

# POTENTIAL FOR ZINC AT THE ABNER RANGE PROJECT

Level 8, 580 St Kilda Road, Melbourne VIC 3004
PO Box 6315, St Kilda Road Central, Melbourne VIC 8008
T: +61 3 8532 2800 F: +61 3 8532 2805
W: www.lgdi.net E: info@lgdi.net

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# 1 SUMMARY

Legend's Abner Range Project represents an opportunity to explore for world class zinc mineralization in an area that is easily accessible, close to existing infrastructure, and most importantly has a sound geological model with proven nearby mineralization.

The base metal mineral rights are 100% owned by Legend and must be considered a valuable asset that could be realized either through exploration by Legend or by way of farm-out/sale/joint venture to a third party.

If base metals were to be considered then an application should be submitted to secure the available ground to compliment the already prospective landholding.

# **2 LOCATION OF PROJECT**

The project area is located approximately 700 kilometres southeast of Darwin in the McArthur River River region of the Northern Territory (Figure 1). The application falls on the Bauhinia Downs (SE303) and Walhallow (SE5307) 1:250,000 mapsheets and the Mallapunyah (6064), Glyde (6164) and Kilgour (6063) 1:100,000 mapsheets. The project comprises 399 blocks for an area of 1,285 square kilometers.

Access to the project area is excellent during the dry season via the bitumen highways and numerous station tracks. Wet season access is poor and is restricted to the bitumen highways.

All titles are on pastoral land and are subject to Native Title and the Sacred Sites Act. There is no requirement for work program meetings with native title holders at the early exploration stage.

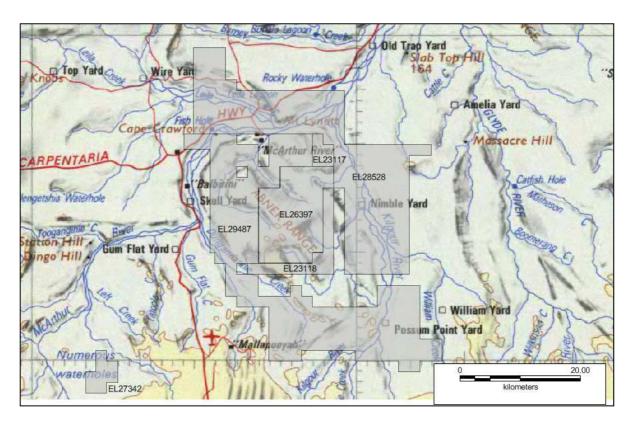


Figure 1. Location of the Abner Range Project

### **3 MINERAL TITLES**

The mineral titles include granted exploration licences EL23117, EL23118, EL26397, EL29487, EL28528 and EL27342. The titles are 100% owned by Legend for all minerals. Newmont Mining holds a 1% royalty on EL23117 and EL23118. All titles are currently in good standing.

### 4 GEOLOGY and MINERALISATION

## 4.1 Geology

This area is located in the Proterozoic McArthur Basin, which comprises unmetamorphosed and mildly deformed rocks of carbonate, siliciclastic and interbedded volcanics deposited in a shallow intracratonic setting. The sedimentary sequences of the southern McArthur Basin has been divided into four groups named, from oldest to youngest, the Tawallah, McArthur, Nathan and Roper Groups. Younger rocks overly the McArthur Basin as shown on **Figure 2**.

The McArthur Group includes the highly prospective Barney Creek Formation, which hosts the zinc mineralization at the McArthur River Mine. The distribution of the Barney Creek Formation is also shown on **Figure 2**.

