



Australian Ilmenite Resources Pty Ltd

**Exploration License 28343
"Roper Gulf Region"**

**First Annual
Report**

For the period

18/06/2011 to 17/06/2012

By

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GDA94 - Zone 53

Target Commodities: Heavy Minerals and Iron Ore

1:250,000 Urapunga

1:100,000 Chapman

July 2012

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SUMMARY

This report covers activities on EL 28343 was granted in June 2011 for a period of six years to Australian Ilmenite Resources Pty Ltd (AIR).

The exploration license is located approximately 130km east of Mataranka in the Roper River region of the Northern Territory.

The Project lies in the Urapunga Fault Zone within the Bauhinia Shelf of the Proterozoic McArthur Basin. The area is underlain by sedimentary rocks of the Maiwok Subgroup of the Mesoproterozoic Roper Group. The Kyalla Formation in the area has been extensively intruded by sills of the Derim Derim Dolerite.

The exploration target has been heavy minerals associated with the weathering and erosion of dolerite sills within the Mesoproterozoic Roper Group. The area has previously been explored for iron ore, base metals and diamonds.

A written request and email reply (see attached) was made to The Department to enable us to provide a presentation to The Titles Advisory Board. The presentation was conducted Friday 20th July 2012. We presented our overall plan and current project status and the difficulties we had in reaching and fulfilling our commitment in the year 2010/2011. We also advised that due to funding restrictions from our Chinese joint venture partners who would not advance funds until we had received the PER from NRETAS.

At the above meeting our proposal to the Department was the works program scheduled for year 2011/2012 now is carried over to year 2012/2013. We have been assured that the PER should be completed in the first half of September 2012 which will trigger the release of the funding requirements from our JV Chinese partners.

INTRODUCTION

Background

The Roper HM Project originally included Exploration Licenses 22478, 23048, 24655, 24986, 26412, 26522, 26523, 26524 and 26525, and covered an area in excess of 10,000 sq km centered on heavy mineral deposits associated with dolerite intrusive of the Roper River region.

The area was originally applied to target insitu and in some instances remobilised heavy minerals shedding from eroding dolerite sills which had been intruded into the Mesoproterozoic Roper Group.

Location and Access

EL 28343 is located about 120km east of Mataranka in the Roper River region of the Northern Territory.

The Roper Highway provides all weather access to the tenement. Further internal access within the EL is provided by unsealed station tracks. There are sealed airstrips at Ngukurr to the east and Minyerri to the south providing all weather access to the tenement to support helicopter flying operations.

