

Investor update August 2015 (CZL:ASX)

# PLOMOSAS UNDERGROUND ZINC MINE, MEXICO

High grade zinc mine with silver, lead credits, targeting JORC resource and near term production with significant exploration potential



**CONSOLIDATED ZINC LTD**

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## CAUTIONARY STATEMENT:

The potential quantity and quality of the exploration targets identified in this announcement are conceptual in nature, and there has been insufficient exploration to date to define a mineral resource in accordance with the Australian Code for Reporting of Mineral Resources and Ore Reserves published by the Joint Ore Reserve Committee 2012 ("JORC Code 2012"). Furthermore, it is uncertain if further exploration at its exploration targets will result in the determination of a mineral resource.

The potential quantity and grade of an exploration target is conceptual in nature, there has been insufficient exploration to determine a mineral resource and there is no certainty that further exploration work will result in the determination of mineral resources or that the exploration target itself will be realised.

## COMPETENT PERSONS' STATEMENT:

The information in this report that relates to exploration results, data collection and geological interpretation is based on information compiled by Mr Andrew Richards BSc (Hons), Dip Ed, MAusIMM, MAIG, MSEG, GAICD who is a Member of the Australasian Institute of Mining and metallurgy (AusIMM) and Institute of Geoscientists (AIG). Mr Richards has 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 a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves' (JORC Code). Mr Richards consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



# The Project



## **CZL owns 51% of the high grade Plomosas Zn-Pb-Ag mine in Mexico**

With the rights to acquire up to 80% interest (and ultimately 100%) for additional \$750,000 cash and \$2,500,000 in shares.

### **Plomosas – Key Project Attractions**

- Multiple, very high grade Zn-Pb-Ag deposits, grading 18-25% Zn + Pb with 60g/t Ag
- 40 yr Mining Leases and most mining approvals in place.
- Significant exploration upside with immediate drill targets;
- A near term production asset with UG access to mineralisation already established;
- Excellent infrastructure;
- Clean mineralogy and high metallurgical recoveries.
- Low cost and low capex mining and processing options.



# The Company



## Capital Structure (ASX:CZL)

Shares on issue (approx)	219,655,958
Total options on issue	50,887,622
<b>including</b> listed options	23,350,152
Cash at Bank	\$1,800,000
Share price	\$0.037
<b>Approx Market Cap (undil)</b>	<b>\$8.1 million</b>
<b>EV</b>	<b>\$6.3 million</b>

## Major shareholders

Copulos Group	19.9%
Mexican Vendors	11.4%
Arena Group	6.8%

## Board and Management

- **Stephen Copulos** – Non Executive Chairman
- **Will Dix** – Managing Director
- **Andrew Richards** – Executive Director
- **Luis Rogelio Martinez Valles** – Non-executive Director
- **Chris Watts** – Company Secretary
- **Steve Boda** – Exploration Manager

Approximately 1,500 Shareholders.

Share buy-back arrangement recently announced for many holders with unmarketable parcels to significantly reduce the number of shareholders and ongoing administrative costs.

# Directors and Management



## » CHAIRMAN—Mr Stephen Copulos

Over 30 years experience in business and investments and over 16 years experience as a company Director of both listed and unlisted entities. He is the major shareholder of Consolidated Zinc Limited and Chairman of Crusader Resources (ASX:CAS) and Black Rock Mining Ltd (ASX:BKT).

## » Managing Director - Mr Will Dix

A geologist with over 23 years international experience including as a company Director in listed and unlisted companies. A proven track record of bringing projects from exploration to production and in funding junior resource companies.

## » Executive Director - Mr Andrew Richards

Over 30 years experience as a geologist including senior management roles and project finance. Andrew has extensive international experience and has been on the boards of several unlisted and listed companies on the ASX and AIM.

## » Non-Executive Director - Mr Luis Rogelio Martinez Valles

Mr Martinez is a mining entrepreneur with 40 years' experience in industrial minerals, base and precious metals. He holds an Industrial Engineer qualification from Chihuahuas Tech, with a Masters in Business Administration from Nuevo León University, and a Member of the Mining Association of Chihuahua.

