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AIM: AAU

# SIGNIFICANT GOLD AND ZINC ZONES AT KOKKINOYIA, CYPRUS

Ariana Resources plc ("Ariana" or "the Company"), the AIM-listed mineral exploration and development company with interests in gold mining operations in Europe, is pleased to announce that further to recent drilling results at the Kokkinoyia Sector of the Magellan Project ("the Project"), several important revisions have been made to the geological model. The Project is 100% owned by Venus Minerals Ltd ("Venus")\*. Venus is focused on the exploration and development of copper and gold assets in Cyprus and Ariana will be completing its earn-in to 50% of Venus by the end of October 2021.

### Highlights:

- Detailed evaluation of recent drilling data identifies a potentially economically significant metal zonation within the Kokkinoyia deposit.
- Significant gold intercepts include:
  - 51.8m @ 0.96g/t Au + 0.51% Cu + 0.28% Zn + 8.21% S
  - 13.0m @ 2.21g/t Au + 1.22% Cu + 0.78% Zn + 5.99% S
  - 42.2m @ 0.55g/t Au + 0.09%Cu + 0.27% Zn + 5.14% S
- Significant zinc intercepts include:
  - 47.0m @ 0.36% Zn + 0.28g/t Au + 0.20% Cu + 2.6% S
  - $\circ~~$  25.0m @ 0.47% Zn + 1.16g/t Au + 0.67% Cu + 3.6% S
  - 5.9m @ 1.60% Zn + 4.55g/t Au + 0.53% Cu + 9.4% S
- Deposit comprises a gold and zinc dominated upper portion, followed by a copper and gold-rich zone and a largely separate low-grade gold zone at further depth.

#### Dr. Kerim Sener, Managing Director, commented:

"The Kokkinoyia Sector has proven to be a significantly more exciting deposit than initially thought. The presence of gold throughout the system is notable, and its closer association with zinc in the upper parts of the system suggests that the eventual economics of the Kokkinoyia mining opportunity will be influenced significantly for the better. Intercepts of over 40-50m carrying 0.5-1 g/t gold, with associated copper and zinc, dramatically change the definition of potentially economic zones across the deposit. This will also have a marked positive impact on the mineral resource which is currently defined only for copper at 5.2Mt @ 0.69% Cu. In addition, further upside exists within the Kokkinoyia East area, which has not yet been drill tested by Venus.

"Further work will now need to be undertaken on the metallurgy of these zones of mineralisation to determine the optimal route for economic extraction of copper, gold and zinc, in particular the potential to recover the metals via hydrometallurgical processing routes.

Venus is currently engaging with metallurgical consultants to define a programme of testwork which will lead towards a processing plan."

\* Further information about Venus Minerals and its projects is available on the Company's website, <u>www.venusminerals.co</u>.

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 as it forms part of UK Domestic Law by virtue of the European Union (Withdrawal) Act 2018 ("UK MAR").

#### Introduction

Following the release of the 2021 Kokkinoyia drilling results (6 October 2021), several important revisions have been made to the geological model of Kokkinoyia and specifically relating to the distribution of gold, copper and zinc within the deposit.

The 2021 Kokkinoyia drilling programme was entirely focused at testing the Kokkinoyia West area of the deposit (Figure 1). Kokkinoyia West is generally located closer to surface compared to mineralisation elsewhere within the deposit, with locally exposed outcrops containing low-grade mineralisation in the form of sulphide veins and disseminations of pyrite in hydrothermally altered lavas. Some mining has occurred across areas of outcropping mineralisation; most significantly during the 1980s in the form of a small-scale (290m long, 105m wide) open cut, from which approximately 1,800t of ore was extracted to an approximate depth of 40-50 metres. Beyond this depth, the mineralisation at Kokkinoyia West is defined by both historic drilling and the 2021 drilling to depths of approximately 200m.

Kokkinoyia East is separated from Kokkinoyia West by a major SE-NW normal fault, dissecting and compartmentalising the two areas. Generally, the Kokkinoyia East area is more structurally complex and contains higher grades of mineralisation. Furthermore, Kokkinoyia West is estimated to contain 23% more resource tonnage than Kokkinoyia East. Future exploration and resource infill drilling at Kokkinoyia will also test the Kokkinoyia East area.

