

ASX RELEASE: 31 JANUARY 2018

## DECEMBER 2017 QUARTERLY ACTIVITIES REPORT

- ▶ Completion of the acquisition of the high-grade Napier Range Zinc with drilling planned for March Quarter
- ▶ Successful Metallurgical testwork program on the Admiral Bay Zinc Project with China Minmetals being a key step required to comply with financing requirements of Chinese banks
- ▶ Positive review of the Admiral Bay Zinc Project Pre-Feasibility Study (PFS) Stage 1 completed by China NFC, being a key step required to comply with financing requirements of Chinese banks
- ▶ Significant cobalt intersections at the Kyarra Cobalt project with phase 2 drilling planned
- ▶ Strengthening of the Metalicity board with the appointment of Justin Barton as Executive Director

### ACQUISITION OF HIGH GRADE LENNARD SHELF ZINC PROJECT (100% MCT)

Metalicity Limited (ASX:MCT) ("MCT" or "Company") strengthened its zinc project pipeline through the completion of the acquisition of the high grade Napier Range Zinc Project and the Emanuel Range Zinc Project (collectively the Lennard Shelf Zinc Project), located in the Lennard Shelf of the Kimberley Region, WA. Napier Range represents a low capital and near term producing zinc production opportunity, while Emanuel Range represents an early stage but highly prospective zinc exploration project with an extensive 30km strike of largely untested targets. These projects will complement the development of its large scale long life Admiral Bay Zinc Project, located in the adjoining Canning Basin of the Kimberley Region, WA.

