



21 January 2019

ASX: NZC

**KALONGWE EXPLORATION AND DEVELOPMENT UPDATE**

**KASANGASI FOOTPRINT EXTENDED TO 1.2KM AND NEAR-MINE DRILLING DELIVERS MORE HIGH-GRADE COBALT AT MONWEZI 7**

*Plus, pre-development activities gathering momentum at Kalongwe with design of key site infrastructure items completed and metallurgical testwork program nearing completion.*

**Highlights**

- Final results received from the 2018 exploration field season across the Fold & Thrust Belt JV (FTBJV) licences surrounding Nzuri's flagship Kalongwe Copper-Cobalt Project.
- Mineralisation trend at the Kasangasi Prospect significantly extended from 400m to 1,200m, demonstrating the potential of this large-scale target. New results from widely spaced reconnaissance drilling include:
  - 7.4m @ 0.83% Cu and 15m @ 1.07% Cu (DKAS\_DD016);
  - 8.1m @ 0.79% Cu (DKAS\_DD016\_2); and
  - 5.8m @ 0.7% Cu (DKAS\_DD019)
- Significant additional zones of cobalt mineralisation intersected at the Monwezi 7 Prospect, some 6km south-west of Kalongwe. The new results include:
  - 10.8m @ 0.18% Co (DMON7\_DD003)
  - 30.4m @ 0.22% Co including high-grade zone of 1.2m @ 1.1% Co (DMON7\_DD003)
- Data review, interpretation and planning underway for the 2019 exploration field season.
- ~50km of road refurbishment and access completed, facilitating access to key regional exploration targets including Kambundji.
- Significant recent progress with pre-development activities at Kalongwe include completion of detailed design of the tail's storage facility and river diversion channel by Knight Piesold, as well as substantial completion of the extensive metallurgical testwork program at CORE in Brisbane.
- Engineering and Procurement ("EP") fixed-price offer currently under review in parallel with ongoing funding discussions with lenders and multiple potential off-takers.
- Formal application was made to the DRC government for duty exoneration associated with all project items required to be imported into the DRC for the initial construction and operation of the project.

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Nzuri CEO Mark Arnesen said the 2018 program had delivered encouraging results from across the FTBJV licence areas, providing the Company with a series of exploration and growth opportunities to be pursued further in 2019, in parallel with its core focus on advancing the Kalongwe Project towards development.

*“The key highlights of the past 12 months have included a significant expansion of the mineralised footprint at Kasangasi – where recent wide-spaced reconnaissance drilling has demonstrated the potential for a standalone deposit – and the successful delineation of three key near-mine prospects, all located within a 1-6km radius of Kalongwe and all of which have the potential to contribute additional ore feed to the Kalongwe plant.*”

*Our development team has also been busy, with several work streams advancing in parallel to ensure that Kalongwe is ready to move swiftly into construction as soon as we make a final investment decision and secure project funding. Following completion of the Front-End Engineering Design program last quarter, we have completed detailed design of key items of site infrastructure, almost finalised the metallurgical testwork program and are negotiating a fixed-price Engineering & Procurement offer in parallel with ongoing funding discussions.”*

Nzuri Copper Limited (ASX: NZC) (**Nzuri** or the **Company**) is pleased to announce results from its 2018 exploration field season across the Fold & Thrust Belt Joint Venture (**FTBJV**) licences, located in the Western Katangan Copperbelt in the Democratic Republic of Congo (**DRC**), and provide an update on pre-development activities at its flagship Kalongwe Copper-Cobalt Project.

The 2018 exploration program across the FTBJV successfully achieved several key objectives, including:

- Significantly extending the mineralisation at the **Kasangasi Prospect** in recent wide-spaced drilling, confirming the Company’s conceptual exploration model for a Kamao-type discovery and expanding the known strike length of the target from 400m to 1.2km;
- Delivering further strong cobalt results from the **Monwezi 7 prospect**, located 6km along strike from Kalongwe, confirming the potential for this key near-mine prospect to provide an additional source of high-grade cobalt feed;
- The successful delineation of a shallow zone of oxide copper mineralisation at the **Monwezi 2 prospect**, located 3.5km along strike from Kalongwe, resulting in the definition of an Exploration Target of 1-2.5Mt grading between 0.8% Cu and 1.5% Cu (see ASX release, 3 October 2018 – FTBJV Exploration Update). The Company cautions that this potential quantity and grade is conceptual in nature. There has been insufficient exploration to generate a Mineral Resource estimate for the Monwezi 2 prospect and it is uncertain if further exploration will result in the estimation of a Mineral Resource; and
- Definition of the **Kalongwe SW satellite prospect**, located immediately adjacent to the Kalongwe Mine, advancing this prospect to resource definition stage. Kalongwe SW is expected to provide a cobalt-rich feed to the Kalongwe plant (see ASX Release, 20 June 2018 – FTBJV Exploration Update).

The Company is currently undertaking data interpretation and planning for the 2019 field season, based on a review of results and priorities from its exploration activities over the past 12 months.

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**Kasangasi**

Nzuri targeted Kasangasi as an area with potential to host Kamo-a-type mineralisation following a review of historical boreholes drilled by Ivanhoe Mines in 2007. The 2018 exploration program included wide-spaced reconnaissance diamond drilling which targeted a 2.5km-long corridor for extensions of the known mineralisation. The mineralised corridor appears to be preserved over a strike length of approximately 5km, trending ENE across Nzuri-held ground (Figure 1). By the end of the 2018 field season, the Company had completed a total of eight widely spaced diamond drill-holes at Kasangasi for 1,023.5m.

The drill-hole positions were designed using the structural interpretation of high-resolution aeromagnetic survey data. Three of eight drill-holes successfully intersected the targeted mineralised stratigraphic contact (DKAS\_DD016, DKAS\_DD016\_2 and DKAS\_DD019) at a vertical depth of between 50m and 100m.

In all cases, the contact between grey siltstones of the Mwashya Series and the Lower Nguba Formation (diamictites) was brecciated and highly weathered with copper oxide mineralisation (malachite and azurite) occurring interspersed with clay minerals.

Assay results indicate that the copper mineralisation occurs in a broad zone (up to 30m drilled thickness) in the grey calcareous siltstones which overlie (overturned) the diamictites. The stratigraphic position and mineralisation characteristics of the new extensions are identical to the main Kasangasi Target, confirming that the new drill holes have intersected an extension to the known mineralisation.

Drill-hole DKAS\_DD016 returned downhole mineralised intervals of 7.4m @ 0.83% Cu and 15m @ 1.07% Cu. DKAS\_DD016\_2, which was a re-drill of DKAS\_DD016, returned 8.1m @ 0.79% Cu (re-drilled due to poor core recovery in the hanging wall not the ore zone) and DKAS\_DD019 returned 5.8m @ 0.7% Cu.

These results have increased the known strike length of the Kasangasi mineralisation from 400m to 1.2km with the system remaining open to the east and a further 2km still to be explored (Figure 1).

