



**PART OF BORROLOOLA WEST PROJECT**

**EL28658 FINAL SURRENDER REPORT (OF PARTIAL  
RELINQUISHMENT PORTION)**

**Tenement Holder: Sandfire Resources NL**

**Operator: Pacifico Minerals Ltd**

**Formerly Part of Group Reporting Number: GR121-13**

**Report Period:** 27 October 2011 to 2 November 2018

**Distribution:**

DME Geoscience

Pacifico Minerals Ltd

28658

AMETS Darwin

Sandfire Resources NL

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## TITLE PAGE AND BIBLIOGRAPHIC DATA SHEET

<b>Project Name:</b>	Borrooloola West Project
<b>Group Reporting No.</b>	Part of GR121-13
<b>Tenement Numbers</b>	EL28658
<b>Tenement Operator</b>	Pacifico Minerals Ltd
<b>Tenement Holder</b>	Sandfire Resources NL
<b>Report Type</b>	Partial Relinquishment Report
<b>Report Title</b>	EL28659, Final Relinquishment Report for the Period 27 October 2011 to 2 November 2018
<b>Report Period</b>	27 October 2011 to 2 November 2018
<b>Authors</b>	D. Pascoe
<b>Date of Report</b>	9 January 2019
<b>1:250,000 map sheet</b>	BAUHINIA DOWNS (SE5303)
<b>1:100,000 map sheet</b>	Tawallah Range (6066)
<b>Target Commodity</b>	Copper, Lead, Zinc, Manganese
<b>Keywords</b>	
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## ABSTRACT

This Partial Relinquishment report for the period 27 October 2011 to 2 November 2018 covers the mineral exploration completed by Pacifico Minerals Ltd ("Pacifico") on the relinquished part of EL28658, formerly of the Borrooloola West Project Group (GR121-13).

EL28658 forms part of the Borrooloola West Project. The Borrooloola West tenements were farmed-out to West Rock Resources Limited in an agreement executed on 1 July 2013. Pacifico Minerals Ltd ("Pacifico"), a public company listed on the Australian Stock Exchange (ASX: PMY), acquired 100% of West Rock Resources Ltd on 19 August 2013, now West Rock Resources Pty Ltd ("West Rock"). Pacifico has now earned a 51% interest in the project and in April 2016 an unincorporated joint venture was formed.

EL28658 was granted on 27 October 2011 and covered an area of approximately 304 km<sup>2</sup>. A partial surrender of the southern portion of the EL was made on 2 November 2018 of approximately 153km<sup>2</sup>, which is the subject of this report.

The project area lies within the Batten Trough of the Middle Proterozoic sediments and minor volcanics of the Tawallah, McArthur and Roper Groups of the McArthur Basin, with Cretaceous and Tertiary cover sediments.

During the reporting period 27 October 2011 to 2 November 2018, Pacifico carried out:

- Reconnaissance geological mapping
- Rock chip sampling (pXRF analyses)

No work was carried out on this licence subsequent to the group annual report dated 10 April 2018.