#### **Geological Modelling**

Detailed multi-element fire assay and ME-ICP analysis from the 2021 drilling has provided new understanding of the distribution of major metals within the Kokkinoyia deposit, in addition to defining the relationship between these metals in terms of their depositional history. Previous drilling and sampling at Kokkinoyia was generally completed only for copper and sulphur, and therefore it was not previously possible to quantify gold and zinc potential and/or their association with copper within the deposit.

New statistical analysis of the element associations within the Kokkinoyia deposit has identified generally weak correlations between copper, gold and zinc within the defined extents of Kokkinoyia West. Although each metal is present within the deposit at potentially economic grades, copper tends not to directly correlate with gold or zinc. Rather, each metal is represented by its own population and shows its own spatial distribution (Figure 2). This also suggests that each of the metal zones were likely to have been deposited at slightly different times or under slightly different geochemical conditions.

Gold appears to show better correlations with high-grade copper zones (represented by massive sulphide lenses) and to some extent zinc in the upper portions of the deposit (Table 1). Furthermore, gold is also noted to form in isolation of the other metals towards the base of the deposit, where zones of highly-silicified host rocks display finely disseminated sulphides and pyritic veinlets. Further analysis of all the gold assay samples identified at least two statistical populations of gold, further supporting multiple relationships or phases of gold

mineralisation within the deposit. Significant gold specific intercepts from the 2021 drilling include:

- VMD001 (from 48.2 to 100m) 51.8m @ 0.96g/t Au + 0.51% Cu + 0.28% Zn + 8.21% S
- VMD002 (from 128 to 141m) 13.0m @ 2.21g/t Au + 1.22% Cu + 0.78% Zn + 5.99% S
- VMD004 (from 90 to 132m) 42.2m @ 0.55g/t Au + 0.09%Cu + 0.27% Zn + 5.14% S

Zinc shows a generally weak association with copper and appears to primarily form in association with gold in its own zone at the upper limits of the deposit, forming an enriched "cap", with only partial overlap across lower-grade copper mineralisation which occurs directly below (Table 2). Furthermore, it appears that there is a local enrichment of gold towards the base of the zinc-rich zones, particularly in the vicinity of underground development, suggesting that these areas may have been mined in the past, specifically for gold. Significant zinc specific intercepts from the 2021 drilling include:

- VMD010 (from 54 to 101m) 47.0m @ 0.36% Zn + 0.28g/t Au + 0.20% Cu + 2.6% S
- VMD002 (from 116 to 141m) 25.0m @ 0.47% Zn + 1.16g/t Au + 0.67% Cu + 3.6% S
- VMD001 (from 48.2 to 54.1m) 5.9m @ 1.60% Zn + 4.55g/t Au + 0.53% Cu + 9.4% S

The observed distribution of each metal and their association with one another are probably a result of the changing physical and/or chemical environments associated with circulating hydrothermal fluids during the deposit formation. The standard geological model for a Volcanogenic Massive Sulphide ("VMS") contains a chalcopyrite-rich massive pyrite core (massive sulphide lenses), surrounded by a halo of chalcopyrite-sphalerite-disseminated pyrite, grading into distal sphalerite-galena peripheral zones. Gold is typically shown to have vertical zonation, with upper portions of a deposit occasionally enriched.

Kokkinoyia shares some of the general anatomy of a classic VMS. However, the deposit contains a massive sulphide chalcopyrite-pyrite core which is enriched in gold (typically 1-5g/t Au), with an upper zone containing zinc and lower-grade gold (0.1-1g/t). Gold associated with pyrite (0.1-0.5g/t Au) is also noted in association with minor to no copper within the roots of the Kokkinoyia system. This unusual distribution of gold within the deposit is likely due to a progressive change in the formation of the deposit over time, from a near typical VMS "black smoker" type system, to a later lower temperature "white smoker" system, which may account for the multiple gold population distributions occurring within the deposit.

Despite the wide range of metal zoning within the Kokkinoyia deposit, all metals are noted to form in association with massive or disseminated pyrite. Therefore, and importantly, the future mineral resource estimates for Kokkinoyia will focus on defining mineralisation domains based on pyrite content. Further sub-domaining within these areas will then be completed to accommodate zinc enriched areas, along with massive sulphide-copper-gold rich zones, and finally low-grade copper and gold only zones. This approach will allow much of the known mineralisation to be considered for its economic potential, but will also allow appropriate domaining of various metals to support a more representative estimation.



**Figure 1:** Plan view of the Kokkinoyia area, showing all recent drill collar positions and the projection of the orebody to surface.



