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**MAGELLAN METALS PTY LTD**  
**ANNUAL REPORT**  
**for the period 03/02/2005 to 02/02/2006**  
**E51/980: YANDIL AREA**  
**MAGELLAN LEAD PROJECT, WA**

Due Date: 04/04/05

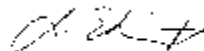
By

Jeff Elliott  
BSc, MAIG

**For: Magellan Metals Pty Ltd**  
**96 Welshpool Road,**  
**Welshpool, WA, 6106**

By: CSA Australia Pty Ltd  
Level 1, 47 Burswood Road  
Burswood, WA 6100

Approved



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J. C. Elliott

1. Department of Industry and Resources (Perth)
2. Magellan Metals Pty Ltd (Perth)
3. CSA Australia (Perth)

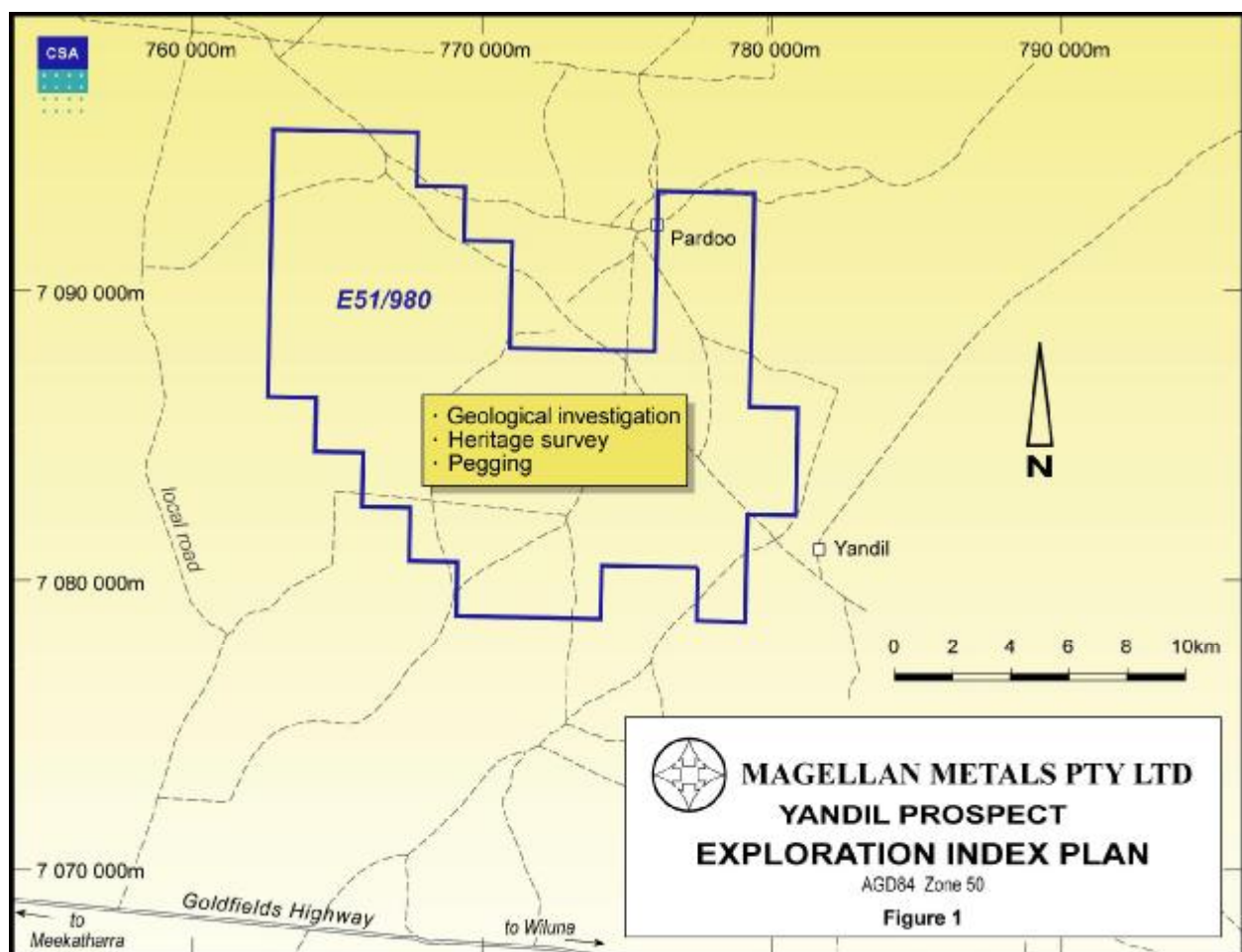
## SUMMARY

The Yandil tenement (E51/980) is located in the southeastern portion of the Yerrida Basin approximately 50 kilometres west of Wiluna, Western Australia. Access to the Project is by the Great Northern Highway from Perth to Meekatharra, then via the unsealed Goldfields Highway from Meekatharra to the Paroo Station access road (~120km west of Meekatharra) and then onto the tenement via various station tracks.

During the reporting period the following exploration activities were completed (see Figure 1, Exploration Index Map).

- Geological investigation;
- Heritage survey planning; and
- Pegging.

The work was completed to progress exploration towards drilling for Magellan-style lead mineralisation. At the end of the reporting period the heritage survey was still pending.



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## 1 INTRODUCTION

The Yandil tenement (E51/980) is located in the southeastern portion of the Yerrida Basin approximately 50 kilometres west of Wiluna, Western Australia (see Figure 2). Access to the tenement is by the Great Northern Highway from Perth to Meekatharra, then via the unsealed Goldfields Highway from Meekatharra to the Paroo Station access road (123km west of Meekatharra) and then onto the tenement via various station tracks.