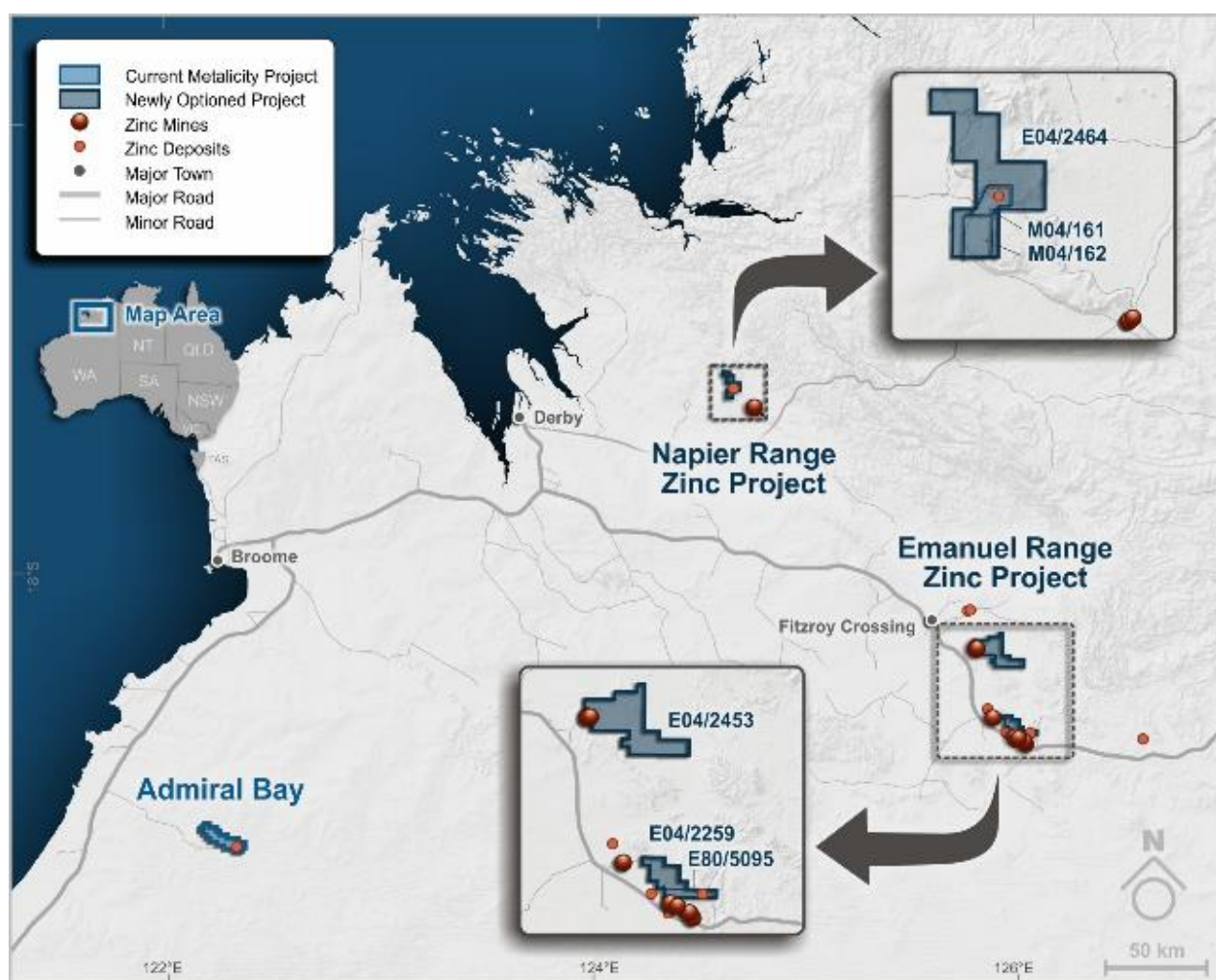
### Overview

The Napier Range Zinc Project consists of 2 granted mining licenses, an exploration license application and a granted general purpose license (Table 1). It includes the Wagon Pass deposit, with a JORC 2012 compliant Inferred Mineral Resource Estimate (MRE) of 750Kt at 5.8% Zn, 7.2% Pb, 54g/t Ag (13.6% ZnEq) and an adjoining Exploration Target Range (ETR) of 100Kt-200Kt at 10%-13% ZnEq.

The most recent MRE of 750Kt at 5.8% Zn, 7.2% Pb, 54g/t Ag (13.6% ZnEq) at Wagon Pass was completed by Cube Consulting in 2016, using a 5% Zn + Pb cut off, 2m downhole compositing, and an assumed bulk density of both waste and mineralised material of 3.0 g/cm<sup>3</sup>. The deposit is located between 150-200m depth below surface. Additional details on key parameters of the MRE are presented in ASX Announcement "High Grade Near Surface Zinc Projects on 30/10/17.

Extensions to the Wagon Pass deposit and additional deposits are considered likely if systematically explored, by leading independent geological consultant CSA Global, who recently completed a comprehensive targeting exercise and commented that the area is underexplored (CSA Global 2016). The report outlines 9 targets, 1 for resource extensions to the Wagon Pass deposit and 8 further targets.

**Figure 1: Location of the Lennard Shelf Zinc Projects**



Source: Metalicity

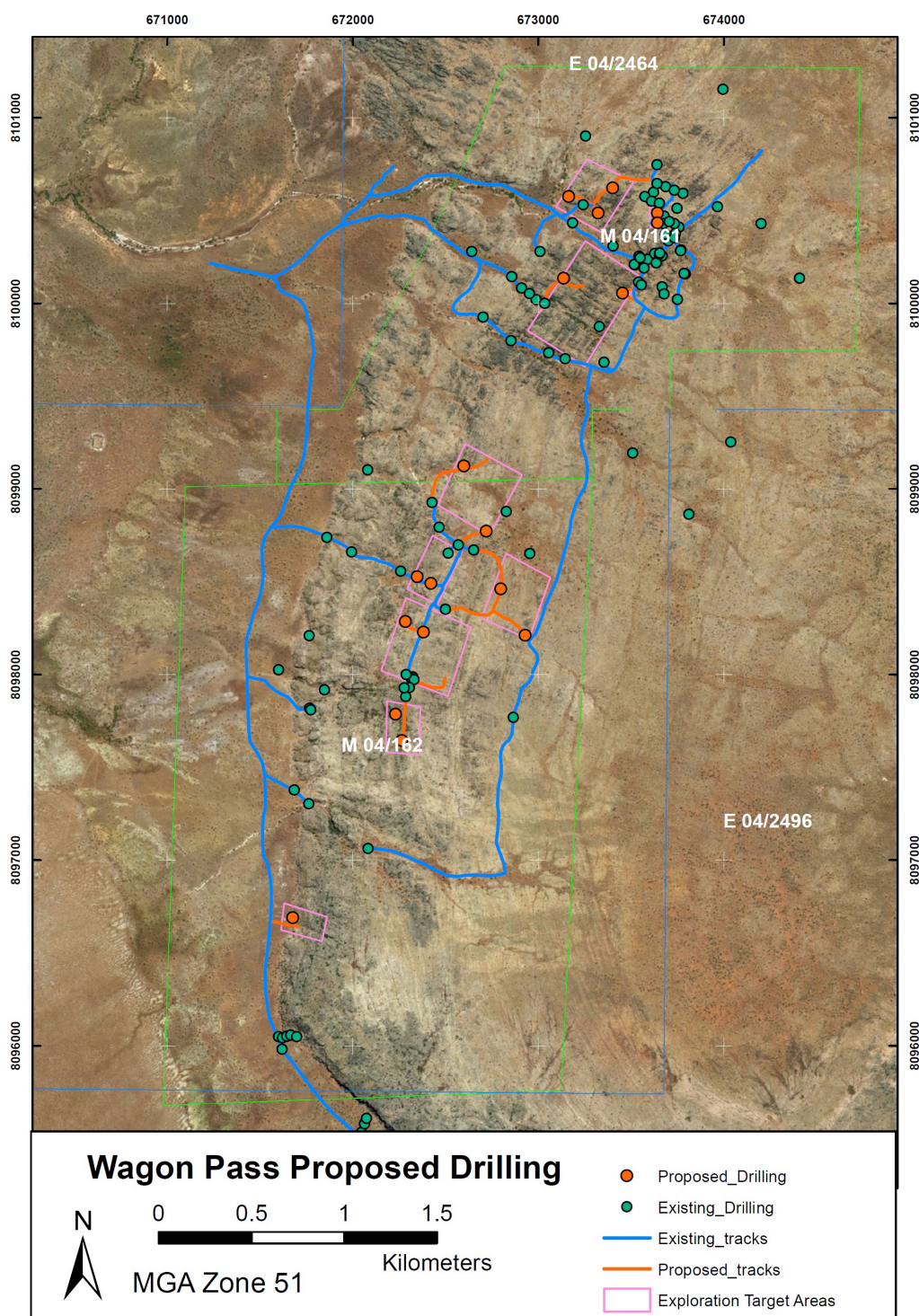
At Wagon Pass, mineralisation potential exists to extend the resource to west of the deposit, with an Exploration Target Range of 100-200Kt at 10-15% ZnEq. The remaining 8 targets are located further south, mostly in analogous settings to Wagon Pass. CSA further commented 'Although drilling has occurred in the project area, many drill holes did not test the favorable Lower Napier stratigraphy.

