Titleholder	Stirling Zircon Pty Ltd
Operator (if different from above)	
Tenement Manager/Agent	Austwide Mining Title Management Pty Ltd
Titles/Tenements	EL24820
Mine/Project Name	East Melville
Report title including type of report and reporting period including a date	Annual Report for period ending 28th July, 2012
Personal author(s)	Phillip Hutt B App Sc - App Geol
Corporate author(s)	MZI Resources Ltd
Company reference number	EL24820_2012_A
Target Commodity or Commodities	Mineral Sands
Date of report	25th September
Datum/Zone	52
250 000 K mapsheet	Melville Island
100 000 K mapsheet	Melville Island
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1. ABSTRACT

This annual report covers EL24820 located on the south west coast of Melville Island near Paru. During the reporting period no mineral sand exploration work was completed because of the exceptional circumstances the company found itself in. The company's processing plant was completely destroyed by fire in July 2011. The EL is located on Melville Island, part of the Tiwi Islands, in the Northern Territory (see Figures 1a & 1b). The area is prospective for zircon and rutile rich mineral sands however suitable exploration areas must be outside of environmentally sensitive zones. The tenement was purchased by MZI Resources (previously Matilda Zircon) from the Administrator of Matilda Minerals in July 2009. It is recommended the tenement EL24820 be dropped as the previous work has considerably reduced the potential of the tenement to contain resources of mineral sands. Management is considering the work program presented to meet the DOR requirements and a decision is expected within 8 months.

TABLE OF CONTENTS

		Page Number
1.	ABSTRACT	2
2.	LOCATION, TITLE HISTORY AND ACCESS (INTRODUCTION)	4
3.	PHYSIOGRAPHY	7
4.	TENURE	7
5.	GEOLOGY and GEOMORPHOLOGY	7
6.	PREVIOUS EXPLORATION	9
7.	EXPLORATION	10
8.	CONCLUSION AND RECOMMENDATIONS	10
9.	REFERENCES	10

LIST OF FIGURES

Figure	Title	Location
Figure 1a	Tiwi Islands - tenement locations	Page 5
Figure 1b	Tiwi Islands – MZI tenement overview	Page 5
Figure 2	Melville Island –Paru tenement boundaries	Page 6
Figure 3	EL24820 Original boundary on landsat photo	Page 10

TABLES

Table No.	Content	Location
Table 1	MZI tenement EL24820	Page 7

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2. LOCATION, TITLE HISTORY AND ACCESS (INTRODUCTION)

The tenement is located on the south west coast of Melville Island in the area defined as the Tiwi Islands approximately 50km north of Darwin as shown in Figure 1. The islands are wholly within the Tiwi Island Aboriginal Land Trust administered by the Tiwi Land Council ("TLC"). Matilda Minerals had signed an agreement with the TLC on 19 December 2003 which set conditions for the exploration and mining development activity and MZI Resources has worked under the agreement.

MZI Resources Ltd (previously Matilda Zircon) purchased the title as part of the assets of Matilda Minerals Ltd in July 2009 after Matilda Minerals appointed a voluntary administrator in September 2008 due to cash flow problems. The tenement was one of several titles purchased at that time.

MZI is currently mining the high grade mineral sands of the Lethbridge South deposit, identified by Matilda Minerals in 2005 from exploration within the Tiwi Islands aimed at identifying additional resources. Prior to the start-up of the processing plant at Lethbridge South a devastating fire completely destroyed the ready to be commissioned plant. The subsequent investigations, rebuild and restart consumed all of the company's cash and available loans consequently halting exploration. Hence exploration was on hold for the past 12 months.

Expenditure on all the MZI Resources leases since the start of the project (2003) has totalled almost $4 million dollars with reasonably systematic exploration completed over most areas of the islands of Melville and Bathurst Island. The exploration spend on the EL24820 is only small in comparison to more prospective areas.