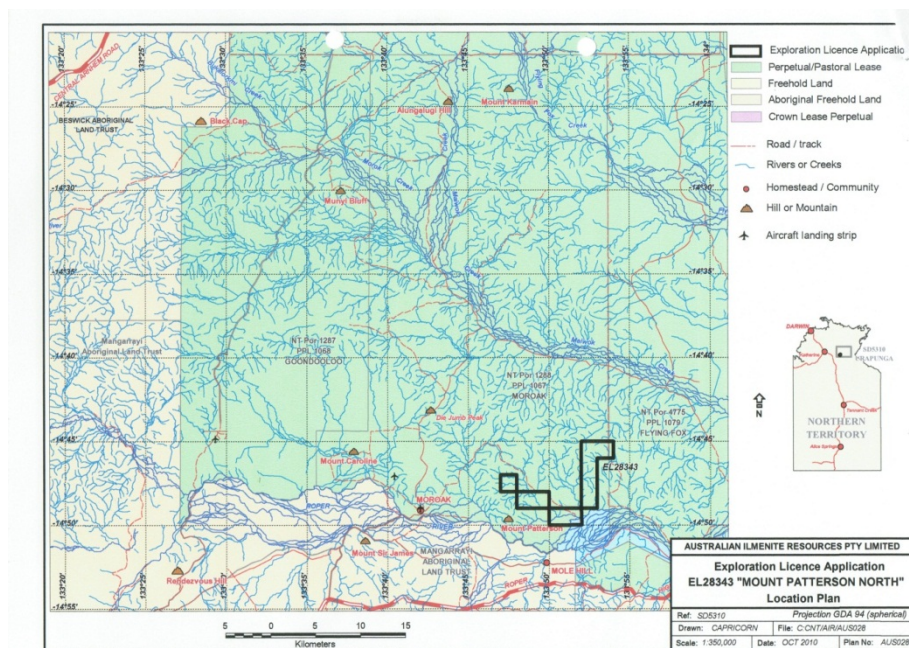


Figure 1: Tenement Location

Climate

The project area has a humid monsoonal climate, with mild dry winters and hot humid summers often with heavy monsoonal rains associated with tropical cyclones. The average annual rainfall is 700 millimetres with most falls between November and April. The wet season renders portions of the area inaccessible for exploration activities.

Topography and Vegetation

The EL is within the Gulf Fall physiographic province (Stuart, 1954) where dissected Proterozoic sediments have produced an undulating topography of low hills and rubble covered ridges with broad areas of alluvial and colluvial plains.

Vegetation consists of open savannah Eucalyptus woodland with local stands of lancewood on higher ground. The creek beds and water holes of the tributaries of the Roper River extend through the area and are associated with paperbark and larger Eucalyptus trees. To the west and north sparsely vegetated (Spinifex grassland) Proterozoic sandstone forms plateaus and minor escarpments that are deeply dissected by rivers.

TENURE

Mining/Mineral Rights

EL 28343 was granted to Australian Ilmenite Resources Pty Ltd on 17 June 2011 for a period of 6 years.

Table 1: Tenement Details

Tenement #	Ownership	Application Date	Grant Date	Blocks Applied	Blocks Granted	Blocks Retained
EL 28343	AIR	13/10/2010	17/6/2011	10	10	10

Granted in June 2011 for a period of six years

Land Tenure

This tenement covers Moroak PPL 1067.

Native Title

The Roper Valley North Native Title Claim (DC01/62) covers the current EL. An aboriginal land claim under the *Aboriginal Land Rights (NT) Act* is current over the vacant crown land of the stock route.

GEOLOGY

Regional Geology

The Project lies in the Urupunga Fault Zone within the Bauhinia Shelf of the Proterozoic McArthur Basin (see Figure 4). The basin consists of several northerly trending rifts separated by northwest-trending faults and transverse ridges, and was subject to repeated cycles of clastic and marine carbonate sedimentation interspersed with volcanic extrusion and sill emplacement in response to reactivation of older basement structures.