## » Company Secretary - Mr Chris Watts

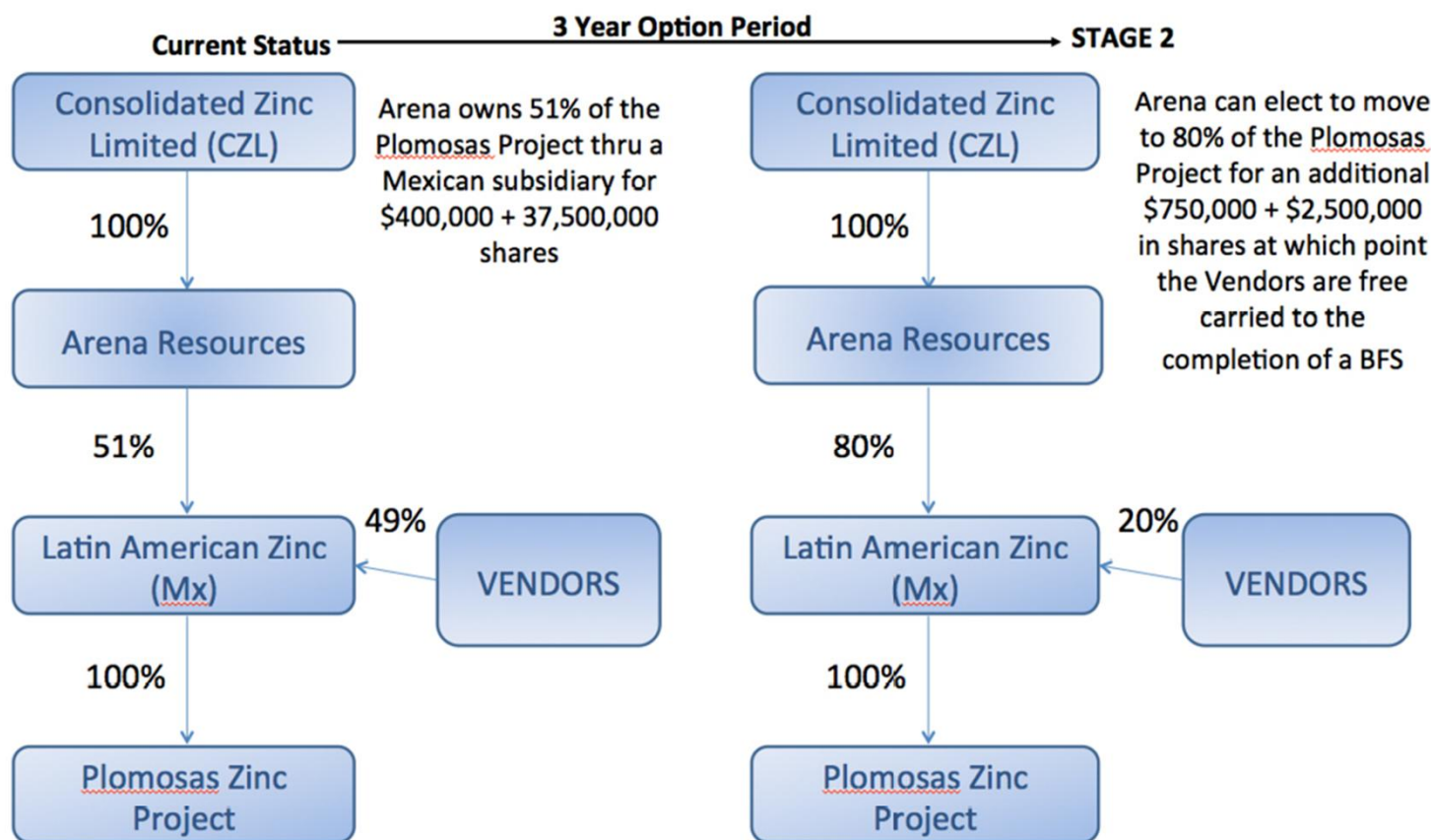
Chris has 20 years experience in Audit and Corporate Services together with experience in the commercial sector. He had provided audit and corporate services to listed and unlisted companies of varying sizes as well as non profit groups.

## » Exploration Manager - Mr Steve Boda

Steve has 25 years experience in exploration and occupied senior management roles with mining and exploration in Australia, China, SE Asia and Zambia. He has a track record in using structural geology to target economic mineralisation across a variety of commodities and definition of JORC resources.



# Acquisition Terms



Upon completion of a BFS, the vendors contribute or dilute or

- 1) MX 10% can be purchased by CZL for 10% of valuation of asset (at CZL election)
- 2) Arena 10% is a put/call for 10% of the EV of CZL (MC - \$\$ in bank)

# Plomosas – Location



## Plomosas Location

- 2 hour flight from Dallas/Houston
- 110km to Chihuahua City
- 90km to concentrator on paved roads

## Chihuahua Province

- World class mining province
- Experienced work force
- The country's largest zinc producing state

## Mexico

- Favorable regulatory environment allows 100% ownership for foreign companies,
- Ranked #5 in world for mining investment (2013)
- Ranked #6 in world for zinc production (2013)



# Plomosas – Mining History



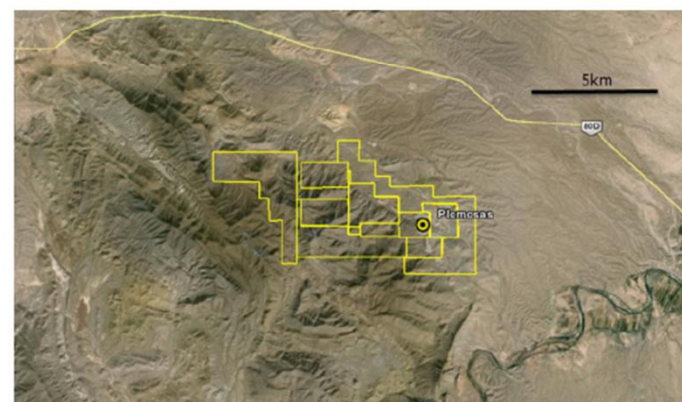
ASARCO Grupo Mexico mined until 1974. Extracted 2.2Mt ore at 16% Zn, 8% Pb, 60g/t Ag

**A rate of up to 20,000t ore per vertical metre at 24% Zn+Pb.**

Intermittent mining undertaken since 1975 with current small scale production of up to 90-100 tpd. Focused only on remnant mineralisation above Level 5 (131 mbs).

Currently dewatering Level 7 to:

- investigate potential for immediate production ramp up and
- to provide access for drilling and underground exploration.





