



# **ORESOME AUSTRALIA PTY LTD**

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## **Partial Relinquishment Report for EPM 15268 “Urquhart Point” for the Period Ending 20 August 2012**

**Oresome Australia Pty Ltd**

**by**

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**24<sup>th</sup> December 2015**

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## **METADATA**

Tectonic :	Carpentaria Basin
Stratigraphy:	Helby Beds
Age:	Jurassic, Cretaceous, Pleistocene, Holocene
Maps:	Weipa (7272)
Locality:	Urquhart Point
Commodities:	Zircon, rutile, ilmenite, leucoxene, monazite, bauxite
Key Words:	Auger Drilling, Aerial Radiometric Surveys
Prospects:	Urquhart Point
Pages:	11

## **1. SUMMARY**

Oresome Australia Pty Ltd (Oresome) is a wholly owned subsidiary of Metallica Minerals Ltd (Metallica).

The Oresome Cape York Project, which is prospective for mineral sands and bauxite, at its peak comprised of nineteen tenements, seventeen were granted and the remaining two tenements were under application. Following a review of the exploration potential and results of the project the tenement holding was reduced to comprise at the time of writing of twelve granted tenements and one application. All of the Oresome tenements are situated on western and northern Cape York and cover areas of known dune systems with indications of heavy minerals sands (HMS) deposits and plateau areas prospective for bauxite deposits.

EPM15268 is located approximately 4 km south-west of Weipa on Cape York and was granted to Oresome Australia Pty Ltd commencing on 25th October 2007 for 5 years expiring 24th October 2012. At grant it contained 24 sub blocks which was reduced to 23 sub blocks on the 16th July 2012.

The one (1) sub-block relinquished significantly overlapped with Rio Tinto Alcan's ML7024 and comprised mostly of current drainages and low-lying swamp areas which do not have apparent sand deposits or an anomalous Thorium response, some of the HM targeting criteria applied by Oresome, or significant plateau areas prospective for bauxite.

As a result this area has been relinquished.

## 2. INTRODUCTION

Oresome Australia Pty Ltd, (Oresome) is a wholly owned subsidiary of Metallica Minerals Limited. Oresome is exploring a number of tenement areas on western Cape York for HMS and bauxite via the Cape York HMS and Bauxite Project.

On the 8th September 2014 Oresome entered into a Joint Venture agreement with a private Chinese investor, Ozore Resource Pty Ltd over the Cape York HMS and Bauxite Project. The JV is held 50% by Oresome and 50% by Ozore.

Historically the presence of heavy mineral sands was known in Cape York from the 1950's with the first such lease on the west coast being ML6023 applied for 8 July 1960 and granted 25 March 1982 for heavy mineral sands at Urquhart Point located across the Embley River from Weipa

## 3. TENURE

EPM15268 is located approximately 4 km south-west of Weipa on Cape York (Figure 1) and was granted to Oresome Australia Pty Ltd commencing on 25<sup>th</sup> October 2007 for 5 years expiring 24<sup>th</sup> October 2012. At grant it contained 24 sub blocks (Table 1) which was reduced to 23 sub blocks on the 16<sup>th</sup> July 2012.

BIM Code	Block Number	Sub-blocks
MITC	622	D E J K O P S T U X Y
MITC	623	F
MITC	694	B C G H M N Q R S V W X
<b>Total</b>		<b>24 Sub-blocks</b>

**Table 1 EPM15268 Sub Blocks at Grant**

Since commencement of the project Oresome have applied for and been granted the current Mining Leases ML 20669 granted 8th October 2013 and expiring 31st October 2023, and ML 20737 granted 26th March 2015 and expiring 31st March 2025, at Urquhart Point.

An Exploration agreement has been entered into with Wik and Wik Way and Ngan Aak Kunch Aboriginal Corporation.

The one (1) sub-block relinquished (Table 2, Figure 2) comprised mostly of current drainages and low-lying swamp areas which do not have apparent sand deposits or an anomalous Thorium response, some of the HM targeting criteria applied by Oresome, or significant plateau areas prospective for bauxite. In addition the sub block significantly overlapped with Rio Tinto Alcan's ML7024.