Geological consultants CSA Australia Pty Ltd (CSA) carries out exploration on behalf of the tenement owner (Magellan Metals Pty Ltd).

## 2 OWNERSHIP AND TENURE

Magellan Metals Pty Ltd (MM) a subsidiary of Ivernia Inc, applied for a 70-block exploration licence in the Yandil area in April 2001. Seven blocks were relinquished prior to granting of the 63 block tenement (E51/980) on the 3<sup>rd</sup> February 2004. The tenement has an annual rental of \$6,237 and an annual expenditure commitment of \$56,700. Tenement boundaries are illustrated in Figure 1.

## 3 REGIONAL GEOLOGY

The Yandil tenement is situated in the southeastern corner of the Palaeoproterozoic Yerrida Basin at the northern end of the Archaean Yilgarn Craton. The Yerrida Basin is part of the Capricorn Orogen, a zone of low- to high-grade metamorphic rocks, magmatic belts, and low-grade volcano-sedimentary basins that were formed as a result of oblique collision between the Pilbara and Yilgarn Cratons about 1.8Ga. The Yerrida Basin was probably formed at approximately 2.2Ga and was affected by the Capricorn Orogeny. The Yerrida Basin has a faulted contact with the Bryah Basin in the west (Goodin Fault) and the Marymia Inlier in the north, and is unconformably overlain by rocks of the Earahedy Basin in the east. Rocks that have accumulated in the Yerrida Basin are assigned to the Yerrida Group (formerly part of the Glengarry Group) (Pirajno & Adamides, 2000).

The Yerrida Group is divided into the Windplain and Mooloogool Subgroups. The Windplain Subgroup contains the Juderina and Johnson Cairn Formations, which include siliciclastic rocks, evaporites, argillites, and locally turbidites. The rocks of the Windplain Subgroup were deposited in a shallow epicontinental sea, locally with sabkha environments. The Mooloogool Subgroup was deposited in a high-energy environment, probably in a widening rift structure, surrounded by uplifted Archaean rocks of the Marymia and Goodin Inliers. The Subgroup comprises four formations: The Doolgunna, Thaduna, Killara and Maraloou Formations (Pirajno & Adamides, 2000).

Within the Yandil area, the Yerrida Group is represented the Maraloou Formation (carbonaceous shale). The Maraloou Formation consists of carbonaceous shale, finely laminated siltstone, argillaceous dolomitic limestone and interbedded siltstone with thin beds of limestone and dolomite. Exposure of the shale and siltstone is poor due to preferential weathering, and alluvial plain covers much of the unit.

The uppermost Yelma Formation is locally preserved in the Yandil area as small outlier mesas of the Spinifex Range and subcropping areas in the colluvial plains. In the nearby Magellan area, the Yelma Formation attains a maximum thickness of ~60m and comprises a basal fining-upwards clastic sequence of quartz sandstone and siltstone (~30m thick) that is overlain by a coarsening-upwards,

poorly lithified and variably silcretized, chert breccia (~30m thick) thought to be of carbonate and evaporite origin.

The Yerrida sediments are commonly flat lying to moderately dipping to the north and west. Northeasterly and southeasterly trending faults are the dominant structural feature, folding is very gentle and where described comprises NNW and NE open folds. The Earraheedy sediments appear to have undergone relatively minor structural deformation.

## **4 SUMMARY OF ACTIVITIES**

During the reporting period the following exploration activities were completed (see Figure 1, Exploration Index Map).

- Geological investigation;
- Drill hole pegging; and
- Heritage survey planning

The work was completed to progress exploration towards drilling for Magellan-style lead mineralisation. At the end of the reporting period the heritage survey was still pending.

### **4.1 GEOLOGICAL INVESTIGATION**

Results from the prior year's exploration programs (soil sampling, mapping and aerial photography) were assessed to determine what further work would be completed on the tenement. As results of the geochemical survey were very disappointing (only four results show levels greater than 18ppm lead), planned mosaicing and orthorectification of the colour aerial photography over the Yandil area was postponed.

Scout drilling however was recommended in the hills (Yandil Range) north of Corner Well and south of Crystal Well on Paroo Station (Figure 3). The drilling will test the mapped Yelma Formation sediments based on geological and structural similarities with the nearby Magellan tenements where several deposits of lead carbonate / sulphate mineralisation have been identified. The proposed work program comprises:

- Some 57 RAB drill holes at ~400m hole spacing on six traverses spaced approximately two kilometres apart; and
- Approximately nineteen kilometres of tracks to provide access for drilling, including re-establishing the old access track which follows the fence-line west of Cookies Bore.

### **4.2 HERITAGE SURVEY**

To allow the next phase of exploration work to be commenced at Yandil a request for a heritage survey was submitted to the Yamatji Land and Sea Council via Magellan's consultant Jerome Frewen of Desert Management Pty Ltd.

It was hoped that the heritage survey could be completed in 2005 to allow drilling to follow early in 2006. However, at the anniversary date, the heritage survey was pending and unlikely to be completed until May 2006.

### **4.3 PEGGING**

In preparation for the heritage survey, the proposed drill hole sites were pegged using a handheld GPS and access tracks were marked by flagging tape. Jim Ford the pastoralist at Paroo Station was contacted and confirmed his availability to complete any clearing required (once all necessary approvals were in place).

## **5 REFERENCES**

PIRAJNO, F., and ADAMIDES, N. G., 2000, Geology and mineralization of the Palaeoproterozoic Yerrida Basin, Western Australia: Western Australia Geological Survey, Report 60.