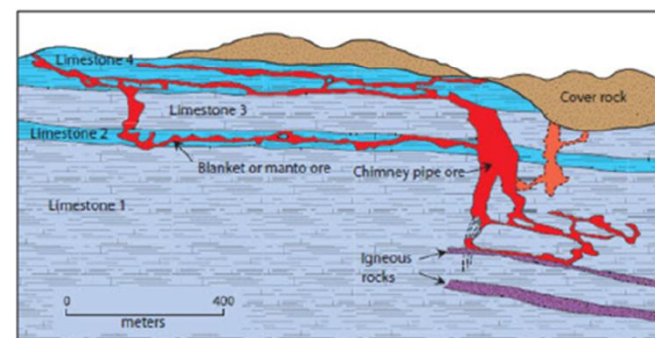
# Plomosas – Simple Geology



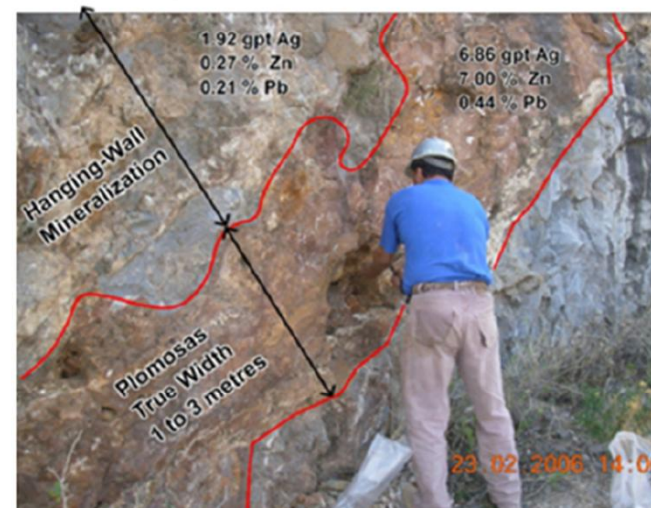
- Shale-limestone units deposited at the margins of the major Chihuahua sedimentary basin.
- Deposits formed by mineralised fluids migrating through district scale structures and replacing carbonate units in the shale-limestone sequence.
- Mineralisation is confined to identified stratigraphic horizons and comprises either;
  - 1) Low angle stratiform sheets of mineralisation at several horizons within the sequence (**mantos**), or
  - 2) High angle, crosscutting mineralised bodies in linking structures (**chimneys**).

Massive orebodies found in groups with individual dimensions comprising:

- strike lengths ranging from tens to several hundred metres, and
- thicknesses from 0.5m to 15m (average ~3-4m)



*Santa Eulalia deposit in same mineral trend as Plomosas*



*Mineralised outcrop north and along strike of Plomosas mine.*

# Plomosas – Latest UG Sampling



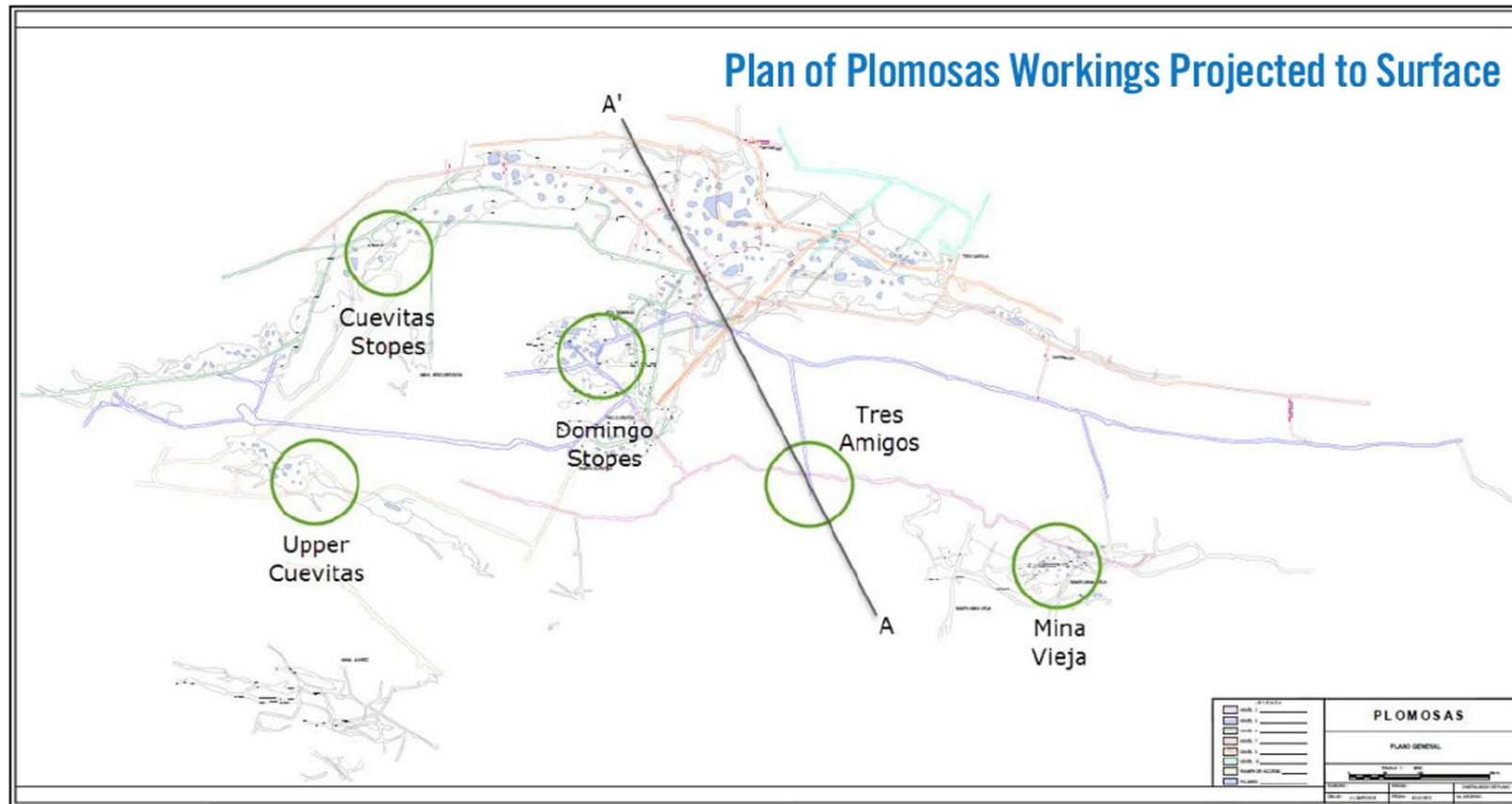
Sample	Elev.	Type	Zn %	Pb %	Ag g/t
CV022	988.090	Channel	39.58	12.55	63.5
CV023	992.368	Channel	42.32	4.39	56.9
CV025	998.334	Channel	43.59	13.05	52.6
VJ003	1124.365	Channel	43.82	4.80	41.0
VJ015	1105.509	Channel	31.22	2.25	38.4
CV021	1003.780	Channel	26.50	8.22	34.3
CV026	989.020	Channel	24.20	9.66	32.1
TRS1	1000.171	Grab	24.20	0.80	13.3
VJ019	1106.179	Channel	23.10	3.52	30.7
VJ006	1121.258	Channel	22.70	8.39	31.3
CV015	1115.010	Channel	22.40	10.55	25.3
28VJ004	1125.661	Channel	22.40	7.75	32.0
CV016	1113.049	Channel	21.90	9.02	26.1
CV008	1111.427	Channel	20.70	7.76	14.6
CV009	1113.340	Channel	19.35	11.75	29.7
CV024	995.496	Channel	19.25	7.19	41.3
CV001	1114.060	Channel	18.05	9.33	24.5
LVL5ST	990.430	Grab	16.00	12.20	28.0

