TALMINA TRADING PTY. LIMITED

EXPLORATION LICENCE 3055

THE NORTHERN TERRITORY OF AUSTRALIA

ANNUAL REPORT ON WORK
COMPLETED DURING THE YEAR
TO JANUARY 1983

By: G. N. KATER
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Greg Kater & Associates Pty. Limited

CR 83/221
The Director
Talmina Trading Pty Ltd
PO Box 4609
DARWIN NT 5794

Dear Sir

I refer to the Annual Report submitted in respect to Exploration Licence 3055 on 8 April 1983.

The Report is incomplete in that there is no locality plan for the Auger holes or surface samples nor has any assay results been provided. Expenditure detail for the period has also been omitted.

It would be appreciated if you would provide this information as quickly as possible and ensure that all future Annual and Final Reports cover these requirements.

Yours faithfully

A R HOPE
Senior Exploration Registrar

5-5-83
EXPLORATION LICENCE 3055

INTRODUCTION

Exploration Licence No. 3055 covers an area of approximately 25.5 square kilometres bounded by Latitude 13°31'S, then Longitude 131°23'E, then Latitude 13°33'S, then Longitude 131°22'E, then Latitude 13°35'S, then Longitude 131°20'E excluding an area of mining leases as shown on the accompanying plan at 1:25,000. The licence is on Mining Tenures 1:100,000 Plan 14/5, Tipperary.

The New Stuart Highway passes to the north and east of the licence area about half way between Adelaide River and Pine Creek. The area is drained by small creeks flowing both north and south.

Work during the year included auger drilling and sampling, concentrating on areas close to old workings, mapping and formulation of a proposed programme for the 1983 dry season.
WORK COMPLETED

During the year 21 auger drill holes were completed, 15 in the north-eastern portion and 6 in the north-western portion of the licence area, using the company's tractor-mounted auger drill, for an aggregate depth of 92 metres (average 4.38m.) with depths varying between 1m. and 7m.

The first 15 drill holes were mainly concentrated around a number of old diggings, mainly gold workings, but including one old copper open pit and one old silver/lead mine situated on north-west trending elongate low ridges comprising banded ferruginous quartz chlorite schists, tuffaceous arenites, slates, cherts and siltstones of the South Alligator Group. Drill holes averaged approximately 50 metres apart and were close to the old diggings. The second 6 holes were drilled around outcropping ridges in gravel alluvials shedding similar rock types as above west of the main Howley gold line.

Samples were taken at one metre intervals in the holes, placed into large plastic bags, dried, weighed and panned to concentrate. The concentrates were colour counted and are retained in the company's possession at Howard Springs. Generally values were fairly low in overall samples, varying from approximately 0.1 to 2.0 gm. Au/tonne.
Surface sampling along a number of ridges on either side of the Howley Line showed strong sulphide mineralization after "dollying" and some gold colours particularly from samples of quartz and/or chert bands; five trenches were dug to a depth of 3.5 to 4 metres in alluvial gravels by back-hoe in the north-east portion and vertical side wall samples were panned, also showing colours.

Regional geological mapping was conducted as a preliminary programme to assist in formulation of a comprehensive programme of geological, geochemical and geophysical work to obtain targets for deep percussion drilling.
GEOLOGY AND MINERALIZATION

The main rock-types in the area are of Lower Proterozoic age and consist of interbedded metasediments of the South Alligator Group overlain in the central portion of the licence by sediments of the younger Finnis River Group. Rocks in both Groups are intensely folded with bedding striking north-westerly. In parts of the area the Lower Proterozoic sediments are overlain unconformably by flat-dipping to horizontal Cambrian shales and siltstones and Cretaceous sandstones, claystones and siltstones. A preliminary geological regional map at a scale of 1:25,000 accompanies this report.

The Finnis River Group consists of interbedded shale, siltstone, sandstone, arenite, slate and conglomerate, often with strong cleavage. The older South Alligator Group consists of ferruginous quartz chlorite schists, tuffs, tuffaceous arenites, slate and siltstones with prominent quartz and chert bands following the bedding. Cross veining is common with veins comprising quartz and carbonates. The metasediments are characterized by intense micro-folding. Rock types are similar to those along the anticlinal Howley Line covered by mineral leases surrounded by E.L. 3055.

Mineralization observed associated with the South Alligator Group metasediments consists of pyrite, arsenopyrite, galena,
chalcopyrite in fresh rock. Limonite and haematite are common in gossanous weathered surface rocks. Gold was observed in quartz banding, usually coarse grained, often associated with sulphides. Gold observed in "dollied" and auger drill samples were mainly coarse with some fine grains. The style of gold mineralization suggests that, whilst gold is associated with sulphide mineralization, it is not "locked-in" and should be reasonably recoverable. The sulphide association suggests that electrical geophysical methods should assist in locating primary drill targets.
PROPOSED PROGRAMME (1983)

1. **Surveying:** Initially two baselines should be surveyed one in the north-eastern portion of the area (bearing 310°, length 1200 metres) and one in the south-western portion of the area (bearing 320°, length 2400 metres) with stations located at 50m. intervals (total 74 pegs).

38 traverse lines, each 600 metres in length, will be pegged 100 metres apart at right angles to the baselines with pegs at 50m. spacings along the lines (456 pegs).

2. **Geochemical Sampling:** Soil samples should be taken at depths of 40 to 50 cm. at each station (475 samples) along the traverse lines and analyzed for copper, lead, zinc, silver, arsenic and gold. Additional sampling at 10m. intervals should be conducted around anomalous values, say an additional 450 samples.

3. **Geophysical Work:** The company is contracting a crew from Scintrex Pty. Ltd. to conduct R.R.M.I.P. surveys, probably around May 1983, over several areas in the Howley region. The work on E.L. 3055 will involve six 600 x 600m. "blocks" (12 days) and possibly additional "blocks" if results warrant (say additional 2 days).
4. **Geological Work:** Geological mapping, including petrological sampling and thin section analysis, of outcrops should be conducted along traverse lines concurrent with geochemical sampling with emphasis on correlation with geochemical and geophysical data.

5. **Percussion Drilling:** Approximately 200 metres of percussion drilling will be conducted to test targets derived from the above surveys. Metre length chip samples will be collected using a cyclone, quartered and analyzed with the remaining samples retained for logging of holes. Analyses should initially be conducted for copper, gold and silver.

6. **Additional Work:** It is proposed to conduct further auger drilling on alluvial flats in the north, north-east and south-west portions of the licence, using the company's tractor-mounted auger drill. A total of 300m. of auger drilling is proposed.
# ESTIMATED EXPENDITURE

## PROGRAMME FOR 1983

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**Total** $180,000