



## **31 January 2018**

**ASX Code: PMY** ABN 43 107 159 713

#### CORPORATE DIRECTORY

#### **Managing Director**

Simon Noon

#### **Directors**

Richard Monti (Chairman)
Peter Harold (Non-exec.)
Andrew Parker (Non-exec.)

## **Company Secretary**

Patrick Holywell

#### **Registered office**

Level 10, 553 Hay St Perth WA 6000

#### **Telephone:**

+61 8 6266 8642

#### Facsimile:

+61 8 9421 1008

#### Email:

info@pacificominerals.com.au





# **Quarterly Activities Report – December 2017**

Pacifico Minerals Limited ("Pacifico" or "Company") is pleased to provide its activities report for the December 2017 quarter.

## **Highlights**

#### **AUSTRALIA**

Borroloola West Joint Venture - Copper/Zinc/Lead/Cobalt/Silver

- Pacifico announced an Exploration Target\* of 5 to 10Mt of 0.8% Cu to 1.1% Cu at Lorella.
- Acid leach testwork on oxide copper mineralisation from the Lorella prospect returned highly positive results and indicates >90% recoveries, with low acid consumption.
- Preparation for aircore program at Lorella to test strike extensions of previously intersected oxide copper mineralisation, with RC and diamond drilling following, to establish inferred resources of oxide copper.
- Diamond drilling completed at Mariner and Coppermine Creek Prospects, designed to test for major primary copper and zinc-lead mineralisation.
- Fieldwork at Mariner extended lead and zinc anomalism north into projected Barney Creek Formation.
- Diamond drilling targets established for primary sediment hosted zinc-lead and copper (cobalt) subject to further mapping and geological modelling.
- JV Partner Sandfire Resources funding 49% share of exploration costs.

\*Exploration Targets are conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource under the JORC code, 2012 edition. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

Limestone Creek - Zinc/Lead

• Highly prospective RC/diamond drilling targets for primary sediment hosted zinc-lead mineralisation established.

#### **COLOMBIA**

Berrio Project – Gold

 Auger sampling through January and February aiming to delineate targets for diamond drilling.

#### **CORPORATE & FUNDING**

- Consolidated cash balance at 31 December 2017 was approximately \$842k.
- Subsequent to quarter end Pacifico received firm commitments for \$750,000 through a placement.



## **Australia**

## Borroloola West Joint Venture, Northern Territory – Copper/Zinc/Lead/Silver – PMY 51%

The Borroloola West Joint Venture ("BWJV") consists of 12 exploration licences and 1 mining licence (1,817 km²) and lies west and northwest of the world class McArthur River zinc-lead mine and Teck's zinc-lead resource at the world class Teena deposit (Figure 1). The parties to the BWJV are 51% Pacifico Minerals Limited ("Pacifico" or "Company") (ASX code: PMY) and 49% Sandfire Resources NL ("Sandfire") (ASX code: SFR).

Sandfire continues to contribute its 49% share of all exploration costs.

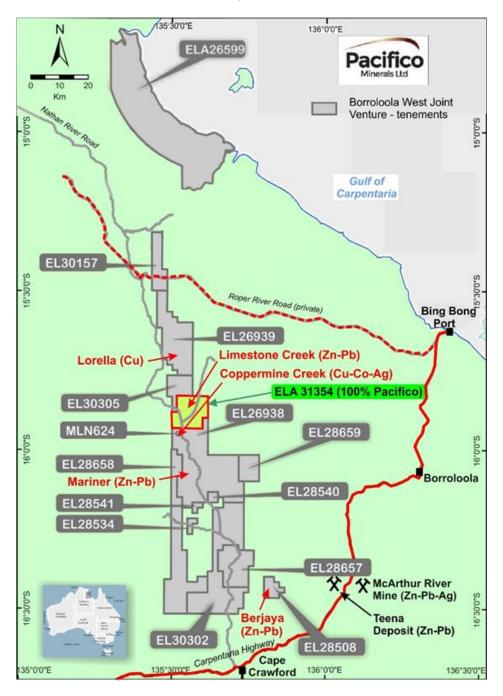


Figure 1: Borroloola West Joint Venture Tenements (Pacifico 51%, and Sandfire 49%), ELA 31354 (Pacifico 100%), and prospects



### Lorella – Oxide and primary copper - (cobalt)

The Lorella prospect lies 100km NE of the McArthur River Mine. The Nathan River Road lies 7km to the west, and the Lorella Springs Road is 9km to the east, both unsealed public roads (Figure 1).