- Previously unexplored mineralised zones identified (highlighted in orange);
- Sampling confirms widespread high grade through the mine;



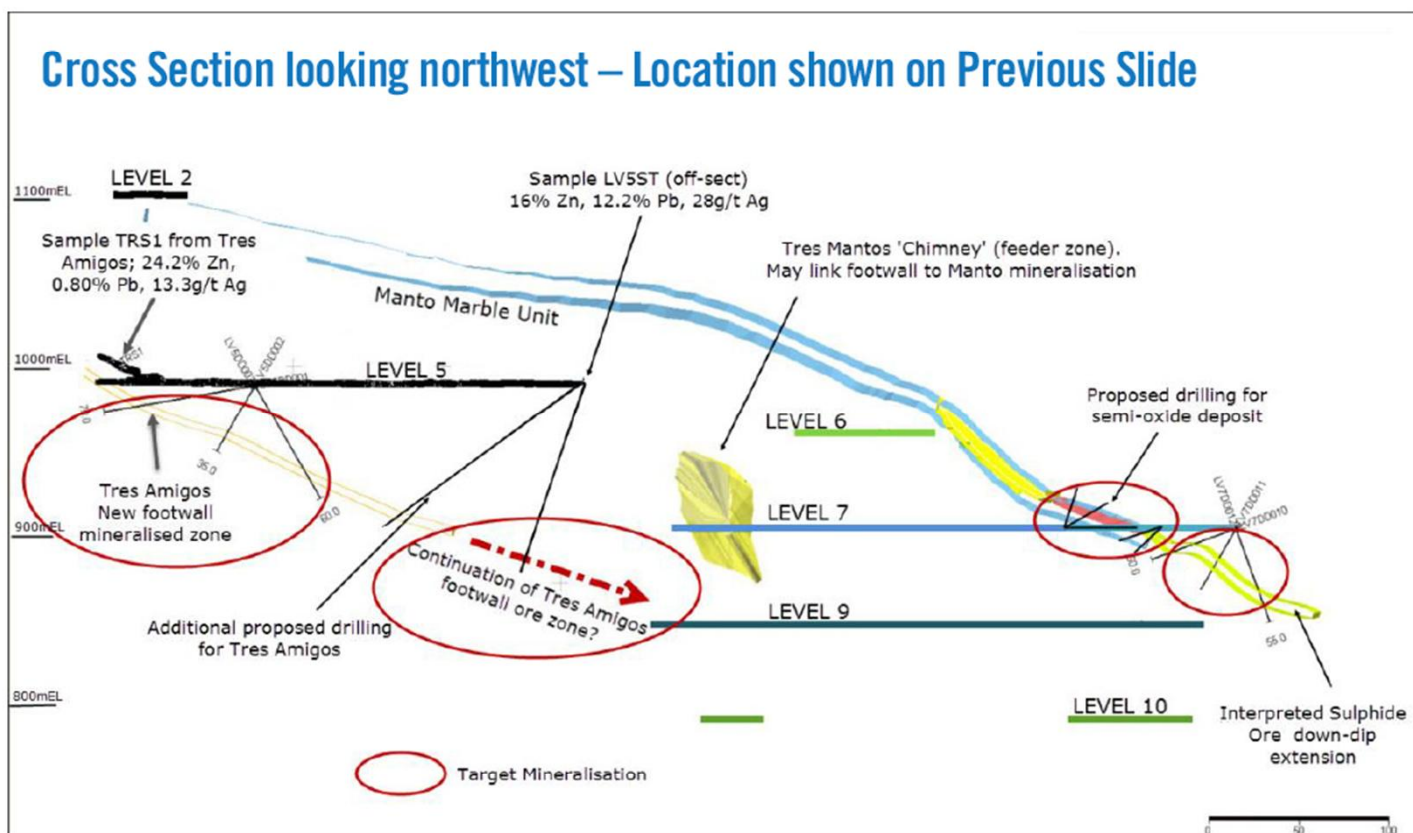


# Plomosas – Exploration Areas



- Recent Sampling areas showing the widespread nature of the high grade mineralisation.
- Section A-A' (next slide) illustrates the drill targets for the initial campaign to commence within 2-3 weeks
- Drilling from Level 7 requires additional underground development which is underway

