

# ASX Announcement 13 July 2022

# More Visual Copper and New RC Drilling Starts – Rochford Copper Trend

- 5,000 metre (m) reverse circulation (RC) drilling program commenced to test new targets at Greater Canbelego and Caballero prospects along the Rochford Copper Trend
- Visual copper mineralisation intersected in first two RC drill holes testing new lode positions approximately 200m west of the Canbelego Main Lode within the Greater Canbelego Joint Venture project area
- Three recently completed diamond holes intersected copper sulphide (chalcopyrite) mineralisation
  within the Canbelego Main Lode target zone supporting new interpretation of 'south plunging' shoots
  and mineralisation extending well beneath the current Canbelego Inferred Mineral Resource<sup>1</sup> outline

Helix Resources Limited (ASX: HLX) ("Helix" or "the Company") is pleased to provide an update on the ongoing exploration drilling on the Rochford Copper Trend at its Canbelego Joint Venture (JV) Project located in the Cobar region of NSW.

A ~5,000m RC drilling program has recently commenced to test copper-lode targets in the 'Greater Canbelego' area and the Caballero Prospect which is located 2.5km south of Canbelego Main Lode, along the Rochford Trend. The RC drilling follows the completion of the latest Canbelego Main Lode diamond drilling program, consisting of four drill holes, CANDD010 to CANDD013.

The diamond drill holes tested the new geological interpretation for the Canbelego Main Lode of a high-grade copper shoot plunging south, not north, highlighted by the CANDD002 intercept of 14m at 4.2% copper<sup>2</sup> and potentially a second shoot to the southeast (refer **Figure 1 Long Section**).

- Preliminary geological logging is highly encouraging with copper minerals observed<sup>3</sup> at the northern shoot position in drillholes CANDD010 and 012. These were drilled approximately 50 metres 'up' and 'down'-plunge (respectively) from the high-grade copper intercept in CANDD002. Helix geologists recorded narrow zones of high-intensity chalcopyrite (copper sulphide) veins within broader zones of disseminated chalcopyrite (refer **Figure 2 Chalcopyrite veins in drill core**).
- The southern shoot position was tested with CANDD011 and CANDD013. CANDD011 intersected a broad ~18m interval of disseminated and vein chalcopyrite (refer Figure 3 semi-massive chalcopyrite in drill core) and CANDD013 intersected a narrow zone (<3m) of vein and disseminated chalcopyrite, including a 40cm zone of >10% chalcopyrite, in the interpreted 'South Shoot' position (only preliminary log available).
- All assays for CANDD010 to 013 are pending.

The first two RC holes of the new RC program both hit visual copper mineralisation testing a newly identified parallel lode position (CBW1) 200m west of the Canbelego Main Lode (refer **Figure 4 Location Plan**). One drillhole intersected oxide copper minerals (malachite and chalcocite) at shallow depths (7 to 34m downhole in

<sup>&</sup>lt;sup>1</sup> Refer Attachment 1 for further details on Mineral Resource

<sup>&</sup>lt;sup>2</sup> Refer ASX Report 12 May 2021 and 23 June 2021

<sup>&</sup>lt;sup>3</sup> Refer Cautionary Statement on Reporting Visual Estimates of Mineralisation on page 2 of this report



CBLRC032). The second hole intersected a 4m interval of disseminated and vein chalcopyrite from 94m in CBLRC031. These intersects extend the mineralisation in the CBW1 Lode approximately 60 metres to the north – and this lode remains open to the north and at depth.

The RC drilling program will continue testing the newly identified parallel lode positions to the west of the Canbelego Main Lode and then move south to the Caballero Prospect to follow-up on promising anomalous RC drill results returned in 2018 but not followed up.