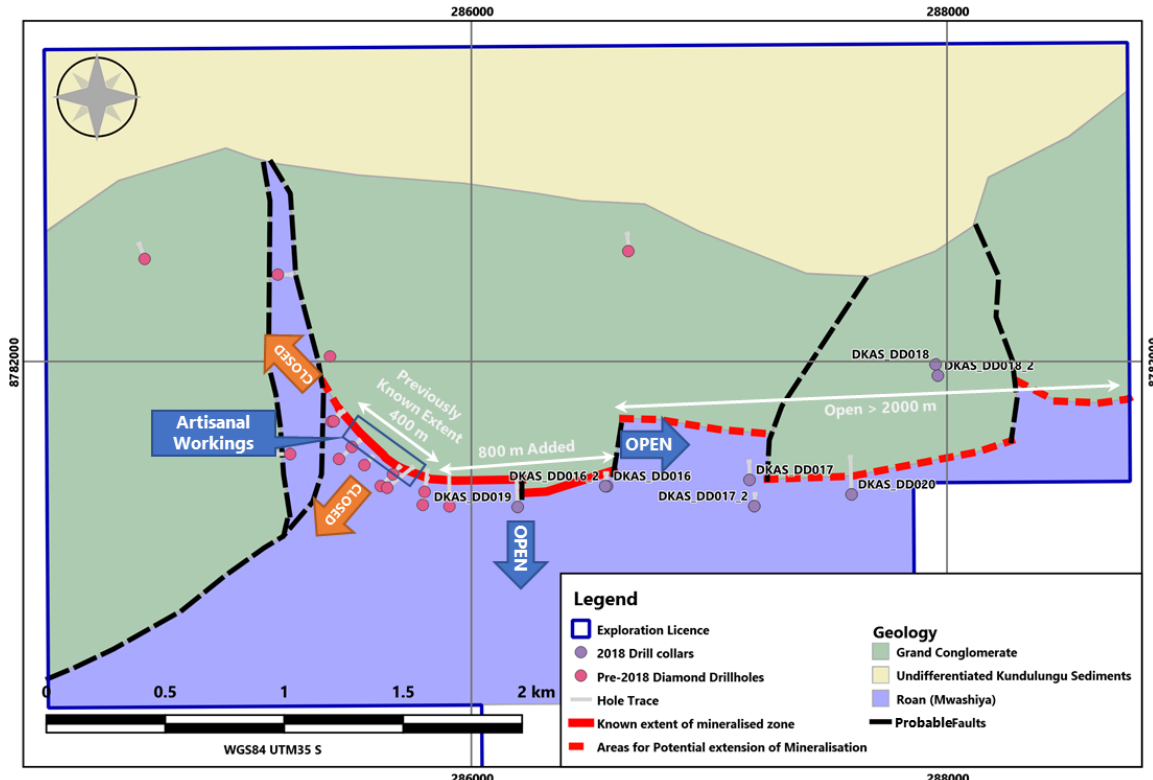


Figure 1. Kasangasi showing strike extension resulting from the 2018 drilling.

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**Monwezi 7 – Latest Results**

The initial phase of drilling of the Monwezi 7 cobalt target, located 6km along strike to the west of Kalongwe, revealed outstanding results including 19m @ 0.48% Co in DMON7\_RC02. As part of the 2018 drill program, Nzuri planned drill-holes to test a third Mines Series fragment at the Monwezi 7 prospect. Two holes were drilled with DMON7\_DD002 returning broad downhole cobalt intercepts, including

- 10.8m @ 0.18% Co from 66.2 m in DMON7\_DD003 and;
- **30.4m @ 0.22% Co** from 79.1m, including a high-grade zone of **1.2m at 1.1% cobalt** in DMON7\_DD003.

The cobalt mineralisation occurs as cobalt oxy-hydroxide (heterogenite) mainly within a brecciated zone of Mines Series rocks (RSC, RSF and RAT). These lithologies are a common host rocks to Congolese-type Cu-Co mineralisation. The fragment was selected for testing based on its similarities to Kalongwe, specifically its inferred thrust stacked Mines Series fragments. A new fragment was also mapped during the 2018 field program close to drill hole DMON\_DD002 which may offer potential to expand the extent of mineralisation at Monwezi 7.

At this stage, the Monwezi 7 prospect consists of nine small Mines Series fragments, with high-grade cobalt mineralisation in the form of heterogenite intersected in all three fragments that have been drill tested to date (Figure 2). The RSC-RSF and SD lithologies and especially fault breccias between the fragments host heterogenite mineralisation.

The orientations of the fragments are highly variable, and it is likely that additional fragments are buried close to surface. Conceptually the Monwezi 7 target offers the scope for several shallow satellite pits to supplement the Kalongwe plant, 6km to the north-east with high-grade cobalt material (Figure 7). The area warrants further work and its potential will be assessed further.

