



# 7 September 2017 RECOMMENDATION

### **Speculative Buy**

3M Average daily vol	1.84m
12 month share low	\$0.014
12 month share high	\$0.04
Market Risk	High
Liquidity Risk	High
Infrastructure Risk	Med
Country Risk	Med

CapIQ & DJC Research

### **ISSUED CAPITAL**

ASX	CZL
Share price	\$0.018
Mkt cap	\$13.0m
Cash	\$3.0m
Enterprise Value	\$10.0m
Ordinary shares on issue	726.2m
Unlisted options	166.8m

Source: CapIQ

### **DIRECTORS & Management**

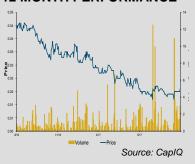
Chairman
CEO
Exec Director
Non-Exec Director
<b>Exploration Manager</b>

### **MAJOR SHAREHOLDERS**

Copulos Group	21.4%
FarJoy Pty Ltd	9.4%
Retzos Group	9.3%
Jetosea Pty Ltd	5.3%

As at August 2017

### 12 MONTH PERFORMANCE



### Paul Adams Head of Research +61 8 9263 5200

# **Consolidated Zinc Ltd (CZL)**

New resource sets stage for Scoping Study

CZL has released a resource update indicating a 70% increase in resource tonnes to the maiden resource set at the Plomosas high grade zinc project in northern Mexico. We anticipated the new resource would be close to 1.0 million tonnes. At 968,000 tonnes, CZL will now use this to complete a scoping study that aims to determine the economics around a small-scale, early development opportunity utilising the considerable, already existing infrastructure. This would keep start-up capital to a minimum and mean some form of production could potentially start during 2018. We maintain our Speculative Buy on CZL.

### **Key Points**

- Close to 1.0Mt resource: CZL has posted a resource up-grade to the high grade Plomosas polymetallic project in northern Mexico of close to 1Mt. In March this year, we anticipated that CZL would reach a 1Mt resource inventory within 9 months.
- Scoping Study almost complete: CZL is close to finishing a Scoping Study for Plomosas with
  the aim of establishing a small-scale operation using the Tres Amigos resource as a basis of a
  mining schedule. The study is to be finished by Q3 2017 with mining a distinct possibility in 1H
  2018. CZL could therefore be in production to take advantage of the robust zinc high price over
  the next few years.
- New zones could rapidly add resource tonnes: CZL has concentrated its drilling effort at Tres Amigos. Recent work has highlighted Tres Amigos as the likely zone for initial production given its proximity to UG infrastructure, high grade and metallurgical properties. Drilling at Las Espadas and Carola South was postponed but will be the focus for drilling in early 2018. CZL has the opportunity to add additional tonnes to the resource base in 1H 2018 from these areas. Simultaneously, CZL are likely to drill the most compelling regional targets in 2018. We believe success regionally could provide a step change in project size.
- Existing infrastructure minimises start-up capex: It should be stressed that all of the resource
  defined thus far is in close proximity to existing underground infrastructure and is readily
  accessible. Capital expenditure required to mine the material would be minimal and a
  refurbishment of the small processing facility and associated peripheral infrastructure the only
  real capital requirement. The hurdle rate to get into production, in terms of capital and time,
  therefore is much less than most of CZL's ASX-listed peers.
- Cashflows enough to fund potential step change in project scale: We estimate cashflows of between A\$10m and A\$15m net to CZL (80%) from production based on the Tres Amigos prospect area. This will be sufficient to aggressively undertake near-mine exploration/definition and to explore regional targets, with the aim of a step-change in project scale.
- Speculative Buy recommendation maintained: We re-iterate our Speculative Buy recommendation on CZL and believe that the new targets have the potential to realise the tonnage required to place CZL on a development footing with a superior grade to peers.