## Commenting on these drill results, Helix Managing Director Mike Rosenstreich said:

"The current diamond and RC drilling is providing strong encouragement of deeper high grade copper shoots at Canbelego Main Lode and potential parallel 'look-a-likes' in close proximity. This RC drill program comprises approximately 40 holes and we are excited to start drill testing other, earlier stage prospects, such as Caballero along the Rochford Copper Trend. Copper mineralisation is typically very 'visual' and RC drilling is much quicker than diamond core drilling - so we can make drill decisions and share news more regularly ahead of assays – which are still taking 60 to 80 days."

Please refer to the following Technical Report section for further details.

#### CAUTIONARY STATEMENT ON VISUAL ESTIMATES OF MINERALISATION

References in this announcement to visual results are from diamond drill core. Visible mineralisation in HQ and NQ core drilling. Fresh sulphide mineralisation (CANDD010 to CANDD013) consisted of disseminated chalcopyrite and veins, stringers and semi-massive chalcopyrite and pyrrhotite.

Visual estimates of percentages are based on logged visual observations of the drill core surface as presented in the core trays and may not be representative of the entire sample interval. Laboratory assays are required for representative estimates of copper and other metal content abundance.

Mineralised sections will be cut and sampled the for assays. Assay results for these holes are expected in mid-August 2022. Refer to Appendix 2 for further details.



Figure 1: Canbelego Main Lode Inclined Long Section



Figure 2: CANDD012, interval of chalcopyrite veins in chlorite altered pelite from 426m



Figure 3: CANDD011, interval of semi-massive chalcopyrite with approximately 15% of chalcopyrite from 152m.



Figure 4: Location Plan Greater Canbelego JV Project Area

## TECHNICAL REPORT – CANBELEGO DIAMOND DRILLING (CANDD010 to CANDD013) AND RC DRILLING

## Introduction

The Canbelego Copper Project lies along the regional scale Rochford Copper Trend. It is a 70:30 'contributing' JV (Helix 70% and Manager, Aeris Resources Ltd (ASX:AIS) 30%).

The Company considers that the Rochford Trend has the potential to host 'Cobar-style' copper deposits analogous to the large-scale, high-grade mineralisation found at the nearby CSA Copper Mine.

In 2021, the JV drilled five diamond drillholes for nearly 2,000 metres around and beneath the Canbelego Mineral Resource<sup>4</sup> or Main Lode, after an 8-year exploration hiatus. Since then, further RC and diamond drilling has been undertaken identifying new, parallel lode positions to the west of the Canbelego Main Lode and highlighting high-grade shoot extensions on the Main Lode.

In addition, Helix has undertaken detailed geological and structural logging of all its drill core which is yielding new interpretations which are being utilised to target the current round of drilling.

Four diamond core holes have recently been completed into the Main Lode (CANDD010 to CANDD013) targeting down dip extensions of high-grade mineralised shoots. Visual observations<sup>5</sup> of copper minerals are reported for all four diamond holes, albeit those for CANDD013 are preliminary and made whilst the core was on the drill site.

RC drilling is currently in progress, following up the anomalous copper results returned from RC drilling in early 2022<sup>6</sup> in the parallel lode positions west of the Canbelego Main Lode.

<sup>&</sup>lt;sup>4</sup> Refer Appendix 1 for details on Mineral Resource estimate

<sup>&</sup>lt;sup>5</sup> Refer Cautionary Note on Visual estimates on Page 2

<sup>&</sup>lt;sup>6</sup> Refer ASX Reports 10 February 2022 and 12 April 2022



This report provides an update of the visual results from CANDD010 to CANDD013 and the first two RC holes and an outline of the ~5,000m RC program, which commenced on 8 July 2022.

For further technical details please refer to **Appendix 2 JORC Code Table 1**.

## Canbelego Main Lode Visual Copper-Sulphide Results CANDD010 to CANDD013

Drill holes CANDD010 and CANDD013 were completed in May and June 2022. Logging and sampling of CANDD010 and CANDD011 has been completed and is in progress for CANDD012. Logging of CANDD013 will commence shortly.