In addition, the footprint of the Wagon Pass deposit is small and the area is significantly under-explored for additional deposits 0.5 to 1 Mt size.' Based on the CSA Global analysis the Company is targeting multiple occurrences of 0.5-1Mt size, resulting in an Exploration Target Range (ETR) at Napier Range of 1-4 Mt @ 10-15% ZnEq. The grade and tonnage range is based on the grade and geometry of the Wagon Pass deposit, and the clustering nature of this deposit type.

Additional details on key parameters of the ETR are presented in ASX Announcement "High Grade Near Surface Zinc Projects" on 30/10/17. The Exploration Target Ranges (ETR) stated above are conceptual in nature and the potential quantities and grades are conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource Estimate outside that known at Wagon Pass, and it is uncertain whether further exploration will result in the estimation of additional Mineral Resources.



Figure 2: Exploration Target areas, existing and proposed drilling, and major gossan locations at Napier Range.



Source: Metalicity

The Emmanuel Range Zinc Project consists of one exploration tenement and two tenement applications in close proximity to the Pillara, Kapok, Cadjebut and Goongewa Mines, in the Emmanuel Range of the Kimberley Region, WA. (Figure 3). All of the tenements in this project cover the prospective stratigraphy and structural positions, in very close proximity to existing deposits or mines. For example, E04/2453 is located less than 2km from the Pillara deposit, the largest Pb-Zn deposit yet discovered in the Lennard Shelf.

A number of synergistic opportunities may be likely with the development of the Company's 100% owned large scale long life and low cost Admiral Bay Zinc Project. The primary synergy is the potential of Napier Range to be a high grade low capital near term producing asset, that would generate sufficient cashflow to help support the development of Admiral Bay.

Other key synergies identified to date include various infrastructure components, mineral processing equipment, human resources, financing and offtake synergies. These will be further evaluated and quantified during the Due Diligence period.

Note that Lennard Shelf Pty Ltd (a 50:50 joint venture between Glencore and Teck) retain an option to earn a 51% participating interest in the Wagon Pass tenements if a new JORC Inferred Resource has been discovered, by either completing and sole funding a Feasibility Study, or spending \$20M on the assessment of the inferred resources. Metalicity has held discussions with both Glencore and Teck regarding this option and will update the market should any investment and/or amendment to the agreement be reached.