Pacifico announced an Exploration Target\* of 5 to 10Mt of 0.8% Cu to 1.1% Cu of oxide copper mineralisation at Lorella. The oxide copper mineralisation is flat or gently dipping and lies beneath just 20 to 30m of unconsolidated alluvial overburden. The grades of the Exploration Target are derived from the grades of mineralised blocks defined by 18 RC and diamond holes in the drilled area (approximately 400m x 400m) of oxide copper mineralisation (see Table 1). The holes were drilled by Sandfire, during 2010 and 2011, as part of an extensive drilling program targeted at primary sulphide copper mineralisation. The tonnage estimates for the Exploration Target are based on an estimate of the occurrence of pods of oxide copper mineralisation over 12km of strike under shallow alluvial cover.

Table 1 – Historical oxide copper drill Intersections, drilled by Sandfire 2010 -2012<sup>1</sup>, showing 0.25% Cu and 0.4% Cu cut-offs<sup>2</sup>

|  | 0.25% Cu c/o |      |              |      | 0.4% Cu c/o |      |              |      |
|--|--------------|------|--------------|------|-------------|------|--------------|------|
|  |              |      | intersection |      |             |      | intersection |      |
| Hole Number  | From         | То   | thickness m  | %Cu  | From        | To   | thickness m  | %Cu  |
| 11BLDD0006   | 28           | 45   | 17           | 1.17 | 28          | 43   | 15           | 1.29 |
| BLRC020  | 22           | 28   | 6            | 0.31 |             |      |              |      |
| BLRC032  | 18           | 26   | 8            | 1.45 | 20          | 26   | 6            | 1.83 |
| BLRC047  | 20           | 28   | 8            | 1.06 | 20          | 28   | 8            | 1.06 |
| BLRC060  | 25           | 28   | 3            | 0.29 |             |      |              |      |
| BLRC062  | 26           | 36   | 10           | 0.33 |             |      |              |      |
| BLRC063  | 25           | 39   | 14           | 0.67 | 25          | 35   | 10           | 0.81 |
| BLRC064  | 24           | 31   | 7            | 0.5  | 25          | 30   | 5            | 0.57 |
| BLRC084  | 22           | 28   | 6            | 0.59 | 22          | 25   | 3            | 0.87 |
| BLRC085  | 20           | 27   | 7            | 0.77 | 20          | 24   | 4            | 0.96 |
| BLRC089  | 22           | 31   | 9            | 0.79 | 23          | 31   | 8            | 0.84 |
| BLRC090  | 23           | 26   | 3            | 0.38 |             |      |              |      |
| BLRC092  | 25           | 44   | 19           | 0.44 | 31          | 37   | 6            | 0.63 |
| BLRC093  | 23           | 31   | 8            | 0.58 | 24          | 31   | 7            | 0.62 |
| BLRC094  | 24           | 38   | 14           | 1.18 | 24          | 38   | 14           | 1.18 |
| BLRC095  | 25           | 37   | 12           | 0.66 | 25          | 35   | 10           | 0.7  |
| BLRC097  | 23           | 27   | 4            | 1.25 | 23          | 26   | 3            | 1.54 |
| BLRC098  | 26           | 33   | 7            | 0.98 | 26          | 32   | 6            | 1.09 |
| Intersection thickness weighted average grade % Cu |              | 0.77 |              |      |             | 1.01 |              |      |
| Average thickness m 10                             |              |      |              |      | 8           |      |              |      |

<sup>&</sup>lt;sup>1</sup> Sandfire 2010-12 Borroloola Project Group Annual Mineral Exploration Reports GR121-09 to NT Dept Primary Industry & Resources

<sup>\*</sup>Exploration Targets are conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource under the JORC code, 2012 edition. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

<sup>&</sup>lt;sup>2</sup> Minimum vertical thickness 3m. maximum internal waste included 3m



Preliminary acid leach test work comprising acid leach bottle roll tests, was carried out at SGS Metallurgy in Perth on two composite samples from Sandfire's drill core. This testwork indicated that leaching the oxide copper material could be economically viable and the results show encouraging copper leach extractions at relatively low acid additions (37kg/t and 44kg/t) for both samples. Copper recoveries higher than 90% were obtained. The key results are summarised below:

