



8 JULY 2024  
ASX RELEASE

# PHASE 1 DRILLING COMPLETED AT KANOWNA GOLD PROJECT

## HIGHLIGHTS

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- Cosmo has completed a 4,915m drill program at the Company's 100% Kanowna Gold Project (KGP) comprising nine RC holes (1,764m) and 42 aircore holes (3,151m)
  - Visual logs have identified widespread alteration and geological features supporting the Company's targeting model that the KGP hosts a 'live' mineral system
  - The programs were designed to follow up historical drill intercepts such as 18m @ 5.3g/t Au and 10m @ 4.7g/t Au<sup>1</sup> from the Don Álvaro Prospect
  - Targets included several important structural zones newly identified from targeting work by Cosmo's technical team including:
    - Extensions of the Fitzroy Shear, the main controlling structure at the +7Moz Au Kanowna Belle Gold Mine, 1.5km to the east of the KGP, and
    - Structural 'splays' off the Kanowna Shear Zone
  - Assay results are anticipated in the next two-three weeks.
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Cosmo Metals Ltd ("Cosmo" or the "Company") (ASX: CMO) is pleased to announce the completion and first results from aircore (AC) and reverse circulation (RC) drilling programs at the Kanowna Gold Project ("KGP" or the "Project").

Cosmo's Managing Director, James Merrillees commented:

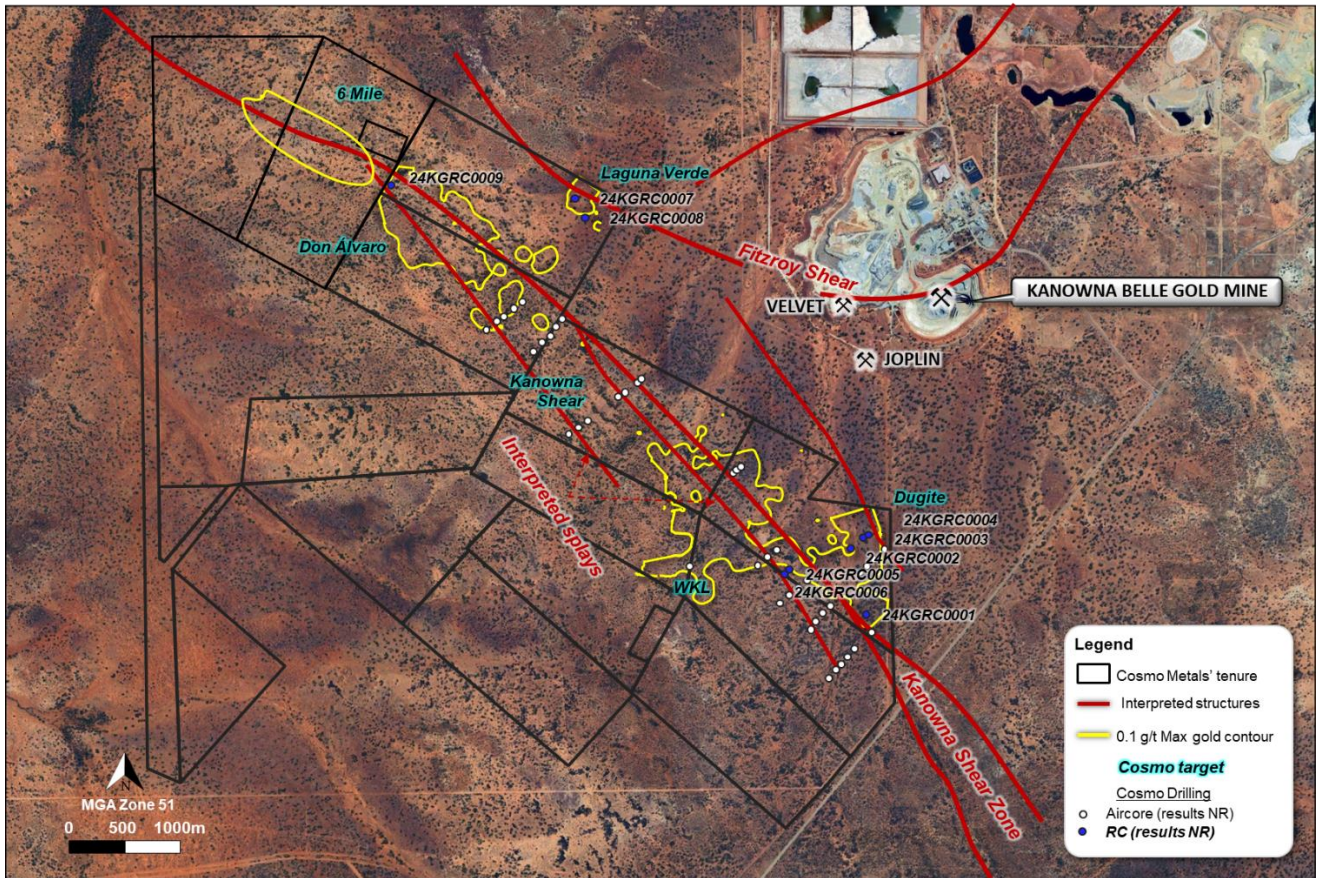
*"The completion of Cosmo's first drilling program at the KGP has successfully intersected host rocks and alteration styles which support the Company's targeting model.*