For further information related to Geology, Mineral Resource Estimate (MRE), Exploration Target Range (ETR) and Terms of the Acquisition please see ASX Announcement "High Grade Near Surface Zinc Projects, 30/10/17."

## COMPLETION OF KEY STEPS OF THE MOU'S WITH CHINA MINMETALS AND CHINA NFC

### CHINA MINMETALS METALLURGICAL TESTWORK PROGRAM

On 19 July 2017, the Company signed a MOU with CMN for future offtake from Admiral Bay. The MOU contemplates the supply of an initial 10% of future offtake from an anticipated production of 174,000t of zinc concentrate and 115,000t of lead concentrate per annum from Admiral Bay in exchange for preliminary metallurgical and beneficiation testwork. For further details on the MOU see ASX:MCT 19/7/17.

The Company's metallurgical and mineral processing test work carried out to date delivered positive results including (1) The material does not currently demonstrate any deleterious metallurgical behaviour (2) It appears readily amenable to processing through a simple, conventional flotation plant to achieve high zinc, lead and silver recoveries (3) Preliminary metal recovery expectations are in the range of 90-95% across zinc, lead and silver (4) Concentrate product grades were good (Pb +60% and Zn +48%), although selectivity of zinc and lead was not ideal and there is scope for further optimisation (see ASX:MCT 27/7/16).

The preliminary metallurgical testwork study by CMN was undertaken by Changsha Institute of Mining Research Co., Ltd under the commissioning of CMN on 52.4kg of diamond core from drill holes ABRD005, ABRD006, ABRD008 and ABRD009 located primarily within the high-grade zone of Admiral Bay and located within the granted mining license (ML4/249). The core was selected to be representative of the Admiral Bay orebody and an advance on previous testwork.

Samples were crushed and screened to a particle size of -2mm, and were then prepared by mixing and division, and taken for beneficiation tests, analysis, mineralogical studies and standby application. Four composites (ABMET1, ABMET2, ABMET3, ABMET4) were assayed pre-comminution, each sample representing sections of different drill holes. Composites ABMET1 & ABMET4 were combined and selected for testing.

**Table 1:** Sample Information for testing

Sample ID	Dry Weight (kg)	Pb grade (%)	Zn grade (%)	Au grade (g/t)	Ag grade (g/t)
ABMET1 ABRD 006	26.12	1.17	4.85	0.1	24.98
ABMET2 ABRD 005	14.44	0.58	3.08	0.23	17.54
ABMET3 ABRD 008	2.18	0.3	2.01	0.23	4.47
ABMET4 ABRD 009	9.62	1.78	2.24	0.21	16.06
<b>Calculated total average grade:</b>	<b>52.36</b>	<b>1.08</b>	<b>3.76</b>	<b>0.16</b>	<b>20.44</b>

Bench flotation tests were carried out on the samples to establish the amenability of conventional beneficiation. The samples were characterised by a mineralogy study and chemical composition. The objectives of the bench flotation tests were to:

- (1) To gain a comprehensive understanding of the properties of the samples via a mineralogy study, providing a basis for beneficiation testwork study
- (2) To determine the economic beneficiation process flowsheet, reagent system and performance indices indexes for Admiral Bay Zinc-Lead-Silver by conducting systematic beneficiation tests, investigating the main mineralogical and technological process factors that influence beneficiation indexes, and providing the basis for the next step in testwork study.

## SUMMARY OF METALLURGICAL TESTWORK RESULTS WITH CHINA MINMETALS

### Summary of Results

- (1) Samples were characterised as zinc-lead primary sulphides with the main recoverable minerals being sphalerite and galena. The mineralogy was characterised as sphalerite, galena, pyrite and chalcopryrite, with gangue minerals being mainly calcite, quartz, barite and sericite.
- (2) Sequential flotation is the preferred method with lead flotation followed by zinc flotation from lead tailings. The reagent regimes selected were: (a) CaO (Lime) was chosen to depress pyrite, with (b) ZnSO<sub>4</sub> and NaSO<sub>3</sub> selected to depress zinc and (c) ETC and BX have a selective collecting effect on Lead minerals, these were adopted as a collector blend in the Lead flotation
- (3) Full process, close-circuit, tests were carried out with Zinc recoveries of 88.27% to a zinc concentrate with a grade of 51.27% Zn and 181.2 g/t Ag achieved, while Lead recoveries to lead concentrate were 91.88% at a lead concentrate grade of 65.13% Pb and 137g/t Ag (refer to Table2).
- (4) The grade of deleterious elements will not attract penalties.
- (5) Gold and silver are up to 0.23g/t Au and 23.22g/t Ag respectively with a significant recovery value.