**Figure 2:** Northeast-southwest section through the Kokkinoyia deposit based on a 150m swathe. Metal zones are represented by individually modelled subdomains, which are shown within a single sulphur parent domain using a 1% sulphur modelling cut-off. Note that details of gold and zinc distributions are currently only available for Kokkinoyia West, which has been re-drill tested and assayed during 2021, using a detailed multi-element analytical approach.

**Table 1:** Significant intercepts calculated for the 2021 drilling completed at Kokkinoyia using gold as the primary economic element at a 0.1g/t Au cut-off and allowing for up to 2m of internal dilution. All intercepts are colour coded to: Zinc and gold domain (1, blue), Massive sulphide domain (2, red), Low-grade copper and gold domain (3, green); and Low-grade gold and with minor copper domain (4, yellow).

Hole ID	From (m)	To (m)	Interval (m)	Au (ppm)	Cu (%)	Zn (%)	S (%)	Comments	Domain Code
VMD001	48.23	100	51.8	0.96	0.51	0.28	8.21	Zinc domain/transition into low- grade copper	1
VMD001 including	48.23	49.6	1.4	12.75	0.41	4.06	10.00	UG development at enriched base of zinc domain	1
VMD001 including	85	87	2.0	2.05	0.40	0.48	10.00	UG development - massive sulphides	2
	103	122	19.0	0.21	0.54	0.02	6.83	Low-grade copper domain	
	125	128	3.0	0.10	0.27	0.02	10.00		3
VMD001	142	164	22.0	0.24	0.56	0.02	9.11	Low grade copper domain - newly	
	165	167	2.0	0.11	0.68	0.02	10.00	defined extension. Base zone not	
	170	177	7.0	0.17	0.53	0.01	9.85	intercepted?	
	53	71	18.0	0.36	0.08	0.18	6.76	Zinc domain	1
	80	92	12.0	0.18	0.45	0.07	9.00	Low-grade copper domain	3
	98	101	3.0	0.13	0.05	0.19	2.15	Zinc domain	1
VMD002	104	110	6.0	0.23	0.02	0.17	2.06		
	128	141	13.0	2.21	1.22	0.78	5.99	Massive sulphides (structurally constrained)?	2
	144	146.9	2.9	0.12	0.10	0.08	1.33	Base of system low gold and minor copper	4
	80	83	3.0	0.53	0.04	0.22	1.22		
	92	98	6.0	0.42	0.02	0.18	1.64	Zinc domain	1
	107	110	3.0	0.34	0.03	0.13	1.49		
VMD003	122	137	15.0	0.53	0.41	0.33	7.04	Zinc domain/transition into low- grade copper	3
	140	144	4.0	0.13	0.06	0.05	10.00	Base of system, gold only - newly	
	147	153	6.0	0.14	0.01	0.06	10.00	defined	4
	84.05	85.1	1.1	0.28	0.11	0.13	2.24	Zine Demoin	1
	90	132.2	42.2	0.55	0.09	0.27	5.14	2inc Domain	T
	137	139	2.0	0.10	0.54	0.00	10.00	Low grade conner domain	2
	147	149	2.0	0.12	0.12	0.01	10.00	Low-grade copper domain	5
VMD004	153	155	2.0	0.13	0.00	0.00	10.00		
	157	158	1.0	0.11	0.00	0.01	10.00		
	159	161	2.0	0.15	0.00	0.01	10.00	Base of system gold only - newly	4
	164	165	1.0	0.18	0.26	0.01	10.00	defined	
	189	192	3.0	0.11	0.05	0.01	10.00		
	74	77	3.0	0.17	0.04	0.14	1.31	7:	1
	83	107	24.0	0.58	0.14	0.39	4.59	Zinc domain	T
	110.5	113	2.5	0.16	0.02	0.06	5.66	Mostly historic underground	2
VIVIDUUS	116	119	3.0	0.13	0.06	0.07	5.05	back-fill, likely within low-grade	5
	122	136.1	14.1	0.49	0.42	0.30	6.37	copper domain, transitioning into	Л
	140	144.8	4.8	0.16	0.21	0.04	7.95	a gold only base zone.	+
	5	14	9.0	0.19	0.14	0.05	1.32	Low-grade copper domain (oxide)	3
	41	59	18.0	0.19	0.02	0.11	6.54		
	65	68	3.0	0.13	0.01	0.02	10.00	]	
VMD009	80	83	3.0	0.12	0.10	0.02	10.00	Base of system gold primarily	
	89	92	3.0	0.21	0.03	0.02	10.00	with intermittent low-grade zinc -	4
	98	101	3.0	0.17	0.20	0.01	9.10	newly defined	
	113	133	20.0	0.19	0.02	0.22	9.60	]	
	137	139.6	2.6	0.11	0.01	0.02	10.00		