*Cosmo's technical team is being assisted by input from Dr Gerard Tripp, a geologist with well recognised expertise at Kanowna Belle, and this collaboration has helped to develop the compelling targets at the KGP which we have started testing with the recently completed program as we assess outstanding historical drill intersections through 'fresh eyes'.*

*With assay results from the nine-hole RC program to come as well as the aircore drilling to support targeting, the Company is well placed to unlock the potential of the KGP."*

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<sup>1</sup> Refer CMO ASX Announcement 17 January 2024



**Figure 1:** Kanowna Gold Project, targets on background aerial photo with June 2024 RC holes (labelled) and aircore hole collars. Note the newly identified extension of the Fitzroy Shear and structural splays associated with the Kanowna Shear Zone.

## DRILL TARGETING AT THE KGP

### New Geological Understanding

The Company’s technical team targeting work is being undertaken in collaboration with well-known Eastern Goldfields geologist Dr Gerard Tripp, whose doctoral thesis synthesised controls on major gold deposits of the Eastern Goldfields (Tripp, G. *et. al.* 2020). This collaboration has led to the identification of several structural zones in Cosmo’s KGP considered prospective controls on gold mineralisation including (refer Figure 1):

1. Extensions of the **Fitzroy Shear**, the primary controlling structural feature of gold mineralisation at Kanowna Belle, which is now interpreted to extend into Cosmo’s KGP adjacent to the Laguna Verde prospect.

No work has been completed at Laguna Verde since 2019 despite mineralisation being open both along strike and at depth including historical intersection of **8.5m @ 1.32g/t Au from 132m to EOH (end of hole) in FVRC048<sup>2</sup>**.

2. Numerous **NE-trending splays**, or structural trends, oblique to the main NW-trending Kanowna Shear Zone (KSZ). Where these splays intersect the KSZ are considered priority areas to target primary gold mineralisation.

<sup>2</sup> Refer CMO ASX Announcement 17 January 2024



These structural zones are associated with widespread pathfinder element (e.g. arsenic, antimony, bismuth, tellurium etc) anomalism and supergene gold identified from historical drilling. These zones include structures considered analogous to the structural and geological setting of the Kanowna Belle (KB) gold mine less than 2km to the northeast.

The above criteria provided the basis for targeting Cosmo's drill program at the KGP with<sup>3</sup>:

1. Widespread surficial and near-surface gold at WKL and Dugite (tested with holes 24KGRC0001-4)
2. High grade gold in historical drilling intersections at Don Álvaro (24KGRC0009); and Laguna Verde (24KGRC0007-8)
3. The association of gold anomalism with structures cutting the NE-trending Kanowna Shear which bisects the KGP from NW to SE (24KGRC0005-6 and the 42 hole AC program).

