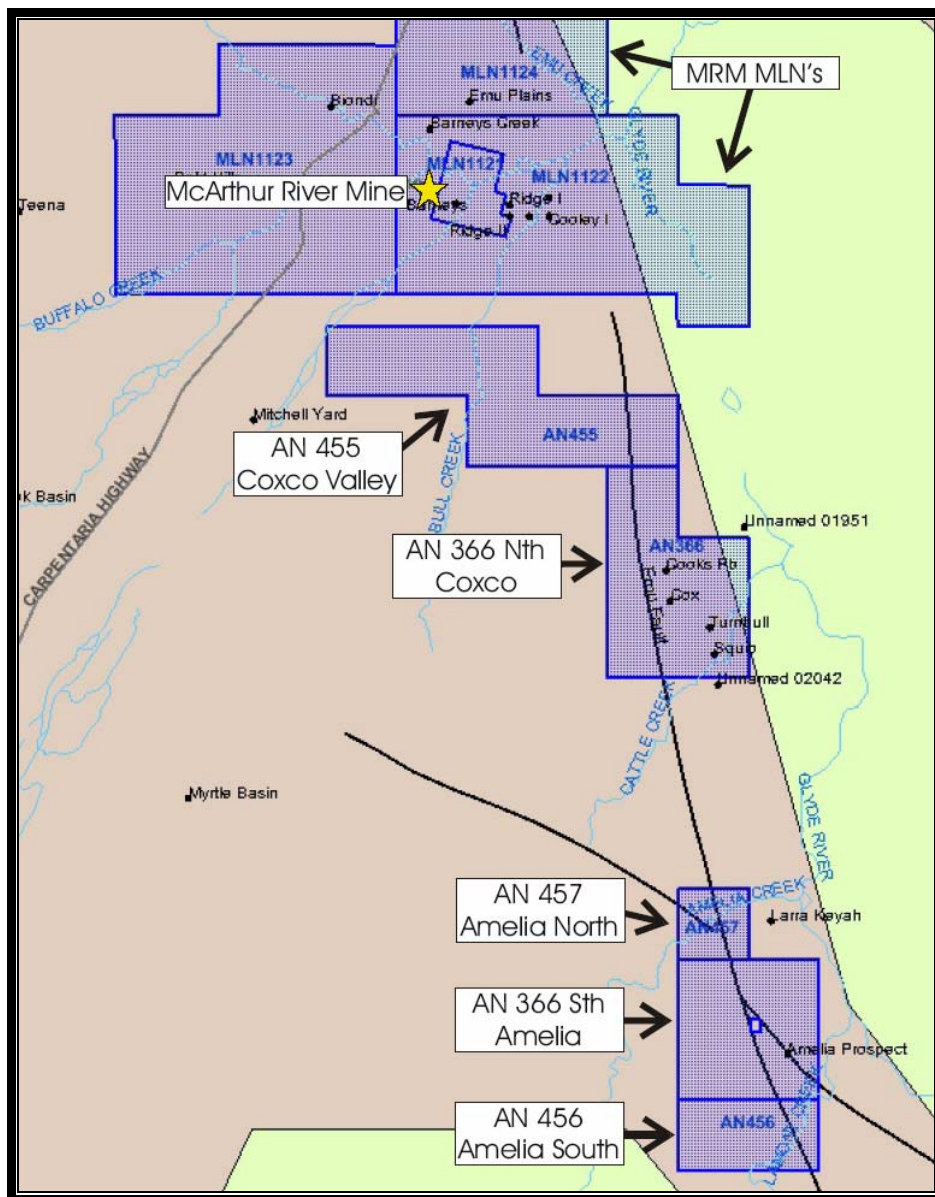


# 1<sup>st</sup> ANNUAL REPORT ON THE EVALUATION OF AN455, 456 & 457

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## 1.0 INTRODUCTION

Authorisation Northern 455, 456 and 457 cover highly prospective near mine exploration leases close to the Here's Your Chance (HYC) Zn-Pb SEDEX deposit, located approximately 60km south of Borroloola in the Northern Territory. The deposit is currently mined by McArthur River Mining (MRM).



**Figure 1:** Location of Authorisation Northern 455, 456 and 457 relative to the McArthur River mine leases (image edited from DPIFM Strike database).