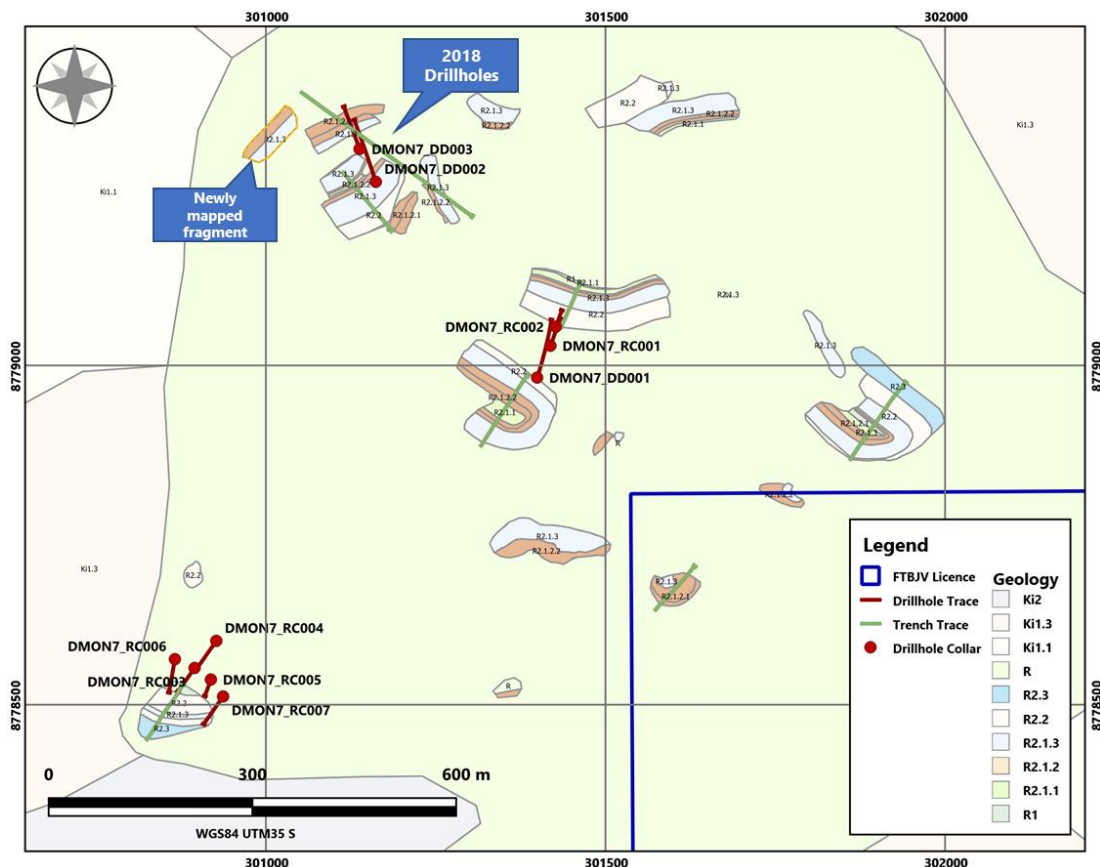


Figure 2. Locations of drill-holes at Monwezi 7.

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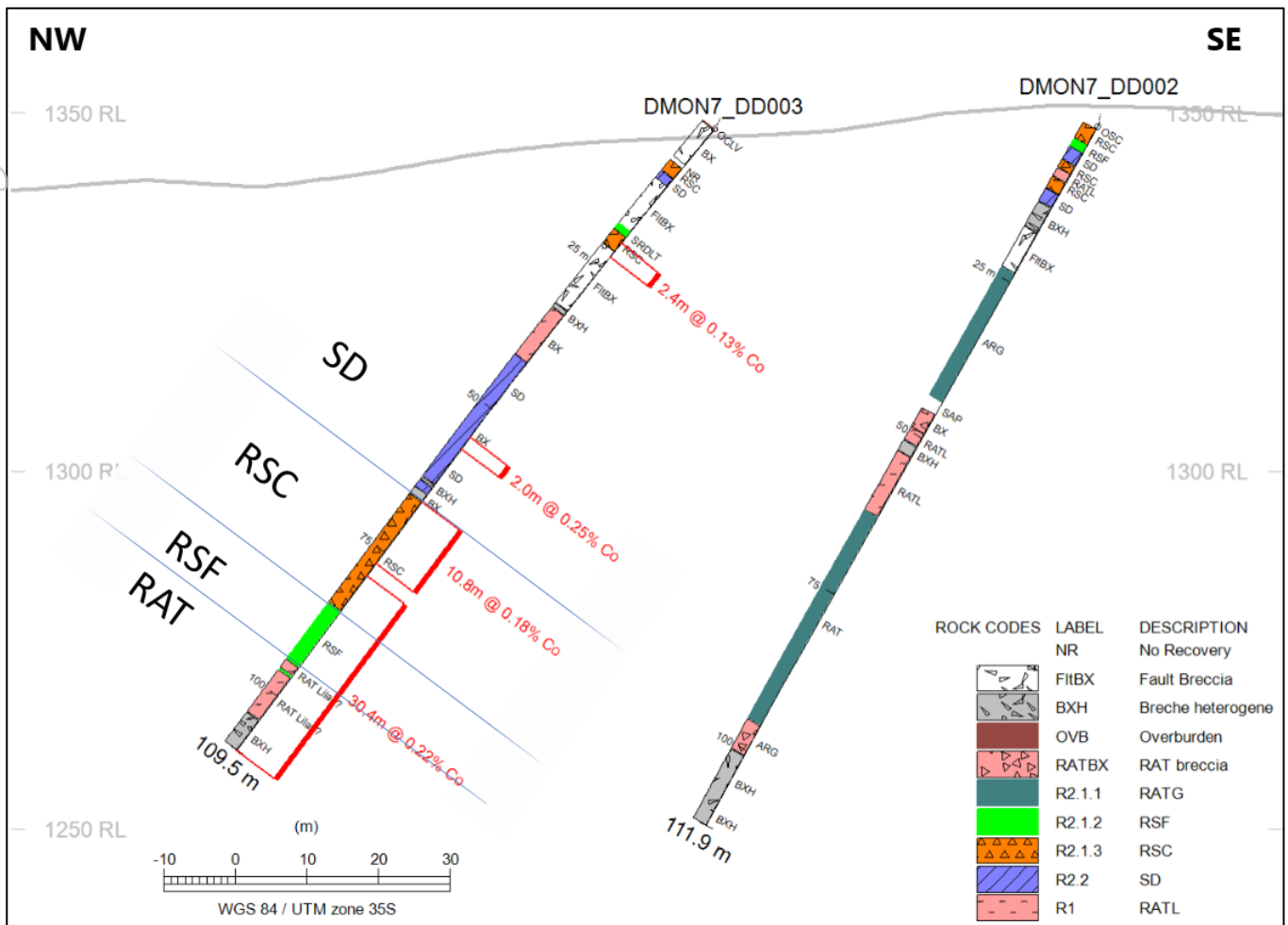


Figure 3. Cross-section showing intercept in DMON7\_DD003.

### Regional Exploration – FTBJV Update

The Fold & Thrust Belt joint venture area includes additional historical and conceptual targets that underwent a technical review at the end of 2017. The Company undertook follow-up work on several of these during 2018. The Company has evaluated all key regional prospects which were identified for testing during 2018 (Figure 8):

- Kambundji** – An extensive pitting and trenching program was executed at the Kambundji East prospect designed to follow-up on an RC drill hole where high-grade copper mineralisation was intersected (best intercept of 18m at 1.84% Cu including 5m @ 3.25% Cu as outlined in the Nzuri ASX release 7/2/17). This program has identified several new Mines Series fragments and constrained the location of the Menda Fault (Figure 4). Interpretation and drill-hole planning is underway for the 2019 field season.
- Mulonda Funda and Mutwa** – are historical targets based on geochemical soil anomalies defined by anomalous lead-zinc. The target has the potential for the discovery of high-grade Kipushi-style zinc (copper) mineralisation. The soil anomaly has maximum zinc values of 263ppm and lead values of 141ppm, which are 14 times high than regional threshold, can be traced over a strike length of ~9 km and is sub-parallel to the regional and local structural-stratigraphic setting. (It is located near the small but very high-grade Kengere zinc-lead deposit, from which historically about 10,000 tonnes of ore at 60% Pb was extracted). Nzuri excavated three pit traverses across the core of the zinc-lead anomaly trend and

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analysed the samples by portable XRF, which confirmed the soil anomalies. The anomalies are clustered on a fold anticline where Nguba Formation (Grand Conglomerate member) is exposed beneath Kundulungu Formation. The structural stratigraphic position of these anomalies is favourable for Kengere-Kipushi-type zinc-lead mineralisation. A structural interpretation of surface mapping and integration with previously collected high resolution aeromagnetic survey data is currently underway to determine the type and location of future exploration work at the prospect area.