### **June 2024 RC Drilling**

The reverse circulation (RC) drill program comprised nine holes for a cumulative 1,764m (refer Figure 1). All holes reached target depths and summary logs are provided in Appendix A.

All holes intersected variably altered (quartz-albite-fuchsite), sheared and mineralised (pyrite) rocks with quartz veining noted in discrete intervals. Logged geology was dominated by Panglo Basin sediments (sandstones and shales) in holes 24KGRC001-0006 and 0009.

Assays are anticipated for all of the holes in the RC program in the coming weeks.

As previously announced Cosmo's RC drilling contractor, Challenge Drilling has agreed to accept Cosmo shares as payment for up to 50% of the current program (at Cosmo's election)<sup>4</sup>.

### **June 2024 Aircore (AC) Drilling**

AC drilling in 42 holes (3,151m) targeted the newly identified splays associated with the Kanowna Shear Zone as well as extending and infilling historical AC results (refer Figure 1 & Table 1 for hole locations).

In general, the AC holes intersected 50-80m of weathered rocks with fresh basement comprising altered, sheared and (pyrite) mineralised Panglo Basin sediments (shales and sandstones).

Targeting work is ongoing using logs and portable XRF data in anticipation of laboratory gold and multielement analyses in the coming weeks.

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<sup>3</sup> Refer CMO ASX Announcement 11 June 2024

<sup>4</sup> Refer CMO ASX Announcement 18 June 2024



## FORWARD PLAN

Following receipt and interpretation of results from the current programs over the coming weeks the Company is planning:

- Follow up drilling of mineralised intersections and vectors to mineralisation identified from alteration or pathfinder geochemistry (*est. August*)
- Further AC drilling to target the newly identified structural splays associated with the Kanowna Shear, and anomalous gold and pathfinder geochemistry (*est. August*)
- AC drilling across the newly acquired 6-Mile target, covering a roughly 2km zone with anomalous supergene gold directly to the northwest of Don Álvaro (*est. August*)
- Review of electrical geophysical methods (e.g. IP, SAM etc) to target disseminated sulphide (pyrite) zones where these are associated with gold mineralisation (*est. August-September*).

This announcement is authorised for release to the ASX by the Board of Cosmo Metals Ltd.

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### References

Tripp, G. *et. al.* (2020). Neoproterozoic Eastern Goldfields of Western Australia: Geology of the World's Major Gold Deposits and Provinces. Society of Economic Geologists, SEG Special Publications, no. 23, pp.709-734

### About Cosmo Metals Ltd

Cosmo Metals Ltd (Cosmo; ASX: CMO) is an ASX-listed, gold and base metals exploration company with key projects located in Western Australia.

In early CY 2024, Cosmo announced the intention to acquire the Kanowna Gold Project (KGP) located adjacent to the 7m ounce Au Kanowna Belle gold mine some 13km north of Kalgoorlie.

Cosmo is also active in the underexplored Yamarna Belt in the Eastern Goldfields region which is considered highly prospective for copper-nickel-cobalt (Cu-Ni-Co) and platinum group elements (PGE).

Cosmo's activities are supported by a well-regarded technical team who are advancing exploration on multiple fronts to unlock the potential of both the KGP and Yamarna Projects.



### Competent Persons Statement

*The information in this report that relates to Exploration Results is based upon and fairly represents information compiled by Mr James Merrillees, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Merrillees is a full-time employee of the Company.*

*Mr Merrillees has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Merrillees consents to the inclusion in the report of the matter based on his information in the form and context in which it appears.*

### Forward-Looking Statements

*This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Cosmo's planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may," "potential," "should," and similar expressions are forward-looking statements. Although Cosmo believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.*



## APPENDIX A DRILL HOLE INFORMATION

**TABLE 1:** RC and AC drill hole coordinate details. Drill hole coordinates MGA94 Zone 51 (GDA94). EOH= end of hole depth, RC = Reverse Circulation, AC = Aircore