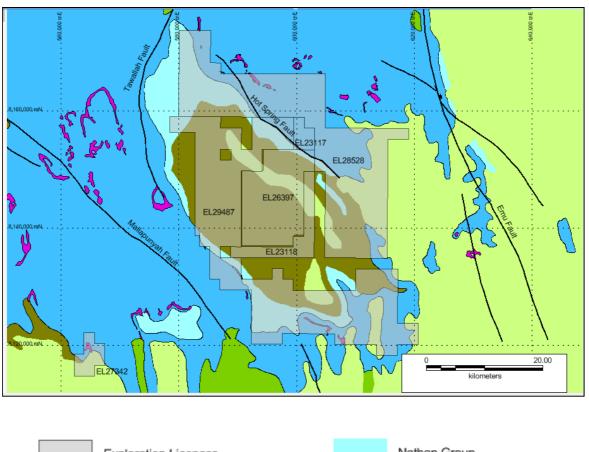




Figure 2. Regional Geology

### 4.2 Mineralisation

The McArthur Basin forms part of the Carpentaria Zinc Belt that extends from Mt Isa in Queensland through the McArthur River region into Arnhem Land. The belt hosts several world class zinc mines including the Century Zinc Mine in Queensland, which is due to close in 2016 and the McArthur River in the Northern Territory, which is expected to operate until at least 2027.

The major zinc deposits in the McArthur Basin all occur within 25km of Legend's Abner Range Project and are shown on **Figure 3**. These deposits include;

- McArthur River Mine (160 million tonnes @ 10.7% zinc)
- Myrtle deposit (44 million tonnes @ 5% zinc/lead)
- Teena deposit (no resource yet, recent drill intersections of 26m @ 13% zinc)

The deposits are classified as Sedimentary Exhalative Deposits (Sedex). Sedex deposits include many sub-types but can be broadly described as ore deposits that formed on or near the sea floor in a basinal environment. The three Northern Territory deposits listed above occur in either a synclinal or basinal setting, which may also be associated with major faulting. Furthermore the major Northern Territory zinc deposits are all hosted by the Barney Creek Formation (BCF) of the McArthur River Group. It is therefore possible to make a rapid assessment of the prospectivity based on the presence of the BCF either at surface or inferred at depth.

The BCF has been mapped by the Northern Territory Geological Survey (NTGS) as occurring within Legend's Abner project. It is mapped in a synclinal setting associated with a major fault in the northern part of the project (**Figure 3**) and is also present in the south-western part of the project (**Figure 4**).