Table 2: Copper leach testwork results

|             | Sample Composite<br>Hole No and interval | Head grade | Acid addition | Residue  | % Cu<br>extraction |
|-------------|--|------------|---------------|----------|--------------------|
| Composite A | 11BLD0006 35-37m                         | 1.68% Cu   | 44 kg/t       | 0.07% Cu | 94.1               |
| Composite B | 11BLD0006 37-39m                         | 1.16% Cu   | 37 kg/t       | 0.08% Cu | 92.8               |

There is potential for the construction of a solvent extraction, electrowinning operation ("SXEW") to produce cathode copper within a short lead time, and with relatively low capital and operating costs.

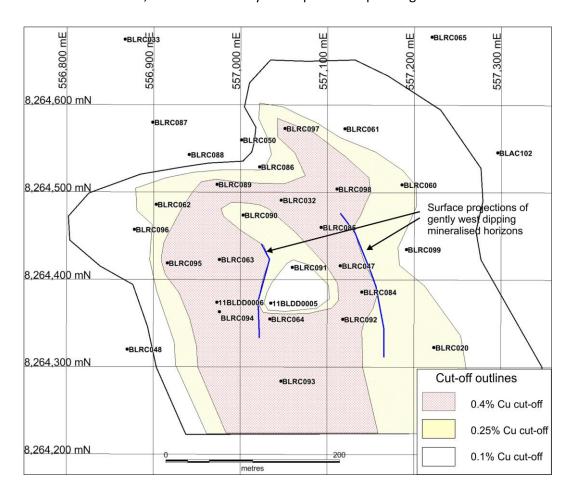


Figure 2: Cut-off outlines based on preliminary assessment of historical drill data

The oxide copper mineralisation consists of disseminations, blebs, veins and fracture fill of malachite and azurite within highly leached siltstone and fine grained sandstone (Figure 3). The intersection thickness averages 8m using 0.4% Cu cut-off, and results in an average grade of about 1.0% Cu (Table 4). The primary rock is dolomitic and lies within the Amelia Dolomite sequence. However, the carbonate minerals have been almost completely leached out, as reflected by the low acid consumptions in the testwork.







Figure 3: Blebs and disseminated malachite in Sandfire diamond hole 11BLDD006

The primary control of the copper mineralisation is considered to be stratigraphic, and dips are low angle to the west. Elsewhere in the BWJV tenements e.g. at Coppermine Creek, copper mineralised horizons within the Amelia Dolomite are recognised that extend for several kilometres. At Lorella, the distribution of copper mineralisation indicates that it has been oxidised, transported and enriched by supergene processes (Figure 4).

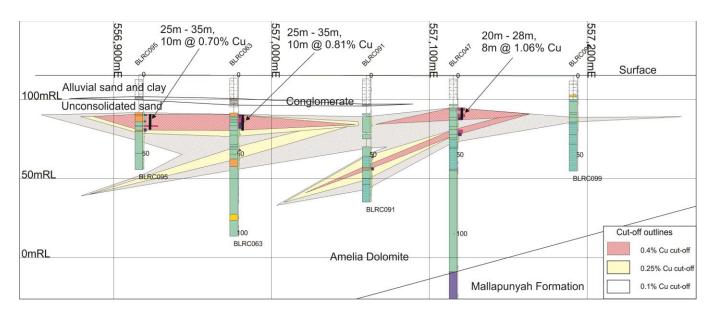


Figure 4: Section through oxide copper mineralisation, Lorella prospect

Only 500m of the sub-outcropping strike of mineralisation has been tested previously. The oxide copper mineralisation is open to the SSE (Figure 2) and there is the likelihood of further lenses to the north west (Figure



5). There is potential for about 10km of strike (Figure 5) under shallow alluvial cover within the BWJV tenements that is virtually untested.

An aircore program of 2000m is planned for April 2018 (after the Northern Territory wet season) to test strike extensions of the oxide copper mineralisation. The planned lines 1km apart, with 100m hole spacing are shown on Figure 5.