PROSPECT	HOLE ID	HOLE TYPE	EOH (M)	EAST MGA94 Z51	NORTH MGA94 Z51	RL (M)	DIP	AZIMUTH MGA
WKL	24KGAC0001	AC	91	362911	6609668	370	-90	0
WKL	24KGAC0002	AC	89	362757	6609518	370	-90	0
WKL	24KGAC0003	AC	99	362688	6609445	370	-90	0
WKL	24KGAC0004	AC	92	362631	6609380	370	-90	0
WKL	24KGAC0005	AC	91	362583	6609326	370	-90	0
WKL	24KGAC0006	AC	54	362519	6609249	370	-90	0
Dugite	24KGAC0007	AC	74	363029	6610430	370	-90	0
Dugite	24KGAC0008	AC	51	362930	6610335	370	-90	0
Dugite	24KGAC0009	AC	63	362870	6610271	370	-90	0
Dugite	24KGAC0010	AC	72	362808	6610217	370	-90	0
WKL	24KGAC0011	AC	129	362536	6609910	370	-90	0
WKL	24KGAC0012	AC	75	362353	6609694	370	-90	0
WKL	24KGAC0013	AC	82	362397	6609766	370	-90	0
WKL	24KGAC0014	AC	106	362465	6609844	370	-90	0
Kanowna Shear	24KGAC0015	AC	68	361642	6611126	370	-90	0
Kanowna Shear	24KGAC0016	AC	49	361676	6611155	370	-90	0
Kanowna Shear	24KGAC0017	AC	69	361712	6611186	370	-90	0
Kanowna Shear	24KGAC0018	AC	60	360230	6611545	370	-90	0
Kanowna Shear	24KGAC0019	AC	80	360312	6611606	370	-90	0
Kanowna Shear	24KGAC0020	AC	64	360589	6611823	370	-90	0
Kanowna Shear	24KGAC0021	AC	68	360652	6611865	370	-90	0
Kanowna Shear	24KGAC0022	AC	68	360771	6611953	370	-90	0
Kanowna Shear	24KGAC0023	AC	79	360802	6611992	370	-90	0
Kanowna Shear	24KGAC0024	AC	63	360138	6611485	370	-90	0
Kanowna Shear	24KGAC0025	AC	87	359895	6612323	370	-90	0
Kanowna Shear	24KGAC0026	AC	62	359971	6612378	370	-90	0
Kanowna Shear	24KGAC0027	AC	84	360023	6612463	370	-90	0
Kanowna Shear	24KGAC0028	AC	97	360080	6612535	370	-90	0
Kanowna Shear	24KGAC0029	AC	60	359811	6612239	370	-90	0
Kanowna Shear	24KGAC0030	AC	72	359384	6612437	370	-90	0
Kanowna Shear	24KGAC0031	AC	56	359478	6612513	370	-90	0
Kanowna Shear	24KGAC0032	AC	71	359542	6612558	370	-90	0
Kanowna Shear	24KGAC0033	AC	54	359636	6612633	370	-90	0
WKL	24KGAC0034	AC	47	359715	6612691	370	-90	0
WKL	24KGAC0035	AC	48	361245	6610276	370	-90	0
WKL	24KGAC0036	AC	111	361868	6610284	370	-90	0
WKL	24KGAC0037	AC	95	361955	6610360	370	-90	0
WKL	24KGAC0038	AC	96	362042	6610421	370	-90	0
WKL	24KGAC0039	AC	65	362070	6609936	370	-90	0
WKL	24KGAC0040	AC	75	362155	6610010	370	-90	0
WKL	24KGAC0041	AC	54	362244	6610078	370	-90	0
WKL	24KGAC0042	AC	81	362322	6610144	370	-90	0



PROSPECT	HOLE ID	HOLE TYPE	EOH (M)	EAST MGA94 Z51	NORTH MGA94 Z51	RL (M)	DIP	AZIMUTH MGA
WKL	24KGRC0001	RC	120	362862	6609830	370	-60	45
Dugite	24KGRC0002	RC	198	362720	6610438	370	-60	45
Dugite	24KGRC0003	RC	198	362832	6610535	370	-60	45
Dugite	24KGRC0004	RC	168	362883	6610562	370	-60	45
WKL	24KGRC0005	RC	132	362154	6610246	370	-60	45
WKL	24KGRC0006	RC	168	362112	6610203	370	-60	45
Laguna Verde	24KGRC0007	RC	228	360195	6613640	370	-60	25
Laguna Verde	24KGRC0008	RC	360	360287	6613461	370	-60	25
Don Álvaro	24KGRC0009	RC	192	358512	6613759	370	-60	45

TABLE 2: Summary RC drill logs including visually estimated sulphide (pyrite) and quartz vein percentages.

