# **Plomosas Scoping Study Completed with Positive Results**

Consolidated Zinc Limited (ASX:CZL; "Consolidated Zinc" or "the company") is pleased to announce that the Scoping Study into recommencing mining at its Plomosas mine in Mexico was completed with positive results at a base-case level as well as several potential areas where returns might be improved.

The study focussed on mining the Tres Amigos resource on Level 5 using existing infrastucture. An increase in the Tres Amigos portion of the resource was recently announced to the ASX on 4 September, 2017 and comprised a total resource of 544,000 tonnes grading 11.2% zinc, 2.1% lead and 13.9 g/t silver (see Table 1 for full details). Of this, 10% falls into the indicated category.

While slightly lower grade than the other resources at Plomosas, this material was prioritised due to its proximity to surface, the ability to immediately access the ore via existing infrastructure, the high metallurgical recoveries that had previously been identified and the quality concentrate that testwork has established can be obtained.



Figure 1. Location of Plomosas mine, Mexico

The strategy underpinning the Scoping Study was to recommission the mine and plant with an early start up at Tres Amigos while optimising and drilling to expand the remaining resource to provide higher grade millfeed in years 2 and 3 onwards.

The mining component of the study was undertaken by independent global consultant RPM Advisory Services Pty Ltd ("RPM") while BatteryLimits Pty Ltd addressed the metallurgical and process engineering options as well as the final financial model.

The Scoping Study was conducted at an accuracy of  $\pm 35\%$  with a 15% contingency applied to capital costs. The results of the study and highlights are discussed below:

- The top of the Tres Amigos mineralisation is located at a depth of 260 meters from surface and can be immediately accessed by existing declines and drives.
- The orientation of the resource, particularly the dip, would be best suited to mining by cut and fill methods.
- The metallurgical testwork indicates that zinc recoveries of 90% to 95% could be obtained to
  produce a clean concentrate with contained grades of 55% Zn and 4% Pb. Lead recoveries
  have achieved 70% from testwork but there are low levels of lead in the Tres Amigos
  mineralisation and the economic influence is minor. There will only be one high grade zinc
  concentrate produced.

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- Initial confidential discussions with a number of potential offtake partners suggest this will be a sought after concentrate due to the low levels of deleterious elements or elements that attract a penalty.
- The Scoping Study assumes a contract mining model.
- The refurbished plant would utilise existing float cells and thickeners but requires a new crushing, milling circuit and rougher flotation cells. Whether that is purchased or acquired on a contract basis is an area requiring further investigation.
- The finished processing plant would be industry standard and would comprise crushing and grinding followed by conventional bulk flotation roughing and cleaning stages to produce a single zinc concentrate.
- The Scoping Study has arrived at an industry competitive total capital expenditure, comprising plant, mining, infrastructure and indirects including contingency of 15%. Several areas have been identified that could be optimised and warrant further review.

Commenting on the outcomes of the Scoping Study, Managing Director, Will Dix said:

"Our goals over the last 10 months have been to complete a resource upgrade and deliver a positive Scoping Study and I'm delighted that we have been able to achieve these objectives.

We are confident that our strong technical understanding of the project given our access to the ore, existing plant and previous successful concentrate production will enable us to secure the funding necessary to advance the project.

Our strategy moving forward is focussed on optimising the study outputs particularly through the addition of new ore sources from within the Plomosas mine area and completing the permitting required to commence construction and production. As the Company moves from the exploration to development and production phase we are reviewing our organisational structure to reflect the new requirements. An element to this is strengthening the mining and metallurgical skill set both at Board and management level and the search for people to fill these roles has commenced."