Source: CZL

Source: DJC

### New resource at just under 1.0 million tonnes

- CZL has released its first resource upgrade at the high-grade, Plomosas polymetallic project in northern Mexico. The new resource lifts contained tonnes by 70% to 958,000 tonnes whilst at the same time providing a 60% uplift in tonnes in the indicated category.
- The resource also contains an additional 60% increase in contained metal compared to the maiden resource at 154,000 tonnes.
- Resource growth has come from down dip and down-plunge extensions of Level 7, extension of
  mineralisation at Tres Amigos and extrapolation of in-mine mineralisation at Las Espadas and
  Carola South. A cut-off grade of 3% zinc equivalent has been used throughout taking into account
  likely mining and processing costs and other cost metrics from northern Mexico.

	September 2017 Mineral Resource Estimate (3% Zn Cut-off)							
		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	

			Inferr	ed Mineral I	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	

Table 1. Resource table, Plomosas Project

Table 2 below shows the precent change between the maiden resource and the new updated estimate.

### Comparison of Resource update to maiden estimate

	N	/laiden Est	imate			Updated	Estimate			% Change		
Prospect	Tonnage (T)	Zinc Grade (%)	Lead Grade (%)	Silver grade (g/t)	Tonnage (T)	Zinc Grade (%)	Lead grade (%)	Silver grade (g/t)	т	Zinc Grade	Lead Grade	Silver Grade
Level 7	318,000	13.6	6.4	40.0	319,000	13.5	6.3	40.2	0.3%	-0.7%	-1.6%	0.5%
Tres Amigos	250,000	11.3	1.7	13.7	544,000	11.2	2.1	13.9	117.6%	-0.9%	23.5%	1.5%
Carola					28,000	13.0	5.7	64.7	100.0%	100.0%	100.0%	100.0%
Eas Espades					77,000	11.8	5.0	14.4	100.0%	100.0%	100.0%	100.0%

Table 2. Comparison of maiden estimate to updated estimate

- The combined grade (Zn+Pb) of 15.9% is the highest combined zinc-lead grade of any of its peers on the ASX and ranks Plomosas in the top decile of projects globally.
- The resource was estimated using OK kriging. Indicated resources were categorised where
  drilling was closer than 20m by 20m where lode predictability was good. Inferred resources were
  categorised where drilling was wider than 20m by 20m but less than 40m by 40m.

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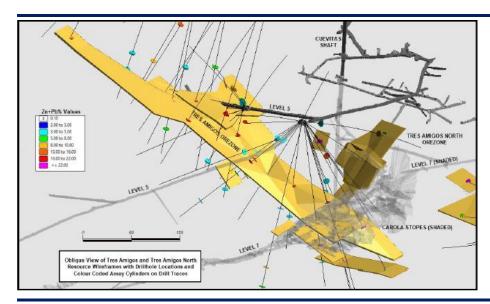


Figure 1. Oblique view of the Tres Amigos area with drill traces in infrastructure

### Source: CZL

### **Scoping Study almost complete**

- In December 2016, CZL published the maiden JORC 2012 resource for the Plomosas deposit at 568,000 tonnes at 16.9% Zn+Pb. At the end of February 2017, CZL announced the initiation of a Scoping Study at Plomosas, aimed at determining the metrics of a small-scale mining operation that involved accessing ore proximal to existing underground development and a refurbishment of the existing small-scale processing facility on site.
- CZL has performed metallurgical testwork on the Tres Amigos sulphide mineralisation. A high-grade zinc concentrate was produced using a conventional zinc flotation processing route. A +90% zinc recovery was observed in the tests to a concentrate that could also contain lead credits. Zinc concentrated to a high of 62% and recoveries were recorded as high as 98.1%, with lead credits up to 6.1%.
- The results from the resource update support the continued progress of the scoping study with
  the mining study initially focused on Tres Amigos (and Las Espadas). The focus on Tres Amigos
  prevented CZL from extending the resource base around Las Espadas and Carola South, which
  will become a focus for drilling in 2018. We therefore estimate a further resource upgrade in 1H
  2018 which will include these two areas.
- CZL aim to expand and refurbish the existing plant, currently rated at 75ktpa, to 100ktpa. If the Scoping Study is successful, CZL could be in production during 2018, depending on approval timeframes. Results of the study are due in September.