<b>BIM Code</b>	<b>Block Number</b>	<b>Sub-blocks</b>
MITC	623	F
<b>Total</b>		<b>1 Sub-block</b>

**Table 2 EPM15268 Sub Block Relinquished**

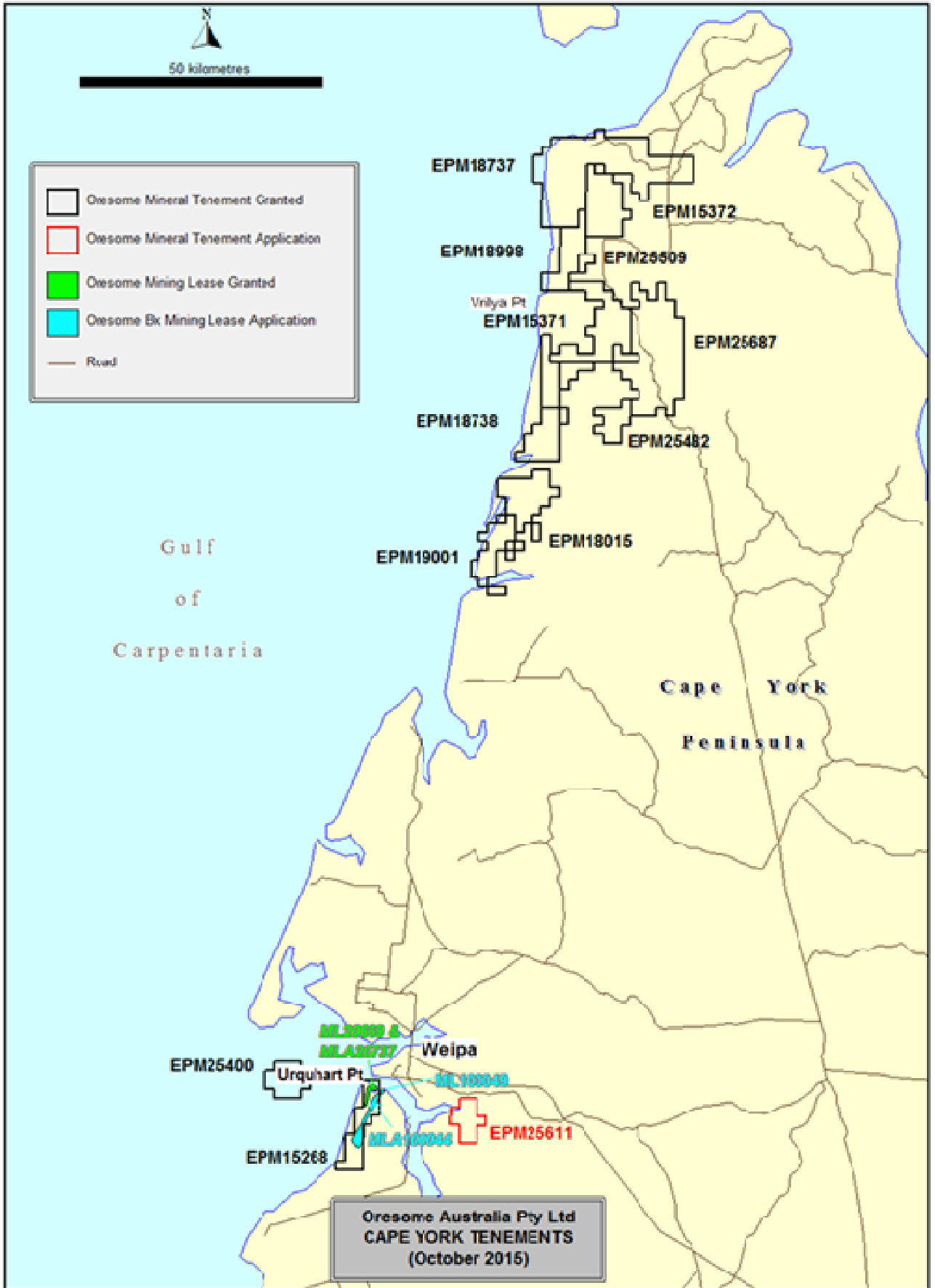
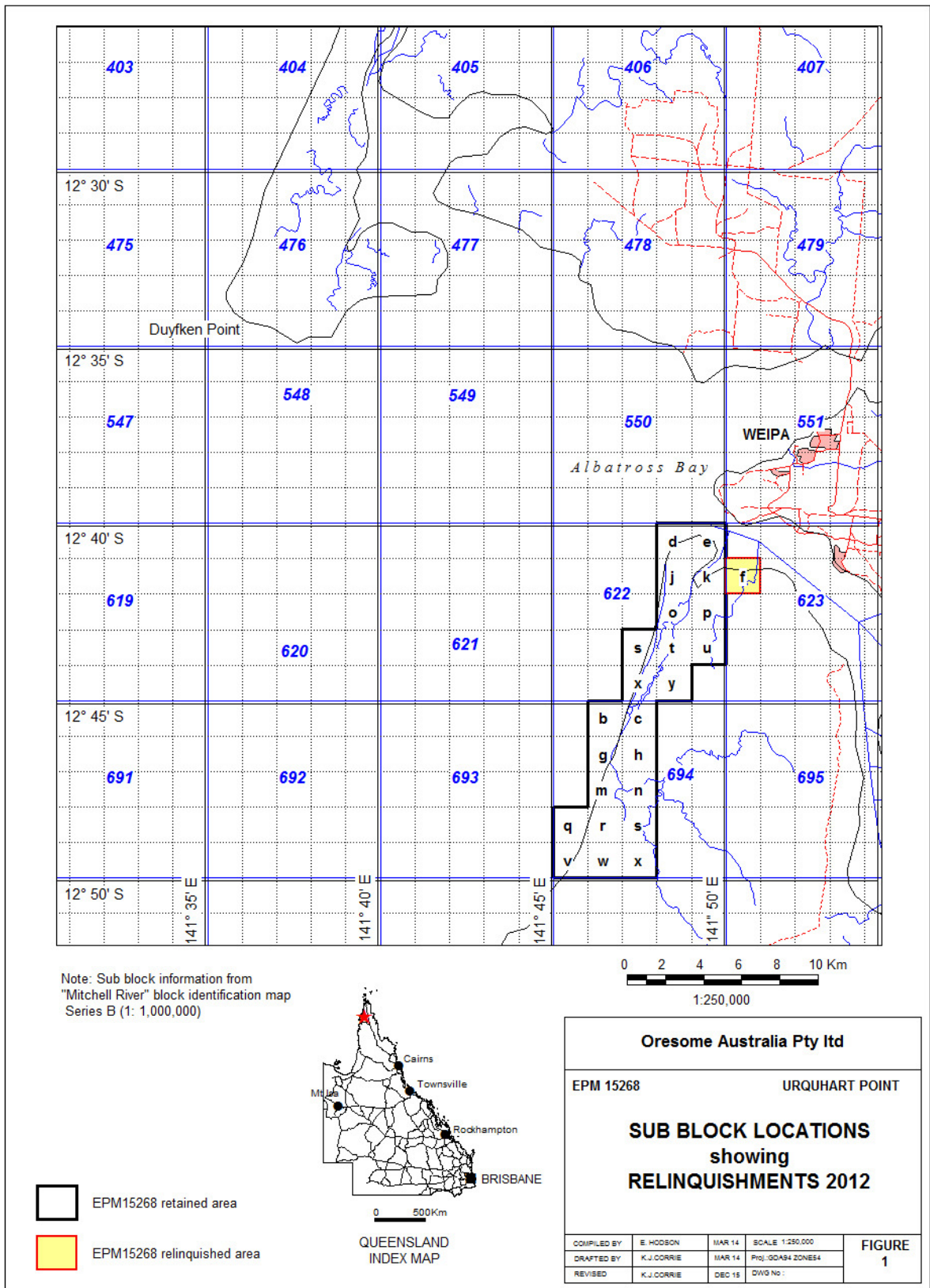