Will Dix Managing Director 27 October, 2017

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#### Cautionary Statement concerning Scoping Study Results including Inferred Resources

The Scoping Study referred to in this announcement has been undertaken by Consolidated Zinc (the "Company") to ascertain whether a business case can be made for proceeding to more definitive studies or stage one production. It is a preliminary technical and economic study of the potential viability of the Plomosas Zinc Project. It is based on low level technical and economic assessments that are not sufficient to support the estimation of ore reserves. 90% of the current Mineral Resource at Tres Amigos is in the inferred category. For this reason, in accordance with Section 8.5, ASX Guidance Note 31, CZL cannot disclose production targets, forecast financial information or income-based valuations related to the Scoping Study, but instead discloses appropriate information of a technical nature to ensure the market is properly informed of the company's prospects. CZL instead makes aspirational statements and discloses parts of the study that do not contain production targets. The aspirational statements are based on the entity's current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further exploration and evaluation work and appropriate studies are required before the Company will be in a position to estimate any ore reserves or to provide any assurance of an economic development case.

To achieve the outcomes indicated in the Scoping Study, additional funding will likely be required. Investors should note that there is no certainty that the Company will be able to raise the necessary amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise effect the value of the Company's existing shares. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

At present CZL owns 51% equity in the project and has the option to increase this to 90% at the Company's sole election. It is also possible that the Company could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the Company's 51% interest in the Plomosas Zinc Project. If it does this, this could materially reduce the Company's proportionate ownership of the Plomosas Zinc Project.

The Australian Securities and Investments Commission (ASIC) released Information Sheet 214, which concerns forward-looking statements by mining and resource companies (INFO 214). One of the matters raised is that forward-looking statements should only be made if the entity has reasonable grounds for concluding that funding will become available to the entity as and when required by the project's development or production schedules. As noted above, additional funding will be required by Consolidated Zinc to bring the Project into full production stage.

The Company notes that it has a current market capitalisation of  $^A$ \$13 million and has successfully raised  $^A$ \$8million over the last 24 months. The Board confirms that the results from the Scoping study are positive and that this justifies the Company committing to the next stage of exploration and development.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.

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#### **ABOUT CONSOLIDATED ZINC**

Consolidated Zinc Limited (ASX:CZL) is a minerals exploration company listed on the Australian Securities Exchange. The Company's major focus is in Mexico where it recently acquired 51% of the exciting high grade Plomosas Zinc Lead Silver Project through its majority owned subsidiary, Minera Latin American Zinc CV SAPI. Historical mining at Plomosas between 1945 and 1974 extracted over 2 million tonnes of ore grading 22% Zn+Pb and over 80g/t Ag. Only small scale mining continued to the present day and the mineralised zones remain open at depth and along strike. The Company's main focus is to identify and explore new zones of mineralisation within and adjacent to the known mineralisation at Plomosas with a view to identifying new mineral resources that are exploitable.

#### **Competent Persons' Statement**

The information in this report that relates to exploration results, data collection and geological interpretation is based on information compiled by Steve Boda BSc (Hons), MAIG, MGSA, MSEG and Andrew Richards BSc (Hons), Dip Ed, MAUSIMM, MAIG, MSEG, GAICD. Messrs Boda and Richards are both Members of Australian Institute of Geoscientists (AIG) and Mr Richards is also a Member of the Australasian Institute of Mining and Metallurgy (AusIMM).

Both Messrs Boda and Richards have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves' (JORC Code). Messrs Boda and Richards consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The information in this document that relates to the interpretation of metallurgical test work, process plant and infrastructure design for a Scoping Study level assessment is based on information compiled and reviewed by Mr David Pass, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Pass is an employee of BatteryLimits. Mr Pass consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.

The information is extracted from the report entitled "70% Increase in Zinc Resource, Positive Metallurgical Testwork Results" created on 4 September, 2017 and is available to view on the Company's and ASX websites. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.