# Plomosas – Stage 1 planned drilling



» Note location of unexplored footwall zone – Tres Amigos and potential extensions



# Plomosas – Technical keys (1)



<b>Mine infrastructure</b>	Excellent condition, minor u/g rehab required
<b>Production rate (e)</b>	Current infrastructure can handle 1,000 tpd from multiple headings
<b>Mining method</b>	Cut and fill method expected to maximise ore recovery
<b>Operating Costs</b>	Comparison & estimates suggest opex will be low (tbc by FS)
<b>Upside potential/Mine life</b>	Comparison & estimates suggest opex will be low (tbc by FS)
<b>Immediate targets</b>	Comparison & estimates suggest opex will be low (tbc by FS)



# Plomosas – Technical keys (2)



## Processing plant

Current plant is pilot scale - can be upgraded to 200tpd but a larger full-scale operation requires a new concentrator

## Plant upgrade

Low capex to upgrade current plant – US\$850K

## Concentrate

Historically very clean - Zn-Pb-Fe-Ag with very minor other elements. High recoveries.

## Process water

Groundwater neutral and benign (pH 6.74);

## Permitting upgrade

Full permitting expected to take around 6 months from submission





# Plomosas – Timeline



- Initial drilling campaign targeting 3 areas – **COMMENCING AUGUST 24;**
- Stage 1 JORC Resource (extensional from current mine) – November- December 2015;
- Scoping Study to run partly in parallel with JORC – January - February 2016
- Targeted development decision by second half 2016 based on:  
Initial 5-7 yr mine life for stage 1 with target production ramp up to 250,000 to 300,000 tonnes per annum

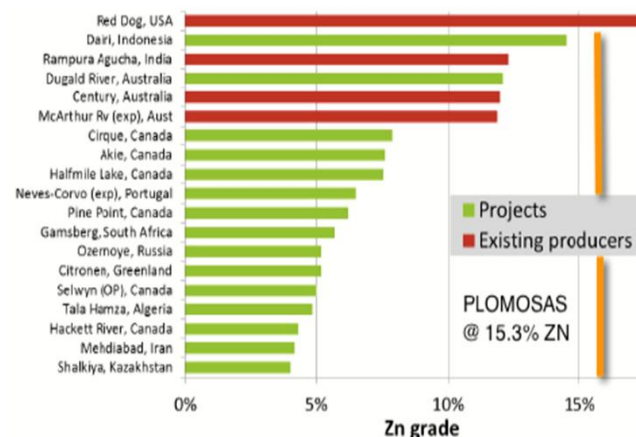
Milestone	2015										2016		
	March	April	May	June	July	August	September	October	November	December	January	February	March
Completion of DD and Cap Raise													
In mine sampling and dewatering													
Pre-drilling preparation underground													
Stage 1 in and near-mine drilling													
Extensional and Exploration drilling													
Stage 2 Expl. drilling (new targets)													
Resource Study and JORC													
Scoping Study													

# How does Plomosas compare?



**Zinc grade is higher than most deposits and competes with major, world class producers.**

Silver content offers significant credits to reduce operating costs.



## Profitable size and grade:

The Plomosas style and size of Zn-Pb-Ag deposit has been highly profitable around the world including the:

- Chihuahua region (eg Naica, Santa Eulalia), and
- Lennard Shelf, WA.

Lennard Shelf Resources (December 2000)					
Deposit	Tonnes	Zn %	Pb %	Zn+Pb%	Ag
Cadjebut	5,215,000	11.2	3.2	14.4	<10g/t
Cadjebut Splay Fault	390,000	1.4	14.4	15.8	<10g/t
Goongewa	2,571,000	8.5	2.8	11.3	40g/t
Kapok/Kapok E	4,636,000	9.4	8.6	18.0	10-15g/t
Kapok West	1,220,000	4.3	9.0	13.3	10-15g/t
Kutarta	2,340,000	7.2	0.5	7.7	40g/t
<b>CADJEBUT TREND</b>	<b>16,372,000</b>	<b>8.9</b>	<b>5.0</b>	<b>13.9</b>	
Pillara	18,786,000	7.8	2.6	10.4	15-20g/t
Napier Range	590,000	8.5	8.0	16.5	75g/t
Fossil Downs	1,460,000	10.1	1.6	11.7	30g/t
<b>TOTAL</b>	<b>37,208,000</b>	<b>8.4</b>	<b>3.7</b>	<b>12.1</b>	



# Summary & Overview



## The Plomosas project provides ConZinc with:

- Entry into a highly mineralised, low cost mining region.
- Low risk country with strong mining culture.
- Established offices, network and workforce.
- Ability to define mineral resources in short term
- Near term cashflow from assuming operations at our election
- Opportunity to establish operation with significant mine life.
- Outstanding upside potential through exploration and additional acquisitions.

## Plomosas features:

- Multiple, very high grade Zn-Pb-Ag deposits.
- Mining leases and some mining approvals in place.
- Immediate drill targets
- Good infrastructure and access.
- Clean mineralogy.
- Low cost and low capex mining and processing options.





» FOR FURTHER INFORMATION PLEASE CONTACT:

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**E: [wdix@conzinc.com.au](mailto:wdix@conzinc.com.au)**



## » APPENDIX

### ADDITIONAL INFORMATION





# Plomosas – District Exploration



## Zinc-Lead-Silver targets

Prospective mineralised horizon up to 25m thick can be readily identified and dips at low to moderate angles.