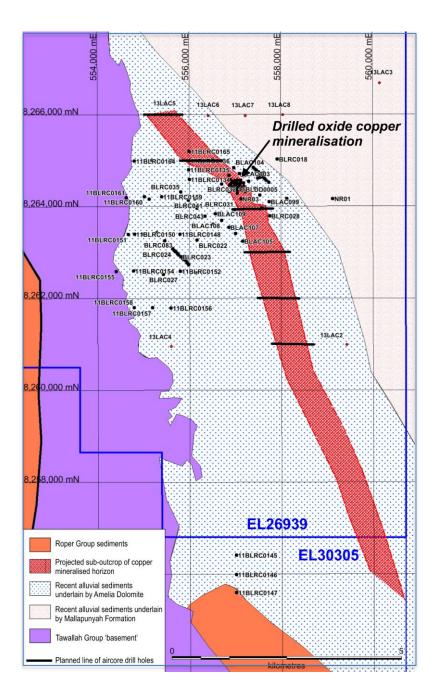


Figure 5: Lorella Prospect, plan showing historical drill hole collars and projected extent of sub-surface copper mineralisation



## Mariner (zinc – lead)

Two diamond drill holes (Figure 6) were completed during the quarter at the Mariner Prospect and established the presence of Barney Creek Formation carbonaceous and pyritic shales and siltstones in MND06 (Figure 7). The Barney Creek Formation is host to the world class McArthur River zinc-lead deposit and therefore of potential for the discovery of further zinc-lead deposits. It had never been previously recognised or mapped in the Mariner prospect area. A Barney Creek Formation sub-basin is projected to extend north beneath younger Roper Formation sediments.

MND05 passed from Roper Group sediments, through a fault breccia zone, and into moderately fractured dolomite interpreted as being part of the Mara Dolomite. The fractures were often oxidised and contained limonite and cerussite (lead carbonate).

Geological mapping and portable X-Ray Fluorescence instrument reconnaissance undertaken during the quarter identified anomalous lead and zinc rock chip geochemistry (values to 0.21% Pb and 510ppm Zn) two kilometres north of the previous diamond drilling, confirming the prospectivity of the sub-basin of Barney Creek Formation, that extends north beneath Roper Group sediments. Further mapping is planned during 2018 to establish if the sub-basin could extend westwards, as there is uncertainty over the published Geological Survey mapping of the Tawallah Group sandstones. If it is indicated by the mapping that the sub-basin has a substantial size, diamond drill holes will be planned.

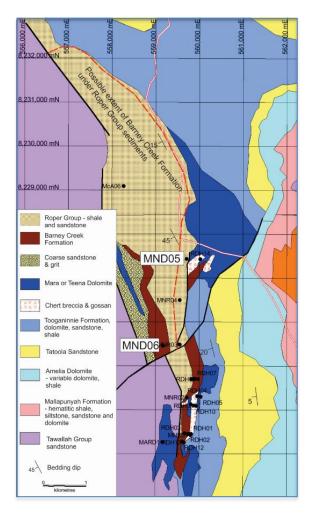


Figure 6: Mariner Prospect – interpreted geological plan showing diamond hole collars MND05 and MND06



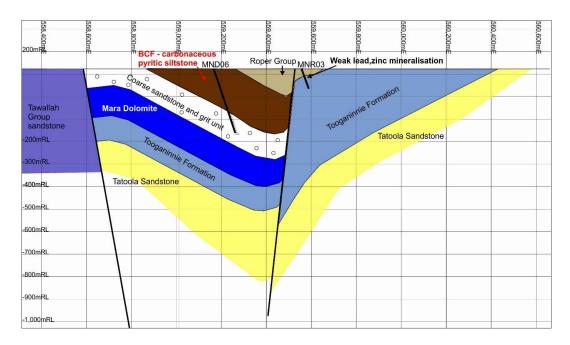


Figure 7: Section through diamond hole MND06 at Mariner, BCF = Barney Creek Formation

## Coppermine Creek (copper – cobalt)

Copper mineralisation is extensive, stratabound, and gently dipping. There are large areas where the depths of the mineralised layer are at only 50m to 250m depth. This was confirmed by diamond drilling of two holes at Coppermine Creek (Figure 8) completed during the quarter where copper mineralisation was intersected over significant widths. CCD09 intersected approximately 13m of visible copper mineralisation from 123m depth (Figure 9). The hole was drilled 1.4km south of the Coppermine Creek Fault. CCD10 intersected a broad zone of 68m of visible copper mineralisation from 174m.