Table 1. Plomosas Project
September 2017 Mineral Resource Estimate (3% Zn Cut-off)

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		Indicated Mineral Resource					
Prospect	Tonnage	Zn	Pb	Ag	Zn	Pb	Ag
	t	%	%	g/t	t	t	Oz
Level 7	107,000	18.5	8.6	54.8	20,000	9,000	189,000
Tres Amigos	51,000	17.6	1.8	19.5	9,000	1,000	32,000
Total	158,000	18.2	6.4	43.4	29,000	10,000	220,000

	Inferred Mineral Resource						
Prospect	Tonnage	Zn	Pb	Ag	Zn	Pb	Ag
	t	%	%	g/t	t	t	Oz
Level 7	212,000	11.0	5.1	32.8	23,000	11,000	224,000
Tres Amigos	493,000	10.6	2.2	13.3	52,000	11,000	211,000
Carola	28,000	13.0	5.7	64.7	4,000	1,600	58,000
Las Espadas	77,000	11.8	5.0	14.4	9,000	4,000	36,000
Total	810,000	10.9	3.3	20.3	88,000	27,000	528,000

	Total Mineral Resource						
Prospect	Tonnage	Zn	Pb	Ag	Zn	Pb	Ag
	t	%	%	g/t	t	t	Oz
Level 7	319,000	13.5	6.3	40.2	43,000	20,000	412,000
Tres Amigos	544,000	11.2	2.1	13.9	61,000	12,000	242,000
Carola	28,000	13.0	5.7	64.7	4,000	1,600	58,000
Las Espadas	77,000	11.8	5.0	14.4	9,000	4,000	36,000
Total	968,000	12.1	3.8	24.0	117,000	37,000	748,000

#### Note:

The Mineral Resource has been compiled under the supervision of Mr. Robert Dennis who is a full-time employee of RPM and a Member of the AIG and AusIMM. Mr. Dennis has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he has undertaken to qualify as a Competent Person as defined in the JORC Code.

All Mineral Resources figures reported in the table above represent estimates at September, 2017. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.

The Mineral Resource has been estimated in accordance with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Geoscientists and Minerals Council of Australia (The JORC Code 2012).

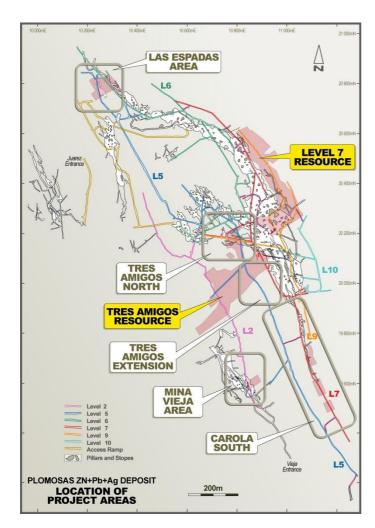


Figure 2. Plan view of the Plomosas mine showing location of the underground development and updated resource outlines.

Resource definition work areas referred to in the text including Level 7 and Tres Amigos are identified. Figure 3 provides a schematic cross section through the mine and geological sequence.

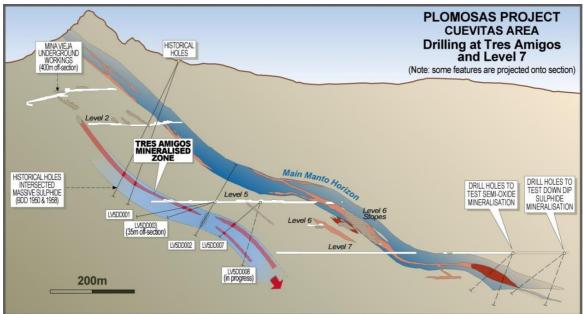


Figure 3. Section view of the Plomosas mine through Cuevitas area showing the Tres Amigos zone, historical drilling and the drilling planned for mineralised horizons.