### Potential for further tonnage growth

- CZL still need resource growth. We envisage in-mine drilling in 2018 will again add incremental
  tonnes but a step change in resource size is more likely to come from drilling success on regional
  targets. This in our view would be a major catalyst for the company.
- Further drilling is planned at all four prospects but drilling at Las Espadas and Carola South is
  most likely to result in resource expansion in the short-term, where mineralisation is easily
  accessible to existing infrastructure. Drilling will begin in early 2018 after the results of the
  scoping study and review of the development options.

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Source: CZL

- If we assume that over the next 9 months the size of the resource can grow to towards 1.5Mt, a larger operation may be feasible requiring a larger processing facility.
- It should be stressed that all of the resource defined thus far is in close proximity to existing underground infrastructure and is readily accessible. Capital expenditure required to mine the material would be minimal and a refurbishment of the small processing facility and associated peripheral infrastructure the only real capital requirement. The hurdle rate to get into production therefore is much less than most of its ASX-listed peers.

### Timeline to production

### Is a short-term production strategy the right approach?

- CZL has elected to follow a near-term production strategy (Phase 1) to fund a Phase 2 expanded strategy which will involve a larger plant with more meaningful cashflow.
- It is true to say that near-term production strategies, to help fund future exploration or
  development, have not been taken particularly positively by the market. There is a perception,
  arguably correct, that it can distract management from bigger picture activities and place the
  company under financial stress if things go wrong. Generally, we are also of this view.
- However, in the case of CZL, there are circumstances which make us feel a more comfortable with this approach. These include:
  - 1. Access to ore is immediate
  - 2. A processing option is already on-site
  - 3. Very low start-up capex
  - 4. Existing local mining experience
  - 5. Most permits require up-grading, not starting from scratch
  - 6. Mining conditions and metallurgy are well understood
  - 7. Very high-grade ore provides margin buffer
- These factors reduce risk of a small-scale development in our view. Another factor which we believe is important, is that CZL, and other ASX-listed zinc development companies, need to get into production quickly if they are to maximise the opportunity from the current high zinc process. If companies take too long, they will be at serious risk of coming into production in the tail end of the cycle, or missing the cycle completely. Additionally, deposits with low grades will be at the wrong end of the cost-curve, at the wrong time. It is no surprise to see the only companies going into production are those with high value ore on a metal equivalent basis Red River Resources (ASX:RVR) and Heron Resources (ASX:HRR).

# STAGE 1 OUTLINE Timeline: Mining Q4 2017 Producing Q1 2018 Scoping Study near completion Existing plant onsite Targeting: ~130ktpa STAGE 2 OUTLINE Timeline: Estimated ~2020 New Standalone plant: Targeting ~250,000 tpa Extended Resource to support mine life

Figure 2. Development strategy for Plomosas

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Source: CZL

### What needs to be done in the short-term?

- Completion of the Scoping Study (limited pre-feasibility study) will set the short-term development strategy. This will include a mine plan and mine design, underground infrastructure placement and process flow sheet and plant design (with upgrade requirements).
- 2. A development decision needs to be upon scoping study completion.
- 3. Order long-lead time items. Plant refurbishment estimated at between 4 and 6 months, with key items being an upgrade electrical circuit and upgrades to the drying filter. A preliminary study on the plant refurbishment had previously been completed. CZL aim to increase the plant capacity from 75,000 tonnes per annum to 100,000 tonnes per annum.
- 4. Obtain the necessary project funding. This could be tied in with obtaining off-take agreements or obtained via an independent funding source.
- 5. Simultaneously run the permitting process.
- 6. In our view, the hiring of additional key mining (project building) personnel will be critical to the successful implementation of the production strategy.
- 7. In addition, CZL need to exercise their option to take a larger stake in the project. CZL currently own 51%. To go to 80%, CZL need to make a vendor payment of A\$750,000 and an additional A\$1.7m in CZL stock, under the current arrangement. Vendors are then free-carried to BFS.