HOLE ID	FROM (M)	TO (M)	SUMMARY	PYRITE	PYRITE (%)	QZ% (in metres with a vein)
24KGRC0001	0	4	Cover			
	4	78	Saprolite clay			50
	78	87	Massive sandstone			
	87	120	Black Shale	Trace	0.1	
24KGRC0002	0	3	Cover			
	3	35	Saprolite clay			
	35	124	Intermediate intrusive	Trace	0.1	
	124	166	Fuchsite altered intermediate intrusive	Trace	0.1	5
24KGRC0003	166	198	Massive intermediate intrusive			
	0	9	Cover			
	9	77	Saprolite clay			
	77	142	Intermediate intrusive			
24KGRC0004	142	154	Quartz veining, albite altered intermediate			50
	150	198	Intermediate intrusive			30
	0	9	Cover			
	9	90	Saprolite clay			40
24KGRC0005	90	146	Intermediate intrusive			30
	146	161	Albite altered intermediate			10
	161	168	Intermediate intrusive			
	0	3	Cover			
24KGRC0006	3	95	Saprolite clay			30
	95	104	Intermediate intrusive			
	104	132	Black Shale			
	0	47	Saprolite clay			30
24KGRC0007	47	124	Black Shale			30
	124	168	Intermediate intrusive	Trace	0.1	
	0	3	Cover			
24KGRC0008	3	60	Saprolite clay			
	60	84	Intermediate intrusive	Trace	0.1	
	84	112	Intermediate intrusive with trace pyrite	Weakly disseminated	0.3	10
	112	113	Massive sulphide (pyrite)	Massive	100	
	113	174	Intermediate intrusive with fuchsite alteration, qtz veining and trace pyrite	Trace	0.1	10
	174	228	Massive intermediate intrusive			
24KGRC0009	0	6	Cover			
	6	62	Saprolite clay			
	62	72	Massive intermediate intrusive			10



HOLE ID	FROM (M)	TO (M)	SUMMARY	PYRITE	PYRITE (%)	QZ% (in metres with a vein)
	72	126	Intermediate intrusive with fuchsite alteration, qtz veining			10
	126	137	Intermediate intrusive with fuchsite alteration, qtz veining and trace pyrite	Weakly disseminated	0.5	70
	137	252	Intermediate intrusive			10
	252	270	Strong quartz veining	Weakly disseminated	0.5	70
	270	301	Intermediate intrusive with fuchsite alteration, qtz veining and trace pyrite	Weakly disseminated	0.5	10
	301	360	Intermediate intrusive with qtz veining			10
24KGRC0009	0	8	Cover			
	8	58	Saprolite clay			30
	58	113	Black Shale			10
	113	165	Black Shale with trace pyrite	Trace	0.1	5
	165	192	Black Shale			





## APPENDIX B JORC CODE, 2012 EDITION – TABLE 1

### SECTION 1 - SAMPLING TECHNIQUES AND DATA

(Criteria in this section apply to all succeeding sections)