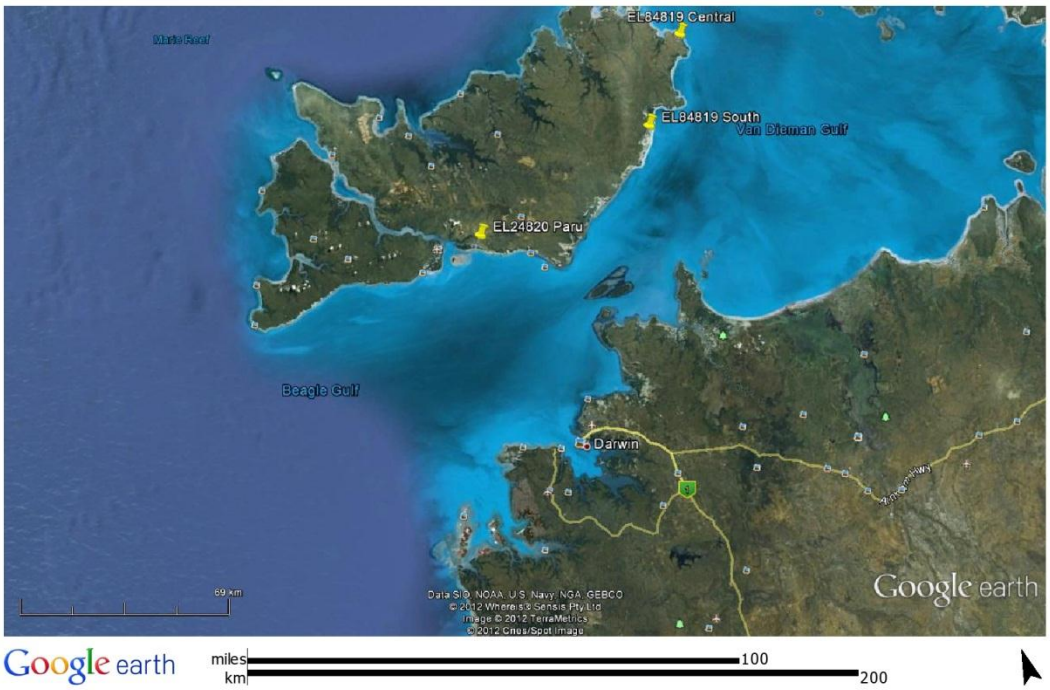

Figure 1a Tenement Location EL24820 Paru - Tiwi Islands

Figure 1b Tiwi Islands – MZI tenement overview

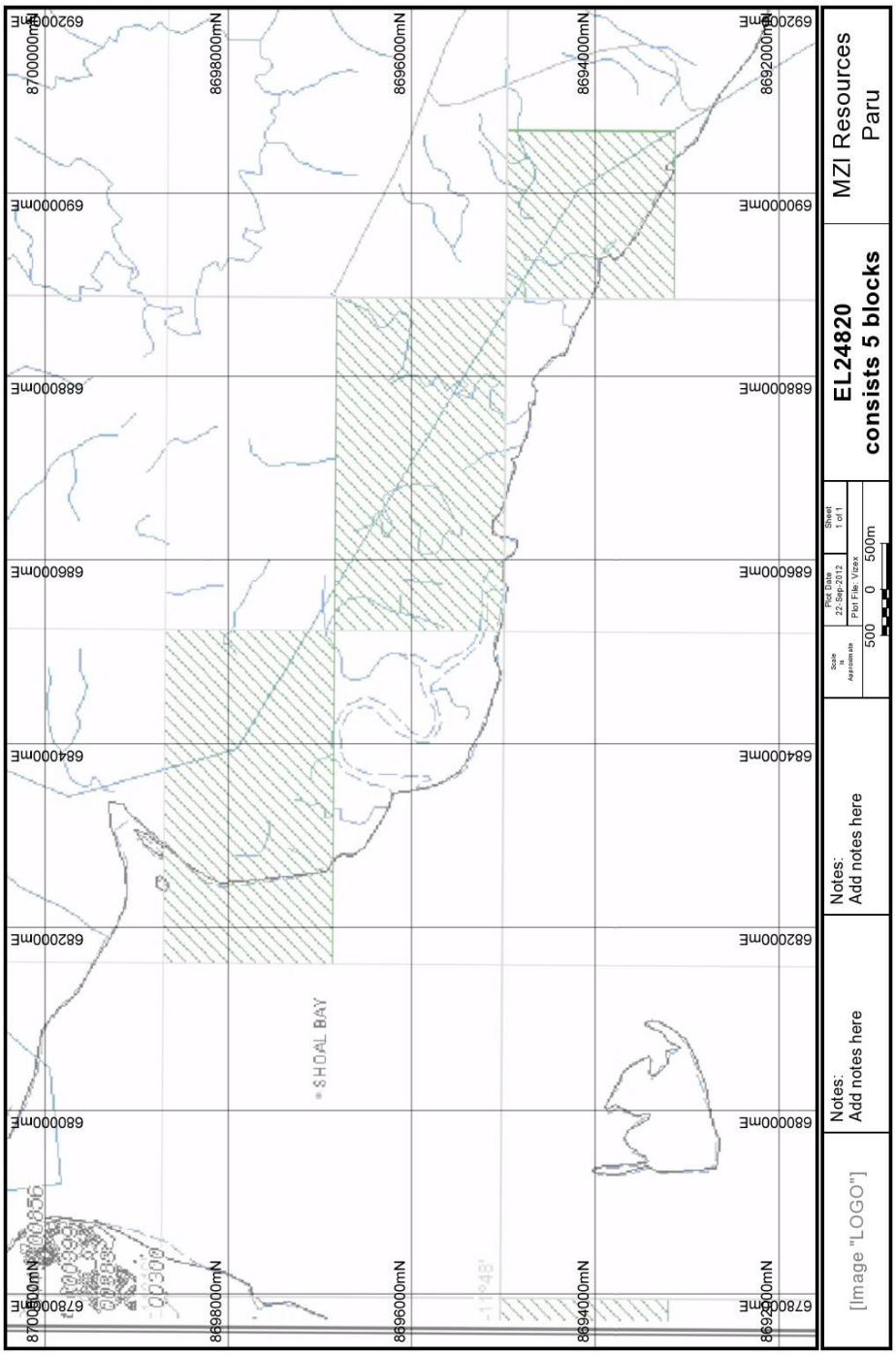

Figure 2 Tenement Location – EL24820 Paru

3. PHYSIOGRAPHY

The climate of the Tiwi Islands is tropical monsoonal, with warm dry winters and hot wet summers. The annual average rainfall is 1200mm – 1400mm in the eastern part of Melville Island to 1800mm – 2000mm in the north-west of Melville Island and north of Bathurst Island. The majority of the rain falls between December and April under the influence of the northwest monsoons. Temperatures range from a mean of 35ºC to 21ºC in summer, and 26ºC to 18ºC in winter.

The topography of the islands is characterised by relatively low relief, dominated by partially dissected plateaux rising to 100m above sea level, interspersed with broad valleys, riverine lagoons and estuarine tidal flats. The coastline varies from more exposed low cliffs and beaches to large estuaries and extensive tidal flats. The vegetation is consistent with a tropical savannah regime, dominated by dense eucalypt and acacia woodland in the hinterland and more prominent coastal fringe, while melaleuca (paperbark) forests predominate along the watercourses. Mangroves proliferate around tidal flats, while casuarina trees and pandanus palms fringe the coastline.