## 2.0 TENEMENT HISTORY

The ground covered by Authorisations Northern (AN) 455, 456 and 457 was formerly part of the MIM held AN366, but was relinquished in 1996 under statutory relinquishment requirements. The relinquished ground was then reapplied for by MIM as separate Authorisations, under identical legislative conditions as an Exploration Lease. Although the first application was lodged by Mount Isa Mines in mid 1996, hurdles in the application process meant the tenements were not formerly granted until August 2006.

AN455 (6 graticule blocks, 19.74km<sup>2</sup>) is situated over the Coxco Valley prospect, located approximately 5km south of the current McArthur River Mining. The area shows anomalous base metal concentrations, and is adjacent to the Coxco Prospect, a sub-economic, carbonate hosted Zn – Pb deposit. The Coxco Valley area has the potential to host both HYC style mineralisation and later stage remobilised base metal stockworks and veins.

AN456 (2 graticule blocks, 5.58km<sup>2</sup>) and AN457 (1 graticule block, 3.29km<sup>2</sup>) cover extensions to the north and south of the Amelia Prospect (AN366 South), a package of highly prospective ground currently under lease to McArthur River Mining. This area was the focus of significant exploration activities by Mount Isa Mines Exploration division between 1988 and 1995. Base metal mineralisation within the Amelia Prospect is confined to vein and stockwork structures associated with brittle deformation adjacent to the Emu Fault Zone (EFZ), and is prospective as a target area for a moderate grade, low tonnage structurally controlled Zn-Pb resource.

## 3.0 WORK COMPLETED IN 2006/2007

A summary of the work completed on AN 455, 456 and 457 is given below.

<i>Activity</i>	<i>Cost (\$)</i>
Tenement review and literature research	5000
Field reconnaissance	2500
<i>Total</i>	7500

*Table 1:* Summary of activities and associated expenses accrued for AN 455, 456 and 457 during the first year of tenure.

### ***3.1 Literature Research***

A review of the MRM near mine exploration archive revealed a lack of data relating to the ground covered by AN 455, 456 and 457, ground formerly covered as part of AN 366. This prompted a search of the Minerals and Energy Information Centre (MEIC) archive, which revealed a large amount of historical exploration data covering the Amelia and Coxco Valley areas, dating back to 1957. The last significant reports accessed from the MEIC archive dated to the mid 1970's, meaning that known Mount Isa Mining Exploration (MIMEX) division reports from the early 1990's still had to be located.

It was soon discovered that data collected by MIMEX over AN 455, 456 and 457 was relocated to the Xstrata Copper Exploration archive, located in Mount Isa. A trip to this archive facility proved to be a worthwhile venture, as it allowed us to gather geological data and establish the exploration history of the three areas. As AN 455, 456 and 457 were formerly part of AN 366, the literature research conducted on AN 366 benefited our understanding of the exploration history of the newly granted tenements.

### ***3.2 Field reconnaissance***

One complete day of field reconnaissance was completed for each of the three tenement areas. The field area covered by AN455 is topographically subdued and covered by a thick sequence of black soil, with sparse dolomitic outcrop restricted to small hills and ridges. The tenement covers the area from the north of the Coxco deposit, westwards to the McArthur River (figure 1).

The physiographic features of AN 456 and 457 are markedly different from AN455, as both tenements cover ground along the Emu Fault Zone. The EFZ is marked by a prominent uplifted scarp of tectonised basal dolomite with interbedded dolosiltstone lithologies.

## **4.0 RECOMMENDATIONS**

### ***4.1 Lease Boundary survey***

The lease boundaries of the three tenements will be surveyed, utilising the MRM survey department and its equipment.

### ***4.2 Field reconnaissance and mapping***

Additional field reconnaissance is recommended over AN 456 and 457, including outcrop scale mapping in areas of visible mineralisation, with a focus on vein and fracture orientations.

#### **5.0 PROPOSED EXPENDITURE FOR 2007/2008**

The proposed expenditure for exploration activities across AN 455, 456 and 457 during the second year of tenure is summarised in Table 2.

<i>Activity</i>	<i>Cost (\$)</i>
Boundary survey	4500
Field mapping	3500
Administration	500
<i>Total</i>	8500

*Table 2:* Summary of proposed expenditure for the 2<sup>nd</sup> year of tenure.