All the copper mineralisation is present as chalcopyrite, and minor bornite, which forms disseminations, blebs and lenses throughout the mineralised zones. The copper mineralisation is hosted by the Amelia Dolomite consisting typically of finely bedded dolomite with carbonaceous laminae. Carbonaceous shales are locally developed. In parts of the sequence ex-anhydrite nodules and masses of ex-gypsum crystals are observed, now dolomitised. The copper minerals are concentrated within the evaporite rich part of the sequence, and often associated with zones of abundant carbonaceous laminae or algal mats. Anomalous cobalt has been intersected in previous drilling. GPRCO7¹ contained 30m of 0.04% Co (and 1.2% Cu).

Geological mapping and rock chip geochemistry traverses were carried out recently over the prospective area. Extensive barite veining was observed associated with the fault bounding the eastern contact of McArthur Group sediments against the Scrutton Volcanics. There are similarities in this area with the geology of the Mount Isa Copper deposit, which is also close to a major fault and adjacent to older volcanics. The copper mineralised horizon is projected to lie beneath the outcropping Tatoola Sandstone and may be a future target for diamond drilling, subject to further surface sampling and mapping.



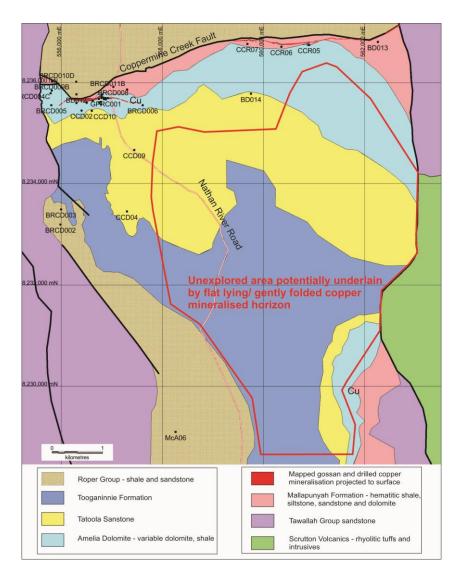


Figure 8: Geology and drilling, including location of diamond holes CCD09 and CCD10 at Coppermine Creek, and showing the significant untested area potentially underlain by a gently dipping copper mineralised horizon

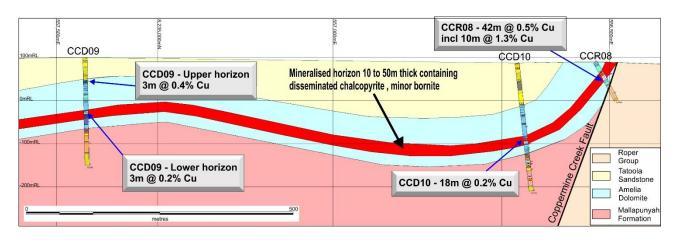


Figure 9: Section through recently drilled diamond holes CCD09 and CCD10 at Coppermine Creek



## Limestone Creek (zinc - lead) ELA 31354, 100% Pacifico

Rock chip sampling, completed during the quarter, obtained values of up to 2.0% Pb and 0.49% Zn over a strike length of 1km. The values are obtained from ferruginous and gossanous material within the Amelia Dolomite, which in this area comprises dolomite, ex-evaporite beds, carbonaceous shale, conglomerate, grits and sandstone. The poorly outcropping area is considered highly prospective for sediment hosted zinc-lead mineralisation.

It is expected that ELA 31354 will be granted during the next quarter.

## Berjaya prospect (zinc-lead)

Diamond drilling was completed during the quarter. Drill hole BJD04 intersected down-faulted Cretaceous sediments with coal fragments and then passed into the Hot Springs Formation at a depth of 143m. The projected VTEM conductive zone at the base of this horizon may be reflecting the weathered clayey sediments of the top of the Hot Springs Formation. Pacifico intended to continue the hole, at least into the underlying Barney Creek Formation to provide stratigraphic control for future drilling programs. However, at 300.2m, BJD04 was terminated without Pacifico's agreement by the drilling contractor Mitchell Services for commercial reasons.

#### **Colombia**

## Berrio Project – Gold

The Berrio Project is situated within the southern part of the Segovia Gold Belt from which several million ounces of gold have been produced over the past 150 years. Pacifico continued exploration over titles and applications which cover areas of the Segovia and Antioquia Batholiths, prospective for large gold systems in vein and stockwork systems. The area covered by the tenements (Figure 10) lies close to the intersection of three major regional faults, the Palestina Fault, Nus Fault and Bagre Fault, and in a district with known significant gold mineralisation.