**Table 2:** Testwork summary results for Pb/Zn & Ag grades in concentrate with respective recoveries

Product	Yield Rate (% of Mass)	Pb grade (%)	Zn grade (%)	Ag grade (g/t)	Pb Recovery (%)	Zn Recovery (%)	Ag Recovery (%)
Pb Concentrate	1.89	65.13	3.95	137.65	91.88	1.75	11.25
Zn Concentrate	7.36	0.49	51.27	181.20	2.69	88.27	57.72
Tailings	90.75	0.08	0.47	7.90	5.43	9.98	31.03



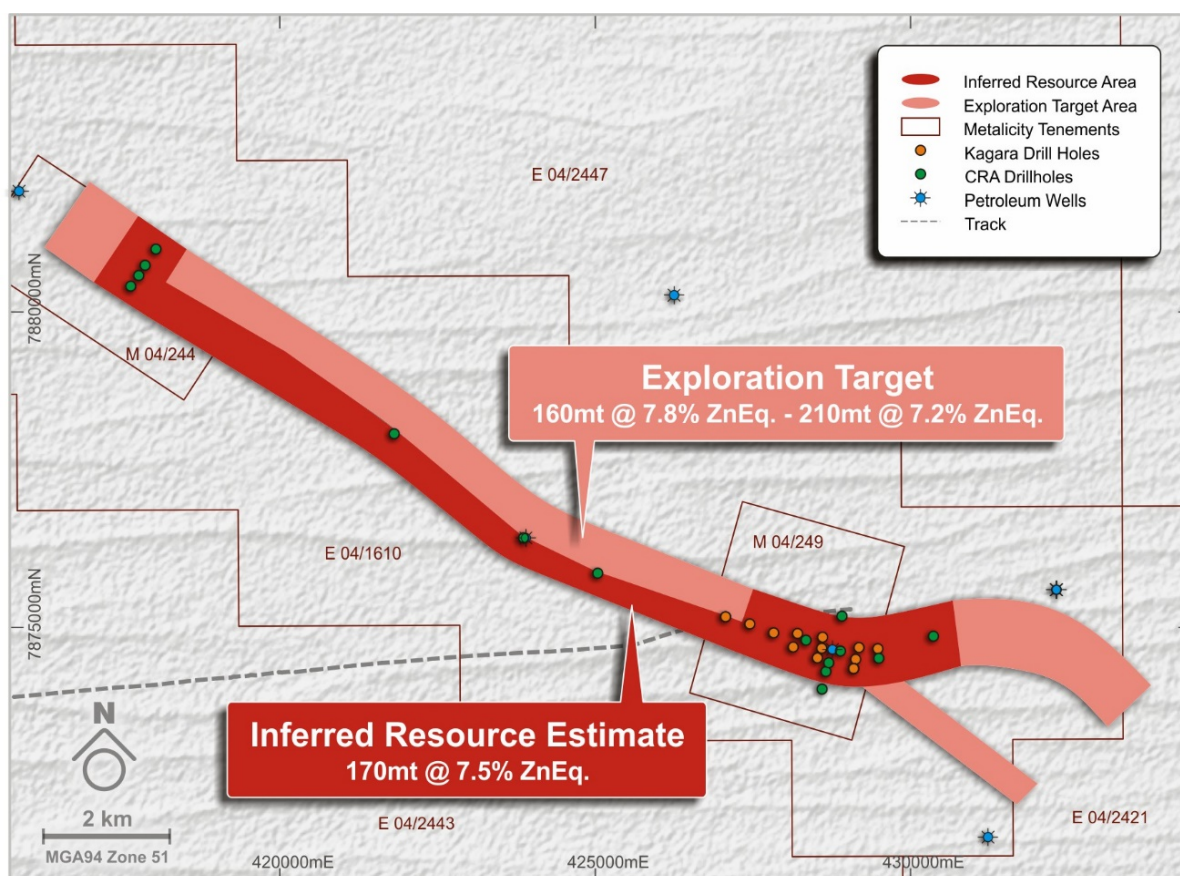
## SUMMARY OF THE CHINA NFC PROJECT REVIEW

During the quarter, China Non-Ferrous Metals (NFC) formally notified the Company of the successful completion of a detailed review (Review) of the technical and financial parameters of the Admiral Bay Zinc Project PFS Stage 1 report (see ASX:MCT 10/10/17) supporting the Memorandum of Understanding (“MOU”) signed with the NFC holding company CNFC for the feasibility, development and financing of Admiral Bay (see ASX:MCT 8/2/17).