Hole ID	From (m)	To (m)	Interval (m)	Au (ppm)	Cu (%)	Zn (%)	S (%)	Comments	Domain Code
	55	64	9.0	0.53	0.72	0.29	0.65	Zing domain	1
	71	74	3.0	0.17	0.02	0.14	0.18	Zinc domain	
	77	101	24.0	0.32	0.13	0.52	4.57	Zinc domain/transition into low- grade copper	
	104	110	6.0	0.11	0.25	0.05	8.72	Low grade copper domain	3
VMD010	122	123	1.0	0.14	0.07	0.00	10.00		4
	125	127	2.0	0.11	0.01	0.02	10.00		
	131	132	1.0	0.25	0.00	0.00	10.00	Base of system gold only - newly	
	136	137	1.0	0.12	0.00	0.00	10.00	denned	
	143	152	9.0	0.20	0.06	0.00	10.00		
VMD011	74	89	15.0	0.52	0.44	0.16	5.95	Zinc domain/transition into low- grade copper	
	92	106	14.0	0.19	0.09	0.08	5.95	Zing domain with gold	
	109	113	4.0	0.16	0.01	0.05	2.42	Zine domain – with gold	
	121	122	1.0	0.28	1.35	0.02	10.00	Massive sulphides	2
	125	138	13.0	0.15	0.12	0.02	8.88	Base of system with minor copper	4
	55	61	6.0	0.11	0.01	0.06	1.95		
VMD012	67	70	3.0	0.35	0.03	0.29	1.78	Base of system gold only - newly	4
	118	121	3.0	0.16	0.01	0.01	3.51	ueimeu	

**Table 2:** Zinc prioritised significant intercepts for the 2021 Kokkinoyia drilling, using a 0.1% Zn cut-off and allowing for up to 1m internal dilution.

Hole ID	From (m)	To (m)	Interval (m)	Zn (%)	Au (ppm)	Cu (%)	Pb (%)	S (%)
	48.2	54.1	5.9	1.60	4.55	0.53	0.03	9.35
	70.0	71.0	1.0	0.14	0.54	0.21	0.00	10.00
VIVIDUUT	81.6	90.5	8.9	0.38	1.38	1.51	0.02	9.93
	147.0	148.0	1.0	0.12	0.28	1.09	0.00	9.30
	50.0	65.0	15.0	0.21	0.37	0.08	0.00	7.36
	89.0	95.0	6.0	0.11	0.17	0.29	0.00	3.51
VIVIDUUZ	98.0	107.0	9.0	0.22	0.18	0.03	0.00	1.42
	116.0	141.0	25.0	0.47	1.16	0.67	0.00	3.60
	80.0	83.0	3.0	0.22	0.53	0.04	0.00	1.22
VMD003	89.0	110.0	21.0	0.15	0.19	0.02	0.00	0.94
	116.0	133.0	17.0	0.43	0.43	0.40	0.01	4.23
	84.1	87.0	3.0	0.16	0.10	0.05	0.00	0.80
VIVID004	90.0	124.0	34.0	0.33	0.64	0.10	0.00	5.31
	74.0	77.0	3.0	0.14	0.17	0.04	0.00	1.31
	83.0	110.2	27.2	0.36	0.52	0.14	0.00	4.48
VMD005	114.0	116.0	2.0	0.14	0.03	0.03	0.01	1.18
	119.0	134.7	15.7	0.31	0.45	0.37	0.00	5.45
	142.0	143.0	1.0	0.10	0.23	0.20	0.00	8.89
	2.0	3.0	1.0	0.10	0.01	0.43	0.00	0.05
	41.0	53.0	12.0	0.15	0.21	0.02	0.00	4.81
VIVIDUU9	110.0	122.0	12.0	0.41	0.13	0.03	0.00	10.00
	123.0	124.0	1.0	0.12	0.41	0.06	0.01	10.00
VMD010	54.0	101.0	47.0	0.36	0.28	0.20	0.00	2.58
	74.0	83.0	9.0	0.22	0.58	0.28	0.00	3.94
VMD011	86.0	89.0	3.0	0.11	0.62	1.01	0.00	10.00
	94.0	97.0	3.0	0.11	0.22	0.13	0.00	7.16
	100.0	103.0	3.0	0.11	0.21	0.01	0.01	5.66
	113.0	116.0	3.0	0.10	0.03	0.01	0.00	1.35
VMD012	67.0	73.0	6.0	0.31	0.20	0.04	0.00	1.88