The Main Lode target for CANDD012 was down-plunge of the high-grade intercept reported in 2021<sup>7</sup> from CANNDD002 (**14m @ 4.22% Cu** from 352m, refer **Figure 1 Long Section**), referred to as the 'North Shoot' position. CANDD012 targeted the Main Lode approximately 45m down-plunge from CANDD002 and intersected a 14.3m mineralised zone of chalcopyrite veins, including a 5.3m strongly mineralised zone from 426m with up to 10% chalcopyrite in veins and breccia matrix within strong green and black chlorite alteration (refer to **Table 1** & **Figure 2 Chalcopyrite veins in drill core**).

CANDD010 targeted an up-plunge position of the North Shoot and intersected an upper zone of 6m from 290m of chlorite-silica altered metapelite with trace chalcopyrite and pyrrhotite associated with quartz veins, including a 1m zone from 293m with 2% chalcopyrite. A lower zone of 2.2m from 315m of dark-grey chlorite-rich schist, including 1m from 316m of 15% semi-massive chalcopyrite veins was also intersected (refer to **Table 1**).

The Main Lode target for CANDD011 was approximately 65m down-plunge of historic workings, in a possible 'South Shoot' position, and it intersected a 17.7m zone from 152m of chalcopyrite mineralisation, including 0.5m of semi-massive chalcopyrite with approximately 15% of chalcopyrite from 152m (**Figure 3 semi-massive chalcopyrite in drill core**). The lower 15m interval of this zone consists of trace to 1.5% chalcopyrite in veins, disseminations, and laminations, including 1m of 4% chalcopyrite from 163m (refer to **Table 1**).

Hole CANDD013 was targeting the down-plunge extension of the southern shoot of the Main Lode. A preliminary observation of the drill core indicates that CANDD013 intersected a narrow zone (<3m) of intense chlorite alteration and quartz veins with vein chalcopyrite, including a 40cm zone of >10% chalcopyrite, in the interpreted 'South Shoot' position (refer **Figure 1**). The South Shoot position remains open down-plunge.

Drill hole details for holes CANDD010 to CANDD013 are provided in Table 2.

#### Main Lode – Next Steps

Sampling of holes CANDD010 and CANDD011 has been completed and the samples submitted to the laboratory for assay. Logging of CANDD012 is in progress and sampling will commence shortly. Logging of CANDD013 will also commence shortly. Assay results for CANDD010 and CANDD011 are expected in mid-August, with assays for the remaining holes to follow.

Downhole EM (DHEM) surveys are planned for CANDD007, CANDD009 and CANDD013 in July. After the completion of the DHEM surveys and receipt of all outstanding assays, planning for the next round of drilling into the Main Lode will commence. The mineralised interval from 417m down hole in CANDD012 has extended the Main Lode mineralised position to over 130m down-dip from the base of the existing resource shell (refer **Figure 1**). Further drilling is planned for this area, which will commence after the completion of the current RC program in 6 to 8 weeks.