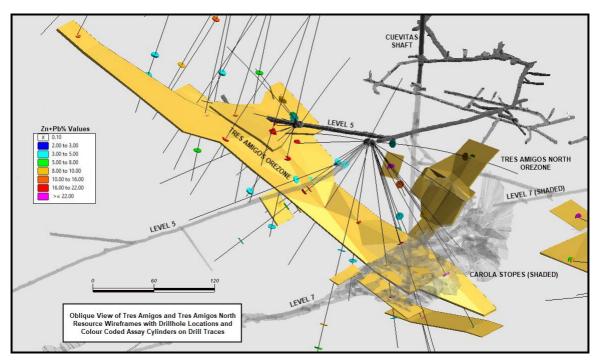


Figure 4: Oblique view looking NW of increased Tres Amigos Mineral Resource wireframed solids showing drillhole traces and intercepts.

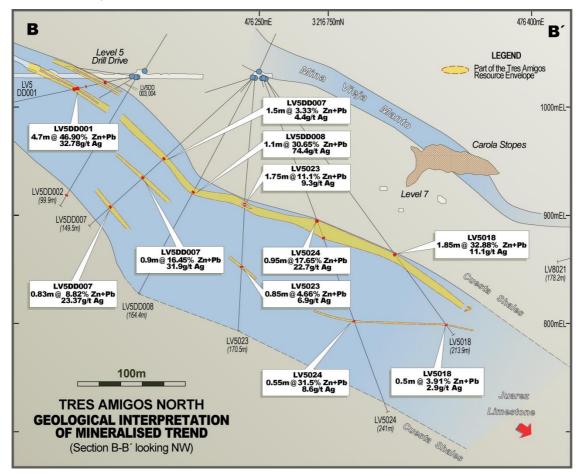


Figure 5: Schematic section through Tres Amigos area showing geological interpretation and mineral targets within the Juarez Limestone unit.

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

### **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>	<ul> <li>Sampling of cut channels was conducted by locating a one metre sampling line, using spray paint across mineralisation and ensuring that the line began in hanging wall host, spanned mineralisation and terminated in footwall host. Where mineralisation was thicker than one metre, the line was adjusted accordingly. This was done to minimise the bias of the sample value. Channel sampling was then completed, using the line as a guide, without sampling the line itself. As much representative sample was taken from the length of the line to produce a two to four kilogram sample. For this level of exploration, the sample size and method of sampling was deemed adequate to represent in-situ material.</li> <li>Drilling sampling techniques employed at the Plomosas underground drilling program include saw cut NQ drill core samples.</li> <li>Only NQ triple tube core (NQ3) is currently being used to drill out the geological sequences and identify zones of mineralisation that may or may not be used in any Mineral Resource estimations, mining studies or metallurgical testwork.</li> <li>Diamond NQ3 core was sampled on geological intervals/contacts, with the minimum sample size of 0.5m and max 1.2m.</li> <li>Core was cut in half, with one half to be sent for analysis at an accredited laboratory, while the remaining half was stored in appropriately marked core boxes and stowed in a secure core, sampled from the half sent for analysis.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul> <li>Currently NQ3 triple tube using conventional wireline drilling is being used.</li> <li>Core is being routinely orientated where possible, every 5th run (a run being 1.5 metres in length) using the Reflex ACT II RD core orientation system.</li> </ul>



