TALMINA TRADING PTY. LTD.
EXPLORATION LICENCE 3444 (Mt Bundey)
IN THE NORTHERN TERRITORY OF AUSTRALIA

ANNUAL REPORT FOR THE YEAR ENDED

JANUARY 1983

Licensee - Talmina Trading Pty. Ltd.
Licence - EL 3444
Location - Darwin 1:250,000 SD52-4
Mary River 1:100,000
Period - January 82 - January 83
Date Submitted - 3rd August 1983
Author - B.D. Richardson
TABLE OF CONTENTS

1. INTRODUCTION
2. WORK DONE AND RESULTS
3. CONCLUSIONS
4. FUTURE PROGRAMME

FIGURES

1. EL's 2252 and 3444 - EXPLORATION ACTIVITY 1982 - 83.

APPENDIX

1. STATEMENT OF EXPENDITURE.
1. INTRODUCTION

In the vicinity of the old Mt Bundey station, approximately 90 kms SE of Darwin, Talmina Trading Pty. Ltd. have control of two adjoining exploration licences, EL's 2252 and 3444 (Fig. 1) EL2252 covers an area of some 13 km² and was granted to J.W. Benger on the 23rd December 1980. EL3444 of only 6 km², was granted to Talmina Trading Pty. Ltd. on the 8th January 1982. The licences were explored jointly and this report covers work done on both EL's.

The licence areas occur to the west of the Mt Bundey Granite and contain metasediments of the Kapalga and overlying Burrell Creek Formations. The older units of the Gerowie Tuff and Koolpin Formation occur just north of the area. A fold axis of a southerly plunging anticline runs through EL2252, and the nose of a smaller fold occurs in the north of EL3444. The prospective unit is the gold and sulphide bearing banded iron formation (b.i.f.) within the Kapalga. Rock types within this unit consist of siliceous siltstone, cherts and gossanous arenites with numerous quartz veins following bedding. Potentially mineralized zones occur as stratiform formations occurring often over several thousands of metres and varying in thickness between 2 and 20 metres.

Results suggest that auriferous zones could be extensive and are possibly associated with sulphide mineralization.
LOCATION

EXPLORATION ACTIVITY 1982-83

Fig 1

TALMINA TRADING
ELS 2252 + 3444
Aug 83
2. WORK DONE AND RESULTS

During the year mapping and surveying was carried out to determine the route for an all-weather road into the E.L. areas. Due to the difficult and inconsistent terrain it was found necessary to use a helicopter to help survey and determine this route. The road was then constructed using the company's D7 Bulldozer.

Due to the lack of permanent water in the area it was necessary to construct a road, and transport a mobile concentrator unit into the area during the wet season. The plant was set up on the nearby Marrakai Creek and twenty-five, 5 tonne bulk samples of alluvial material were collected from the lease area (Fig. 1), and trucked to the Marrakai Creek for processing. The grade estimates varied between 0.1 and 1.5 gm Au per tonne and these results were regarded as significant by the directors.

3. CONCLUSIONS

The gold in the lease area appears to be restricted to the b.i.f. units of the Kapalga Formation, and in associated alluvials. Goulevitch (1979) and Nicholson (1979) proposed a syngenetic model for the genesis of sulphides, and the gold deposits associated with b.i.f., within the Kapalga and Koolpin Formations. This model may well apply to the Mt Bundey area and the proposed programme for 1983 of detailed mapping, sampling and drilling will adequately test the b.i.f. within the Kapalga Formation for gold mineralisation.
4. FUTURE PROGRAMME

In 1983, EL's 2252 and 3444 will be intensively explored with most of the work concentrating on the b.i.f. within the Kapolga Formation. The proposed programme is outlined below.

i. Surveying: A base-line with a true bearing of $360^\circ$ True should be surveyed with the base peg (designated coordinates 5000N; 5000E) in the central portion of the area. The base-line should be extended 2000 metres north and 2000 metres south with pegs at 50 metre spacings (81 pegs). Thus the most north and south peg coordinates will be 7000N; 5000E and 3000N; 5000E respectively.

Initially 21 traverse lines will be pegged east and west of the base-line 200 metres apart with stations at 50m spacings and lengths designed to cross Mount Bundey Creek and the major banded ironstone formation rock-types west of the base-line. Average lengths of traverse lines should be about 800 metres (357 pegs).

ii. Geophysical Work: It is proposed that induced polarization geophysical surveys (either E.I.P. or M.I.P.) be conducted over the total grid along the traverse lines together with ground magnetometer work to determine the effectiveness of these techniques in locating vertical and lateral extents of sulphide (and possibly magnetite) mineralization associated with stratiform lodes within the banded iron formation.
iii. Geochemical/Geological Work: Geochemical soil samples taken from 20 to 30 cm depth where possible should be taken at 25 m intervals along the traverse lines over and close to the banded iron formation. All samples should be sieved to -80 mesh and analysed for Cu, Pb, Zn, Au, and As. At the same time channel samples should be taken across the strike of outcropping "B.I.F." at 1 m or 2 m intervals and rock-types collected for petrological thin sections. All channels should be tied into the grid.

iv. Prospecting Work: Prospecting work including panning should continue to determine the most favourable zones of potential alluvial gold mineralization.

v. Drilling: A percussion drilling programme of 37 holes has been planned to test the b.i.f. All geophysical and geochemical anomalies will be tested and profiles will be drilled across the prospective unit. Holes will vary between 50-100 m in depth and angled so as to penetrate the target horizon below the oxidized zone. If results from the percussion drilling programme are encouraging provision has been made for limited diamond drilling in the 1983 season.
BIBLIOGRAPHY

Goulevitch, J. 1979: Int. Uranium Symposium Pine Creek

Nicholson, P.M. 1979: Int. Uranium Symposium Pine Creek
**ESTIMATED EXPENDITURE 1983**

Estimated Expenditure 2252 and 3444

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**APPENDIX 1.**

**Expenditure for 1982 on E.L. 3444**

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**TOTAL**             **$14,970.00**