<sup>&</sup>lt;sup>7</sup> Refer ASX reports 12 May 2021 and 23 June 2021

Hole ID	Downhole Interval	Down hole Width	Copper Mineralisation Intensity	Visible Copper Sulphide / Oxide
	162 – 168m	6m	Weak	Trace chalcopyrite stringers concordant with foliation
	268 – 269.5m	1.5m	Medium	Trace to 3% chalcopyrite associated with quartz veins
CANDD010	290 – 296m	6m	Weak	290-294m: trace to 1% chalcopyrite veins and disseminations
			Medium	246-296m: 2% chalcopyrite veins
	315 – 317.2m	2.2m	Weak	315-316m: trace chalcopyrite veins
	515 517.2111	2.2111	Strong	316-317.2m: 15% semi-massive chalcopyrite veins
	34 – 35m	1m	Weak	Trace malachite in veins
	137 – 139m	2m	Weak	Trace to 1.5% chalcopyrite veins
	152 – 169.7m		Strong	152 – 153m: 15% semi-massive chalcopyrite veins
		17.7m	Weak	153 – 160m: trace to 1% chalcopyrite veins
CANDDOII			Medium	160 – 164m: 0.5% to 4% chalcopyrite veins
			Weak	164 – 169.7m: trace to 2% chalcopyrite veins
	177 – 186m	9m	Weak	Trace to 0.5% chalcopyrite veins and blebs
	193 – 197m	4m	Weak	Trace to 0.5% chalcopyrite veins
	78 – 83m	5m	Weak	Trace chalcopyrite veins
	102 – 103m	1m	Weak	1.5% chalcopyrite veins
	161 160 1	8.4m	Weak	161 – 168.4m: 1% chalcopyrite veins
	161 – 169.4m		Medium	168.4 – 169.4m: 4% chalcopyrite veins
			Medium	417 – 418m: 0.5% to 3% chalcopyrite veins
			Weak	418 – 419.7m: trace chalcopyrite veins
CANDD012			Medium	419.7 – 421.3m: 1% to 3% chalcopyrite veins associated with quartz veins
	417 – 431.3m	14.3m	Weak	421.3 – 423.5m: trace to 1% chalcopyrite veins and disseminations
			Medium	423.5 – 426m: 1% to 3% chalcopyrite veins
			Strong	426 – 431.3m: 3% to 10% chalcopyrite in veins and breccia matrix, with quartz veins from 430m
CANDD013	163 – 163.4m	0.4m	Strong	Vein and blebby chalcopyrite in intense black chlorite alteration zone

## **Table 1:** Visual Copper Sulphide & Oxide log for CANDD010 to CANDD012

## Table 2: Drill Hole Details

Hole ID	Туре	Easting (mE)	Northing (mN)	Start Dip	Azimuth	RL	Total Depth
CANDD010	HQ 0-47.5m NQ 47.5-EOH	434249	6500811	-73	85	308	353.1
CANDD011	HQ 0-71.6m NQ 71.6-EOH	434326	6500780	-60	90	208	210.6
CANDD012	HQ 0-137.9m NQ 137.9-EOH	434155	6500760	-75	84	309	465.7
CANDD013	HQ 0-120.6m NQ 71.6-EOH	434315	6500671	-60	85	310	234.5
CBLRC031	RC	434062	6500887	-60	80	309	150
CBLRC032	RC	434126	6500875	-60	80	309	102

Grid: MGA94 Zone 55



## Greater Canbelego Project Area and Caballero Prospect - RC Drilling

Data from previous auger geochemical surveys completed by the Company between 2010 and 2018 were reprocessed to define broad areas of copper anomalism. The copper anomaly in the Greater Canbelego Area covers an area of 1.4km along strike and up to 660m width. The copper anomaly over the Caballero prospect is 480m along strike and 180m width. Proposed RC drilling in both areas will follow-up anomalous copper results from auger geochemistry and previous drilling.

A total of 38 RC holes for 4,900m are proposed to test these targets, including recently identified lode positions west of the Main Lode (**Figure 4 Greater Canbelego Location Plan**), and the Caballero prospect, which is 2.2km southeast of the Main Lode (**Figure 5 Rochford Trend Location Plan**). The RC program commenced on 8 July 2022 and is planned to be completed in 6 to 8 weeks.

Nine RC holes were drilled by the Company in the Greater Canbelego Area in early 2022, seven of which returned significant copper results<sup>8</sup>, which included copper intercepts in the CBW1 lode position that are open along strike to the north (**Table 3** and **Figure 4 Location Plan**). Two follow-up RC holes (CBLRC031 and CBLRC032, **Table 2**) have been completed to date in this position and both holes have intersected visible mineralisation, as shown in **Table 4**. This has extended the CBW1 lode by approximately 60m to the northwest and remains open in that direction and at depth.