All the tenements and applications have been covered with reconnaissance traverses, that included mapping of the geology and taking rock chips. Anomalous gold values and widespread hydrothermal alteration of the rocks in structures were noted in the areas covered by the soil grids (Figure 10). These areas are largely underlain by granodiorite of the Segovia Batholith, and lie adjacent to the Palestina Fault.

During the quarter, two areas of auger soil sampling on a spacing of 200m x 200m were completed. The northern area (within tenement 6822) is underlain by diorite of the Segovia Batholith and some Berrio sediments consisting of black carbonaceous shale, siltstone and sandstone. Structures containing pyrite mineralisation had been noted during the reconnaissance work. Three anomalies are identified within an overall area of 1.2 x 1.0km (targets 1, 2 and 3 - Figure 10). Values up to 71ppb Au, 43ppm As, 264ppm Cu and 360ppm Pb were obtained. There are abandoned artisanal adits in the vicinity of target 1.

The soil grid over the southern area (within tenement application 6857) is also underlain by diorite of the Segovia Batholith and there are several fault splays off the adjacent Palestina Fault. The north-eastern part of the licence contains extensions of known gold mineralised structures extending away from the Nus Fault. However, only



isolated gold anomalies were obtained in the soil results, up to 19ppb Au, and the area is now considered of lower priority.

The gold anomalous areas defined as a result of this soil sampling program, will continue to be followed up through January and February with  $100m \times 100m$  soils, and if appropriate, power auger drilling, pitting and trenching to define diamond drill targets.

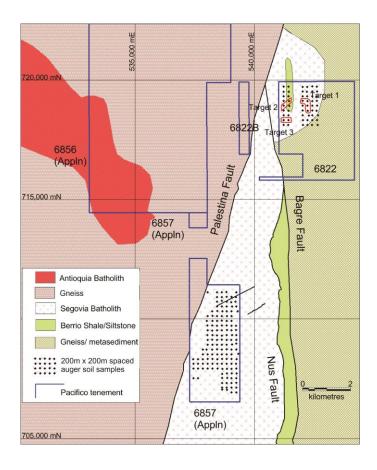


Figure 10: Geology and soil sample locations, with Pacifico (100%) owned tenements 6822, 6822B and tenement applications 6856 and 6857

## Natagaima Prospect - Copper/Silver/Gold

The Natagaima tenement application is situated in the department of Tolima, approximately 5km west of the navigable Magdalena River. It is located within the Middle Cauca Porphyry Belt. There was no activity on the project during the quarter. Follow up exploration will continue when the Natagaima tenement application is granted to Pacifico and will include detailed mapping and trenching of areas of interest.

#### Urrao Project, Colombia – Copper/Gold/Silver

The Urrao Project is part of the Choco porphyry copper belt and is located 35km north west of Tarso in the municipality of Urrao and Salgar. The project consists of one granted tenement covering a total area of approximately 902 hectares. There was no activity on the project during the quarter.



## **Corporate**

The consolidated cash balance at 31 December 2017 was approximately \$842k.

Subsequent to the quarter end, the company announced it had received binding commitments to raise approximately \$750,000 through a placement of approximately 125 million new fully paid ordinary shares at an issue price of 0.6 cents per share. In addition and subject to shareholder approval, participants in the Placement will receive a free attaching unlisted option on the basis of 1 option for every 2 Shares subscribed for under the Placement. The Options will each have an exercise price of 1.5 cents and an expiry date of 2 years from the date of issue. No fees are payable for the placement.

The Placement was made in accordance with the Company's available 15% placement capacity pursuant to ASX Listing Rules 7.1 and 10% capacity pursuant to ASX Listing Rule 7.1A. The new shares will rank equally with existing Pacifico ordinary shares quoted on the ASX. The Options will be subject to shareholder approval. Completion of the placement is now expected to occur on or around 31 January 2018 and the Company will make an application to the ASX for listing of the Shares.

Proceeds from the Placement will be applied to exploration at the company's Borroloola West Project in the Northern Territory, where an aircore drilling program to test strike extensions of previously intersected oxide copper mineralisation at the Lorella prospect is set to commence during the second quarter 2018, with RC and diamond drilling following to establish Inferred Resources of oxide copper (see ASX announcement 20 November 2017 for more information). Proceeds will also be used to continue assessing new project opportunities and for general working capital.