Criteria	JORC Code explanation	Commentary
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>	<ul> <li>Diamond core was reconstructed into continuous runs where possible, in an angle iron cradle for orientation mark ups. Depths were checked against drillers blocks and rod counts were routinely carried out by the drillers.</li> <li>The use of triple tube improved core recovery.</li> <li>Measurements for core recoveries were logged and recorded on hard copy sheets, which were then loaded into excel sheets and sent for data entry. These measurements, in combination with core photography show the overall recoveries vary between 50-95%.</li> <li>Due to the nature of the geology and the presence of large open-spaced breccias present in the vicinity of the mineralisation, the recovery of the mineralised core has been in some cases &lt;60%. The use of triple tube in these areas will not improve recovery.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>CZL system of logging core records lithology, mineralogy, mineralisation, alteration, structure, weathering, colour and other primary features of the rock samples.</li> <li>Logging is both qualitative and quantitative depending on the field being logged.</li> <li>All drill holes are logged in full to end of hole.</li> <li>Diamond core is routinely photographed digitally</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>CLZ diamond core is NQ3 size, sampled on geological intervals (0.3 m to 1.2 m), sawn in half or quartered if duplicate samples are required.</li> <li>Samples to be submitted to ALS Chemex for preparation. The sample preparation follows industry best practice where all drill samples are crushed and split to 1kg then dried, pulverized and (&gt;85%) sieved through 75 microns to produce a 30g charge for 4-acid digest with an ICP-MS or AAS finish. A split will be made from the coarse crushed material for future reference material.</li> <li>Field duplicates are routinely taken for core samples. CZL procedures include a minimum of one duplicate per approximately 20 samples.</li> </ul>



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>	<ul> <li>All drill samples were submitted to ALS Laboratories for multi-element analysis using a 30g charge with a multi-acid digest and ICP-MS or AAS finish (ME-ICP61). Over the limit results will be routinely reassayed by ore grade analysis OG62. Over the limit results for the ore grade will be reassayed by titration methods Cu-VOL61, Pb-VOL50 or Zn-VOL50.</li> <li>Analytes include 51 elements and include Ag, Au, Cu, Pb, Zn as the main elements of interest.</li> <li>QAQC protocols for all drill sampling involved the use of Certified Reference Material (CRM) as assay standards. The insertion of CRM standards is visible estimation with a minimum of two per batch. Geostats standards were selected on their grade range and mineralogical properties.</li> <li>Blanks are inserted at the bottom of relevant mineralised zones using the fine certified blank and immediately later the coarse blank, to identify any potential cross contamination.</li> <li>All drill assays were required to conform to the procedural QAQC guidelines as well as routine laboratory QAQC guidelines.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Significant drilling intersections are noted in this report and are verified by qualified personnel from geological logging.</li> <li>No twinned holes are being drilled as part of this program.</li> <li>CZL logging and sampling data was captured and imported using excel sheets and data entered into Micromine.</li> <li>All CZL drillhole and sampling data is stored in a Micromine based system. Manual backups are routinely carried out.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole 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>Underground drill holes were located by Micromine using accurately surveyed drives and stopes. Once drill holes were located, mine survey crew resurveyed the cuddy and the hole locations. A final collar survey will be finalised when the holes are completed.</li> <li>Down-hole surveys were taken at a nominal 30m interval and a final survey was taken at end of hole using a Reflex EZ-TRAC digital camera.</li> <li>Grid system used is WGS84 Zone 13</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>Hole spacing is currently limited by the confinements of the underground drives. Azimuths of holes are planned so significant intersections have adequate spacing between them to allow sufficient geological and grade continuity as appropriate for inclusion in any Minerals Resource estimations. Where underground access drives allows, drill cuddies have been established at 80 metre intervals to allow for adequate drill spacing.</li> <li>No sample compositing has been applied</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>	<ul> <li>Drill orientations was designed to intersect any geological or geophysical contacts as high an angle as possible to reflect true widths as possible.</li> <li>Sampling has been designed to cross structures as near to perpendicular as possible, minimising any potential in creating a bais sampling orientation.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples were bagged in prenumbered plastic bags into each bag a numbered tag was placed and then bulk bagged in batches not to exceed 25kg, into larger polyweave bags, which were then also numbered with the respective samples of each bag it contained.</li> <li>The bags were tied off with cable ties and stored at the core facility until company personnel delivered the samples to the laboratories preparation facility in Chihuahua.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No audits have been completed to date, but both in-house and laboratory QAQC data will be monitored in a batch by batch basis. All protocols have been internally reviewed.