CRITERIA	COMMENTARY
<i>Sampling techniques</i>	<p>Aircore (AC) and Reverse circulation (RC) drilling was used to collect individual 1 metre samples downhole.</p> <p>RC samples were collected into calico bags over 1m intervals using a cyclone splitter. The residual bulk samples are placed in piles on the ground.</p> <p>One cone split was taken off the rig splitter for RC drilling. This split has been retained for future use for assaying on a 1m basis in areas of interest.</p> <p>Each 1 metre sample pile was systematically spear sampled and composited over a 4-metre interval to obtain approximately 2-3kg sample for analysis. Composite samples are pulverised to obtain a homogenised sample from which a 50g sample was used for gold assay.</p> <p>The final metre of each aircore was sampled as a separate 1m sample for use in multi-element assaying.</p> <p>A quality assurance /quality control (QAQC) system comprising internal and laboratory standards, blanks and duplicates were used to evaluate analytical results.</p>
<i>Drilling techniques</i>	<p>Aircore (AC) drilling by Gyro Drilling with a 3.5 inch blade bit drilled to refusal.</p> <p>Reverse Circulation (RC) Drilling was undertaken by Challenge Drilling using 130 to 140mm diameter drill bits. RC drilling employed face sampling hammers ensuring contamination during sample extraction is minimised.</p>
<i>Drill sample recovery</i>	<p>Sample recovery data were assessed qualitatively in geological comments as part of the logging process. Sample condition is logged for every geological interval as part of the logging process.</p> <p>No quantitative twinned drilling analysis has been undertaken and no information is available to assess the relationship between sample recovery and grade.</p>
<i>Logging</i>	<p>All holes were geologically logged on a metre basis, with logging completed following the Cosmo's standard company procedures.</p> <p>Qualitative logging of samples includes lithology, mineralogy, alteration, veining and weathering and logging is not to sufficient detail to support Mineral Resource estimation or other technical studies</p> <p>Abundant geological comments supplement logged intervals.</p>
<i>Sub-sampling techniques and sample preparation</i>	<p>Industry standard sample preparation techniques were undertaken with systematic grab sampling using a spear taking approximately 500g from each individual 1 metre pile to obtain a 4-metre composite sample of approximately 2-3kg.</p> <p>Sample collection, size and analytical methods are deemed appropriate for the style of mineralisation and the stage of exploration.</p>
<i>Quality of assay data and laboratory test</i>	<p>N/A no assay results reported in this announcement.</p>
<i>Verification of sampling and assaying</i>	<p>Sampling and logging data were entered into a digital table in the field and subsequently imported into the Company's digital database by the Company's database manager.</p> <p>The standard CMO protocol was followed for insertion of standards, duplicates and blanks with a blank, duplicate and standard inserted per 25 samples. No QAQC problems were identified in the results. No twinned drilling has been undertaken.</p> <p>No adjustments have been made to any assay data.</p>



CRITERIA	COMMENTARY
<i>Location of data points</i>	<p>All drill collars were located using a handheld GPS considered to have an accuracy of <math>\pm 3</math> m</p> <p>No downhole surveys were completed of the aircore drill holes. Planned dip measurements were used for survey control for holes without downhole survey data.</p> <p>RC holes were surveyed downhole by the drilling contractors using the Reflex EZ-TRACK with a measurement taken every 30m downhole.</p> <p>The grid system used is the Geocentric Datum of Australia 1994 (GDA 94), projected to UTM Zone 51 South</p> <p>Topographic control is based on handheld GPS which is considered adequate for the current early stage of exploration.</p>
<i>Data spacing and distribution</i>	<p>Aircore drilling was completed on 50m spaced holes on irregular grid designed to infill gaps in the historical drilling.</p> <p>RC drilling was irregular and targeted high priority structural, stratigraphic and/or geochemical targets identified by the Company's technical team.</p> <p>Sample compositing has been applied; four individual metre samples were composited together to obtain an assay sample.</p> <p>The drilling completed to date is of a level typical for an exploration project and does not demonstrate the continuity of geology or grade required to support the definition of a Mineral Resource.</p>
<i>Orientation of data in relation to geological structure</i>	<p>Drilling is generally located on north-east orientated drill lines which is nominally perpendicular to the interpreted west-northwest regional geological trend but is parallel to local north-east trending shear zones which may host gold mineralization.</p> <p>True widths and orientation of intersected mineralisation is currently uncertain.</p> <p>Cosmo considers the orientation of the sampling data to be appropriate for an exploration project and that there has been no orientation-based sampling bias.</p>
<i>Sample security</i>	<p>Samples have been bagged and secured in the field by Cosmo's personnel and deposited at the ALS receiving yard in Kalgoorlie for transport to the laboratory in Perth.</p>
<i>Audits or reviews</i>	<p>None completed.</p>

