YARDARINO MINING NL

FINAL REPORT

EL9165 - BLACK ANGEL

TENNANT CREEK DISTRICT

NORTHERN TERRITORY

COPIES:

1. Department of Mines and Energy - Darwin.
2. Yardarino Mining NL - Perth

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TABLE OF CONTENTS

1. SUMMARY 3
2. INTRODUCTION 4
   2.1 Location and Access 4
   2.2 Physiology 4
   2.3 Tenure 4
3. REGIONAL GEOLOGY 4-5
4. PREVIOUS EXPLORATION 5
5. EXPLORATION PROGRAMME 5
6. EXPLORATION EXPENDITURE 6

LIST OF PLANS

<table>
<thead>
<tr>
<th>PLAN NO.</th>
<th>TITLE</th>
<th>SCALE</th>
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<tbody>
<tr>
<td>1</td>
<td>Tenement Location Plan</td>
<td>1 : 250 000</td>
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</table>
1. SUMMARY

Exploration Licence 9165 (Black Angel) of one block was granted on 1 August, 1995 and relinquished on 19 July, 1996. The tenement was subject to a joint venture between Orion Resources and Yardarino. No work was conducted on the tenement by Orion Resources as managers of the joint venture before their withdrawal on 15 December, 1995.

Following Orion's withdrawal, an evaluation of available aeromagnetic data and previous exploration work by Yardarino failed to locate any worthwhile targets for ground assessment. The tenement was assessed as being totally underlain by porphyry. Consequently, no field work was undertaken during the period of tenure.
2. INTRODUCTION

2.1 Location and Access

Exploration Licence 9165 is located approximately 35km north-west of Tennant Creek and 10km east of the Warrego Mine (Plan No 1). Access is via the sealed Warrego road which bisects the tenement.

2.2 Physiography

There are no physical features of note in the licence area. The ground is flat and covered with aeolian silt. Vegetation consists of spinifex grass, acacia and eucalypt trees.

2.3 Tenure

Exploration Licence 9165 was granted to Yardarino Mining N.L. for a period of 2 years on 1 August, 1995. The EL covers one block numbered 68-35 on the Short Range Sheet 52/1.

The tenement was subject to a joint venture agreement with Orion Resources N.L. who managed the exploration from 15 June, 1995 until withdrawal on 15 December, 1995.

Subsequent to Orion Resources N.L. withdrawal the tenement was surrendered on 19 July, 1996.

3. REGIONAL GEOLOGY

The Tennant Creek district over the past 60 years has produced several small, very high grade gold orebodies. Two of these bodies, Warrego and Nobles Nob, have produced over 1M ounces. The field has produced copper ore mainly from Warrego and Peko and was, until very recently, the world's major source of bismuth. To date nearly all the gold, copper and bismuth produced has been mined from quartz-jasper-magnetite-haematite bodies locally called ironstones. Exploration has focused on ground prospecting and drilling outcropping ironstones or selecting magnetic bulls eyes from the aeromagnetic surveys for drill testing.

The Tennant Creek district is deeply weathered (+70m) and regionally there is less than 30% outcrop. There are extensive plains of alluvium and colluvium between the outcrops which makes surface stratigraphic mapping almost impossible. There are however, three recognisable groups in the district.
The oldest and most prospective is the Warramunga Group, which hosts all of the significant and potentially mineralised ironstones. The Group consists of medium to deep water siltstones and greywackes which have been highly sheared and folded. There is a pervasive S1 cleavage which commonly is overprinted by S2.

Overlying the Warramunga Group is the Flynn Sub-group. This is characterised by interbedded siltstones and fine sandstones, although highly sheared original bedding can be recognised as can some sedimentary textures.

The Tomkinson Creek Group overlies the Flynn and is located in the northern extremity of the field. This Group is dominated by silicified sandstones and dolerite sills in the Tennant Creek area.

There are very poorly outcropping but extensive granites in the district. These are of two ages with the oldest represented by the sheared Tennant Creek granite and the younger by the unsheared Warrego granite. Quartz-feldspar and feldspar porphyries are reasonably common. They occur as either concordant or discordant to bedding. Often they are cross-cutting to the pitch and plunge of mineralisation.

4. PREVIOUS EXPLORATION

Geopeko explored the Black Angel tenement between 1982 and 1988. A regional exploration approach was adopted with aeromagnetics the prime exploration tool. A geological interpretation indicated that the Black Angel area is almost completely underlain by porphyry and consequently, the area was not subjected to ground assessment.

Between 1982 and 1988, the Black Angel tenement was explored by a Metana Minerals/Placer Exploration joint venture. Exploration work comprised stream sediment sampling, interpretation of a kevron 100m line spacing aeromagnetic survey and ground follow-up of selected anomalies. No anomalies were located in the current Black Angel tenement.

5. EXPLORATION PROGRAMME

No work was undertaken on EL9165 by Orion Resources during their period of project management. Following Orion Resources withdrawal from the joint venture a review of available open file exploration data was undertaken by Yardarino Mining. Little information of direct relevance was found.

An evaluation of available aeromagnetic data indicated that the tenement is not underlain by prospective Warramunga Group sediments, but by intrusive porphyry. The major presence of porphyry was confirmed by a field inspection. No magnetic targets indicative of ironstone bodies or major shear structures are present on the tenement.

In the absence of any worthwhile targets, no field work was undertaken and the tenement was relinquished on 19 July, 1996.
6. **EXPLORATION EXPENDITURE**

The following expenditure was incurred on the EL.

<table>
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<tr>
<th>Description</th>
<th>Amount</th>
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<tr>
<td>Wages</td>
<td>188.18</td>
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<tr>
<td>Administration</td>
<td>113.33</td>
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<tr>
<td>Geological Consultant</td>
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<tr>
<td>Data Acquisition</td>
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<td>Drafting</td>
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<td>Property Costs</td>
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Subtotal: $1,497.93

Overheads: $224.69

**TOTAL:** $1,722.62