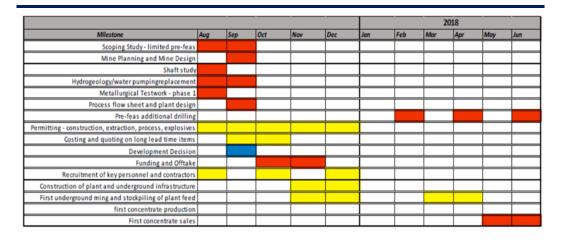


Table 3. Gantt Chart for Plomosas project development

### Major risks to short-term production

- **Delay in permitting:** CZL could experience delays in the permitting process or could face difficult terms with respect to environmental compliance.
- **Difficulty in getting project funding:** Plomosas is likely to require a relatively small amount of project funding. We are estimating circa US\$5m to US\$8m, depending on requirements in the plant. This is small for most funding groups and is likely to attract a high interest rate if funded through debt. Funding through an off-take party is also possible and probably more desirable from a shareholder point of view than funding 100% through direct equity.

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- Not getting the right team to implement the strategy: CZL need to have the right team onsite and on the board to achieve successful implementation of the strategy and to take the company towards Phase 2.
- More project equity: In our view, CZL need to exercise the option to take their project equity to 80% to benefit from the near-term production strategy. CZL will need to fund the S\$750,000 option payment and issue \$1.7m in stock to the vendor. At current prices that means an additional circa 90m shares.

### Peer group comparison

The ASX is limited with respect to companies that have a zinc focus. Figure 3 below show the
enterprise values for companies within our zinc universe that have defined resources and are
direct peers for CZL.

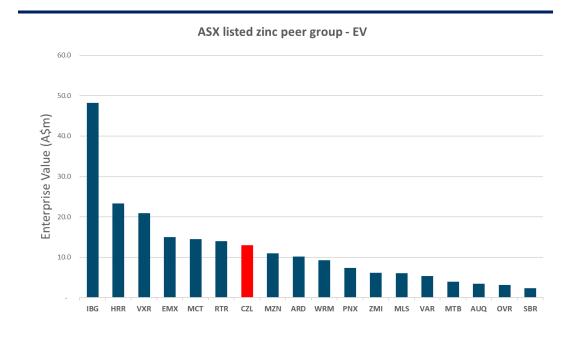


Figure 3. Enterprise value (EV) for ASX listed peers

Source: DJC

- The Plomosas resource grade has the highest zinc and the highest combined zinc and lead
  grade in our ASX zinc universe and would be in the highest decile (10%) of deposits globally.
  The high grade indicated resource defined separately at Level 7 deeps, at 28% combined Zn
  and Pb, would be in the top 1% of global deposits.
- The average grade in our ASX-listed zinc deposit universe is 5%. The average combined zinc and lead grade is 7.0% and silver grades average 46.3 g/t. Figure 4 below shows how anomalous the Plomosas deposit is amongst its peers. The size of the bubble shows the contained metal and shows that this is where CZL need to maintain focus.
- The requirement now for CZL to lift the tonnage to between 1.0 and 1.5Mt overall to derive a standout project amongst its ASX listed peers and indeed, globally for its grade.

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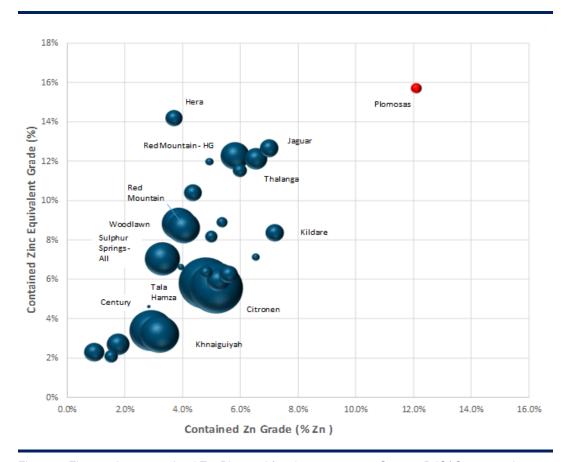


