

# **DECEMBER 2015 QUARTERLY REPORT**

#### **AUSTRALIA**

#### Collerina Copper-Zinc Prospect (NSW):

- A three hole 600m RC drilling program at the Collerina high grade Copper-Zinc Prospect was completed to test extensions of the main high grade zone. Drill hole CORC019, which intersected 12m @ 5% Cu, 2.1% Zn & 0.5g/t Au, within 21m @ 3.2% Cu, 1.3% Zn and 0.3g/t Au.
- Drill hole CORC019 is located 250m east of the previous high grade intercept of 14m @ 4% Cu & 1.3% Zn (ref: Figure 3). The result was the first intercept in primary sulphides and recorded peak assays of 12.6% Cu, 4.7% Zn & 1g/t Au in the 1m samples.
- A Down Hole EM Survey in the three RC holes was also completed identifying further EM conductors east of the drilling to date.
- A three hole 410m diamond drilling program was completed in December intersecting further massive sulphides and assisting in defining geological controls of the main zone mineralisation. The core has been returned to Perth for detailed logging and sampling, with assays expected in February.

### CHILE

### Joshua Porphyry Project:

- Joint venture partner EPG completed a six hole 3,500m diamond drilling program at the Joshua Project. Drilling identified at least three porphyry events with Andesitic, Dioritc and Dacitic Porphyry rocks present within Target 1. The 2015 drilling program has extended the known strike of Target 1 to at least 800m.
- The Company has received assays for the first two holes, drilled on the western side of Target 1, with both returning significant widths of porphyry mineralisation from surface.
- Hole 1 returned: 94m @0.4% Cu, 0.05g/t Au, 1.2g/t Ag and 10ppm Mo, within 650m @ 0.2% Cu, 0.05g/t Au, 1.1g/t Ag and 10ppm Mo from surface.
- Hole 3 which was drilled on the south-western edge of Target 1 has returned 14m @ 0.6% Cu, 0.1g/t Au, 35ppm Mo, within 654m @ 0.2% Cu, 0.04g/t Au, 25ppm Mo from surface.
- EPG has advised that results from the remaining four holes are imminent.

### **CORPORATE**

- As at 31 December 2015, the Company remains funded to achieve its 2016 business goals with \$1.6m in cash.
- The Company disposed of its shareholding in WPG Resources Limited and Tigers Realm Coal Limited for total proceeds of \$0.64m.

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#### PROJECT ACTIVITIES

#### **NSW - COPPER AND GOLD**

# **Collerina Copper-Zinc Prospect**

The Collerina Prospect is located within a regionally significant VMS prospective belt between the Tritton Mine to the North and Tottenham deposits to the south in Central NSW.

The prospect is defined by an open-ended large base metal and gold soil anomaly and associated moving loop EM conductor and lies within a regionally significant VMS trend.

During the quarter Helix completed RC and diamond drilling programs and further down hole EM.

A RC drilling program was completed in October designed to test an additional 150-200m of strike in an easterly direction.

Drill hole CORC019 from this RC drilling program targeted extensions of the main high grade zone and returned exceptional intercept of 12m @ 5% Cu, 2.1% Zn, 0.5g/t Au & 17g/t Ag from 157m downhole, within 21m @ 3.2% Cu, 1.3% Zn, 0.3g/t Au, 10g/t Ag from 153m (Refer ASX Announcement on 10 November 2015)¹in primary sulphides, 250m east of previous high grade intercept in CORC002.

This result was the first intercept in primary sulphides within the main zone, returning peak assays of 12.6% Cu, 4.7% Zn, 1g/t Au & 39.5g/t Ag (Refer ASX Announcement on 10 November 2015)<sup>1</sup> in massive sulphides within this intercept. The result extended the strike of the system to over 500m in drilling so far, with the entire system remaining open down dip and down plunge.

Initial modelling of Down Hole EM from the October RC holes indicated the conductive material associated with the main zone horizon continuing at least a further 50m beyond the eastern-most hole and is modelled to continue at depth, with an off-hole conductor present in front of CORC018.

This work was followed by a three hole 410m diamond drilling program completed in December. The diamond drilling program was designed to target the high grade main zone to determine lithological and structural controls of the mineralisation.

Hole 1 (CODD001) targeted the main zone copper-zinc position close to the discovery hole CORC002 (14m @ 4% Cu – Refer ASX Announcement on 4 February 2015)<sup>1</sup>. Copper mineralisation in this hole is believed to be transition zone material.