At the Caballero Prospect, four RC holes were drilled by the Company in 2010 and 2013, three of which returned significant copper results (**Table 3**). Proposed RC drilling in this area will follow-up these results and test an EM conductor defined by a fixed loop electro-magnetic (FLEM) survey from 2012 (refer **Figure 6 - Caballero Location Plan**). The RC program has been designed to provide flexibility with drill hole planning and may be adapted to follow-up immediate visual results. Therefore, the proposed drill hole locations shown in Figures 6, are indicative. The target areas for the proposed RC holes are summarised in **Table 3**.

Area	Target	Previous Results <sup>9</sup>	Notes	Proposed Holes
	CBW1 Lode	CBLRC023 – 12m @ 0.38% Cu from 94m, incl. 3m @ 1.02% Cu from 97m CBLRC024 – 5m @ 0.23% Cu from 99m Copper anomalism in soils	Test northern strike extent	6
Greater Canbelego ( <b>Figure 4</b> )	CBW2 Lode	CBLRC029 – 13m @ 0.67% Cu from 143m, incl. 1m @ 3.18% Cu from 144m CBLRC030 – 22m @ 0.38% Cu from 103m, incl. 1m @ 1.4% Cu from 104m Copper anomalism in soils	Test northern and southern strike extent	10
	Main Lode	CBLRC028 – 16m @ 0.32% Cu from 15m Copper anomalism in soils	Test southern strike extent of Main Lode	3
	Historic Workings	Untested historic Shango workings	Test northern and southern strike extent	2
FLEM         CBLRC007 – 33m @ 0.22% Cu from 21m           plate         CBLRC020 – 34m @ 0.31% Cu from 25m a           16m @ 0.69% Cu from 69m, incl. 1m @         3.3% Cu from 74m           Caballero         CBLRC021 – 6m @ 0.21% Cu from 124m           (Figure 6)         FLEM conductor		CBLRC020 – 34m @ 0.31% Cu from 25m and 16m @ 0.69% Cu from 69m, incl. 1m @ 3.3% Cu from 74m CBLRC021 – 6m @ 0.21% Cu from 124m Copper anomalism in soils	Test along strike of previous drill results within the FLEM conductor. Scissored holes due to uncertain dip.	7
	Northern areas	Copper anomalism in soils	Test smaller copper anomalies to the NW of the copper plate. Previously untested by drilling.	7

#### Table 3: Proposed RC Target Areas

<sup>&</sup>lt;sup>8</sup> Refer ASX Report 12 April 2022

<sup>&</sup>lt;sup>9</sup> Refer ASX Reports; 24 November 2010, 14 October 2013 & 31 January 2014.



Hole ID	Downhole Interval	Down hole Width	Copper Mineralisation Intensity	Visible Sulphide / Oxide
CBLRC031	94 – 98m	4m	Strong	94 – 95m: 3% chalcopyrite in stringers and 40% semi- massive veins
			Weak	95 – 98m: 1-5% pyrite and trace chalcopyrite veins
	7 24m	′ – 34m 27m	Weak	7 – 32m: trace chalcocite
CBLRC032	7 – 3411		Weak	32 – 34m: trace malachite in veins
	66 – 71m	5m	Weak	Trace pyrite

## Table 4: Visual Sulphide & Oxide log for CBLRC031 and CBLRC032



Figure 5: Plan of Canbelego and Caballero drilling locations.



Figure 6: Caballero Location Plan

## COMPETENT PERSON STATEMENT

The information in this report that relates to exploration results, Mineral Resource estimates and geological data for the Cobar projects is based on information generated and compiled by Mr Gordon Barnes and Mr Mike Rosenstreich who are both employees and shareholders of the Company. Mr Barnes is a Member, of the Australian Institute of Geoscientists and Mr Rosenstreich is a Fellow of the Australasian Institute of Mining and Metallurgy. They both have sufficient experience that is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to each qualify as Competent Person(s) as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Barnes and Mr Rosenstreich have consented to the inclusion of this information in the form and context in which it appears in this report.

This ASX release was authorised by the Board of Directors of Helix Resources Ltd.