# **Section 2 Reporting of Exploration Results**

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

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.	<ul> <li>Sampling was conducted over three adjoining tenements, La Verdad (T-218242), El Olvido (T- 225527) and Ripley (T-218272).</li> <li>Consolidated Zinc Ltd currently owns 51%</li> </ul>
	<ul> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a</li> </ul>	



Criteria	JORC Code explanation	Commentary
	licence to operate in the area.	
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>No relevant information is available.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Plomosas is located in a historic zinc-lead-silver mining district, with mineralisation hosted by a Palaeozoic sequence of shales, argillaceous limestones, reefal limestones, 'conglomeratic' limestones and sandstones. This approximately 1600 metres-thick carbonate-rich sequence forms part of the Ouachita "Geosyncline", which was inverted in a thrust deformation phase during the Upper Palaeozoic Appalachian Orogeny.</li> <li>Characteristics of the deposit lead to the classification as an IRT III type mineralisation (Intrusive Related type III deposit) but may have some distal style affinities.</li> <li>The control on mineralisation is both lithological and structural, but local structural bending of the manto is very important as it is strongly folded in a relatively regular pattern, oriented north/north-west to west/north-west striking. The segment of the fossiliferous horizon with the best potential is north/north-west striking with a south-east plunge. The N/NW orientation of sections of the stratigraphy (due to folding) is considered important in localising mineralisation.</li> <li>The mineralogy is simple, consisting of iron-poor sphalerite, galena, silver, pyrite, chalcopyrite, barite, and calcite. The ore bodies are hosted by shale and marble on the footwall and hanging wall respectively. Intense marblisation is restricted to a few meters from the hanging wall contact.</li> </ul>
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:</li> <li>easting and northing of the drill hole</li> </ul>	<ul> <li>Appropriate information has been included in the report.</li> </ul>
	<ul> <li>collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> </ul>	
	<ul> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	



Criteria	JORC Code explanation	Commentary
	<ul> <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>	
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>	No data aggregate methods were applied to the results.
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>	No drilling was completed to enable any relationship between mineralisation width and intercept lengths
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	Appropriate diagrams are attached in the report
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.	All sample results are reported
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.	<ul> <li>Metallurgical testwork was undertaken at SGS Lakefield Oretest Pty Ltd laboratories in both Canada and Perth, Western Australia under the supervision of personnel from BatteryLimits Ltd of Perth, WA.</li> <li>Testwork included comminution and flotation studies of bulk rock chip channel samples and composites of selected drill core with a variety of reagents.</li> </ul>



Criteria	JORC Code explanation	Commentary
		Sample sizes ranged from 10kg to 100kg. Samples taken were representative of the resource mineralogy from several mine levels as well as the resource grades that might be expected in production. The range of samples also ensured that variability tests of different portions of the resource could be assessed.  The data obtained from the metallurgical testwork was applied to optimising preliminary treatment flowsheets and process plant design.
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>	Appropriate information has been included in the report.

# **Section 3 Estimation and Reporting of Mineral Resources**

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

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Geological and field data is collected using customised logging software on tablet computers. The data is validated by company geologists before the data is sent to Expedio data management consultants. The validated data is stored in Expedio's standardised SQL Server Database Schema. The data is exported by Expedio and sent to RPM in Access format prior to Mineral Resource estimation in Surpac.</li> <li>RPM performed initial data audits in Surpac. RPM checked collar coordinates, hole depths, hole dips, assay data overlaps and duplicate records. Minor errors were found, documented and amended.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	A site visit was conducted by Shaun Searle of RPM, a representative of the Competent Person for Mineral Resources, during November 2016. The site visit included inspection of the geology, drill core, underground development/stoping and the topographic conditions present at the site as well as infrastructure. During the site visit, Mr Searle had open discussions with CZL's personnel on technical aspects relating to the relevant issues and in particular the geological data.
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any</li> </ul>	The confidence in the geological interpretation is considered to be good and is based on visual confirmation in underground development/ stoping, outcrop



