

Criteria	JORC Code explanation	Commentary
	<i>fine/coarse material.</i>	
Logging	<ul style="list-style-type: none"> • <i>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.</i> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> • No drilling is reported, however the channel samples were logged qualitatively geologically by CPRM staff during sampling. The logs are available to Alvo geologists and have been reviewed. Due to the low confidence in location and analytical technique, the data will not be used to support an MRE.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>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.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • No detailed sampling information is available. Sample lengths varied from 0.5 to 1.0m, with most of the samples 1.0m.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>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.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • Detailed assay techniques are unavailable. Documents demonstrate the assaying was done by the Atomic Absorption (AA) technique in a CPRM controlled laboratory. • There are no QA/QC procedures described or reported for the results.



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Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> Data was transposed from historical drill results into an excel table. These were then integrated as channel samples into Alvo's database.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Pit collar locations were georeferenced from historical maps against known locations (such as the historical drilling which has been located accurately in the field). Field checks of the pit locations has found strong evidence of pitting -such as mulloc piles in approximate locations. All location data has been reported in SIRGAS 2000 UTM zone 22S Topographic control is adequate for data that will not be utilised in a MRE.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> Pits were variably spaced. Pit data is not considered sufficient to complement the previously reported inferred JORC 2012 MRE. Results will used only as a guide for future drilling campaigns. No compositing has been applied to the results
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> Pits were vertical- sub optimal for VMS style mineralisation (which is subvertical), but acceptable for supergene mineralisation (which is generally flat lying). All intercepts recorded are downpit intervals and may not equal true width.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> NA
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No audits of the techniques or data has been undertaken at this stage

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)

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Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding 	<ul style="list-style-type: none"> The C3 prospect is located on exploration tenement 800.744/1978 which is a part of the agreement Alvo has with the CPRM (Geological Survey of Brazil). Alvo has the right to explore and eventually transfer 100% of this and other tenements, subject to several staged payments, drilling and



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	<p><i>royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></p> <ul style="list-style-type: none"> • <i>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.</i> 	<p>payment of 1.71% royalty (above statutory government royalties).</p> <ul style="list-style-type: none"> • Alvo is confident the tenement is in good standing and no known impediments exist for further exploration or eventual mining, apart from normal statutory reporting, local access agreements and state and federal approvals.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> • <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> • Exploration by other parties form much of the work completed on the project. The work was completed to high standard for the time and Alvo was able to estimate an inferred JORC compliant Mineral Resource Estimate based on the information and work completed by the CPRM.
<i>Geology</i>	<ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> • The Palma polymetallic project is located principally in the Palmeiropolis volcano-sedimentary sequences (PVSS), composed of a series of bimodal volcanic rocks and associated sedimentary units, regionally metamorphosed to amphibolite facies. The mineralisation is of a Volcanogenic Massive Sulphide (VMS) type, occurring at or near the contact between a metaafic volcanic unit and meta-sedimentary schist and comprises pyrite, pyrrhotite, sphalerite, galena, chalcopyrite, occurring as disseminated, brecciated and massive form. Alvo has also discovered supergene mineralisation which is interpreted to occur as a flat lying blanket at or about the base of oxidation.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> • <i>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:</i> <ul style="list-style-type: none"> ○ <i>easting and northing of the drill hole collar</i> ○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> ○ <i>dip and azimuth of the hole</i> ○ <i>down hole length and interception depth</i> ○ <i>hole length.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • See Table 1 - Collar and results table
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> • <i>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.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • Individual samples are reported. No upper cuts were considered. • No metal equivalents reported



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<p><i>Relationship between mineralisation widths and intercept lengths</i></p>	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> Pits were vertical- sub optimal for VMS style mineralisation (which dips moderately to steeply towards east-southeast), but acceptable for supergene mineralisation (which is generally flat lying). The downpit depths are reported, no intercept widths are reported.
<p><i>Diagrams</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> See diagrams reported in the announcement
<p><i>Balanced reporting</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All results are reported.
<p><i>Other substantive exploration data</i></p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Extensive exploration data and information has been completed at the Palma Project and previously reported. A summary is provided below; Airborne geophysics. There have been several combined aeromagnetic and radiometric surveys which cover the area, generally flown by Brazilian Government Agencies. These are generally broad spaced and useful for regional context. In 2008, private groups Lara Minerals and Voltorantim SA flew a heli-borne VTEM survey across the area which highlighted multiple conductors. These may be related to massive sulphide accumulations, however most of these potential conductors were not followed up. Drilling: Drilling by the CPRM was completed in the '70's and '80's and is included in this summary for the C1 and C3 prospects. CPRM also drilled other targets at C2, C4 and C5 where they discovered mineralisation. CPRM also drilled several targets that did not intersect economic mineralisation. JICA drilled 7 holes in the 1980's mainly around the C4 target. Lara/Votorantim drilled 11 holes into targets they defined from the VTEM survey. Metallurgical testwork: The CPRM completed several phases of metallurgical testwork including bench and pilot plant scale. This testwork is summarised in the Prospectus. Alvo estimated a JORC compliant MRE for the C1 and C3 prospects. Alvo has completed 18 diamond drill holes at C3 in the last 6 months- all the results have been previously reported and referenced in this announcement.



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<p><i>Further work</i></p>	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> • Alvo will continue the 10,000m diamond drilling program. The program will evolve as results are received and will focus on upgrading and expanding the inferred MRE. Potential exists both along strike and at depth. Additional sampling and or drilling will be considered for the supergene mineralisation. • An RC drill program will shortly commence to test some of the CPRM pits which have high grades. • Alvo has purchased electromagnetic survey equipment in order to perform ground and downhole EM surveys. It is expected these surveys will enhance the drilling program by delineating possible extensions of the highly conductive mineralisation.