Figure 4. Zinc grade vs contained Zn+Pb metal for zinc resources Source: DJC/ Company data

The tenor of base metal mineralisation at Plomosas is very high. Second only to Heron Resources' (HRR-AU) Woodlawn underground polymetallic resource on a zinc equivalent basis. HRR's Woodlawn deposit contains additional copper and gold credits not seen in the Plomosas mineralisation.

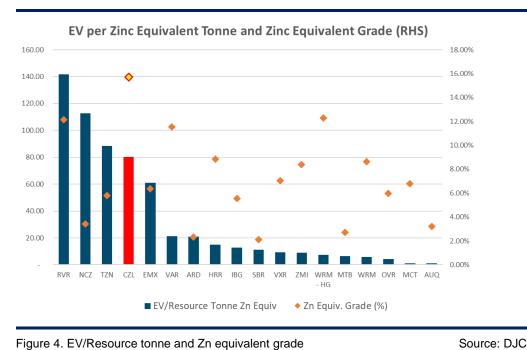


Figure 4. EV/Resource tonne and Zn equivalent grade

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### Zinc continues its strong price performance

Zinc continues to hold its recent strong price rise. Forecasts for the next two years remain robust at around US\$2500 owing to the closure of major mines through resource exhaustion and closure due to low prices in late 2015. Stockpiles continue to shrink.

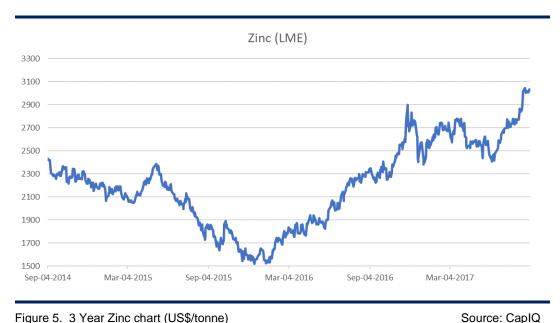


Figure 5. 3 Year Zinc chart (US\$/tonne)

### **Discussion & Recommendation**

- We continue to have a Speculative Buy recommendation on CZL. It is fair to say that the performance of ASX-listed zinc companies, in general, has been less than impressive, especially given the strong rise in zinc prices since the beginning of 2016. The same is true of CZL. However, Plomosas is a stand-out asset in terms of grade and metallurgy.
- CZL will shortly be delivering a scoping study on Plomosas which if positive will inform an early development option leading to cash flow in 2018, subject to regulatory hurdles. We do not think these will be onerous given the existing infrastructure and mining licenses already in place, which in most cases need upgrading.
- We estimate cashflows of between A\$10m and A\$15m net to CZL (80%) from production based on the Tres Amigos prospect area. This will be sufficient to aggressively undertake near-mine exploration/definition and to explore regional targets, with the aim of a step-change in project scale.
- The potential for the company to be in production in the short-term is a distinguishing feature. Red River Resources (ASX:RVR) is currently going into production and Heron's (ASX:HRR) Woodlawn project has just started earthworks for construction. These are the only short-term opportunities on the ASX for zinc production exposure. CZL has the potential to be in production behind RVR, and ahead of HRR.

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The recommendation made in this report is valid for four weeks from the stated date of issue. If in the event another report has been constructed and released on Consolidated Zinc Limited, the new recommendation supersedes this and therefore the recommendation in this report will become null and

Recommendation Definitions

SPECULATIVE BUY - Anticipated 10% or more outperformance, high risk BUY - Anticipated 10% or more outperformance

HOLD - Anticipated 10% underperformance to 10% over performance

SELL - Anticipated 10% or more underperformance

Period: During the forthcoming 12 months, at any time during that period and not necessarily just at the end of those 12 months.

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