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## **APPENDIX 1: Canbelego Copper Deposit - Context**

The Canbelego Deposit is located 45km south-east of Cobar and 5km south of the historic Mt Boppy Mine along the Rochford Copper Trend. Historic production from the Canbelego Copper mine was reported (1920) to be ~10,000t of hand-picked ore grading 5% Cu with mining stopped at the water table at ~80 metres depth.

Canbelego is located on EL6105 which is a joint venture with local copper producer Aeris Resources (ASX: AIS). Helix holds 70% and is the Manager and AIS is a contributing, 30% partner.

Structural remobilisation is considered an important control on high-grade copper in these mineralised systems, termed Cobar-style base metal deposits. Copper mineralisation is developed as structurally controlled, sub-vertically plunging, semi-massive to massive sulphide shoots.

A mineral resource compliant with the 2004 JORC Code of 1.5Mt at 1.2% Cu (oxide, transition and fresh), 100% Inferred was reported in October 2010 as presented in Table 1. This Mineral Resource estimate is based on a total of 39 holes for 8,080 metres of RC and diamond drill core.

Other than results contained in this ASX release, Helix confirms that it is not aware of any new information or data that materially affects the Mineral Resource information included in Helix ASX release dated 7 October 2010 *Initial Copper Resources for Canbelego and Exploration Update*. All material assumptions and technical parameters underpinning the estimates in that release continue to apply and have not materially changed.

Classification	Туре	Tonnes	Copper	Gold	<b>Contained Copper</b>	<b>Contained Gold</b>
		Mt	%	g/t	t	Oz
Inferred	Oxide/Transition/Fresh	1.50	1.2	N/A	18,000	N/A
Total	Combined	1.50	1.2	N/A	18,000	N/A

#### Table A2: Canbelego\* (October 2010) (0.5% Cu cut-off)

(Rounding discrepencies may occur in summary tables)

Reported as 100% of deposit

## Appendix 2: JORC Code Table 1

July 2022 – Canbelego Drilling

## Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, randomchips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sounds, 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 (e.g. '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 explanationmay berequired, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Diamond Core Drilling (DD)</li> <li>Commercial drilling contractor Mitchell Services conducted the DD drilling. The holes are orientated approximately ENE and drilled with starting dips of 60° to 70°.</li> <li>Drill hole locations are determined using a hand-held GPS. Down-hole surveys were conducted using the Reflex multi-shot gyro system.</li> <li>Diamond core is sampled in 1m intervals, taking half core at various intervals (=/&lt;1m).</li> <li>The samples were collected and supervised by Helix staff</li> <li>The samples were in the direct control of Helix staff and transported to the laboratory by Helix.</li> <li>Reverse Circulation (RC) Drilling</li> <li>Commercial drilling contractor Mitchell Services conducted the RC drilling. The holes were orientated approximately E with starting dips of 60°</li> <li>Drill hole locations were determined using a hand-held GPS. Down-hole surveys were conducted using the Reflex EZ shot system.</li> <li>Holes are sampled at 1m intervals via a cyclone cone splitter into a numbered calico bag with weights typically from 1.5kg to 3kg for the lab sample, and a large plastic bag for the remaining sample.</li> <li>The lab samples are collected and always supervised by Helix staff and will be transported to the laboratory by a commercial transport contractor.</li> </ul>
Drilling techniques	• Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, tripleorstandard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	<ul> <li>DD: HQ and NQ drill core was collected using triple tube and all other industry practice methods.</li> <li>RC: 5 ½ inch diameter drill bit.</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>Core recoveries are recorded by the driller on core blocks and checked by a geologist or field technician.</li> <li>Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking and depths are checked against the depths recorded on core blocks. Rod counts are routinely undertaken by drillers as a further cross-reference for depth and core recovery.</li> <li>Samples were checked by the geologist for consistency and compared to the sample interval data for accuracy.</li> <li>RC bulk bag samples are not weighed, however recoveries are monitored and recorded by the supervising geologist.</li> <li>When poor sample recovery is encountered during drilling, the geologist and driller attempt to rectify the problem to ensure maximum sample recovery.</li> <li>Sample recoveries at Canbelego are typically good for both RC and DD, apart from when voids are intersected. The void intervals are recorded on geological logs.</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>The drill core is stored in core trays at Helix's secure facility in Orange. The core is comprehensively logged and sampled by experienced Helix geologists or consultants.</li> <li>The core is entirely logged for lithology, alteration, degree of oxidation, structure, colour and occurrence and type of sulphide mineralisation.</li> <li>Visual estimates of the proportion of copper sulphides: from systematic logging of HQ and NQ diamond drill core, and RC chip samples, the visual estimate of the total amount of copper sulphide in individual metre intervals ranges from 0.01% to 20%. The amount of copper sulphide and the relative proportions of the copper sulphide species from metre to metre vary and a detailed estimate of this variability is not possible within the limits of acceptable accuracy. The metal grades of the core will be determined by laboratory assay. The copper sulphide species and visual estimates of the proportions of those sulphide species present have been made by an experienced geologist with more than 10 years' experience in copper mineralisation in this region.</li> <li>Diamond core and RC chips are logged to an appropriate level of detail to increase the level of geological knowledge and increase the geological understanding of the deposit.</li> </ul>