- Monwezi East** – The area, located 3.4km along trend from Kalongwe to the north-east, is considered an area of interest. A gap in the historical soil sampling measuring 1100 m x 700 m (Figure 5) occurs along trend between Kalongwe and the Ngulube fragment, a cobalt deposit that occurs outside the exploration permit that is exploited by artisanal miners. Mapping in this region has identified one small Mines Series fragment (type of host setting to mineralisation at Kalongwe, Kalongwe SW and Ngulube). Nzuri continues to assess this area during the rainy season for strike extensions to Kalongwe.
- Mamba** – Two drill holes were completed at Mamba which targeted the up-dip, near surface position of sulphide mineralisation intersected in Mines Series Stratigraphy. While anomalous mineralisation was intersected within the Mines Series rocks, no economic mineralisation was intercepted, and no further work is planned at Mamba.

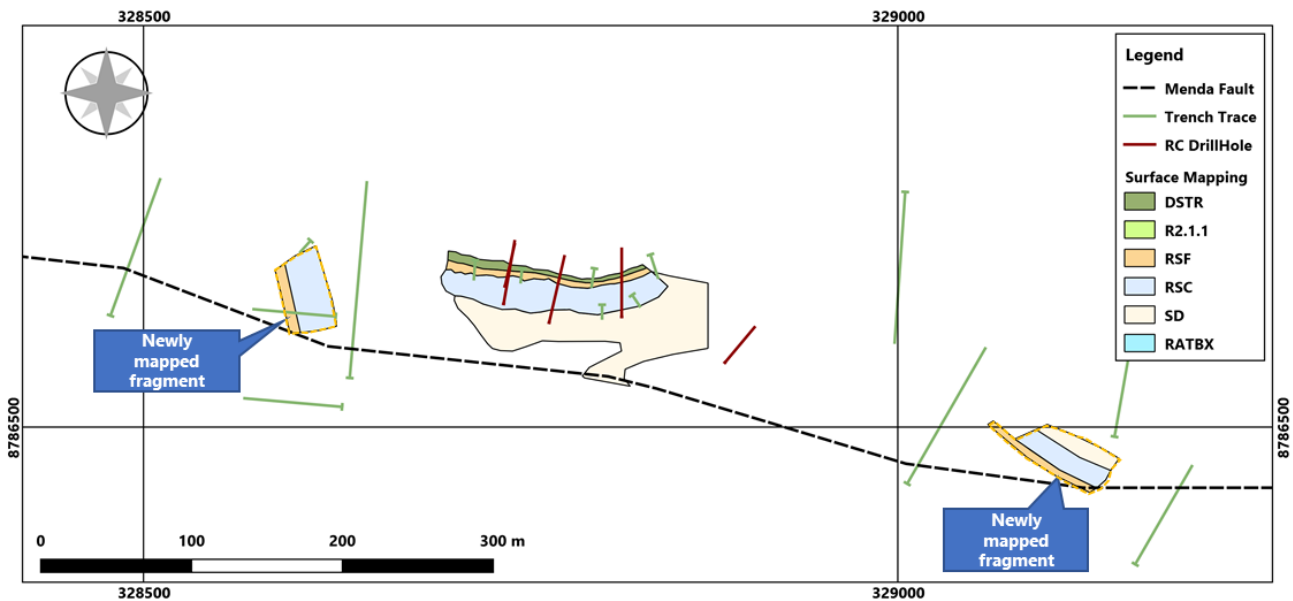


Figure 4. Map showing newly mapped fragments at Kambundji East.

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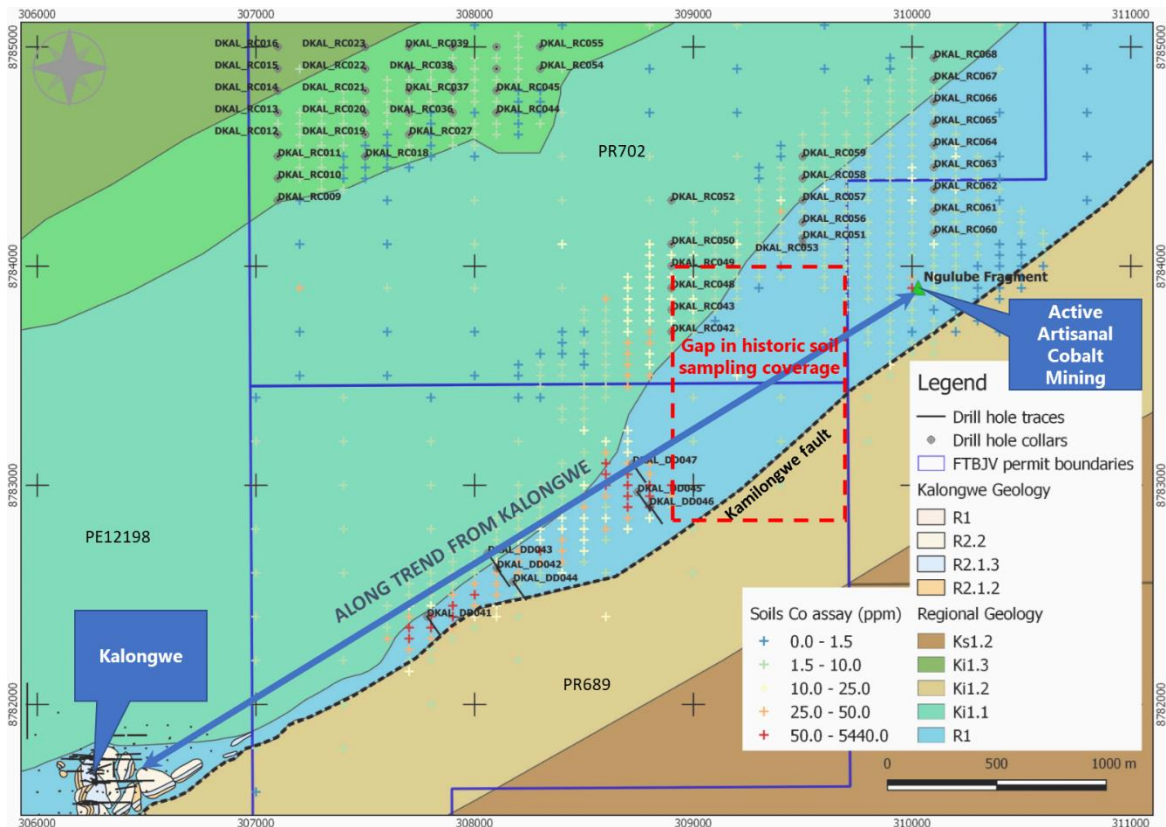


Figure 5. Kalongwe NE conceptual Target

## **Kalongwe Project Development Update**

### **Fixed Price Engineering and Procurement Contract**

An engineering and procurement (“EP”) fixed price offer for the Kalongwe project was received during the quarter and is currently under review. A fixed price EP package together with a self-managed on-shore construction component is in line with the project execution model detailed in the project Feasibility Study, which was priced based on a clearly defined scope split as identified in the 2018 Front End Engineering Design study.