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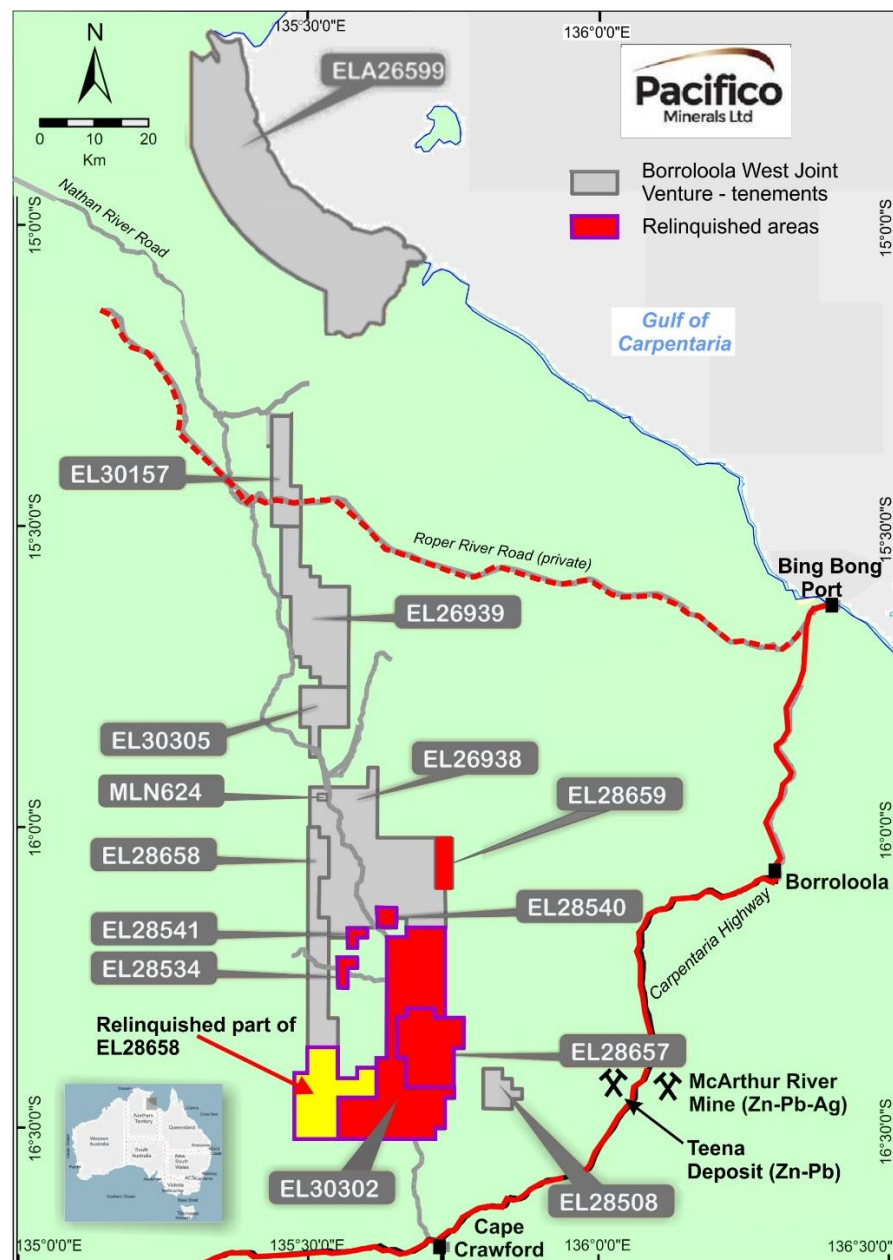
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## 1.0 LOCATION

EL28658 is centered about 650 km southeast of Darwin in the ‘Gulf Country’ of the Northern Territory, Australia.

Access to the licence area is good with sealed roads from Darwin about 590 km southwards along the Stuart Highway to the Hi-Way Inn and then 270 km eastwards along the Carpentaria Highway to Cape Crawford.



**Figure 1-1. Location of relinquished part of EL28658 relative to Borroloola West Project tenements**

## **2.0 TITLES**

### **2.1 Tenements**

EL28658 is part of the Borrooloola West Project. The Borrooloola West tenements were farmed-out to West Rock Resources Limited in an agreement executed on 1 July 2013. Pacifico Minerals Ltd (“Pacifico”), a public company listed on the Australian Stock Exchange (ASX: PMY), acquired 100% of West Rock Resources Ltd on 19 August 2013, now West Rock Resources Pty Ltd (“West Rock”). Pacifico has now earned a 51% interest in the project and in April 2016 an unincorporated joint venture was formed.

EL28658 was granted on 27 October 2011 and covered an area of approximately 304 km<sup>2</sup>. A partial surrender of the southern portion of the EL was made on 2 November 2018 of approximately 153km<sup>2</sup>, which is the subject of this report.

