EXPLORATION LICENCE 6393 NEAR GROVE HILL NORTHERN TERRITORY

ANNUAL REPORT FOR THE SECOND YEAR OF THE LICENCE

OPEN FILE

Prepared for Rose Quartz Mining N.L.,

by

G.R. Orridge,
GEONORTH Pty. Ltd.,
Darwin N.T.

April 1991.
CONTENTS.

1. INTRODUCTION.
2. GEOLOGICAL SETTING.
3. PREVIOUS EXPLORATION WORK.
4. EXPLORATION ACTIVITIES DURING 1990/91.
5. CONCLUSIONS AND RECOMMENDATIONS.

APPENDIX I. Rock Chip Sample Descriptions.
APPENDIX II. Analytical Report.

FIGURE 1. Locality Map.
FIGURE 2. Topographic Map. 1 : 50,000.
FIGURE 3. Tenement Map. 1 : 50,000.
FIGURE 4. Regional Geology. 1 : 100,000.
1. INTRODUCTION.

Exploration Licence 6393 is located about nine kilometres northeast from the old Grove Hill railway siding, some 125 kilometres southeast of Darwin (Figures 1 & 2). Dry season access is possible by 4WD vehicle from a track connecting the gas pipeline easement with the Mount Wells/Fountain Head road 8 kilometres east of Grove Hill.

The area falls in the Ban Ban 1:50,000 sheet area, and the McKinlay River 1:100,000 sheet area, and is within the Ban Ban Springs Pastoral Lease.

The Licence was granted to Rose Quartz Mining N.L. for a period of three years commencing 10th March 1989. It comprises two graticular blocks from which are excluded a small area covered by Mineral Claims in the northwest, and has an area of 6.3 square kilometres (Figure 3).

Topography consists mainly of flat to gently undulating country, with broad swampy alluvial tracts of black clay soils along many of the drainages. A sharp NNW trending ridge traverses the southwest corner of the area. Vegetation is monsoonal savannah woodland typical of the region. The sole land use is open range beef cattle and buffalo production.

This report describes work carried out during the second year of the Licence.
2. GEOLOGICAL SETTING.

The general geology of the district is covered by the McKinlay River 1:100,000 Geological Series map (BMR 1985), a portion of which is reproduced in Figure 4.

The area lies towards the northwestern part of the Early Proterozoic Pine Creek Geosyncline, and in the northwest of the Cullen Mineral Field. The eastern three-quarters of the Licence is underlain by the coarse grained porphyritic Prices Springs Granite, which forms scattered bouldery sub-outcrop in a generally sandy soil covered area. In the northwest, a largely soil covered area is underlain by phyllites and greywackes belonging to the Burrell Creek Formation at the top of the Early Proterozoic succession. In the southwest, a zone of large scale quartz injection occurs along a near north-south trending fault zone cutting granite and phyllites of the Mount Bonnie Formation which underlies the Burrell Creek Formation. There is insufficient outcrop to ascertain the structure of the metasediments in the area of the Licence.

No mineralisation of significance is known in the Licence area. The Woolwonga gold orebody is located in anticlinally folded Mount Bonnie Formation some eight kilometres to the west, and small tin vein deposits occur at Mavis, some six kilometres to the east. Accordingly it is conceivable that the EL could have some grass roots potential for gold and tin.
3. PREVIOUS EXPLORATION WORK.

Work during the first year of the Licence consisted of mapping, and the collection of 14 rock chip samples from the quartz breccia zone in the southwest (Report on EL6393 to May 1990 for Rosequartz Mining NL by Scriven Exploratio Pty Ltd.).

Two of the samples reported moderately anomalous gold in fire assays of 0.13 and 0.31 ppm Au.

Apart from this, there appear to be no other open file records of mineral exploration relating specifically to this area.
4. EXPLORATION ACTIVITIES DURING 1990/91.

Work during the second year of the Licence comprised search of open file records, geological reconnaissance of areas not covered by the Year One work, and further rock chip sampling of the gold-anomalous quartz breccia zone disclosed by the first years results.

The field work was carried out in early 1991 when very wet swampy conditions, and dense grass, limited scope of work which could usefully be accomplished.

The sample locations are shown in Figure 2, and descriptions and assays are provided in Appendices I and II. All samples reported fire assays below the detection limit of 0.01ppm Au.