The remaining two holes were drilled at the eastern end of the prospect, a hole close to CORC019 and a diamond tail in CORC018 to provide further information about the mineralisation characteristics and controls in fresh rock. All three holes have been sent to Perth to be logged in detail and cut for assay. Results from the drilling are expected in February.

Copper and zinc mineralisation at the Collerina Copper-Zinc Prospect is defined by drilling over a 500m length with the high grade zone (>3% Copper) defined over a strike exceeding 250m. It remains open in all directions.





Figure 1: Photos of core from 79.4m in CODD001 illustrating copper mineralisation in massive, semi-massive and vein type mineralisation from 81.4m - 99.8m





Figure 2: Photos of core from 99.8m in CODD001 illustrating copper mineralisation in massive, semi-massive and vein type mineralisation from 99.8m-105.5m, core photo finishes at 108.5m

Table 1: DDH Collar details – Collerina Copper-Zinc Prospect

Project	Site_ID	Easting	Northing	Dip	Azi	Total Depth	HoleType
EL6336	CODD001	505410	6455010	-70	204	120.8m	DDH
EL6336	CODD002	505615	6455000	-70	217	198.5m	DDH
EL6336	CODD003	505630	6455025	060	210	198-276.8m	DDH Tail



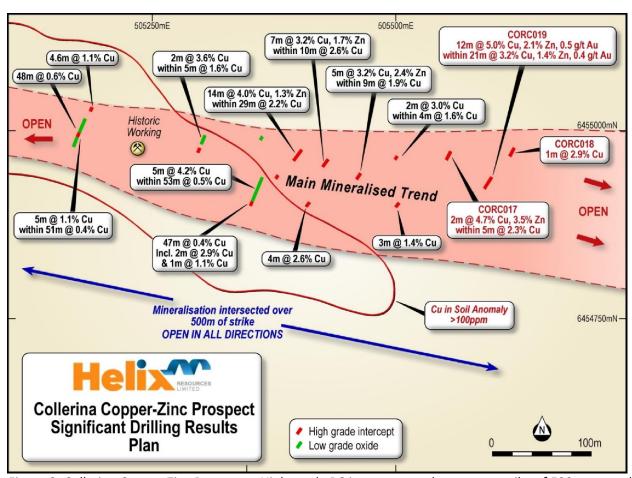


Figure 3: Collerina Copper-Zinc Prospect – High grade RC intercepts to date over a strike of 500m, open down dip and down plunge<sup>,</sup>

The best results in the RC drilling so far being:

**14m @ 4.0% Cu, 1.3% Zn, 0.7g/t Au, 17g/t Ag from 80m** (Refer ASX Announcement 4 February 2015)<sup>1</sup>; within 29m @ 2.2% Cu, 0.7% Zn, 9g/t Ag from 80m

**12m @ 5% Cu, 2.1% Zn, 0.5g/t Au & 17g/t Ag from 157m,** (Refer ASX Announcement 10 November 2015)<sup>1</sup> within 21m @ 3.2% Cu, 1.3% Zn, 0.3g/t Au, 10g/t Ag from 153m

**7m @ 3.2% Cu, 1.7% Zn, 0.6g/t Au, 11g/t Ag from 86m** (Refer ASX Announcement 1 April 2015)<sup>1</sup>; within 10m @ 2.6% Cu, 1.4% Zn, 0.5g/t Au, 9g/t Ag

**5m @ 3.2% Cu, 2.4% Zn, 0.7 g/t Au, 12g/t Ag from 97m** (Refer ASX Announcement 1 April 2015)<sup>1</sup>; within 9m @ 1.9% Cu, 1.4% Zn, 0.4g/t Au, 7g/t Ag.

**5m @ 4.2% Cu, 5g/t Ag from 48m to EOH** (Refer ASX Announcement 4 February 2015)<sup>1</sup>; within 53m @ 0.5% Cu from 0m- EOH

The highly encouraging results to date, along with results and information collected from the recent DDH program will be compiled and used to target additional mineralisation in 2016.



#### **CHILE**

Diamond drilling commenced and continued throughout the quarter at the Joshua Project in Region IV Chile. Hole 1, JS15-01, was drilled to a depth of 684.25m. Hole 3, J0-03, was drilled west from the top of Target 1 to a depth of 683m approximately 120m south of Hole 1. This hole was designed to test behind and south of hole 1.