### **Tails Dam & River Diversion Channel Detailed Design**

Knight Piesold (KP) were engaged late in 2018 to undertake the detailed design of the tailing’s storage facility and pit river diversion channel associated with the planned Dense Media Separation processing plant. Design of these works will facilitate project development (i.e. earthworks) which is a key activity in project construction and the detailed design enables a rapid ramp up of these activities at commencement. The work included:

- Tails dam design and tender documentation for the construction of facility;
- River diversion design and tender documentation for the construction; and
- Geotechnical assessment of the tails and process plant sites.

Design work and reporting was completed in January 2019.

### **Geotechnical Drilling**

As part of the detail dam design works, a detailed geotechnical assessment for the Kalongwe DMS plant and associated infrastructure was undertaken by specialist consultants Knight Piesold (KP). A total of six holes (120m) were drilled specifically to collect geotechnical data at the tails dam and process plant sites. Geotechnical logging of drill core was completed along with geotechnical testing of selected drill core being used in the tails dam design works.

### **Metallurgical Testwork**

As noted in previous advice to the market a detailed metallurgical testwork program was commenced and substantially completed in 2018. Outcomes from this work will provide key grinding and reagent consumption parameters significantly enhancing confidence in the Kalongwe product with off-takers, whilst also providing all key data required for a Stage 2 Definitive Feasibility Study. In addition, Dense Media (DMS) product samples have been generated for potential customers. To date the works significantly extend and importantly reinforce the earlier testwork program completed as part of the DFS.

Completion of the test program, including issue of a detailed report, is anticipated in February 2019.

### **Project Exoneration List**

Formal application was recently made to the DRC Government for substantial duty exoneration associated with all project-related items required to be imported into the DRC for the initial construction and future operation of the project. Some 4,000+ initial line items were identified and priced with their consumption estimated over an 8-year period.

The procedural step of compiling and submitting a detailed exoneration list is a key step in the execution of the project.

END

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## Competent Persons Statement

### *Exploration results*

Scientific or technical information in this release that relates to Exploration Results is based on and fairly represents information and supporting documentation prepared by Dr Peter Ruxton, the Company's Technical Director. Dr Peter Ruxton is a member of the Metals, Minerals and Mining (MIMMM) and a Fellow of the Geological Society of London (FGS) and has sufficient experience which is relevant to the style of mineralisation under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code). Dr Peter Ruxton consents to the inclusion in this report of the information, in the form and context in which it appears.

### *Exploration target*

Scientific or technical information in this release that relates to the Exploration Target for Monwezi 2 is based on and fairly represents information and supporting documentation prepared by Dr Peter Ruxton, the Company's Technical Director. Dr Peter Ruxton is a member of the Metals, Minerals and Mining (MIMMM) and a Fellow of the Geological Society of London (FGS) and has sufficient experience which is relevant to the style of mineralisation under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code). Dr Peter Ruxton consents to the inclusion in this report of the information, in the form and context in which it appears.

### *Mineral resources*

Scientific or technical information in this release that relates to the Mineral Resource estimate for the Kalongwe Project was first released by the Company in its ASX announcement entitled 'Upgraded JORC Resource at Kalongwe 302,000t Copper and 42,700t Cobalt' dated 5 February 2015. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all the material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

### *Ore reserve*

Scientific or technical information in this release relating to the Kalongwe Cu-Co Deposit reserve estimate is extracted from the Company's ASX announcement entitled 'Updated stage 1 feasibility study delivers significantly enhanced financial returns' dated 16th April 2018. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all the material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

## Forward-looking Statements

This release contains statements that are "forward-looking". Generally, the words "expect," "intend," "estimate," "will" and similar expressions identify forward-looking statements.

By their very nature, forward-looking statements are subject to known and unknown risks and uncertainties that may cause our actual results, performance or achievements, or that of our industry, to differ materially from those expressed or implied in any of our forward-looking statements.

Statements in this release regarding the Company's business or proposed business, which are not historical facts, are "forward looking" statements that involve risks and uncertainties, such as estimates and statements that

describe the Company's future plans, objectives or goals, including words to the effect that the Company or management expects a stated condition or result to occur.

Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

### **About Nzuri Copper Limited**

Nzuri Copper Limited (ASX: NZC) is an ASX-listed copper-cobalt company focused on the identification, acquisition, development and operation of high-grade copper and cobalt projects in the Katangan Copperbelt of the Democratic Republic of the Congo (DRC). The Company has two key projects in the DRC: the Kalongwe Copper-Cobalt development project and the Fold and Thrust Belt JV exploration project with Ivanhoe.

#### ***Kalongwe Copper-Cobalt project***

The Kalongwe Copper-Cobalt deposit ("Kalongwe") is the Company's 85%-owned flagship development project. Kalongwe is located in the Lualaba Province of the DRC and is situated towards the western end of the world-class Central African Copperbelt (Figure 1), less than 15km from where Ivanhoe Mines Ltd (TSX: IVN, "Ivanhoe Mines") has announced a second world-class copper discovery at Kakula (see announcement from Ivanhoe Mines Ltd TSX: IVN on 11 August 2016).

Kalongwe hosts a near-surface JORC resource of 302,000t contained copper and 42,700t contained cobalt as predominantly oxide ore (see ASX announcement on 5 February 2015 for further details).

#### ***Fold and Thrust Belt JV project***

The Fold and Thrust Belt JV ("FTBJV") project consists of five highly prospective tenements, covering an area of approximately 334 km<sup>2</sup>, contiguous to the Kalongwe copper-cobalt deposit in the Central African Copperbelt, Lualaba Province, DRC.

The Company has signed an MOU with Ivanhoe Mines Ltd (TSX: IVN, "Ivanhoe Mines") to acquire up to a 98% interest in the project (see ASX announcement on 24 April 2015 for further details).

The FTBJV project is managed by the Company, covers an area of the western Lufilian Arc, a fold belt that contains the world largest cobalt endowment and some of the richest copper deposits in the world. The project area is considered to offer high-quality exploration targets, for Kamo-a-Kakula type targets hosted on redox boundaries within the Grand Conglomerate Formation, as well as structurally controlled copper deposits hosted within the Kamilongwe thrust akin to Mutanda, Deziwa and the Kansuki deposits which occur 60 km to the North East along the structural trend.