4. TENURE

This report covers the following Exploration Licence:

Table 1 - Matilda Zircon tenement

Tenement number	Date granted	Location	Blocks	Annual expenditure – current year
EL24820	29/07/2008	Paru/Melville Is	5	$6,000
			Total	**$6,000**

5. GEOLOGY and GEOMORPHOLOGY

5.1 Geology

The oldest rocks exposed on Bathurst and Melville Islands are represented by the Upper Cretaceous Moonkina Member. This formation consists of fine to very fine sub-labile sandstone, along with interbedded grey carbonaceous mudstone and siltstone, of shallow marine to deltaic derivation. The Moonkina Member is exposed at the base of coastal cliffs, particularly along the southern coastline of Bathurst and Melville Islands, and in lower lying portions of the hinterland.

The Moonkina Member is unconformably overlain by the Tertiary Van Diemen Sandstone, which dominates the geology of the Tiwi Islands. This formation comprises a friable, white to yellow, medium to coarse-grained quartzose sandstone

with subordinate intercalations of grey carbonaceous mudstone and siltstone of fluvial to paralic derivation. The Van Diemen Sandstone broadly dips very gently to the north, becoming thicker in the process, with the unit exposed over a 60m vertical interval at Cape Van Diemen at the extreme north-western tip of Melville Island.