#### For further information or to be added to our electronic mailing list please contact:

Simon Noon (Managing Director) Phone: +61 (0)8 6266 8642

Email: info@pacificominerals.com.au

#### **About Pacifico Minerals Ltd**

Pacifico Minerals Ltd ("Pacifico") (ASX: PMY) is a Western Australian based exploration company with exciting projects in Australia and Colombia. In Australia the operations are focussed on advancing the Borroloola West project in the Northern Territory. The Borroloola West Project covers an outstanding package of ground northwest of the McArthur River Mine (the world's largest producing zinc – lead mine) with high potential for the discovery of world class base metal deposits. In Colombia, the company is focussed on advancing its Berrio Gold Project. Berrio is situated in the southern part of the prolific Segovia Gold Belt. The project is 35km from the Magdalena River which is navigable to the Caribbean Sea and has excellent infrastructure in place including hydro power, sealed roads, water supply and telecommunications coverage.

#### Competent Person Statement

The information in this report is based on information compiled by Mr David Pascoe, who is a Member of the Australian Institute of Geoscientists. Mr Pascoe is contracted exclusively to Pacifico Minerals Limited. Mr Pascoe has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is 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". Mr Pascoe consents



to the inclusion in this announcement of the matters based on information in the form and context in which it appears.

#### **Forward Looking Statements**

Certain statements in this document are or maybe "forward-looking statements" and represent Pacifico's intentions, projections, expectations or beliefs concerning among other things, future exploration activities. The projections, estimates and beliefs contained in such forward-looking statements necessarily involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Pacifico, and which may cause Pacifico's actual performance in future periods to differ materially from any express or implied estimates or projections. Nothing in this document is a promise or representation as to the future. Statements or assumptions in this document as to future matters may prove to be incorrect and differences may be material. Pacifico does not make any representation or warranty as to the accuracy of such statements or assumptions.



## **APPENDIX 1 – INTERESTS IN TENEMENTS**

| Farm-in agreements/Projects/Tenements      | Location  | Held at end of | Acquired during | Disposed during |
|--|-----------|----------------|-----------------|-----------------|
|  |           | quarter        | the quarter     | the quarter     |
| Berrio Project:                            | Colombia  |                |                 |                 |
| 6822                                       |           | 100%           |                 |                 |
| 6822B                                      |           | 100%           |                 |                 |
| IDI-16112X                                 |           | 8.6%           |                 |                 |
| IDI-16113X                                 |           | 8.6%           |                 |                 |
| HINN-02                                    |           | 8.6%           |                 |                 |
| JG1-09552                                  |           | 8.6%           |                 |                 |
| T1935005                                   |           | 8.6%           |                 |                 |
| IHF-08012                                  |           | 7.5%           |                 |                 |
| T1928005                                   |           | 5.7%           |                 |                 |
| Urrao Project:                             | Colombia  |                |                 |                 |
| 2791                                       |           | 100%           |                 |                 |
| Borroloola West Project (earning up to 80% | NT,       |                |                 |                 |
| from Sandfire Resources):                  | Australia |                |                 |                 |
| EL26938                                    |           | 51%            |                 |                 |
| EL26939                                    |           | 51%            |                 |                 |
| EL28508                                    |           | 51%            |                 |                 |
| EL28534                                    |           | 51%            |                 |                 |
| EL28540                                    |           | 51%            |                 |                 |
| EL28541                                    |           | 51%            |                 |                 |
| EL28657                                    |           | 51%            |                 |                 |
| EL28658                                    |           | 51%            |                 |                 |
| EL28659                                    |           | 51%            |                 |                 |
| EL30157                                    |           | 51%            |                 |                 |
| EL30302                                    |           | 51%            |                 |                 |
| EL30305                                    |           | 51%            |                 |                 |
| MLN624                                     |           | 51%            |                 |                 |

| Farm-out agreements/Tenements             | Location  | Held at end of quarter | Acquired during the quarter | Disposed during the quarter |
|---|-----------|------------------------|-----------------------------|-----------------------------|
| Mount Jukes Project (Pacifico diluting to | Tasmania, |                        |                             |                             |
| Corona Minerals Ltd):                     | Australia |                        |                             |                             |
| EL51/2008                                 |           | 14.8%                  |                             |                             |
| EL12/2009                                 |           | 14.8%                  |                             |                             |