Plomosas concessions contain over 6km strike of the mineralised horizon – underexplored and requires drill testing.

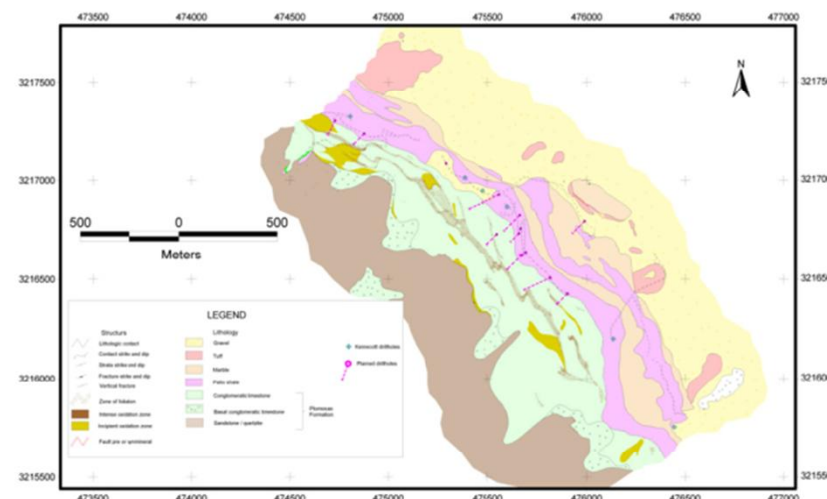
Mineralised sequence within horizon averages over 3m. Massive sulphide and part oxide mineralisation.

**Expect additional mineralisation down dip and repetitions along strike of current workings**

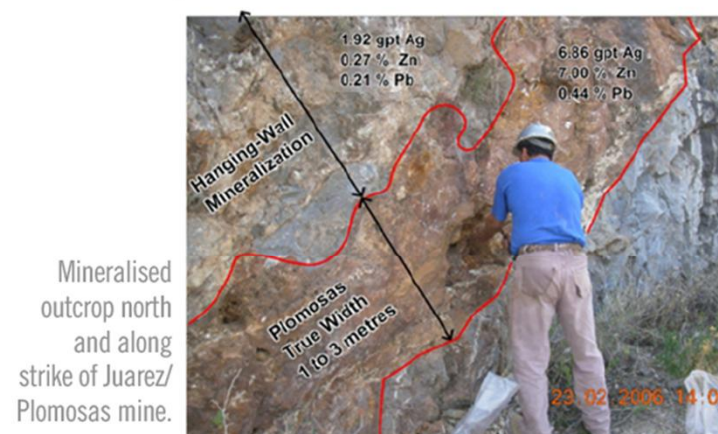
## EXPLORATION TARGET – STAGE 1

**Initial Exploration Target of 2.8 – 3.2 Mt mineralisation at 15% - 25% Zn+Pb and 60-80 g/t Ag**

down dip of existing mine workings (assuming advance additional 125 – 215mbs at 20kt per vertical metre)



1700m underexplored mineralised horizon around Plomosas mine





# Plomosas – District Exploration Targets

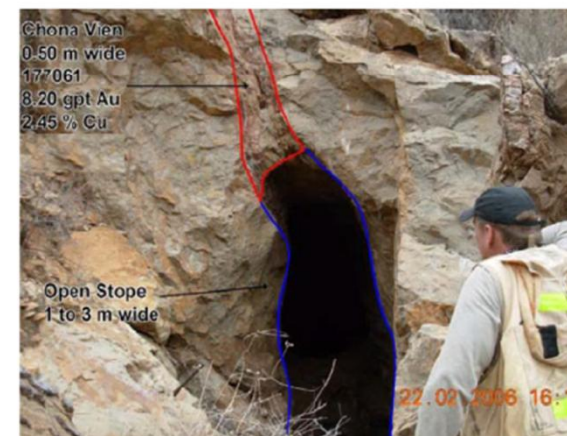


## Copper-gold epithermal mineralisation

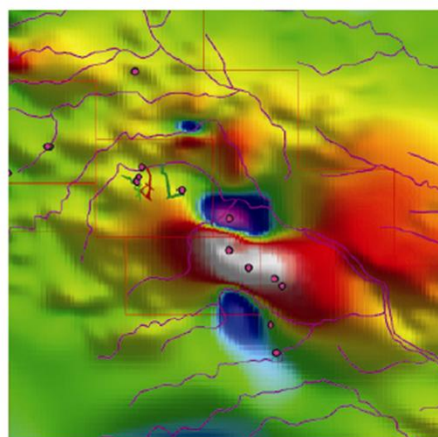
Chalcopyrite and gold encountered in parts of Plomosas including near intrusive in Juarez.

Narrow epithermal Cu-Au veins mined 4-7km WNW of Plomosas.

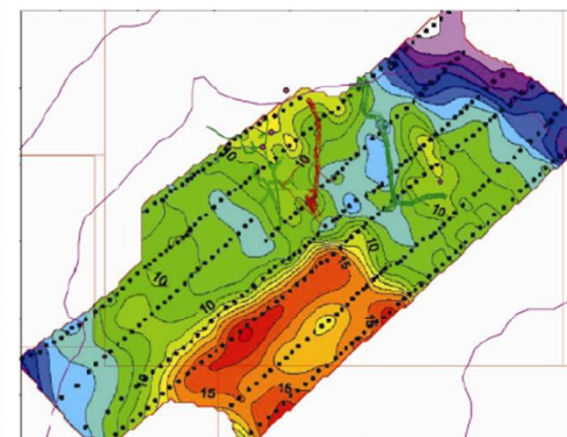
Gravity and magnetic survey (North Minera ) suggests major intrusive at depth below the old camp. Source of mineralising fluids?