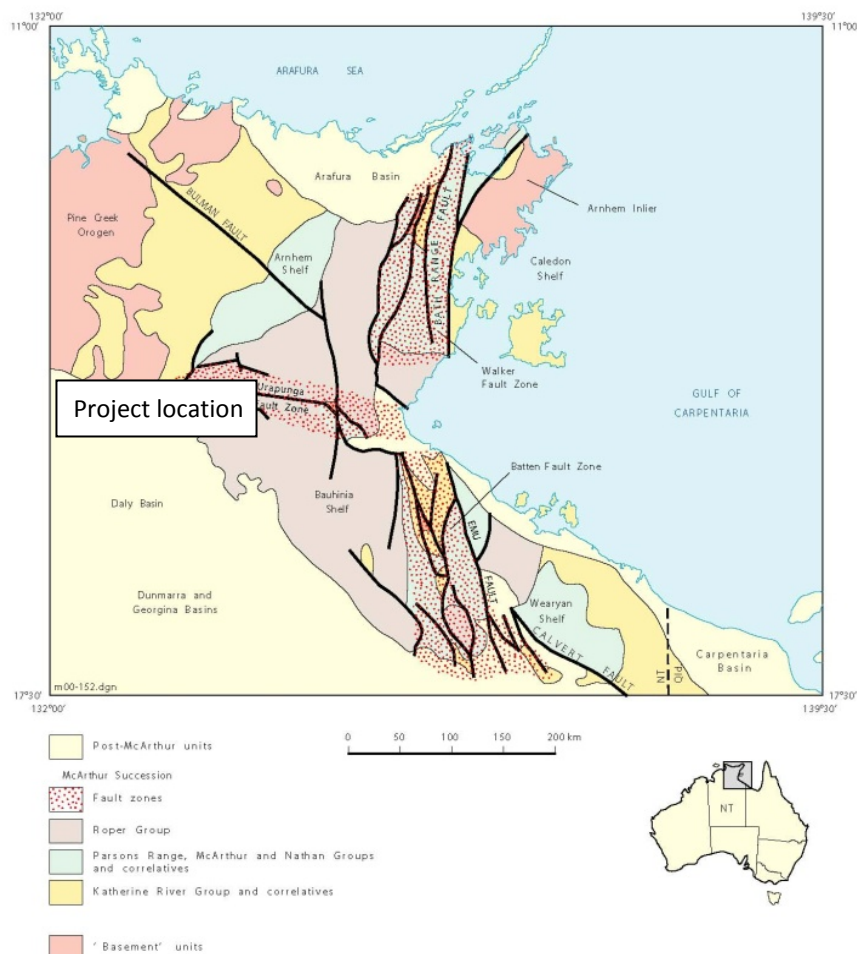


Figure 2: Regional Geological Setting

A later, more passive series of sedimentary cycles in response to western basin subsidence occurred with the deposition of suites of blanket quartz sandstones, micaceous siltstones, black shales and glauconitic sandstones of the Roper Group. Ironstones are prominent on a local stratigraphic level within this succession. Tholeiitic dolerite and gabbro sills were emplaced throughout the Roper Group soon after deposition ceased and before regional deformation.

Local Geology

The area is underlain by sedimentary rocks of the Maiwok Subgroup of the Mesoproterozoic Roper Group. The oldest rocks cropping out in the area are sandstones of the Moroak Formation. These are overlain by siltstones, mudstones and minor sandstones of the Kyalla Formation. Some low escarpments of the Bukalorkmi Sandstone which overlies the Kyalla Formation occur in the area, and these are the youngest Proterozoic rocks present.

The strata are generally flat lying although faulting has resulted in steepening of dips and stratigraphic dislocation in places. A minor north-south orientated fault has been mapped to the east of Mount Eleanor in the central part of the EL.

The absence of Cambrian flood basalts (Antrim Plateau Volcanics) and only remnant outliers of Cretaceous sandstone suggest that significant uplift and erosion has occurred within the area permitting exposure of the underlying Proterozoic sediments and dolerite sills. Extensive deposits of Quaternary to Recent sediments comprising alluvium, colluvium, unconsolidated gravel and sand overlain by mud-rich soils are mapped in the project area and reflect material derived from prolonged weathering and erosion during the Tertiary.

The Kyalla Formation in the area has been extensively intruded by sills of the Derim Derim Dolerite, which may be up to 100 thick. The dolerite outcrops as low-relief hills strewn with rounded boulders. The dolerites are fine to coarse grained and composed of plagioclase (40%), clinopyroxene (40%), amphibole (7%), opaques (ilmenite & magnetite 5%) and clay (7%).

The dolerite is generally deeply weathered and forms soils which are deep red-brown in colour, clay-rich and contains abundant liberated ilmenite, titanomagnetite, magnetite and haematite grains. The heavy mineral deposits present in the residual soils and in associated colluvial and alluvial concentrations form the primary exploration target in the area. In areas of higher elevation the dolerite sills have only been recently exposed, and soil development and erosion are limited. In lower lying areas the dolerite has been exposed for a longer geological time resulting in pisolitic laterite formation and attendant erosion. These latter areas are considered to have the best potential for higher in-situ ilmenite grades in both colluvial and alluvial terrain.