### **2.2 Native Title**

The Borrooloola project area granted tenements are subject to several undetermined Native Title Claims that have been registered with the Federal Court.

The Alawa people have a Native Title claim DC2000/029 over the southern portion of the Limmen National Park which includes EL28658.

Registered and recorded heritage sites within the project’s licence areas have been identified on plans sourced from the Aboriginal Areas Protection Authority (AAPA).

### **2.3 Landholders**

During 2012 the Limmen Nation Park (“LNP”) was formalised. The LNP covers former lease Billengarra (NT Por. 1323).

### **3.0 GEOLOGICAL SETTING**

The McArthur Basin is a large sedimentary basin with an exposed area of about 180,000 km<sup>2</sup>. Most of it lies within the northeastern Northern Territory, and it extends over the border into the state of Queensland. Thick marine and non-marine sedimentary rocks were deposited from the late Palaeoproterozoic to the early Mesoproterozoic (1800 -1430 Ma). EL28658 lies within the Batten Fault Zone (BFZ) where sediments of the Tawallah, McArthur and Roper Groups rest unconformably on the Scrutton Volcanics, and are partially concealed by Cretaceous and Tertiary sediments.

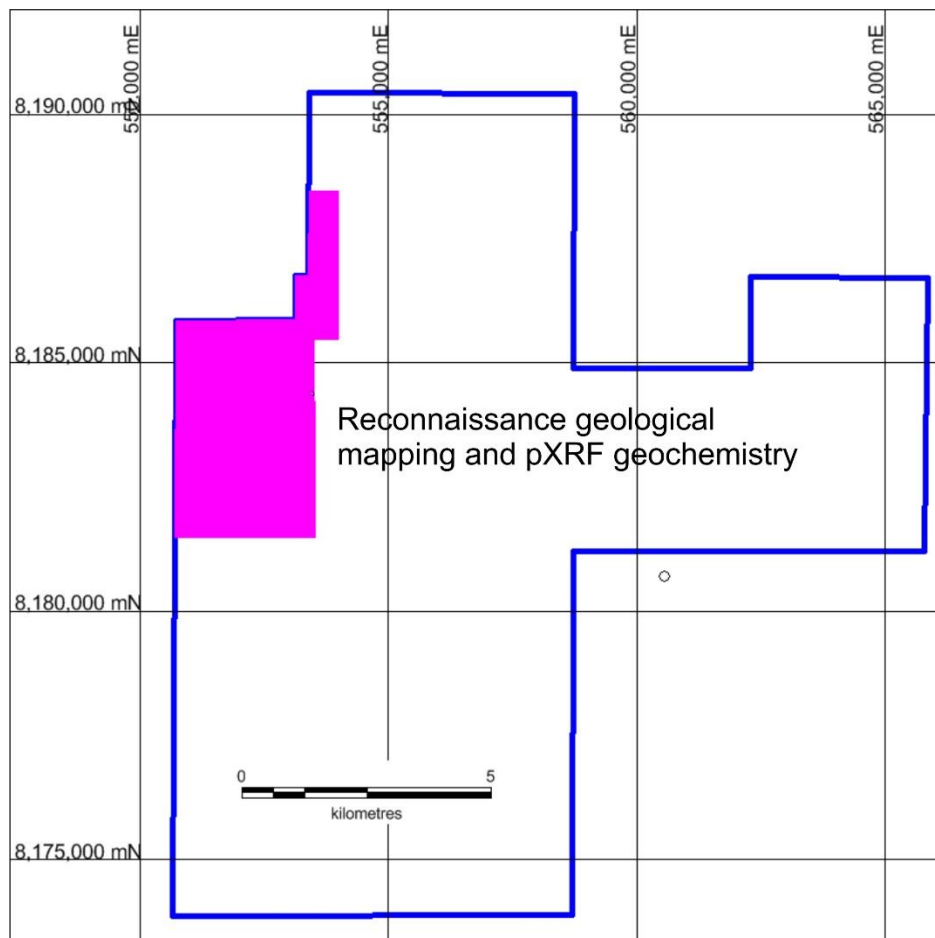
The McArthur Basin is a prime target area for SHMS type economic sulphide deposits. This style of deposit contains 50% of the world's zinc and lead reserves and make up around 25% of world zinc and lead production. The McArthur Basin hosts the world class McArthur River (HYC) zinc-lead-silver deposit close to the northerly trending Emu Fault Zone.