Chona Cu-Au vein



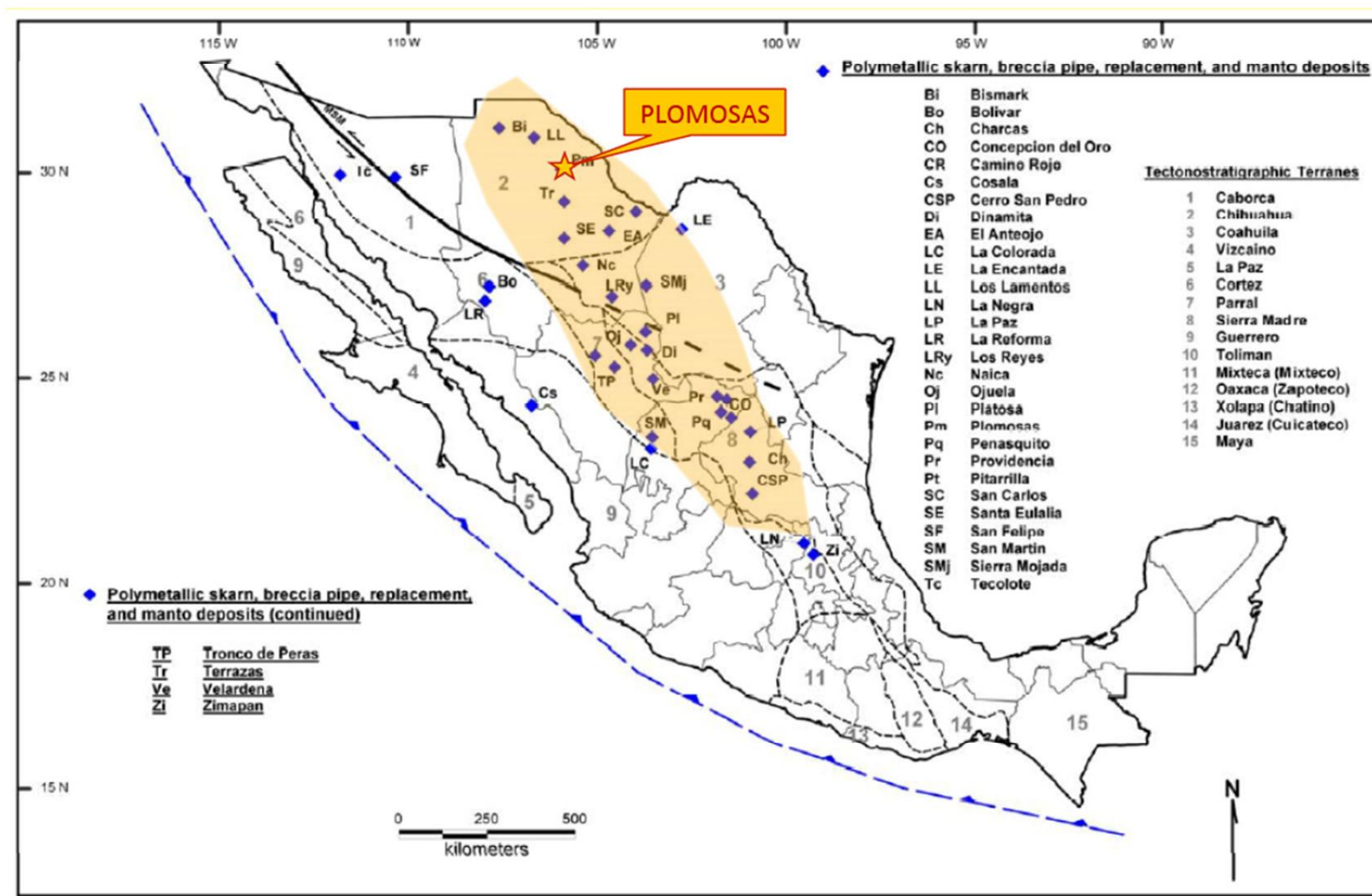
Magnetic survey



Gravity survey

Magnetic and gravity surveys completed by North Minera (2000). Anomalies interpreted as significant intrusive at depth (black rectangle is area of gravity survey).

# Chihuahua BM deposit trend





# Mining



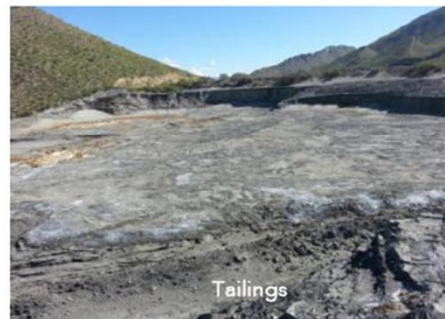
- Plomosas comprises three underground mines (Vieja, Juarez and Cuevitas) accessed via 3 separate portals.
- Cuevitas contains the largest historic workings with decline and shaft down to a total depth of over 250mbs (Level 10). Workings on an below Level 5 (135 mbs) are currently being prepared for access.
- No development mining is currently being undertaken.
- Access to the working areas is via historic declines (~3.5m wide x 3m high). The integrity of the declines is sound, despite the absence of any ground support in the vast majority of the decline system.
- A review of the haulage strategy and decline sizes may be required for future planned production rates.
- Ore is produced via small room and pillar stopes using traditional drill and blast techniques. Blasted ore is loaded into either a small underground truck or modified Ford F450 truck with small (1.5 to 2.5 cubic yard) Load Haul Dump (LHD) units



# Pilot Processing Plant



- Ore is currently trucked 90km to a concentrator near Chihuahua for batch processing. Zinc and lead concentrates are then trucked 1700km to the port of Manzanillo, where it is sold under an existing contract.
- A small concentrator is installed on site but is currently not operational. The concentrator includes:
  - Dual stage crushing and screening circuit;
  - 2 small ball mills (2 x 25hp);
  - Two banks of float cells each containing 4 float cells;
  - Two thickeners;
- Plan to recommission to reduce operating costs and increase revenue.
- The majority of the equipment appears to be in good mechanical repair with minimal corrosion with only parts of the electrical installation needing replacement.