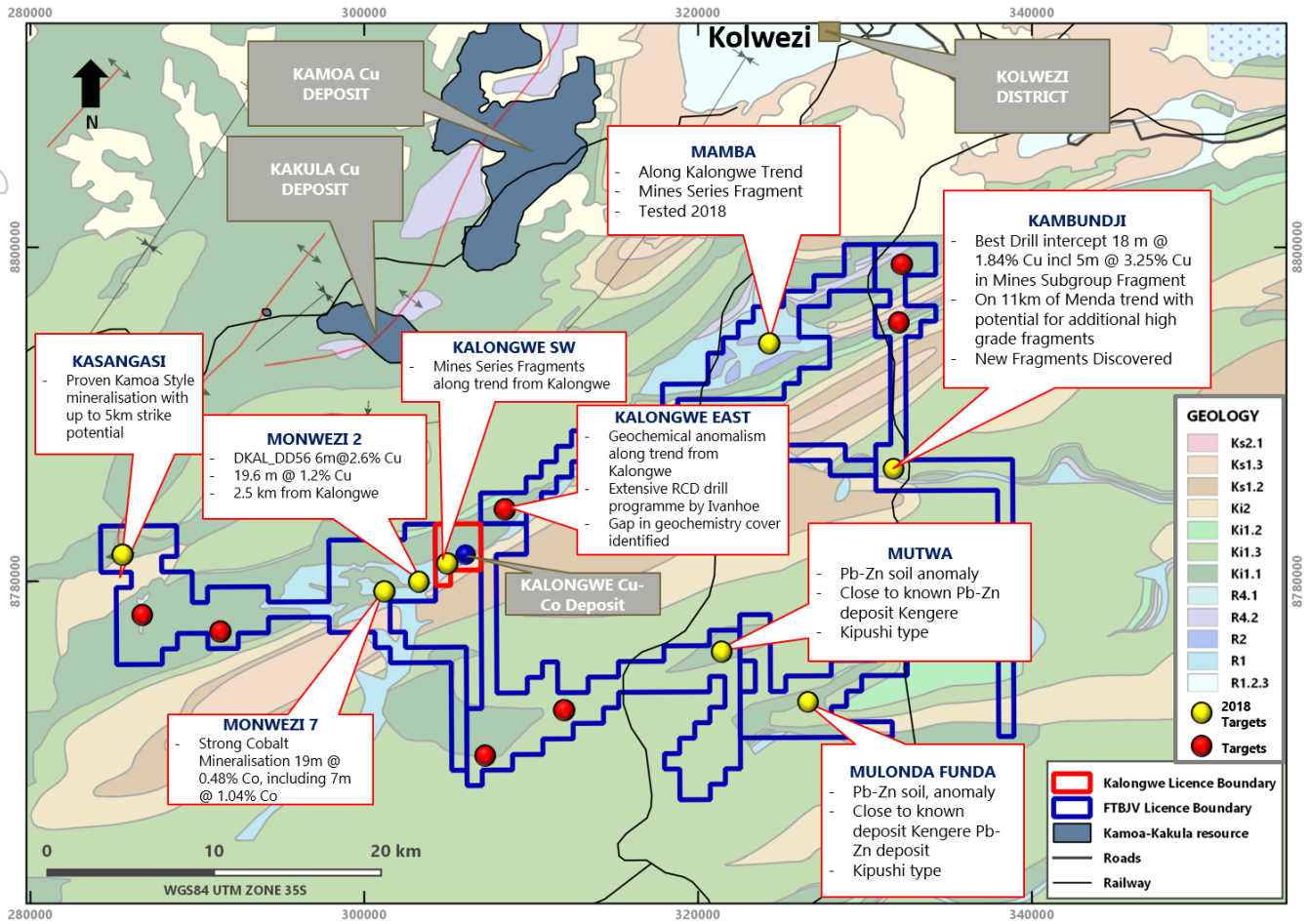


Figure 7. Key targets tested in 2018 exploration program

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**Appendix 1: Drill-hole intercepts and collar positions for Kasangasi and Monwezi 7**

Appendix Table 1: Drill Hole Intercepts from boreholes at Monwezi 7

Hole ID	Method	Target	From	To	Length (m)	Cu%	Co ppm*	Year Drilled
DMON7_RC01	RC	Monwezi 7	11	12	1	0.04	1100	2017
DMON7_RC01	RC	Monwezi 7	16	21	5	0.03	1668	2017
DMON7_RC01	RC	Monwezi 7	24	34	10	0.03	2002	2017
DMON7_RC01	RC	Monwezi 7	45	47	2	0.02	1530	2017
DMON7_RC01	RC	Monwezi 7	71	77	6	0.04	1445	2017
DMON7_RC02	RC	Monwezi 7	4	9	5	0.04	2236	2017
DMON7_RC02	RC	Monwezi 7	20	41	19	0.03	<b>4800</b>	2017
including	RC	Monwezi 7	23	30	7	0.04	<b>10424</b>	2017
DMON7_RC02	RC	Monwezi 7	45	49	4	0.03	1409	2017
DMON7_RC03	RC	Monwezi 7	1	12	11	0.01	1146	2017
DMON7_RC04	No Significant Intercepts							
DMON7_RC05	No Significant Intercepts							
DMON7_RC06	RC	Monwezi 7	4	10	6	0.02	1752	2017
DMON7_RC07	RC	Monwezi 7	0	12	12	0.02	<b>2605</b>	2017
DMON7_RC07	RC	Monwezi 7	15	19	4	0.01	1355	2017
DMON7_DD001	DD	Monwezi 7	31	34	3	0.07	1100	2017
DMON7_DD001	DD	Monwezi 7	62	64	2	0.1	2300	2017
DMON7_DD001	DD	Monwezi 7	71	79	8	0.05	2005	2017
DMON7_DD001	DD	Monwezi 7	103	111.6	8.6	0.05	1732	2017
DMON7_DD002	DD	Monwezi 7	No Intercept					
<b>DMON7_DD003</b>	<b>DD</b>	<b>Monwezi 7</b>	<b>20.6</b>	<b>23</b>	<b>2.4</b>	<b>0.05</b>	<b>1301</b>	<b>2018</b>
<b>DMON7_DD003</b>	<b>DD</b>	<b>Monwezi 7</b>	<b>55</b>	<b>57</b>	<b>2</b>	<b>0.25</b>	<b>2525</b>	<b>2018</b>
<b>DMON7_DD003</b>	<b>DD</b>	<b>Monwezi 7</b>	<b>66.2</b>	<b>77</b>	<b>10.8</b>	<b>0.03</b>	<b>1762</b>	<b>2018</b>
<b>DMON7_DD003</b>	<b>DD</b>	<b>Monwezi 7</b>	<b>79.1</b>	<b>109.5</b>	<b>30.4</b>	<b>0.06</b>	<b>2221</b>	<b>2018</b>
including	DD	Monwezi 7	<b>97.8</b>	<b>100</b>	<b>2.2</b>	<b>0.06</b>	<b>8736</b>	<b>2018</b>

Results are reported at a cut-off of 1000 ppm Co with a minimum width of 2 m.