Figure 1: Cape York Tenements



**Figure 2: EPM15268 Relinquishment (yellow)**

## **4.0 CAPE YORK HEAVY MINERAL SANDS AND BAUXITE PROJECT**

Oresome's current granted tenements and those under application cover an area of approximately 1,274 km<sup>2</sup> and are located between Weipa in the south to Bamaga in the north on the western coastline and divide of the Cape York Peninsula (Figure 1).

Landforms vary extensively from saline mudflats and mangroves to dense vine forests, swampy grasslands and open eucalypt forest plateau areas. Reviews of satellite and air photo data show these landform areas characterised by i) - dune systems in a number of shapes indicating various depositional styles that give rise to long narrow systems, "J" shaped systems reminiscent of those on Urquhart Point, with swales carrying extensive swamps cut by small creek systems, and ii) – flat lying lateritic plateau areas prospective for bauxite which are highly dissected by creeks and swamps.

A modal analysis of the Cape York coastline indicates that better value HMS deposits are more likely to occur north of Weipa than south of Weipa. The analysis also identifies the siliceous paleo-beaches as potential hosts for HMS. The Oresome tenements generally cover these paleo-beaches and these areas are targeted for HMS exploration.

While the initial exploration focus for the tenements was targeted towards HMS mineralisation recent reviews of the current and previous exploration and the geological setting has identified the potential for bauxite mineralisation of the Weipa style to be present within lateritic caps developed above Rolling Downs Group sediments and Bulimba Formation fluvial sediments of the Tertiary age Karumba Basin and which form coastal and inland plateau areas within a number of the EPM's.

## **5.0 EXPLORATION PROGRAMS**

### **5.1 Preliminary Studies**

The Urquhart Point tenement comprises a sandy peninsula which is situated approximately 4 km south-west of Weipa on Cape York (see Figure 1). Access is via boat from Weipa or helicopter. There are currently no roads which access EPM15268.



The vegetation in the area consists of mixed scrubby sclerophyll vine woodland on well drained deep siliceous sands. These sands are mainly aeolian in origin forming a series of low, elongated shore-parallel ridges and are composed mainly of fine sands. These ridges overlie a more heterogeneous deposit of coarse sand, bauxite and ironstone nodules and fragmented and whole shells. These are highly similar to beach ridge plains described elsewhere in the Albatross Bay region. Marine shell is commonly found in the area.

EPM 15268 is covered by two of the physiographic units recognised in the Weipa area: the Weipa Bauxite Plateau and the Mapoon Plain. The third unit, the Merluna Plain, occurs further to the east. The Weipa Plateau is a dissected plateau remnant of the Aurukun Surface and rises from about 5m at the coast to about 50m along its eastern margin, with local variations being commonplace.

The drainage pattern is dendritic, with sparsely distributed broad, shallow streams, and the major river valleys having been drowned at the coast, reflecting the Holocene rise in sea level. The plateau is underlain by Bulimba Formation and capped by resistant bauxite and aluminous laterite. The Mapoon Plain is a narrow coastal plain comprising younger beach sand ridges (Qhm) backed by black soil plains and clay flats (Qac), with a few salt pan areas, which in turn are backed by an older set of sand ridges (Qpm).

The Urquhart Point Zircon - Rutile deposit was investigated in 1956 and 1959 and several open file reports held at the Queensland Department of Mines and Energy give a good indication of the deposits' potential. It has been determined from previous reports that the deposit was drilled by hand auger over a distance of approximately 1,500 metres to the east and west of Urquhart Point. A total of 632 auger holes for 4,004 feet (953m) were reportedly drilled on 59 sections and high grades of zircon and rutile were recorded.

In addition to Urquhart Point many of the dune systems identified on western Cape York were explored by shallow hand auger programs in 2009 by Matilda Minerals (Coxhell and Baxter 2009), however results were disappointing and the program lapsed.

Oresome became aware that one of the mineral sands projects the company reviewed in Victoria was able to be targeted by use of airborne radiometrics due to low concentrations of radioactive uranium and thorium in zircon, ilmenite and rutile. Thus it considered that a re-

interpretation of the Matilda work could be of value, to better focus efforts to locate significant mineralisation.

## **5.2 Program for the Period Ending August 2012**

Oresome requested Salva Resources to conduct a desktop review of the radiometric signature over the Cape York Project exploration permits, including EPM15268, in order to characterise the expression of the Urquhart mineral sands deposit in terms of its radiometric, Shuttle Radar image expression and on Satellite imagery expression within the framework of the known geology of the area and then attempt to identify additional similar targets in the project area.

The analysis demonstrated that the Urquhart Point deposit is well delineated by the thorium and uranium channels derived from the GSQ Cape York airborne geophysical survey. This was apparent in both imaged and stacked profile format.

This work identified a total of 22 Thorium anomalies within the Cape York Project area for ground follow up.

None of these Thorium anomalies were located within the relinquished sub block.

## **6. CONCLUSIONS**

A desktop review of the radiometric characteristics of the Cape York HMS and Bauxite Project exploration permits identified a total of 22 Thorium anomalies.

The one (1) sub block relinquished significantly overlapped with Rio Tinto Alcan's ML7024 and comprised mostly of current drainages and low-lying swamp areas which do not have apparent sand deposits or an anomalous Thorium response, some of the HM targeting criteria applied by Oresome, or significant plateau areas prospective for bauxite.

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