ROSEQUARTZ MINING NL

FINAL REPORT ON

EXPLORATION LICENCE

NO. 5835

AUGUST, 1990.
TABLE OF CONTENTS

1. LOCATION AND ACCESS
2. TENURE
3. GEOLOGY
4. YEAR ONE EXPLORATION
5. YEAR TWO EXPLORATION
6. EXPENDITURE

LIST OF FIGURES

FIGURE 1. EL 5835 LOCALITY MAP
FIGURE 2. EL 5835 TENEMENT MAP
FIGURE 3. GEOLOGY, ROCK CHIP SAMPLE AND ANOMALOUS BLEG AREAS
1. **LOCATION AND ACCESS**

EL 5835 occupies an area of some 7 square kilometres immediately south southeast of the Ban Ban homestead and 105 kilometres south-east of Darwin (Figure 1). It occurs on the western edge of the McKinlay River 1:100 000 geological and Ban Ban 1:50 000 topographic sheets. Access is off the Stuart Highway via the Fountainehead road to Fountainehead, thence northerly towards Ban Ban. The Ban Ban road has a good all weather surface and it passes through the centre of the prospect.

2. **TENURE**

EL 5835 consists of 1.5 x 3.24 square kilometre blocks (Figure 2). The licence was granted for a period of 3 years from 18/3/88 to 17/3/91. The licence was surrendered on 1/6/90.

3. **GEOLOGY**

The licence is comprised of a northeasterly trending sequence of South Alligator Group sediments dipping moderately to the south-east. The area is interpreted to form part of the south-western limb of a south-easterly plunging regional anticline.

Topography in the area is quite flat and consequently, outcrop and drainage development are poor. The main outcropping features are the low hills of Koolpin sediments in the northwest corner, a broad rise comprised of the Gerowie Tuff, Zamu Dolerite, and quartz patches in the central west, and a gentle strike rise of Mount Bonnie sediments in the southern central part of the area. The only other outcrop feature is a small hill predominated by quartz in the northern central area of the prospect.

The Koolpin Formation consists of characteristically carbonaceous, iron-rich, finely bedded, and strongly cleaved shale and siltstone with minor but common quartz patches and pods. On the southeastern flank of the prominent hill in the northwestern corner of the prospect where the Koolpin sediments crop out, a pseudo-gossanous massive ironstone with iridescent limonite is extensively developed.

Outcrops of the Gerowie Tuff are virtually non-existent in the prospect area. However, the presence of this unit is attested to by the diagnostic rubbly ridge west of the Ban Ban road in the central part of the area. The rubble consists of black chert which has the characteristic light brown angular features of the Gerowie Tuff on weathered surfaces, and of abundant quartz patches and pods. The Gerowie Tuff is interpreted to be a unit 700 metres in thickness in the central part of the prospect area. Post deformation quartz patches and zones are commonly present.

The Mount Bonnie Formation is comprised of highly fractured sometimes sericitized hematitic siltstones with interbedded light
grey cherty horizons which, locally, display iron rich layers. Some of the rock-chip samples taken from zones of silicification and cherty horizons within this Formation have returned low but anomalous gold and arsenic values (R29, R32, R64-65), possibly reflecting a stratiform style of mineralisation.

Intrusive bodies of the Zamu Dolerite crop out as boulder ridges of undeterminable shape. There appears to be a close spatial association between these bodies and occurrences of the Gerowie Tuff. The dolerite is typically dark grey-green, fine to medium grained, and massive.

The only evidence of mineralisation in the area other than the stratiform style in the Mount Bonnie Formation is in the low order gold anomalies associated with the 2 prominent north-northwesterly trending quartz ridges that were extensively sampled during the current programme. Minor malachite was noted in some of the quartz.

4. **YEAR ONE EXPLORATION**

The 1988 exploration program involved detailed 1:10 000 mapping onto a basemap blow-up off 1:25 000 colour aerial photographs, detailed rock-chip sampling and analysis for gold and arsenic, and reconnaissance soil sampling for bulk leach extractable gold and arsenic (bleg) determination.

A total of 73 x 3 kilogram rock-chip samples were taken from potentially mineralised outcrops at a spacing of 40-50 metres, and from selected float. These were sent to Analabs, Darwin for Au and As analysis.

A total of 134 x 5 kilogram soil samples representing 9.8 line kilometres were taken along 6 east-west traverse lines spaced 500 metres apart. Along each line, samples were taken at 25 metre intervals and a composite of every 3 adjacent samples was made, thus providing a gold and arsenic bleg value at 75 metre centres along the traverse lines. The samples were sent to Analabs, Darwin for bulk leach extraction and analysis of Au and As.

Detailed geochemical results were included in the Annual Report for Year One of this licence (Georges) and will not be repeated here.

5. **YEAR TWO EXPLORATION**

No field exploration was carried out in 1989-1990. Exploration consisted of a review of the data gathered in 1988-1989. This revealed the following points:

1. Rock chip sampling for Au on the available outcrop revealed only mildly anomalous results.
2. Concurrent BLEG sampling on traverse lines mainly in areas of limited outcrop gave highly anomalous results (see fig.3).

The BLEG results show either (a) a non outcropping lithology which is anomalous and possibly mineralised in gold, or (b) concentration of Au by geomorphological processes, originating from the outcrops and resulting in the anomalous BLEG samples.

A company decision was made however not to carry out any further work on this area and the licence was surrendered.

6. EXPENDITURE

Total expenditure on the licence amounted to $19,256.00.

The expenditure for Year Two was $2,000.00.