Appendix Table2: Drill Hole Collar information for holes drilled at Monwezi 7

Hole ID	Method	Target	East	North	Azimuth	Inclination	Depth	Date Completed
DMON7_RC01	RC	Monwezi 7	301419	8779029	20	-60	86	2017
DMON7_RC02	RC	Monwezi 7	301427	8779057	20	-60	52	2017
DMON7_RC03	RC	Monwezi 7	300895	8778554	215	-60	85	2017
DMON7_RC04	RC	Monwezi 7	300927	8778594	215	-60	100	2017
DMON7_RC05	RC	Monwezi 7	300919	8778537	200	-75	100	2017
DMON7_RC06	RC	Monwezi 7	300866	8778567	190	-60	100	2017
DMON7_RC07	RC	Monwezi 7	300937	8778512	215	-60	100	2017
DMON7_DD001	RC	Monwezi 7	301399	8778982	20	-60	188.9	2017
<b>DMON7_DD002</b>	<b>RC</b>	<b>Monwezi 7</b>	<b>301161</b>	<b>8779270</b>	<b>340</b>	<b>-60</b>	<b>200</b>	<b>2018</b>
<b>DMON7_DD003</b>	<b>RC</b>	<b>Monwezi 7</b>	<b>301138</b>	<b>8779319</b>	<b>340</b>	<b>-50</b>	<b>109.5</b>	<b>2018</b>

Appendix Table 3: Drill Hole Intercepts from boreholes at Kasangasi

Hole ID	Method	From	To	Length (m)	Cu%	Co ppm	Year Drilled	Comment
DKAS_DD001	DD	No Mineralized intercepts						
DKAS_DD002	DD	40.05	56.65	16.6	0.66	78.9	2007	Intercept was not verified
DKAS_DD002	DD	60.63	62.4	1.77	0.79	216.79	2007	Intercept was not verified
DKAS_DD002	DD	73	79.12	6.12	1.55	26.28	2007	Intercept was not verified
DKAS_DD003	DD	No Mineralized intercepts						
DKAS_DD004	DD	51	55	4	0.75	76.63	2007	Intercept was not verified
DKAS_DD004	DD	127	129	2	1.94	124	2007	Intercept was not verified
DKAS_DD005	DD	No Mineralized intercepts						
DKAS_DD006	DD	No Mineralized intercepts						
DKAS_DD007	DD	27.5	38	10.5	2.76	125	2007	Intercept was not verified
including	DD	33	38	5	4.90	34	2007	Intercept was not verified
DKAS_DD008	DD	65	72	7	0.76	113	2007	Intercept was not verified
DKAS_DD010	DD	No Mineralised Intercepts						
DKAS_DD011	DD	No Mineralised Intercepts						
DKAS_DD013	DD	84.3	86.9	2.6	0.70	143	2017	
DKAS_DD014	DD	No Mineralised Intercept						
DKAS_DD015	DD	No Mineralised Intercepts						
DKAS_DD016	DD	62.6	70	7.4	0.83	77	2018	
DKAS_DD016	DD	75.1	77.1	2	0.61	50	2018	
DKAS_DD016	DD	83	98	15	1.07	333	2018	
DKAS_DD016_2	DD	67	69	2	0.54	330	2018	
DKAS_DD016_2	DD	78.5	80.5	2	0.81	82	2018	
DKAS_DD016_2	DD	87.6	95.7	8.1	0.79	225	2018	
DKAS_DD017	DD	No Mineralised Intercept						
DKAS_DD017_2	DD	No Mineralised Intercept						
DKAS_DD018	DD	No Mineralised Intercept						
DKAS_DD018_2	DD	No Mineralised Intercept						
DKAS_DD019	DD	162	165	3	0.78	1759	2018	
DKAS_DD019	DD	174.2	180	5.8	0.70	115	2018	
DKAS_DD020	DD	No Mineralised Intercept						

Results are reported with a cut-off of 0.5% Cu and a minimum width of 2 m.

Appendix Table 4: Drill Hole Collar information for holes drilled at Kasangasi

Hole ID	Method	Target	East	North	Azimuth	Inclination	Depth	Date Completed
DKAS_DD001	DD	Kasangasi	285618	8781476	45	-60	136.6	2007
DKAS_DD002	DD	Kasangasi	285550	8781565	45	-60	105	2007
DKAS_DD003	DD	Kasangasi	285646	8781469	52	-60	300	2007
DKAS_DD004	DD	Kasangasi	285443	8781590	50	-60	170	2007
DKAS_DD005	DD	Kasangasi	285795	8781397	10	-60	301	2007
DKAS_DD006	DD	Kasangasi	285907	8781391	360	-60	327.5	2007
DKAS_DD007	DD	Kasangasi	285670	8781526	40	-60	86	2007
DKAS_DD008	DD	Kasangasi	285497	8781641	50	-60	84.5	2007
DKAS_DD009	DD	Kasangasi	285803	8781452	10	-60	120.9	2007



DKAS_DD010	DD	Kasangasi	284627	8782431	340	-70	214.4	2017
DKAS_DD011	DD	Kasangasi	286662	8782470	0	-70	215.1	2017
DKAS_DD013	DD	Kasangasi	285412	8781748	340	-60	120	2017
DKAS_DD014	DD	Kasangasi	285237	8781611	270	-60	130.4	2017
DKAS_DD015	DD	Kasangasi	285186	8782365	90	-60	113.3	2017
DKAS_DD016	DD	Kasangasi	286570	8781476	0	-60	112.6	2018
DKAS_DD016_2	DD	Kasangasi	286562	8781476	0	-60	119.6	2018
DKAS_DD017	DD	Kasangasi	287169	8781502	0	-50	122.8	2018
DKAS_DD017_2	DD	Kasangasi	287189	8781392	0	-60	99.5	2018
DKAS_DD018	DD	Kasangasi	287951	8781988.	345	-50	37.5	2018
DKAS_DD018_2	DD	Kasangasi	287961	8781940	345	-50	41.3	2018
DKAS_DD019	DD	Kasangasi	286194	8781388	0	-50	239.2	2018
DKAS_DD020	DD	Kasangasi	287598	8781441	0	-50	251	2018

## Appendix 2: Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, 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 30g charge for fire assay'). In other cases more explanation may be required, 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 style="list-style-type: none"> <li>Diamond Drill core was sampled at a nominal length of 100 cm where visible mineralisation was noted. Intervals immediately above and below were sampled between 50 cm and 1.2 m samples ensuring that no lithological boundaries were crossed.</li> <li>Trenches were sampled by chipping out sample material from the floor of the trench representing a complete meter of insitu material. Nominal 1 m samples were collected except when lithological changes were noted, in these cases samples did not cross lithological boundaries.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling utilising a mentioned in this release utilised a PQ-HQ core sizes where appropriate to maximise core recovery. A double tube core barrel was utilised. Core was not orientated due to bad ground conditions</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Diamond drill recovery is &gt; 80% assessed by measuring the length of core recovered after re-assembling broken core. Intervals of core loss are excluded from sample</li> </ul>

