multiple fertile mineralised systems with significant discovery potential.
- 2. The El Palmar Copper-Gold Project where Sunstone holds 70% of the highly prospective 800ha El Palmar gold-copper porphyry project in Ecuador. Sunstone can acquire 100% through a Staged Acquisition Agreement. The El Palmar gold-copper project is located in Imbabura province, northern Ecuador, within the same geological belt that includes the giant Alpala and Llurimagua porphyry copper-gold and copper-molybdenum deposits.
- 3. **Sunstone has an equity interest** in Stockholm listed Copperstone Resources (COPP-B.ST) following the sale of the Viscaria Copper project to Copperstone in 2019.

Competent Persons Statement

The information in this report that relates to exploration results is based upon information reviewed by Dr Bruce Rohrlach who is a Member of the Australasian Institute of Mining and Metallurgy. Dr Rohrlach is a full-time employee of Sunstone Metals Ltd 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 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr Rohrlach consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Mr Malcolm Norris, Managing Director of Sunstone Metals Ltd., has authorised this announcement to be lodged with the ASX.



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TABLE 1 – Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. 	 The results included are from historical trench sampling and drill core sampling (using half core), generally at 1.5 to 2m intervals. No new sampling has been undertaken by Sunstone. A total of 683m of trench sampling was completed over 12 veins.
	 Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	Core recovery was reportedly good.
	• Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Diamond drilling, rock chip and channel sampling points have been guided by geological mapping. The samples were analysed by ICP through Bondar Clegg in Canada.
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	The Verde Chico target areas have been drilled with diamond core (BQ and HQ sizes) for a total of 4,436.5m in 28 drill holes.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Diamond core recovery data for the Verde Chico drilling program was reportedly good.
,	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Core recovery at Verde Chico was good.
	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.	No relationship between sample recovery and grade has been established.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Drill samples were historically logged for lithology, weathering, structure, mineralogy, mineralisation, colour, and other features.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	 Drill samples were logged for lithology, weathering, structure, mineralogy, mineralisation, colour, and other features. Logging was mostly qualitative in nature. Not all drill logs are available.
	• The total length and percentage of the relevant intersections logged.	Sunstone has not relogged the historical drill core.
Sub-sampling techniques and	• If core, whether cut or sawn and whether quarter, half or all core taken.	• Half core was used to provide the samples that were submitted for assay from the Verde Chico drilling.
sample preparation	• If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	• This announcement relates to historical drill core and trench samples.
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	 Historical drill core samples from Verde Chico (drilled for RTZ and Balaclava Mines) were analysed by Bondar Clegg in Canada. Surface rocks at Verde Chico are historical and were collected by RTZ and Balaclava Mines. Drilling was undertaken in three phases by Marlow Drilling Services, Connors Drilling and Bradley Drilling.
	 Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 	Little is known of the historical Qa/Qc procedures, however it is assumed suitable Qa/Qc was implemented by RTZ.



Criteria	JORC Code explanation	Commentary
	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.	Cannot be determined from the historical data.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	• Sample sizes are considered to be appropriate for the style of sampling undertaken and the grainsize of the material, and correctly represent the style and type of mineralisation at the exploration stage.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	• The samples were analysed at a reputable laboratory in Canada (Bondar Clegg). Since a majority of the exploration was managed by RTZ it is considered that assaying and procedures were appropriate.
10010	• 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.	No Niton pXRF data have been collected.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Cannot be determined from the historical data.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	General reviews have been completed by the Competent Person for exploration results for this announcement.
	 The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 	 Twin holes have not been drilled in these areas. Sunstone imported and reviewed the data using Excel.
	Discuss any adjustment to assay data.	• Assay data were not adjusted. Core loss intervals are assigned assay values of zero where present.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	 Sample co-ordinates are located by GPS and for trench samples measured along the length of the trench. It is assumed that trench samples were taken along outcropping veins.
	Specification of the grid system used.	Ecuador projection parameters quoted in historical reports are PSAD = Provisional Data South American zone 1956 UTM
	Quality and adequacy of topographic control.	The topographic control was compared against published maps and satellite imagery and found to be acceptable.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	• The drill core samples reported were collected from diamond drill holes from the Verde Chico targets, and with sample length generally ranging between 0.5-2m.
	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.	The data from these samples does not contribute to any resource estimate nor implies any grade continuity.
	Whether sample compositing has been applied.	No sample compositing was done.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	 Drilling orientations were appropriate for the interpreted geology providing representative samples. Trench orientations and rock chip locations were appropriate for the interpreted geology providing representative samples, assumed to be primarily along the vein orientations.
	• 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.	No sampling bias is expected at this stage.



Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	 Sample security at the time, in the 1990's, was assumed to be acceptable. Bondar Clegg was an internationally recognised laboratory.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	All historical data has been validated to the best degree possible through discussions with the concession holders and migrated into a database.

TABLE 1 – Section 2: Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	 The Verde Chico property is located in Imbabura province and is held by an Ecuadorian individual Mr Rodrigo Mena. The property is in the process of being transferred to a corporate entity 'MinVCH'. Due diligence to date shows that there are no wilderness areas or national parks or areas of environmental significance within the concession area. There are no native title interests. Sunstone and the 'Verde Chico Group' have entered into a Staged Acquisition Agreement where Sunstone may earn up to 100% based on defined milestones.
	• The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Verde Chico exploration concession is currently held 100% by Mr Rodrigo Mena.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	• The historic exploration at Verde Chico was completed by various groups over the period 1990's. Most of the readily available historic data has been acquired and compiled into databases and a GIS project. Exploration by other parties has included stream sediment surveys, geological mapping, rock chip sampling, channel sampling (trenching), and diamond drilling (28 holes).
Geology	Deposit type, geological setting and style of mineralisation.	The deposit style being explored for includes intrusion- related and stockwork hosted porphyry Au-Cu systems plus epithermal gold-silver-polymetallic veins. The setting at Verde Chico is a volcanic arc setting of interpreted Miocene or Eocene age intrusions.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: a. easting and northing of the drill hole collar b. elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar c. dip and azimuth of the hole d. down hole length and interception depth e. hole length.	 Details of the samples discussed in this announcement are in the body of the text. See Figures 2-3 for the location of historical drilling at Verde Chico.
	• 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.	Information included in announcement.



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Criteria	JORC Code explanation	Commentary
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	 Weighted averages were calculated over reported intervals according to sample length. No grade cut-offs were applied.
	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.	Aggregating of intervals represent broad intervals consistent with porphyry gold-copper mineralised systems.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Metal equivalents are not presented.
Relationship between mineralisation	• If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.	The geometry of the mineralisation relative to the drill holes is not completely known at this stage of exploration.
widths and intercept lengths	• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	True widths of mineralised lodes are not known at this stage.
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.	See Figures 2-3 for maps showing distribution of samples.
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.	• Figures 1-3 above shows the current interpretations of geology.
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.	Figure 1-3 above shows various datasets that are being used to identify target areas and to guide current and future drilling.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large- scale step-out drilling).	An exploration program is currently being planned.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	See Figures 2-3 which show areas for further exploration.