Criteria	JORC Code explanation	Commentary
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 includingfor 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>Drill core is cut with a Corewise automatic core cutter, and a half core sample is taken for laboratory analysis.</li> <li>The RC drilling rig is equipped with an in-built cyclone and cone splitting system, which provides one bulk sample of approximately 20kg to 30kg and a sub-sample of 1.5-3kg per metre drilled.</li> <li>All RC samples are split using the system described above to maximise and maintain consistent representivity. Most samples are dry.</li> <li>Bulk samples were placed in green plastic bags, with the sub-samples collected placed in calico sample bags.</li> <li>Field duplicates were collected by spear from green plastic bags. These duplicates were designed for laboratory checks.</li> <li>Certified Reference Material (CRM) standards and blanks are inserted into the sample stream at approximately 1:35.</li> <li>Laboratory duplicate samples are split with a riffle splitter.</li> <li>A 1.5kg to 3kg RC sample was collected from 1m intervals and is considered appropriate and representative for the grain size and style of mineralisation.</li> </ul>
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>ALS Laboratory Services analysed for Au and multi-elements on 1m split RC samples and half core DD samples. The laboratory techniques below are for all samples submitted to ALS and are considered appropriate for the style of mineralisation at Canbelego:         <ul> <li>Crush and pulverize sample.</li> <li>Au-AA25 Ore Grade Au 30g FA AA Finish</li> <li>ME-ICP61 48 element 4 acid digest ICP-AES.</li> <li>OG62 Ore Grade finish for non-Au over range samples.</li> </ul> </li> <li>The QA/QC data includes standards, duplicates and laboratory checks.</li> <li>Duplicates for percussion drilling are collected from the one metre sample bag using a spear.</li> <li>QA/QC tests are conducted by the laboratory on each batch of samples with CRM standards.</li> </ul>