# Operations – Historic Focus

## Mining

Three discrete ore bodies accessed via their own portals (Vieja, Juarez and Cuevitas) Cuevitas contains the largest historic workings with decline and shaft down to a total depth of over 250mbs (Level 10).

Workings on an below Level 7 (185 mbs) are currently being dewatered and refurbished for access.

The integrity of the declines is sound, despite the absence of any ground support in the vast majority of the decline system.

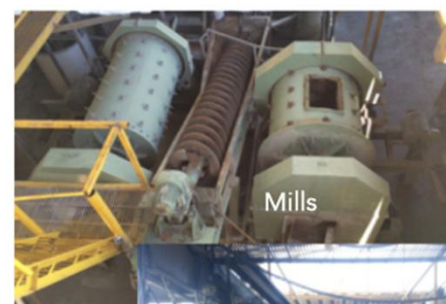
Ore produced via small room and pillar stopes using traditional drill and blast techniques and extracted via shafts or declines.

## Processing

A small pilot scale concentrator is installed on site but is currently not utilised.

Possible to recommission to reduce operating costs and increase revenue.

Ore was recently trucked 90km to a concentrator near Chihuahua for batch processing. Zinc and lead concentrates are then trucked to the port of Manzanillo, where it is sold under an existing contract which expires in mid 2016 and can be re-negotiated.

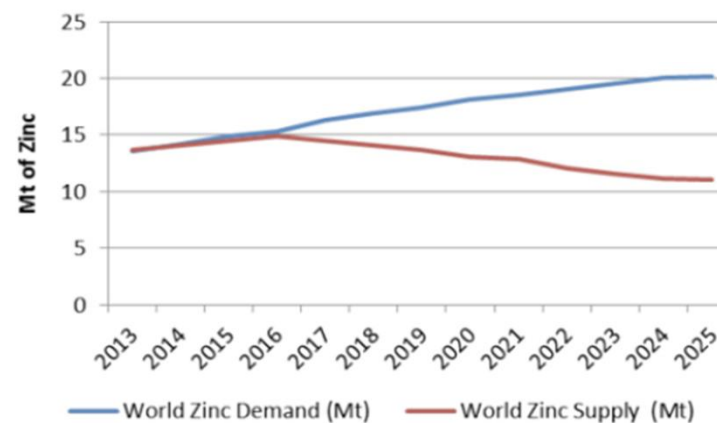


# Future of Zinc



## Zinc demand to outstrip supply, underpinning price

- Several large mines to close over the next 4 years including *Century, Brunswick/perseverance, Lisheen. Platts (Jan 2014), AMG (2014)*
- Stocks have declined  
*LME, International Zinc Assoc (IZA) (April, 2014), Glencore (2014), HDR Salva (2014)*
- Demand to remain steady with increases from 2016.  
*International Zinc Assoc (IZA) (April, 2014), HDR Salva (2014)*



ZINC LME WAREHOUSE LEVEL - ZINC PRICE  
Jan 1, 2010 - Dec 5, 2014

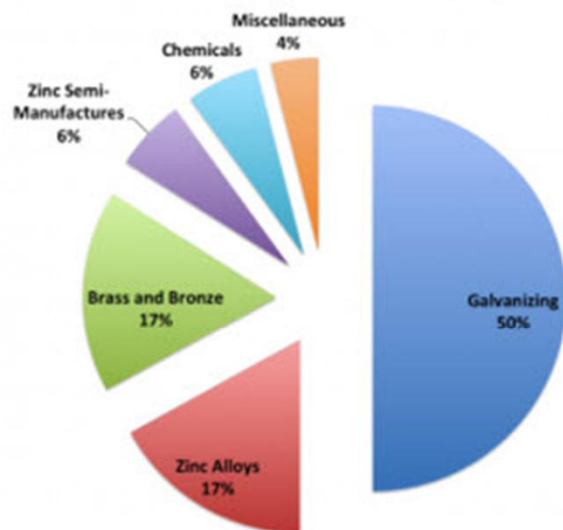




# Zinc Market Details



Major Zinc End Uses



- At present, approximately 75% of the zinc consumed worldwide originates from mined ores and 25% from recycled or secondary zinc.
- Zinc is the 4th most utilised metal in the world.
- Rises in apparent demand of 9.2% in the United States and 13.8% in China were the main drivers behind an increase in global zinc metal usage of 7.4% for 2014 to date.
- Demand in Europe rose by a more modest 0.7%.
- Chinese net imports of refined zinc metal increased by 8.7% to 448kt.

(Source: ILZSG 19th November 2014)

World Refined Zinc Supply and Usage 2009 - 2014

000 tonnes	2009	2010	2011	2012	2013	2013	2014	2014			
						Jan-Sep		Jun	Jul	Aug	Sep
Mine Production	11605	12346	12590	12770	13196	9729	9909	1133.3	1167.3	1168.0	1086.1
Metal Production	11271	12896	13064	12630	12873	9550	9955	1122.7	1144.3	1133.2	1160.9
Metal Usage	10905	12649	12699	12386	12970	9555	10264	1166.2	1166.2	1185.3	1161.4

Source: ILZSG