The Batten Fault Zone setting is also considered prospective for red-bed and Mt Isa style copper deposits and Mississippi Valley Tri-State (MVT) styles of base metal mineralisation.

#### 4.0 WORK UNDERTAKEN BY PACIFICO MINERALS LTD

During the period from 27 October 2011 to 2 November 2018 the following work was carried out by Pacifico, reported in the Group Annual Report for GR121-13 of 2016.

- Reconnaissance geological mapping
- Rock chip sampling (pXRF analyses)

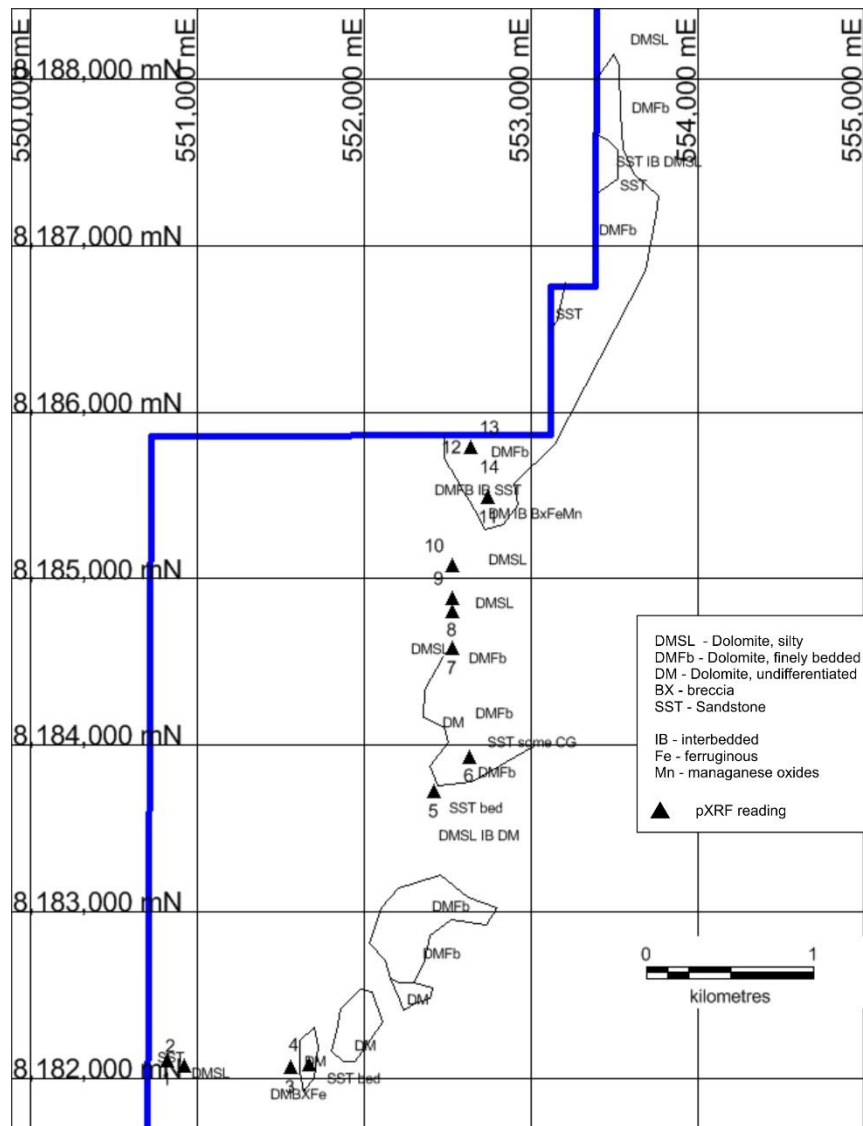


**Figure 4-1: Prospect Index, EL28658**



### Reconnaissance mapping and pXRF Geochemistry

A traverse was made along rocks mapped as Barney Creek Formation on the 1:250,000 published geological map. A pXRF was employed to test selected rocks for base metal mineralization.