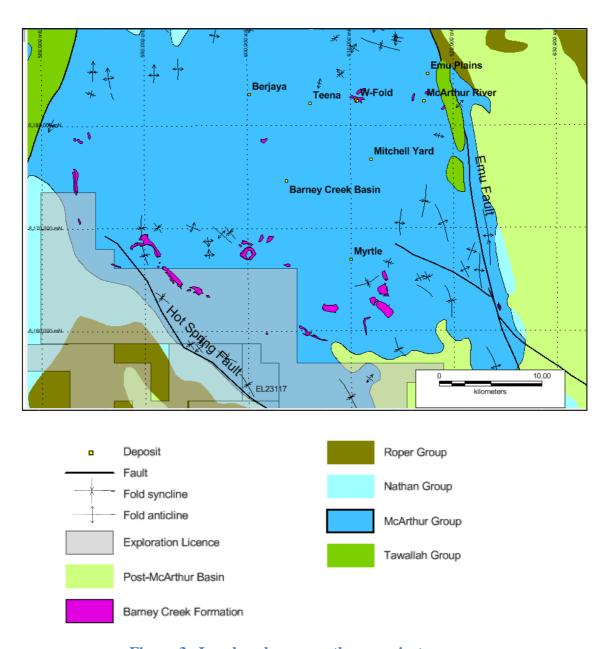


Figure 3. Local geology – northern project area

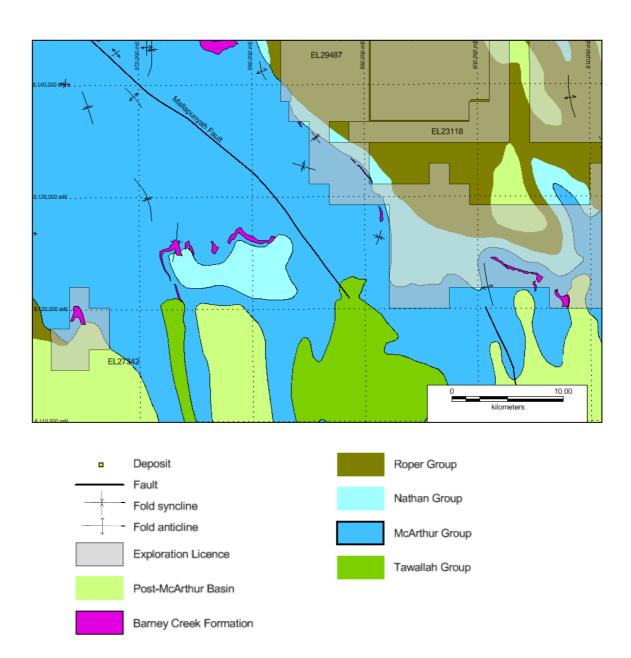


Figure 4. Local geology – southwest project area

### **5 POTENTIAL TARGET AREAS**

Based on the discussion above there are four broad target areas considered prospective for zinc at the Abner Project (Figure 5). The geological setting and the location of the BCF is such that zinc mineralization may be found near surface or at considerable depth. Further exploration would require a detailed review of past exploration and field work to confirm the NTGS I mapping. Geology and available geophysical data would be used to identify specific targets for field programs, which may include soil sampling to generate targets for drilling or geophysics/drilling.

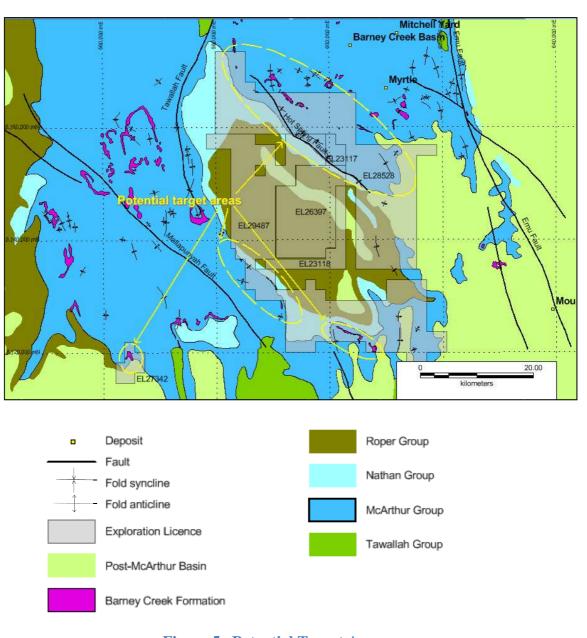


Figure 5. Potential Target Areas

# **6 COMPETITOR ACTIVITY AND VACANT GROUND**

Legend is aware of two drill hole locations targeted by MMG Group for drilling in 2013 (Figure 6). The drilling targets are adjacent to Legend's licence boundaries and it appears the target is the Barney Creek Formation. The drilling of such targets by a major company such as MMG potentially confirms the view that these areas are prospective for zinc mineralisation. Two prospective areas that are currently available for application are shown on Figure 6.

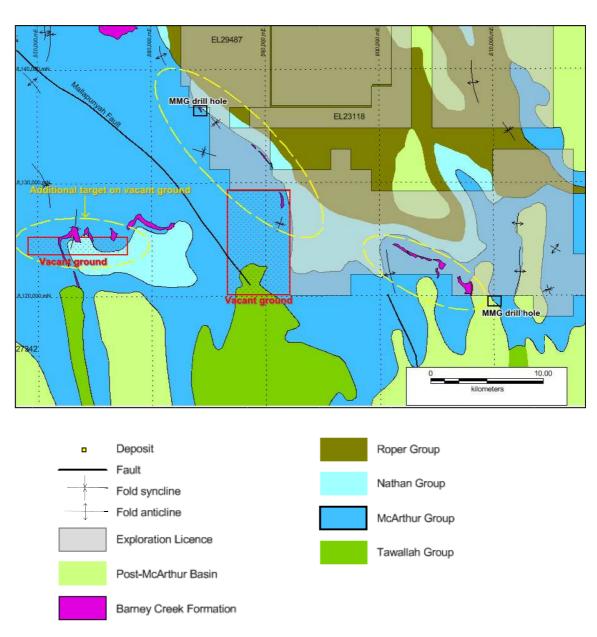


Figure 6. MMG Drilling and Vacant Ground

## **7 CONCLUSION**

Legend's Abner Project represents an opportunity to explore for world class zinc mineralization in an area that is easily accessible, close to existing infrastructure, and most importantly has a sound geological model with proven nearby mineralization.

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