CNFC is the major engineering and equipment arm of NFC in the resources and mining sector and has established markets in the Middle East, Central and North Asia, Central and South Africa, and is seeking further projects related to resources in developed resources and mining markets such as Australia. CNFC is an organization with a strong track record in supporting the development of large, long life projects, including Mehdiabad, Citronen, Talla Hamza and other projects in Northern China including the “City of Zinc”. NFC has entered the Shenzhen 100 Stock Index and Shanghai-Shenzhen 300 Composite Index.

The Review is a key term of the MOU between the Companies and a strong endorsement of the technical and financial parameters of the Admiral Zinc Project PFS Stage 1 report, establishing a framework for the Project Study at the completion of the PFS, incorporating NFC EPC costings. The Project Study is anticipated to significantly reduce overall capital and operating costs, reduce long lead items times, accelerate development timelines and overall economics, and in turn support a binding agreement regarding the feasibility, development and financing of Admiral Bay.

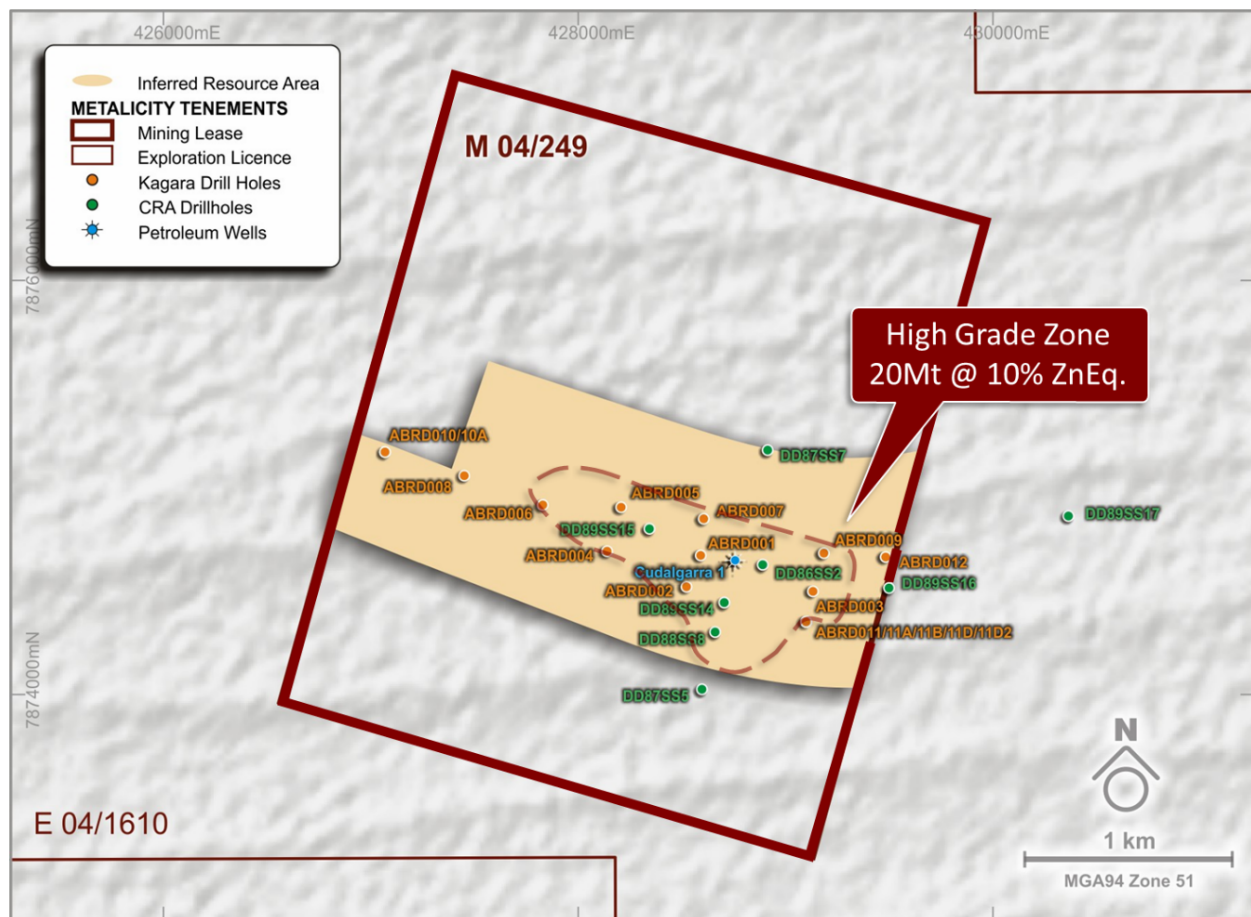
**Figure 3: Admiral Bay Zinc Project: MRE and ETR in plan view**