**Figure 4-2:** Reconnaissance geological mapping and pXRF locations, part of EL28658

No Barney Creek Formation was recognised. Most of the rocks were silty dolomites or finely bedded dolomites, likely to be of the Mara Dolomite Member. No significant base metal values were obtained with the pXRF. At point 5 (Table 1) elevated base metals were obtained from a highly ferruginous (42% Fe) rock and was considered to be the effect of scavenging in the weathering profile.

Point	Date	X	Y	Description	Mode	Cu ppm	Pb ppm	Zn ppm	As ppm	Ca %	Mn %	Fe %	Si %
1	5-Sep-15	550815	8182112	Silty ferruginous dolomite	Geochem	36	28	353	33	0.1	0.1	9.5	17.4
2	5-Sep-15	550922	8182079	Ferruginous dolomitic siltstone	Geochem	19	9	13	-1	8.9	0.1	1.8	21.7
3	5-Sep-15	551562	8182066	Finely bedded dolomite	Geochem	-1	-1	-1	-1	0.0	0.1	0.5	43.9
4	5-Sep-15	551669	8182088	Ferruginous dolomite breccia	Geochem	-1	-1	18	4	0.0	0.0	2.2	34.8
5	5-Sep-15	552420	8183724	Ferruginous dolomite breccia	Geochem	674	162	861	52	2.7	0.3	42.4	17.5
6	5-Sep-15	552634	8183933	Silty stromatolitic dolomite	Geochem	-1	14	67	-1	0.0	0.4	1.7	23.9
7	5-Sep-15	552529	8184586	Silty stromatolitic dolomite	Geochem	103	30	19	93	0.2	0.0	2.8	32.0
8	5-Sep-15	552530	8184807	Ferruginous stromatolitic bed	Geochem	-1	-1	16	11	0.0	0.1	3.7	22.1
9	5-Sep-15	552530	8184885	Ferruginous dolomitic siltstone	Geochem	34	18	140	32	0.0	0.0	12.5	18.0
10	5-Sep-15	552530	8185084	Ferruginous dolomitic siltstone	Geochem	26	-1	82	9	0.0	0.5	2.2	18.3
11	5-Sep-15	552745	8185493	Brecciated dolomite with vughy qtz.	Geochem	80	33	142	36	6.9	0.9	10.7	18.1
12	5-Sep-15	552639	8185792	Brecciated dolomite with vughy qtz.	Geochem	24	-1	136	14	17.0	0.6	12.1	11.1
13	5-Sep-15	552639	8185792	Ferruginous finely bedded dolomite	Geochem	59	-1	358	33	4.1	2.8	26.7	12.0
14	5-Sep-15	552639	8185792	Ferruginous siltstone	Geochem	31	-1	33	-1	13.1	1.3	3.2	19.7

**Table 4-1: Summary of pXRF rock chip results**

## 5.0 CONCLUSION

The portion of the licence to be relinquished is considered to have no immediately testable prospectivity.

## 6.0 REFERENCES

Sandfire Resources NL: 2010 to 2012: Group Annual Exploration Reports, Borrooloola West Project, Reporting Periods: 11 April 2009 to 10 April 2012.

Pacifico Minerals Ltd: Group Annual Exploration Reports, Borrooloola West Project, Reporting Periods: 11 April 2012 to 10 April 2018.

## 7.0 DIGITAL DATA

EL28658_2018_S_01_ReportBody.pdf	Group Annual Report Text
EL28658_2018_S_02_SurfaceGeochemXRF.txt	Surface geochem pXRF text file

MapInfo Files – geological mapping. Attached with report.