## SECTION 2 REPORTING OF EXPLORATION RESULTS

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

CRITERIA	COMMENTARY
<i>Mineral tenement and land tenure status</i>	<p>The Kanowna Gold Project comprises fifteen granted tenements held 100% by La Zarza Minerals Pty Ltd, a wholly-owned subsidiary of Cosmo Metals.</p> <p>The Kanowna Gold Project is located 13km north-east of Kalgoorlie, lying within the Mount Vettors pastoral lease, with access via the sealed Yarri Road.</p> <p>Tenements comprise granted Prospecting Licences P 27/2536, P 27/2537, P 27/2538, P 27/2539, P 27/2540, P 27/2541, P 27/2542, P27/2543, P 26/4680, P 26/4681, P 27/2263, P 27/2264, P 27/2440, P 27/2564, and P 27/2565.</p> <p>The project is covered by the Marlinyu Ghoorlie native title claim (5590) and the company has a heritage agreement with the Marlinyu Ghoorlie covering 10 of the granted P's.</p>
<i>Exploration done by other parties</i>	<p>Previous exploration includes:</p>



CRITERIA	COMMENTARY
	<ul style="list-style-type: none"> <li>• Prior to 1995: Prospectors M. Dalla-Costa and A. Claussen acquired the land and completed gridding, a ground magnetic survey, costeaning, soil sampling and 6 RC holes.</li> <li>• 1995-2000: Kanowna Consolidated Gold Mines (KCGM) completed systematic exploration including soil sampling, AC drilling, RC drilling and a single diamond hole (WAMEX reports A48592 and A51958). This work led to the definition of gold anomalism at the “North West Prospect” (Don Alvaro) and the “North East Prospect” (Laguna Verde).</li> <li>• 2004-05: Gladiator Resources completed soil sampling and reinterpretation of existing datasets (WAMEX report A71069).</li> <li>• 2004-2005 Placer Dome Asia Pacific Ltd completed three lines of aircore (AC) drilling on tenements now covered by the newly acquired Ps (P 27/2263, P 27/2264 and P 27/2440)</li> <li>• 2005-07: Barrick Resources relogged and collected end of hole multielement samples from KCGM AC holes and subsequently completed a new geological interpretation for the area (WAMEX report A73366).</li> <li>• 2015-22: Evolution Resources completed AC and RC drilling (WAMEX report A131805).</li> </ul>
<i>Geology</i>	<p>The Kanowna Gold Project lies within the Kalgoorlie Terrane of the Yilgarn Craton, between the Kanowna and Boorara Shear Zones, and contains deformed and metamorphosed Archean rocks of the southern section of the Norseman-Wiluna Greenstone Belt.</p> <p>The project is cut in half by a west-northwest trending shear zone known as the Kanowna Shear Zone. To the south of the Kanowna Shear the rocks consist of a package of sedimentary rocks dominated by graphitic shales, sandstones and conglomerates. To the north of the Kanowna Shear is a package of felsic siltstones and felsic volcanics intruded by felsic to intermediate porphyries.</p> <p>Gold mineralization identified to date is associated with quartz vein stockwork development within sheared shales, felsic tuffs and porphyries.</p>
<i>Drill hole Information</i>	<p>A list of drill hole coordinates, orientation and intersections for all significant intercepts are provided in the body and appendices within this announcement.</p> <p>No relevant data has been excluded from this announcement.</p>
<i>Data aggregation methods</i>	N/A no assay results reported in this announcement.
<i>Relationship between mineralisation widths and intercept lengths</i>	N/A no assay results reported in this announcement.
<i>Diagrams</i>	Appropriate maps, sections and tabulations are presented in the body of this announcement.
<i>Balanced reporting</i>	All significant exploration results have been reported in this announcement.
<i>Other substantive exploration data</i>	Not applicable, no other material exploration data is available.
<i>Further work</i>	Further work is discussed in the body of this announcement.