Both the Moonkina Member and Van Diemen Sandstone are disconformably to unconformably overlain by unconsolidated Quaternary fluvial, paralic, deltaic and littoral deposits. The most economically significant of these are the younger age littoral quartzose sands associated with the palaeo-shoreline. Holocene (recent) littoral deposits have accumulated along the present coastline, variously abutting or transgressing the Cretaceous, Tertiary and Pleistocene deposits.

Recent Age dating completed by Matilda Zircon has identified the age of the Lethbridge Minerals Sand deposit (and by extrapolation, Andranangoo) as being approximately 2000 years old, probably one of the youngest mineral deposits in Australia.

5.2 Geomorphology

The Van Diemen Sandstone dominates the geomorphology of both Bathurst and Melville Island, forming low partially dissected and lateritised plateaux, which are frequently capped by ferruginous to bauxitic pisolitic laterite accumulations. Low red cliffs, nick-points and platforms of Van Diemen Sandstone are developed along or adjacent to the more exposed portions of the coastline.

In many instances the Tertiary sea cliffs are preserved from further erosion by accumulations of Pleistocene and/or Holocene littoral deposits (Figure 3). The Pleistocene sands are distinguishable from their Holocene counterparts by a mild orange, pink or red discoloration, and are invariably developed as one or more low amplitude, but strike persistent strandlines, with a wavelength characteristically in tens, rather than hundreds, of metres.

The Holocene deposits generally appear to be cleaner and marginally finer grained than their Pleistocene equivalents, incorporating a more significant proportion of coquina and coralline debris. Along the north coast of the islands the present day beaches appear to have accumulated as strandlines directly against the Tertiary escarpment or as a composite strand plain successively comprising both the Holocene and Pleistocene deposits. Holocene dune deposits transgress the older strandlines on several beaches that are more exposed to the prevailing north-westerly monsoonal winds.

Heavy mineral (“HM”) sand accumulations are present within both the Pleistocene and Holocene strands. The immediate provenance of the HM is the Van Diemen Sandstone itself, which contains thin laminae of HM identical in composition to the mineral sands. The Pleistocene and Holocene deposits have therefore been

subjected to two cycles of erosion and deposition, being thought originally to have been derived from the Lower Proterozoic igneous and metamorphic complexes of the Pine Creek Geosyncline on the mainland to the south.

Heavy mineral accumulations, be they Pleistocene or Holocene, appear to be best developed immediately adjacent to the Tertiary Van Diemen Sandstone escarpment from whence they are derived, with successive strandlines being considerably and progressively more depleted in HM away from the scarp. This preferential accumulation of HM immediately adjacent to the Van Diemen Sandstone can be readily witnessed in the present day environment near Cape Fourcroy, located at the extreme south-western tip of Bathurst Island. Here, although limited in extent, HM species represent the only sand preserved on a wave-cut platform at the base of an extensive cliff of Van Diemen Sandstone.

Recent dating by AMS (accelerator mass spectrometer) radio carbon of the underlying coquina/shelly layer at the Lethbridge Bay deposit has returned a date of approximately 2000 years old, a remarkably young minerals sand deposit. The age of 2,000 years is consistent with the soil development and topography of the beach ridges and the fresh appearance of the shell material and co-bedded marine brown algal strands.

From a pragmatic point of view this may indicate that by comparison the Lethbridge South ridges are possibly older but still probably post glacial (<6,000BP) and more importantly the equivalent Pleistocene coastal sands formed when the sea levels were previously around present levels (eg around 120,000BP) has not been identified. They may have been obliterated or they may be preserved either beneath the Holocene sands or preserved but unrecognized in the coastal hinterland.

6. PREVIOUS EXPLORATION

The original area of the tenement on a landsat photo is shown in Figure 3. The last exploration report authored by Coxhill was for the period ending 28 July 2009. In that reporting period no work was done and no work is described previous to the period.

