1.0 2.0 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).
3.0 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$^2$) 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$^2$) and AN457 (1 graticule block, 3.29km$^2$) 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.

4.0 WORK COMPLETED IN 2007/2008

A summary of the work completed on AN 455, 456 and 457 is given below. The departure of the MRM Technical Services department’s only field geologist in early 2008 and the loss of other critical geological staff caused the proposed programme outlined in the 1st annual report to be scaled back. Recruitment for suitably qualified personnel continued throughout the 2008 field season without success, so the scope of intended exploration during the 2008 field season was never realised.
Table 1: Summary of activities and associated expenses accrued for AN 455, 456 and 457 during the second year of tenure.

### 3.1 Lease Boundary Establishment/Field Reconnaissance
A day was spent with a hand held GPS in establishing the corner lease boundaries of all three AN’s and an overview of the work required for 2009 was undertaken.

### 3.2 Administration
Lease administration activities included the payment of licence fees, report writing and additional literature research/topographic and geological base map purchases.

### 4.0 RECOMMENDATIONS
Though the scope of the proposed 2008 field programme was never realised due to ongoing critical technical staff shortages, new permanent geological staff have recently been recruited and there is an exploration budget to carry out the proposed work in 2009.

#### 4.1 Field Mapping
It is proposed to complete 1:5000 outcrop mapping over the three AN’s in order to fill in the gaps that remain from the MIMEX outcrop mapping located during the 2007 literature research. This will focus on vein and fracture orientations and the identification of prospective stratigraphy adjacent to identified major structural dislocations. Establishment of an AMG based grid over these areas will be undertaken.

#### 4.2 Rock Chipping and Soil sampling
Additional rock chipping and selectively targeted areas for geochemical soil sampling is recommended over AN 456 and 457. These areas will specifically target the extensions of the Emu fault and its related splays.
5.0 PROPOSED EXPENDITURE FOR 2008/2009

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

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field mapping including gridding</td>
<td>10,500</td>
</tr>
<tr>
<td>Rock chipping and soil sampling</td>
<td>10,000</td>
</tr>
<tr>
<td>Geochemical Analysis</td>
<td>5,000</td>
</tr>
<tr>
<td>Administration</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30,500</strong></td>
</tr>
</tbody>
</table>

*Table 2: Summary of proposed expenditure for the 3rd year of tenure.*