Criteria	JORC Code explanation	Commentary
	<ul> <li>assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>and drilling.</li> <li>Geochemistry and geological logging has been used to assist identification of lithology and mineralisation.</li> <li>The deposit consists of northeast dipping units. Infill drilling has supported and refined the model and the current interpretation is considered robust.</li> <li>Outcrops of mineralisation and host rocks confirm the geometry of the mineralisation.</li> <li>Infill drilling has confirmed geological and grade continuity.</li> </ul>
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>The Tres Amigos Mineral Resource area extends over a southeast-northwest strike length of 320m (from 3,216,570mN – 3,216,740mN), has a maximum width of 190m (476,080mE – 476,250mE) and includes the 200m vertical interval from 1,090mRL to 890mRL.</li> <li>The Level 7 Mineral Resource area extends over a south-southeast – north-northwest strike length of 400m (from 3,216,930mN – 3,217,300mN), has a maximum width of 110m (476,230mE – 476,340mE) and includes the 90m vertical interval from 950mRL to 860mRL.</li> </ul>
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole</li> </ul>	<ul> <li>Using parameters derived from modelled variograms, Ordinary Kriging (OK) was used to estimate average block grades in three passes using Surpac software. Linear grade estimation was deemed suitable for the Plomosas Mineral Resource due to the geological control on mineralisation. Maximum extrapolation of wireframes from drilling was 40m along strike and down-dip. This was equal to the drill hole spacing in these regions of the Project. Maximum extrapolation was generally half drill hole spacing.</li> <li>Reconciliation could not be conducted due to the absence of mining production records.</li> <li>It is assumed that Ag can be recovered with Zn and Pb.</li> <li>It is assumed that there are no deleterious elements when considering the proposed processing methodology for the Plomosas mineralisation.</li> <li>The parent block dimensions used were 10m NS by 5m EW by 2.5m vertical with sub-cells of 2.5m by 1.25m by 0.625m. The model was rotated to align with the strike of the mineralisation on a bearing of 330°. The parent block size dimension was selected on the results obtained from Kriging Neighbourhood Analysis that suggested this was the optimal block size for the dataset.</li> <li>An orientated 'ellipsoid' search was used to select data and adjusted to account for the variations in lode orientations, however all other parameters were taken from the variography derived from domain 1. Up to three passes were used for each domain. The first pass had a range of 20, with a minimum of 8 samples. For the second pass, the range was extended to 40m, with</li> </ul>



Criteria	JORC Code explanation	Commentary
	data, and use of reconciliation data if available.	<ul> <li>a minimum of 4 samples. For the final pass, the range was extended to 100m, with a minimum of 2 samples. A maximum of 20 samples was used for all three passes.</li> <li>No assumptions were made on selective mining units.</li> <li>Zn and Pb, as well as Pb and Ag had strong positive correlations. Zn and Ag had a moderate positive correlation.</li> <li>The deposit mineralisation was constrained by wireframe solids constructed using a nominal 2% combined Zn and Pb cut-off grade with a minimum down-hole length of 1m. The wireframes were applied as hard boundaries in the estimate.</li> <li>Statistical analysis was carried out on data from 17 domains. After review of the project statistics, it was determined that high grade cuts for Ag within a single domain was necessary. The cut applied was 300g/t Ag resulted in a single composite being cut.</li> <li>Validation of the model included detailed comparison of composite grades and block grades by strike panel and elevation.</li> <li>Validation plots showed good correlation between the composite grades and the block model grades.</li> </ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>Tonnages and grades were estimated on a dry in situ basis.</li> </ul>
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The Mineral Resource has been reported at a 3% Zn cut-off. The cut-off was selected based on an RPM cut-off calculator assuming an underground mining method, a US\$2,600/t Zn price, US\$2,300 Pb price, US\$17/oz Ag price, a 80% metallurgical recovery for Zn and Pb and high level costs derived from a high level technical report supplied by an independent mining consultant to CZL.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	RPM has assumed that the deposit could potentially be mined using underground mining techniques. No assumptions have been made for mining dilution or mining widths, however mineralisation contacts are generally sharp and mining dilution is likely to be minimal if handheld mining methods are used. It is assumed that mining dilution and ore loss will be incorporated into any Ore Reserve estimated from a future Mineral Resource with higher levels of confidence.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding	<ul> <li>Metallurgical testing has been initiated to confirm reasonable processing options for the Plomosas Project.</li> <li>Metallurgical testwork was undertaken at SGS Lakefield Oretest Pty Ltd laboratories in both Canada and Perth, Western Australia under the supervision of personnel from BatteryLimits Ltd of Perth, WA.</li> </ul>