Copper grades in Hole 3 increased in the last 14m of porphyry-style lithologies to 654m, before entering country rock. A single 2m sample from within this zone returned 2m @ 0.8% Cu and 0.1g/t Au (Refer ASX Announcement on 17 December 2015)<sup>1</sup>.

This grade increase at depth is consistent with the geological model for the system.

The 3,500m diamond drilling program has now been completed by the projects JV partner, EPG, with 6 holes drilled into Target 1. All holes have intersected porphyry-style mineralisation. The program has extended the known strike of the system to at least 800m.

Remaining core samples were dispatched to the laboratory for assay and EPG advise the results for the remaining holes are imminent.

The drilling to date has identified the presence of at least three porphyry events including: Andesitic, Dacitic and Dioritic porphyry rocks, associated with the copper mineralisation at the Joshua Project.

The main Joshua porphyry target is at least 3 kilometres across and 1 kilometre wide comprising a large copper in soil anomaly coincident with a large IP anomaly, continuing to a depth in excess of 500m from surface. The main Joshua porphyry target comprises Target 1, the Carmelita Mine zone and Target 4.

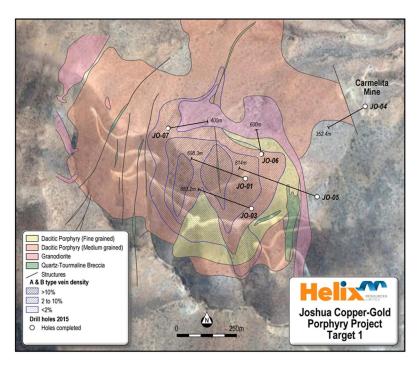


Figure 4: The 2015 Drill hole traces on Joshua Target 1 plan map



**Table 2: Drill Collar locations to date** 

Hole ID	Easting (WGS84-19S)	Northing (WGS84-19S)	RL (above sea level)	Azimuth	Dip	Target Depth	Drilled Depth	Comment
JO-01	320750	6613450	1500	290	-70	500	695	
JO-02	320820	6613350	1444	290	-75	600	30	Abandoned
JO-03	320820	6613355	1444	280	-75	600	683	
JO-04	321250	6613750	1178	240	-60	300	352	
JO-05	321050	6613375	1348	290	-65	700	815	
JO-06	320890	6613550	1416	350	-80	600	638	
JO-07	320372	6613672	1416	80	-65	450	242	

Table 3: Results to date (Refer ASX Announcements on 25 November 2015 and 17 December 2015)<sup>1</sup>

Hole ID	From	Result
JO-01	0m	650m @ 0.2% Cu, 0.05g/t Au, 1.1g/t Ag and 10ppm Mo
Incl.	388m	94m @ 0.4% Cu, 0.05g/t Au, 1.2g/t Ag and 10ppm Mo
JO-03	0m	654m @ 0.2% Cu, 0.04g/t Au and 25ppm Mo*
Incl.	638m	14m @ 0.6% Cu, 0.08g/t Au and 35ppm Mo (to end of porphyry rocks)*

Intersections based on 2m sampling, assayed using mixed acid digest technique for base metal and fire assay for gold. Results are based on a 0.1% Cu cut-off grade and subject to rounding.

<sup>\*</sup>Silver assays remain outstanding at the time of reporting.



#### **About the Joshua Project**

The Joshua Project is located in Region IV Chile, 40km East of Ovalle, at low altitude (less than 1,700m), nearby to infrastructure (refer Figure 2). Four porphyry targets have so far been identified in a regionally significant north-west structural corridor within the total project area of 100km<sup>2</sup>.

The main porphyry system (Target 1, Carmelita Mine & Target 4) is defined by an IP anomaly covering 10km<sup>2</sup> and is coincident with anomalous soil geochemistry over the target zone.

#### **About the Joshua Project Joint Venture**

An Earn-In Agreement over the Joshua Project was executed in June 2015 with Fondo De Inversion Privado EPG Exploracion Minera (EPG Mining Exploration Fund). The fund is managed by EPG Partners S.A, a Chilean based private equity and advisory company. The fund retains an experienced team and is uniquely suited to capturing exploration opportunities in Chile.