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	<ul style="list-style-type: none"> <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>	length and samples represent 100% core recovery.
<b>Logging</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Diamond drill holes are geologically logged for rock type, alteration and qualitative estimates of mineralisation took place, this is deemed sufficient for early stage exploration drillholes.</li> <li>All drill core was photographed.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <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, including for 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 style="list-style-type: none"> <li>PQ diamond drill core is split into halves and one half quartered along the core axis. A diamond blade core saw was used. The same quarter of the core is sampled to prevent bias.</li> <li>HQ diamond drill core is split in half along the core axis. A diamond blade core saw was used. The same side of the core is sampled to prevent bias.</li> <li>5 % of the samples were prepared as field duplicates and were submitted to monitor between sample variability and laboratory assay precision.</li> <li>Samples were submitted to the ALS Laboratory preparation facility in Lubumbashi, DRC, where the entire sample is crushed to &lt; 3mm and a 250 g aliquot is obtained using a rotary splitter followed by pulverising to 85% &lt;75µm. Regular sizing checks were undertaken and reported.</li> <li>Sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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, spectrometer's, 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 (eg 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 style="list-style-type: none"> <li>Handheld XRF analysis is performed using a Thermo Scientific™ Niton™ XL2 instrument. Each sample was analysed for 30 seconds with no factors applied. CRMs are routinely analysed in the sample stream and are assessed to determine the quality of the analyses. Handheld XRF analyses are not reported, only QAQC passed laboratory analyses.</li> <li>Samples selected for laboratory analysis were submitted for a four acid digest (sulphuric, nitric, perchloric and hydrofluoric) and ICP-AES finish for multi-elements.</li> <li>Only QAQC passed laboratory analyses are reported.</li> </ul>

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		<ul style="list-style-type: none"> <li>• QA/QC procedures include; a chain of custody protocol, the systematic submittal of 15% QA/QC samples including field duplicates, field blanks and certified reference samples into the flow of samples submitted to the laboratory.</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Assay verification is undertaken by submitting field duplicates.</li> <li>• At this stage of the exploration programme independent laboratory repeats or twin holes are not deemed necessary</li> <li>• Data is recorded onto hardcopy log sheets which are stored onsite. This data is captured electronically and imported into the project database during which verification and validation is undertaken.</li> <li>• No statistical adjustments to data have been applied.</li> </ul>
<p><b>Location of data points</b></p>	<ul style="list-style-type: none"> <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 Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• Hole collar locations were determined using a Garmin handheld GPS using the average location function. All holes were surveyed by differential GPS with survey work undertaken by a qualified and registered surveyor.</li> <li>• Diamond drill holes are surveyed using a reflex multi-shot survey tool.</li> <li>• The grid system for the project is UTM WGS84, Zone 35 South.</li> <li>• Topographical data is determined through the combination of radar telemetry obtained during a high resolution aeromagnetic survey and average location collected by handheld GPS's.</li> </ul>
<p><b>Data spacing and distribution</b></p>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Drill hole spacing is variable depending on the intention of the exploration test being applied. At Kasangasi</li> <li>• Resource or ore reserve estimation is not reported here.</li> </ul>
<p><b>Orientation of data in relation to geological structure</b></p>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• The orientation of the mineralised zone in the strike extensions of Kasangasi reported here are unknown. It is possible that these drill intersections are oblique, and bias may exist due to oblique intersections.</li> <li>• The orientation of the mineralised zone at Monwezi 7 reported here are unknown. It is possible that these drill intersections are oblique, and bias may exist due to oblique intersections.</li> </ul>

<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>An unbroken sample chain of custody was implemented, as follows:           <ul style="list-style-type: none"> <li>Plastic sample bags sealed and placed inside poly weave bags or boxes which are sealed with cable ties or taped closed</li> </ul> </li> <li>Sample shipments examined on arrival at the laboratory and the sample dispatch form signed and returned with a confirmation of the security seals and the presence of samples comprising each batch.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>ALS's sample preparation laboratory located in Lubumbashi was audited in February and passed all required checks.</li> </ul>

### Appendix 3: Reporting of Exploration Results

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

Criteria	JORC Code Explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, 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 style="list-style-type: none"> <li>All results presented are located entirely within the companies Kalongwe copper-cobalt project (PE12198) in the Central African Copperbelt, Lualaba Province, DRC (see ASX announcement on 22 April 2015 for further details).</li> <li>The mining licence was granted in 2015 for 30 years.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Kalongwe deposit was discovered in 1902 and various phases of prospecting was done in 1931 to 1956, trenches were excavated, and four drill holes were completed but none of this data is available.</li> <li>African Minerals acquired the land covering the Kalongwe area in 2003 and completed the first systematic drilling programme including systematic geochemical sampling and grid-drilling at 100m by 100m. The African minerals drilling data is available and is utilised when planning exploration activities.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The project area is in the far west of the Outer Lufilian Arc in an arcuate-shaped belt of folds and thrusts that formed after the closure of the Katangan intra-cratonic basin. Three deposit models are being targeted: (i) strataform copper mineralization in Roan Group lithologies</li> </ul>

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		and (ii) secondary remobilization of the mineralization along structures. (iii) Zambian type copper mineralization associated with stratigraphically controlled redox boundaries.
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <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:             <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </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 Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• See relevant appendices, all required data has been provided in appendices. Tables in text of report.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg, cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <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> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Intercepts are calculated on a length weighted basis. Cutting of high grades is not applied.</li> <li>• When calculating intercepts missing intervals (eg minor core loss) are treated as 0% copper and 0% Co.</li> <li>• At Monwezi 7 the primary commodity is Cobalt. The parameters used when calculating intercepts are :             <ul style="list-style-type: none"> <li>○ No upper limit has been applied to copper or cobalt grades.</li> <li>○ For cobalt targets 1 m or greater intercepts are calculated all intercepts above 1000 ppm are reported. A minimum length of 1 m is applied with a maximum 1 m of internal dilution.</li> </ul> </li> <li>• For targets where Copper is the primary commodity, as at Kasangasi, the parameters used when calculating intercepts are :             <ul style="list-style-type: none"> <li>○ No upper limit has been applied to copper or cobalt grades.</li> <li>○ For Copper targets 2 m or greater intercepts are calculated all intercepts above 5000 ppm are</li> </ul> </li> </ul>



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		<p>reported. A minimum length of 2 m is applied with a maximum 2 m of internal dilution.</p> <ul style="list-style-type: none"> <li>All metal grades reported are single element, reported in ppm or percentage units as is indicated.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 (eg, 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>The geometry of the mineralised zone at Kasangasi and Monwezi 7 targets are unknown and therefore all intercepts are reported as drilled widths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Drill hole plans are provided as well as sections where necessary.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>In this press release drill holes are reported as intercepts, drill holes which did not intersect Cu or Co mineralisation are reported with "no mineralised intercepts"</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>At this stage assays for all drill holes which have been received have been reported. All substantive data has been reported.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Target is considered poorly tested and requires drill testing in all directions. Plans for further drilling have not yet been finalised and planning for the 2019 field season is currently underway.</li> <li>The potential extensions of Kasangasi are shown on the relevant figures. The possible extents of Monwezi 7 are currently unknown.</li> </ul>