Criteria	JORC Code explanation	Commentary
	metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>Testwork included comminution and flotation studies of bulk rock chip channel samples and composites of selected drill core with a variety of reagents. Sample sizes ranged from 10kg to 100kg. Samples taken were representative of the resource mineralogy from several mine levels as well as the resource grades that might be expected in production. The range of samples also ensured that variability tests of different portions of the resource could be assessed.</li> <li>The data obtained from the metallurgical testwork was applied to optimising preliminary treatment flowsheets and process plant design.</li> </ul>
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	No assumptions have been made regarding environmental factors. CZL will work to mitigate environmental impacts as a result of any future mining or mineral processing.
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Various bulk densities have been assigned in the block model based on lithology and mineralisation. These densities were determined after averaging the density measurements obtained from diamond core.</li> <li>Bulk density was measured using the water immersion technique. Moisture is accounted for in the measuring process. A total of 3,862 bulk density measurements were obtained from core drilled at the Project. A total of 164 measurements were taken from mineralisation intervals.</li> <li>It is assumed that the bulk density will have some variation within the mineralised material types due to the host rock lithology and sulphide minerals present. Therefore a regression equation for Zn and density was used to calculate density in the block model. In addition, cavities are common in the limestone/marble host rock at Level 7. As a result, RPM estimated that approximately 5% of the mineralised material is cavernous (obtained from core logging), therefore deducted this factor from the measured densities when assigning bulk densities in the block model for the Level 7 prospect.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has</li> </ul>	The Mineral Resource estimate is reported here in compliance with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and



Criteria	JORC Code explanation	Commentary
	been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).  • Whether the result appropriately reflects the Competent Person's view of the deposit.	Ore Reserves' by the Joint Ore Reserves Committee (JORC). The Mineral Resource was classified as Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. The Indicated Mineral Resource was defined within areas of close spaced diamond and RC drilling of less than 20m by 20m, and where the continuity and predictability of the lode positions was good. In addition, the 20m distance is equal to approximately two thirds of the observed major direction variogram range of 30m. The Inferred Mineral Resource was assigned to areas where drill hole spacing was greater than 20m by 20m and less than 40m by 40m, where small isolated pods of mineralisation occur outside the main mineralised zones, and to geologically complex zones.  The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The definition of mineralised zones is based on high level geological understanding producing a robust model of mineralised domains. Validation of the block model shows good correlation of the input data to the estimated grades.  The Mineral Resource estimate appropriately reflects the view of the Competent Person.
Audits or reviews	<ul> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	Internal audits have been completed by RPM which verified the technical inputs, methodology, parameters and results of the estimate.
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The lode geometry and continuity has been adequately interpreted to reflect the applied level of Measured, Indicated and Inferred Mineral Resource. The data quality is good and the drill holes have detailed logs produced by qualified geologists. A recognised laboratory has been used for all analyses.</li> <li>The Mineral Resource statement relates to global estimates of tonnes and grade.</li> <li>Reconciliation could not be conducted as no detailed historical mining production records were available.</li> </ul>