5.1 Discussion (from past report by Coxhill, 2009)

"GIS review of EL24820 has been completed and no obvious mineral strandlines were identified."

The conclusion of Coxhill (2009) was the probability of economic mineral sands deposits in the EL was low and no further work was recommended.

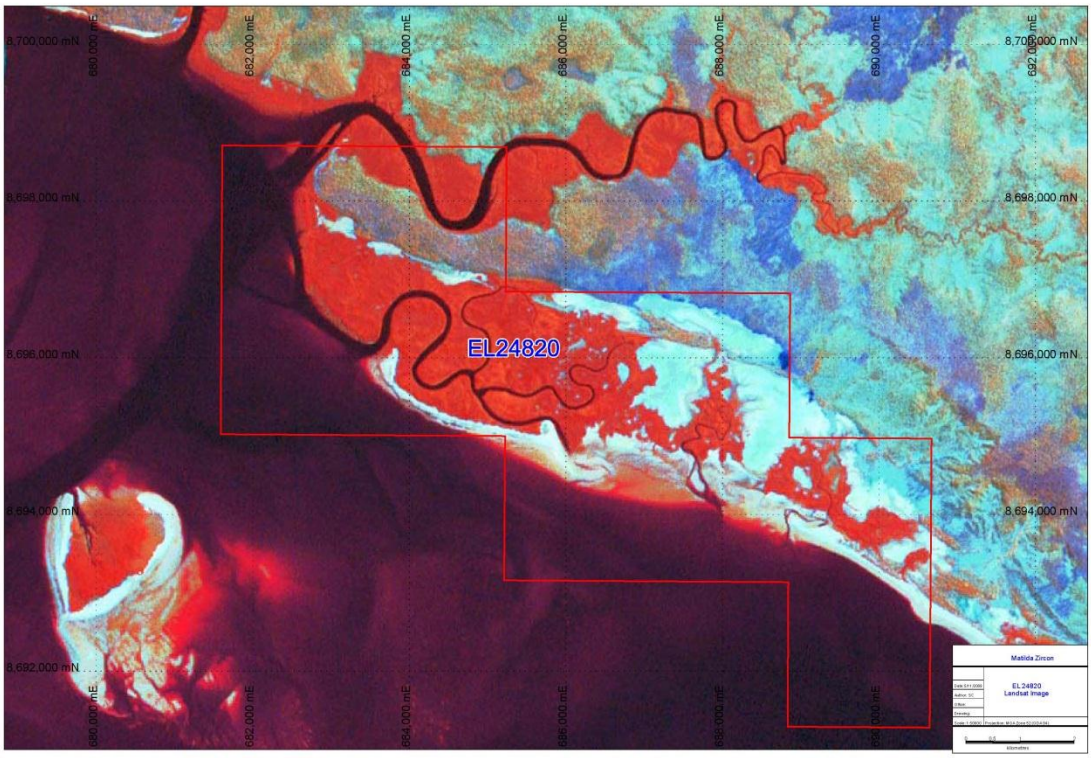

Figure 3: Landsat photo and Tenement EL 24820 (as at 2009) and topography

7. EXPLORATION

No Exploration was conducted in the period due to exceptional circumstances relating to the fire at the Lethbridge South processing plant.

From satellite imagery the coastline of the EL was examined for Lethbridge South dune systems however none of equivalent size or structure were observed.

8. CONCLUSION AND RECOMMENDATIONS

If exploration is to be progressed in the areas of EL24820 a foot reconnaissance and auger sampling program is required. The cost of conducting the work is low and the technology is straight forward therefore this would be easily executed.

Based on the satellite images of beach deposits in the EL the likelihood of finding a mineral sands deposit of equal size to Lethbridge South (28,000 tonnes of economic grade heavy mineral) is very low.

Following a foot reconnaissance and auger program the EL24820 should be relinquished provided no economic mineral sands deposits are identified.

9. REFERENCES

Coxhill	2009	EL24820 Annual Report for the period ending 28 July 2009 (unpublished).

Distribution:

- Geoscience Information, Northern Territory Geological Survey, Department of Primary Industry, Fisheries & Mines, N.T.
- MZI Resources Ltd
- Austwide Mining Title Management Pty Ltd