Key terms of the Joshua Agreement are:

- Stage 1: EPG has the option to earn a 33.4% interest in the Joshua Project by undertaking a minimum of 3,500m of diamond drilling within 1 year for a minimum commitment of US\$1.2m.
- Stage 2: Upon completion of Stage 1, EPG can then elect to increase its interest to 50.1% in the Joshua Project by completing up to 6,500m of RC and diamond drilling within 1.5 years for a minimum commitment of US\$1.8m.
- Following the completion of the two stage program, EPG will have a 50.1% interest in the project and Helix will retain a 49.9% interest in the project. A Joint Venture over the project will then form to progress the project.

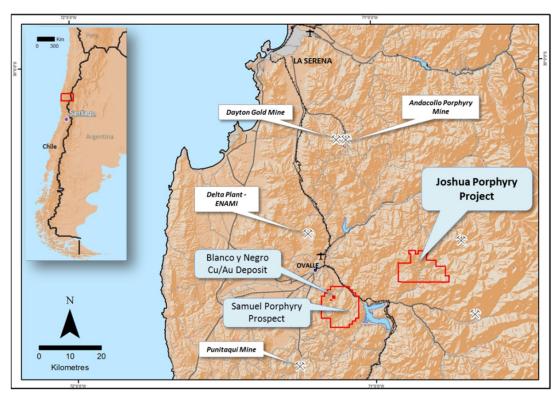


Figure 5: Helix Projects in Chile Location Map



#### **CORPORATE**

#### **Cash and Investments**

As at 31 December 2015, the Company remains well funded to achieve its 2016 business goals with \$1.6m in cash. Refer to Appendix 5B (ASX website) for principle movements in cash for the quarter.

The Company disposed of its shareholding in WPG Resources Limited and Tigers Realm Coal Limited for total proceeds of \$0.64m.

### **OTHER ASSETS**

#### Canbelego Project - NSW

(HLX 70% Manager: Straits 30% Contributing) An Inferred Resource of 1.5Mt @ 1.2 % (refer to resources table below) Copper from surface at the Canbelego Prospect with further potential for oxide copper from surface on 3 advancing prospects (Canbelego, Canbelego West & Cabollero). There also remains untested VMS-style mineralisation associated with a strong DHEM conductor below the Canbelego deposit, below up-dip intercepts including 2m @ 6.8% Cu & 5m @2.4% Cu (Refer ASX Announcement 26 September 2013).<sup>1</sup>

#### Yalleen Iron Ore Project - Western Australia

Yalleen Project has a resource 84Mt @ 57% Iron ore in Indicated and Inferred Resources (refer to resources table below) on 575km<sup>2</sup> of tenements in the West Pilbara owned by Helix Resources – API JV: iron ore rights only Helix is diluting to a royalty over iron ore production from the tenements.).

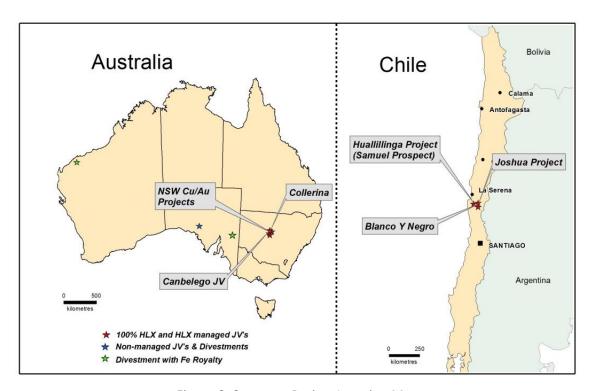


Figure 6: Company Project Location Map



# **Capital Structure**

ASX Ticker Code	HLX
Share Price	AU\$0.03
Market Cap	\$8M
Fully Paid Shares	268M

## **Directors and Management**

Pasquale Rombola	Non-Executive Chairman
Michael Wilson	Managing Director
Jason Macdonald	Non-Executive Director

#### **Assets**

Cash	\$1.6 million
NSW- Restdown Gold JV (70%)	2.6Mt @ 1.2g/t Au (100%) – (JORC 2004)*
NSW - Canbelego JV (70%)	1.5Mt @ 1.2% Cu (100%) – (JORC 2004)*
NSW – Cobar Region	Au/Cu projects with advancing targets
NSW – Collerina Project	New Copper-Zinc discovery
Chile – Joshua Project	Significant Cu-Au porphyry - JV funding drilling program
Chile – Huallillinga Project	Blanco Y Negro: 1.5Mt @ 1.4% Cu, 0.5g/t Au (JORC 2012)* – Samuel Porphyry Prospect: Large Cu porphyry target*

<sup>\*</sup>Refer to Resource Inventory table below and previous ASX releases or at www.helix.net.au