Source: Metalicity

The Exploration Target Ranges (ETR) stated above are conceptual in nature and the potential quantities and grades are conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource Estimate outside the Mineral Resource Estimate at Admiral Bay, and it is uncertain whether further exploration will result in the estimation of additional Mineral Resources.

**Figure 4: Admiral Bay Zinc Project high grade zone extending over a 2.1km strike**



Source: Metalicity

## SIGNIFICANT COBALT INTERSECTIONS AT THE KYARRA PROJECT (100% MCT)

### Kyarra Cobalt Project

The Company completed an initial 1,800m RC drill program at the Kyarra Cobalt project following recent desktop and field work where another 65 rock chip samples were collected including significant results of up to 1500 ppm Co and >1% Zn in weathered near-surface rock chips were received, across the entire outcrop area sampled. Some of the cobalt anomalism has been observed to be associated with west-north-west striking breccia zones interpreted to be related to deep-seated structures and to represent part of a plumbing system for metalliferous fluids upward and southwards into suitable trap horizons.

Of particular note are the generally steep dips of units (typically >50° to the south and southeast), which indicate significant disruption of the units in this area in contrast to the generally held view of the Yerrida Basin units being flat lying. Due to significant delays in the delivery and then processing of the samples, largely out of the control of the Company, results and interpretation of the program will be due shortly.

The drilling intersected sandstones of the Yelma Formation unconformably overlying Maraloo Formation black shales. Holes were terminated within black shale at a predetermined depth. Locally, anomalous analytical results were associated with quartz veining, related to fractures and brecciation, was intersected. The downhole quartz zones are possibly correlative with quartz float at surface, and related to the west-north-west trending breccia zones.

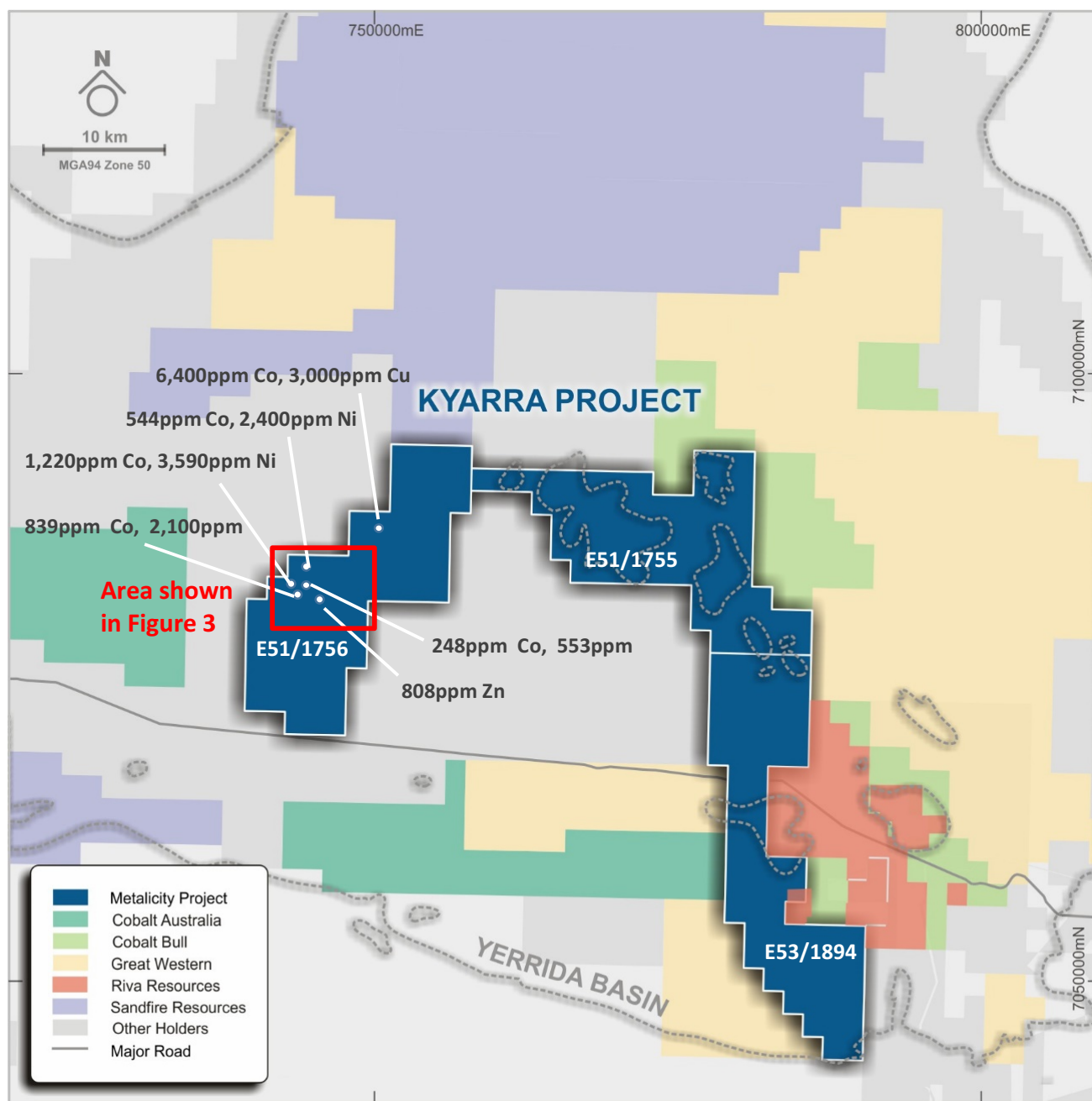
Drill holes encountered a consistent near-surface base metal enrichment zone, interpreted to be a regolith enrichment zone, which may account for some of the anomalous results in surface samples. More interestingly, an 8m to 12m thick, shallow south-dipping zone of anomalous base metal (400–500ppm Cu and 50–60ppm Co) was intersected in all drill holes. These values represent around 4x the Cu background and about 2x the Co background values (Table 1).