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### Editors' Note:

The information in this announcement that relates to exploration results is based on information compiled by Dr. Kerim Sener BSc (Hons), MSc, PhD, Managing Director of Ariana Resources plc. Dr. Sener is a Fellow of The Geological Society of London and a Member of The Institute of Materials, Minerals and Mining and has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration and to the activity that has been undertaken to qualify as a Competent Person as defined by the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and under the AIM Rules - Note for Mining and Oil & Gas Companies. Dr. Sener consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## About Ariana Resources:

Ariana is an AIM-listed mineral exploration and development company with an exceptional track-record of creating value for its shareholders through its interests in active mining projects and investments in exploration companies. Its current interests include gold production in Turkey and copper-gold exploration and development projects in Cyprus and Kosovo.

The Company holds 23.5% interest in Zenit Madencilik San. ve Tic. A.S. with Ozaltin Holding A.S. and Proccea Construction Co. in Turkey which contains a depleted total of c. 2.1 million ounces of gold and other metals (as at July 2020). Operations comprise the Kiziltepe Mine and the Tavsan and Salinbas projects.

The **Kiziltepe Gold-Silver Mine** is located in western Turkey and contains a depleted JORC Measured, Indicated and Inferred Resource of 227,000 ounces gold and 0.7 million ounces silver (as at April 2020). The mine has been in profitable production since 2017 and is expected to produce at a rate of c.20,000 ounces of gold per annum to at least the mid-2020s. A Net Smelter Return ("NSR") royalty of 2.5% on production is being paid to Franco-Nevada Corporation.

The **Tavsan Gold Project** is located in western Turkey and contains a JORC Measured, Indicated and Inferred Resource of 253,000 ounces gold and 3.7 million ounces silver (as at June 2020). The project is being progressed through permitting and an Environmental Impact Assessment, with the intention of developing the site to become the second gold mining operation. A NSR royalty of up to 2% on future production is payable to Sandstorm Gold.

The **Salinbas Gold Project** is located in north-eastern Turkey and contains a JORC Measured, Indicated and Inferred Resource of 1.5 million ounces of gold (as at July 2020). It is located within the multi-million ounce Artvin Goldfield, which contains the "Hot Gold Corridor" comprising several significant gold-copper projects including the 4 million ounce Hot Maden project, which lies 16km to the south of Salinbas. A NSR royalty of up to 2% on future production is payable to Eldorado Gold Corporation.

Ariana is currently earning-in to 75% of **Western Tethyan Resources Ltd** ("WTR"), which operates across Eastern Europe and is based in Pristina, Republic of Kosovo. The company is targeting its exploration on major copper-gold deposits across the porphyry-epithermal transition.

Ariana is also earning-in to 50% of UK-registered **Venus Minerals Ltd** ("Venus") and is in the process of completing its entitlement. Venus is focused on the exploration and development of copper-gold assets in Cyprus which contain a combined JORC Inferred Resource of 9.5Mt @ 0.65% copper (excluding additional gold, silver and zinc).

Ariana operates its wholly-owned **Asgard Metals Fund** ("Asgard"), as part of the Company's proprietary Project Catalyst Strategy. The Fund will be focused on investments in high-value potential, discovery-stage mineral exploration companies located across the Eastern Hemisphere and within easy reach of Ariana's operational hubs in Australia, Turkey and the UK.

Panmure Gordon (UK) Limited is broker to the Company and Beaumont Cornish Limited is the Company's Nominated Adviser and Broker.

For further information on Ariana you are invited to visit the Company's website at <u>www.arianaresources.com</u>.

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## **Glossary of Technical Terms:**

"Au" chemical symbol for gold;

"Cu" chemical symbol for copper;

"g/t" grams per tonne;

"JORC" the Joint Ore Reserves Committee;

"m" Metres;

"S" chemical symbol for sulphur;

"Zn" chemical symbol for zinc;

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