## **Resource Inventory**

Commodity	Category	Project	Interest	Resource
Copper	Indicated	ByN, Chile	100% Helix	0.8Mt @ 1.5%Cu + 0.5g/tAu
(+Gold)	Inferred			0.7Mt @ 1.3%Cu + 0.6g/tAu
	Total			<b>1.5Mt @ 1.5%Cu + 0.5g/tAu</b> (at 0.5% Cu
				Cut-off) – 2012 JORC**
Copper	Inferred	Canbelego	70% (Straits	1.5Mt @ 1.2% Cu for 18,000t* Contained
		JV, NSW	Contributing 30%)	Cu (at 0.3% Cu Cut-off)
Gold	Inferred	Restdown	70%	2.6Mt @ 1.2g/t Au for 100,000oz
		JV	(Glencore 30%)	(0.3 g/t Au cut off)***
Iron Ore	Indicated	Yalleen JV,	30%	47.9Mt @ 57.3% Fe (Channel Iron)****
	Inferred	WA	(Diluting)	36.4Mt @ 57.1% Fe (Channel Iron)****

Joint ventured with API Management Pty Ltd (50% Boasteel, 50% AMCI) and forms part of their West Pilbara Iron Ore Project [WPIOP] which comprises multiple JV's.

<sup>\*</sup> Refer to ASX announcement 7 October 2010.<sup>2</sup>

<sup>\*\*</sup> Refer to ASX announcement 13 August 2015.<sup>2</sup>

<sup>\*\*\*</sup> Refer to ASX announcement 17 August 2011.<sup>2</sup>

<sup>\*\*\*\*</sup> Refer to ASX announcement 24 April 2009.<sup>2</sup>



### **Helix Resources Tenements**

Helix Resources	Tenements		
Tenement	Name	Mineral	Ownership
	NSW COPPER & GO	LD PROJECTS (INCL. CANBELEGO A	ND RESTDOWN JV's)
EL6105	Canbelego	Copper/Gold	Helix 70%, Straits 30%
EL6140	Restdown	Gold/Copper	Helix 70%, Glencore 30%
EL6336	Collerina	Copper/Gold	HLX 100% precious and base metals
EL6501	South Restdown	Copper/Gold	Helix 70%, Glencore 30%
EL6739	Muriel Tank	Gold/Copper	Helix 70%, Glencore 30%
EL7438	Quanda	Copper/Gold	HLX 100%
EL7439	Fiveways	Copper/Gold	HLX 100%
EL7482	Little Boppy	Copper/Gold	HLX 100%
	YALLEEN IRON ORE	PROJECT	
E47/1169-I	Yalleen	Iron ore/Base metals	HLX 100%, API Management Pty Ltd 70% iron
E47/1170-I	Yalleen	Iron ore/Base metals	HLX 100%, API Management Pty Ltd 70% iron
E47/1171-I	Yalleen	Iron ore/Base metals	HLX 100%, API Management Pty Ltd 70% iron
	CHILE PROJECTS		
	EXPLORATION CON	CESSIONS	
Joshua 1-39	Joshua	Copper/Gold	HLX 100% (EPG Earning in)
Bogarin 1-48	Huallillinga	Copper/Gold	HLX 100%
	EXPLOITATION CON	ICESSIONS	
Blanco Y Negro 1/20	Blanco Y Negro	Copper/Gold	HLX 100%
La Cana 11/20	Blanco Y Negro	Copper/Gold	HLX 100%
Joshua A1/150	Joshua	Copper/Gold	HLX 100% (EPG Earning in)
8.41	4		

# **Mining Tenements disposed**

Nil

Beneficial percentage interests held in farm-in or farm-out agreements

Nil

Beneficial percentage interests in farm-in or farm-out agreements acquired or disposed

Acquired - Nil

Disposed - Nil



#### **Notes**

- <sup>1</sup> Helix Resources is not aware of any new information or data that materially affects the information included in the said announcement.
- <sup>2</sup> For more information on the Resource estimate, refer to ASX announcement. Helix Resources is not aware of any new information or data that materially effects the information included in the said announcement.

## **Competent Persons Statement**

The information in this announcement that relating to previous reported Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr M Wilson who is a full time employee of Helix Resources Limited and a Member of The Australasian Institute of Mining and Metallurgy. Mr M Wilson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr M Wilson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Details of the assumptions underlying any Resource estimations are contained in previous ASX releases or at www.helix.net.au