This anomalism is considered significant because in the Central African Copperbelt – the source of the exploration model – there are multiple mineralised horizons (associated with minor redox boundaries) found above the basal productive zone. The Company will now focus its efforts to target the base of the Maraloo Formation and the main transition zone from the underlying “red-bed” sandstones, which represents the primary target and most prospective setting for significant mineralisation.

For further information related to Kyarra Cobalt Project see ASX Announcement “Significant Cobalt intersections at Kyarra” 14/11/17.



Figure 5: Regional Location Map showing Metalicity's Kyarra Project in relation to nearby tenement holders



Source: Metalicity

## LITHIUM PROJECTS (100% MCT)

### Pilbara Lithium Projects

The Company completed an initial 500-600m RC drill program at the Pilgangoora North Project aimed at testing for mineralized pegmatites extending north into the southern parts of the tenement, below the pegmatites already mapped at surface. Drilling intersected pegmatites in every hole. Anomalous lithium was intersected in every hole.

Subsequent to the drilling program, the Company appointed lithium experts from CSA Global to undertake a project review and targeting exercise across the Company's Pilbara Lithium projects. The results were very positive with a number of new targets identified that have yet to be systematically tested with modern exploration techniques.

## CORPORATE AND FINANCIAL

The Company is completing a capital raising via an equity placement to institutional and sophisticated investors in North America and Australia. Proceeds of the raising are to be invested in drilling the Napier Range Zinc Project, progressing the Admiral Bay Zinc Project PFS, and phase 2 drilling of the Kyarra Cobalt Project.

During the quarter the Company appointed Justin Barton to the board as an Executive Director.

## ENQUIRIES

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### Competent Person Statement Regarding Napier Range Zinc Project

See Metalicity Announcement 30/10/17

### Competent Person Statement Regarding Admiral Bay Project

See Metalicity ASX Announcement 19/04/2017.

### Competent Person Statement Regarding Lithium Projects

See Metalicity ASX Announcement 28/04/2017

### Competent Person Statement Regarding Kyarra Cobalt Project

See Metalicity ASX Announcements of 21/06/2017 and 21/07/2017

In accordance with Listing Rule 5.23.2, the Company is not aware of any new information or data that materially affects the information included in the Quarterly Report and the relevant announcements referred above and, in the case of estimates of mineral resources or ore reserves, that all material assumptions and technical parameters underpinning the estimates in the Quarterly Report and relevant announcements referred above continue to apply and have not materially changed.