PREVIOUS EXPLORATION

Mining History

There has been no mining carried out in the region.

Exploration by Previous Companies

The Roper River area has attracted companies in exploration campaigns for iron ore, base metals, diamonds and uranium.

Evaluation of the oolitic ironstones of the Sherwin Formation by BHP in the 1950's identified potential for large tonnage (>400Mt) low to moderate grade (30%-60% Fe) iron deposits largely to the south and southeast of the Project Area. Recently further exploration has been undertaken by Sherwin Iron Ltd.

A number of companies have sporadically explored for base metals (Pb, Zn and Cu) culminating in the discovery of a number of small low grade deposits of sandstone-hosted (disseminated sulphides in Roper Group arenites at Galena Cliffs and Wongalara Prospects) and carbonate-hosted (veins, disseminations and replacement sulphides in brecciated dolomitic rocks of the Nathan Group) styles.

Intensive diamond exploration occurred in the 1980's and 1990's with large scale stream sediment sampling, loam sampling, airborne magnetic surveys and drilling programs conducted by Stockdale Prospecting, Ashton Mining and CRA Exploration. While a few kimberlitic indicator minerals including micro and macro diamonds were reported, most could not be traced to a source with the exception of two thin (<2m) steeply dipping kimberlitic dykes (Packsaddle and Blackjack 1) located by Stockdale southeast of the Project area. The very low grade and small dimensions of the dykes has precluded any further work on them.

Pacific Oil & Gas undertook detailed investigation of the hydrocarbon potential of the Roper River area in the late 1980's and early 1990's. Seismic surveys led to drilling of perceived oil-trap structures incorporating organic shales of the Velkerri and Corcoran Formations. Following only trace encounters of hydrocarbons the petroleum tenements were surrendered in the mid-1990's.

CRA Exploration undertook a cursory evaluation of the heavy mineral content of the extensive dolerite sill (and lateritic soil) horizons reporting the drilling of eight hand-held auger holes testing the upper soil profile at scattered localities. A best assay of 1.0m grading 3.0% ilmenite was reported and the tenements were subsequently surrendered in 1996.

A comprehensive summary of all past exploration can be found in the Explanatory Notes for the Roper Region: Urapunga and Roper River Special Sheet (Abbott, S.T., et al. 2001).

Previous Years – EL 23048

In the first year of tenure (2002-2003) eight shallow pits were excavated and sampled for heavy minerals and some shallow auger holes were completed. Field reconnaissance activities were supported with a helicopter.

In the second year of tenure (2003-2004) laboratory results of the analysis of concentrates from the trench sampling showed that there was a significant heavy mineral content (average 8%) in the first metre below surface. The heavy minerals consisted predominantly of ilmenite.

Digital airborne photography was acquired to enable the production of orthophotos, contours and a DTM.

No field work was conducted during years 3 to 5 (2004-2007). Geological and data reviews were undertaken. Discussions with possible joint venture partners also occurred.

During year 6 (2007-2008) visits were made to China and Japan to interest possible joint venture partners in the project. Three site visits were undertaken to show potential partners the ground.

In year seven, 2008-2009, the EL was assessed for its uranium potential by a consultant geophysicist. No uranium anomalies were found in the tenement. An assessment of the area for diamonds was also undertaken and concluded that there was no potential. A number of site visits were made with a Chinese organisation (Shandong Dongia Group of Shandong, China) interested in a joint venture.

Current Year

Consultant geologist prepared a report for the coming year which necessitated printing of additional maps.

CONCLUSIONS AND RECOMMENDATIONS

Our recommendations for year 2012/2013 will be to undertake the work program that was originally submitted in year 2010/2011. This will require an expenditure of \$7,400. The work program will include, rock chip and grab surface sampling, assaying and a field trip. Also thematic mapper digital data and open file geological and geophysical surveys with target are definition and refinement with association date interpretation and management, reconnaissance and follow up surface sampling (auger drill).

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