Criteria	JORC Code explanation	Commentary
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>Assays results are validated by standard database procedures and are verified by Helix management.</li> <li>Assay data are not adjusted.</li> <li>Geological data is collected using handwritten graphical log sheets, or by devices running OCRIS mobile software, which detail geology (weathering, structure, alteration, mineralisation), sample quality, sample interval and sample number.</li> <li>QA/QC inserts (standards, duplicates, blanks) are added to the sample stream.</li> <li>RQD and magnetic susceptibility data is collected using a datalogger.</li> <li>All logged data, the assay data received from the laboratory, and survey data is loaded into a secure database and verified.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resourceestimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>The drill collar positions were determined using a GPS (±5m).</li> <li>Grid system is MGA94 Zone 55.</li> <li>Surface RL data collected using GPS and verified by public Digital Elevation Models.</li> <li>Relief within the drilling zone ranges from 0m to 15m.</li> </ul>
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>Drilling has been conducted by Helix, Aeris (Straits) and historic drilling by companies in the 1970's.</li> <li>The drilling had been conducted in a manner consistent with the procedures set out in this JORC table.</li> <li>Assays used in the current resource were generated by Straits or Helix and include some re-sampling of the historic core.</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>Surface sampling, the position of the drill holes and the sampling techniques and intervals are considered appropriate for the early-phase exploration of a system such as that identified at Canbelego.</li> <li>The distribution of copper is known to be variably enriched and depleted within the structurally controlled, sub vertical copper deposit at Canbelego.</li> <li>Drilling is designed to intersect mineralisation as close to perpendicular as possible.</li> <li>Drill hole deviation will influence true width estimates of mineralisation. True width of mineralisation will be further assessed with detailed logging of orientated structural data and when the resource model is updated.</li> <li>Drill hole intersections of mineralisation are not considered to be biased.</li> </ul>

Criteria	JORC Code explanation	Commentary		
Sample security	• The measures taken to ensure sample security.	<ul> <li>Chain of Custody is managed by Helix staff and its contractors. The samples were freighted directly to the laboratory, or transported directly by Helix staff, with appropriate documentation listing sample numbers, sample batches, and required analytical methods and element determinations.</li> </ul>		
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	<ul> <li>No additional audits or reviews have been conducted for the drilling to date.</li> </ul>		

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overridingroyalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Canbelego JV Project is located on EL6105 approximately 10km SSW of the Canbelego township. Helix has earned a 70% interest in the project and is Manager of the JV, with JV Partner Aeris retaining 30% and contributing.</li> <li>The tenement is in good standing.</li> <li>This is no statutory, minimum annual expenditure. Rather a program-based exploration commitment is applicable.</li> <li>There are no known impediments to operating in this area.</li> <li>The drill area is situated in a grazing paddock and can be accessed all year round.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous drilling, soil sampling and early geophysics was conducted by Straits (Aeris) and companies during the 1970's.</li> <li>Several small historic mines and workings are present throughout the tenement.</li> </ul>
Geology	• Deposit type, geological setting and style of mineralisation.	The project is prospective for structurally controlled copper.
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>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 tPerson should clearly explain why this is thecase.</li> </ul>	<ul> <li>Refer to Helix's previous announcements available at www.helixresources.com.au.</li> <li>The zones west of the Canbelego Main Lode have not been subject to previous drilling and represent new mineralised positions parallel to the Canbelego Main Lode.</li> </ul>
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	<ul> <li>Assays for mineralised intervals are mostly based on 1m samples. DD core sample intervals range from 0.5m to 1.5m within mineralisation. In rare cases, non-mineralised core intervals may be sampled for lithogeochemical purposes in intervals &gt;1.5m.</li> <li>Assays included in intercept calculations are weighted by interval width</li> <li>Mineralised intercepts for Cu are averaged within a contiguous interval above a specified Cu cut-off grade with a maximum of 2m of internal dilution.</li> <li>Cu and Au intercepts were calculated for Cu cut-off grades of 0.1% Cu, 0.5% Cu and 1% Cu.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <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> </ul>	<ul> <li>No assay cut of high-grade material has been applied.</li> <li>No metal equivalent values have been calculated.</li> </ul>
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 (e.g. 'down hole length, true width not known').</li> </ul>	<ul> <li>Drilling is designed to intersect mineralisation as close to perpendicular as possible.</li> <li>Drill hole deviation will influence true width estimates of mineralisation.</li> <li>The true width of mineralisation will be further assessed on analysis of orientated structural data and when the resource model is updated.</li> </ul>
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>	<ul> <li>Refer to Figures in this announcement.</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>The reporting is balanced, and all material information has been disclosed.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. 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>	<ul> <li>Further DD and RC drilling, assaying and EM surveys will be undertaken. An update of the resource to JORC2012 standard is planned. Regional auger soil sampling is also planned.</li> </ul>