Reconnaissance of the granitic areas in the east, and of the areas of poorly exposed Burrell Creek Formation in the northwest, did not discover any significant quartz veining or other indications of mineralisation warrenting sampling.

Expenditures made in exploration work during the second year of the Licence were as follows:-

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contracting geologist</td>
<td>1,400</td>
</tr>
<tr>
<td>Vehicle and fuel</td>
<td>216</td>
</tr>
<tr>
<td>Assay</td>
<td>136</td>
</tr>
<tr>
<td>Overheads</td>
<td>263</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$ 2,015</td>
</tr>
</tbody>
</table>

- 4 -
5. CONCLUSIONS AND RECOMMENDATIONS.

1. The only feature of possible interest is the zone of quartz veining and brecciation in the southwest. This is part of a large regional structure tracable over a length of at least 15 kilometres. Many of these major silicified zones occur in the region, following late regional faults which post-date the main episodes of folding, granite intrusion and mineralisation. None of these structures is known to host significant gold deposits.

2. Although initial sampling indicated that scattered low gold values occurred in the quartz breccias, this was not confirmed by later sampling.

3. The Exploration Licence is considered to have very low prospectivity for economic gold mineralisation and no further exploration work is recommended.
APPENDIX I.

Rock sample descriptions.
## APPENDIX I - ROCK CHIP SAMPLE DESCRIPTIONS

<table>
<thead>
<tr>
<th>SAMPLE NUMBER</th>
<th>DESCRIPTION</th>
<th>ASSAY PPM Au.</th>
</tr>
</thead>
<tbody>
<tr>
<td>327513</td>
<td>composite sample of outcropping micaceous schists with abundant quartz stockwork.</td>
<td>-0.01</td>
</tr>
<tr>
<td>327514</td>
<td>composite sample of chips of milky quartz float.</td>
<td>-0.01</td>
</tr>
<tr>
<td>327515</td>
<td>&quot;</td>
<td>-0.01</td>
</tr>
<tr>
<td>327516</td>
<td>&quot;</td>
<td>-0.01</td>
</tr>
<tr>
<td>327517</td>
<td>composite chip sample of outcropping white roughly banded massive quartz.</td>
<td>-0.01</td>
</tr>
<tr>
<td>327518</td>
<td>selection of chips of white quartz float.</td>
<td>-0.01</td>
</tr>
<tr>
<td>327519</td>
<td>&quot;</td>
<td>-0.01</td>
</tr>
<tr>
<td>327520</td>
<td>composite chip sample of outcropping massive white quartz with minor hematite in patches.</td>
<td>-0.01</td>
</tr>
</tbody>
</table>
APPENDIX II.

Analytical report.
<table>
<thead>
<tr>
<th>SAMPLE</th>
<th>Au</th>
<th>AuDp1</th>
</tr>
</thead>
<tbody>
<tr>
<td>327513</td>
<td>&lt;0.01</td>
<td>--</td>
</tr>
<tr>
<td>327514</td>
<td>&lt;0.01</td>
<td>--</td>
</tr>
<tr>
<td>327515</td>
<td>&lt;0.01</td>
<td>--</td>
</tr>
<tr>
<td>327516</td>
<td>&lt;0.01</td>
<td>--</td>
</tr>
<tr>
<td>327517</td>
<td>&lt;0.01</td>
<td>--</td>
</tr>
<tr>
<td>327518</td>
<td>&lt;0.01</td>
<td>--</td>
</tr>
<tr>
<td>327519</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>327520</td>
<td>&lt;0.01</td>
<td>--</td>
</tr>
</tbody>
</table>

**UNITS**
- **DET.LIM**: ppm ppm
- **SCHEME**: FA1 FA1
EXPLORATION LICENCE 6393
TOPOGRAPHIC MAP

1 : 50,000

Figure 2
EXPLORATION LICENCE 6393
TENEMENT MAP

1 : 50,000

Figure 3.
EARLY

Pgp Prices Springs Granite.

PROTEROZOIC

Pdz Zamu Dolerite.
Pfb Burrell Creek Formation.
Pso Mount Bonnie Formation
Psg Gerowie Tuff.
Psk Koolpin Formation.

EXPLORATION LICENCE 6393
REGIONAL GEOLOGY

1 : 100,000

Figure 4.