

TALMINA TRADING PTY. LTD.

EXPLORATION LICENCE 3006

IN THE NORTHERN TERRITORY OF AUSTRALIA

ANNUAL REPORT FOR THE YEAR ENDED

FEBRUARY 1983

LICENSEE - TALMINA TRADING PTY. LTD.

LICENCE - EL3006

LOCATION - PINE CREEK 1:250,000 SD52-8

BATCHELOR 1:100,000 5171

PERIOD - FEBRUARY 82 - FEBRUARY 83

DATE SUBMITTED - 30<sup>th</sup> Aug. '83

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CR 83/226

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1. EXPLORATION LICENCES HOWLEY AREA FEB. '83.

## APPENDIX

1. STATEMENT OF EXPENDITURE FEB 82 - FEB 83

### SUMMARY

Exploration Licence 3006 is one of a number held by Talmina Trading Pty. Ltd in the Howley area. The licence was first granted in February 1982 and to date very little exploration has been carried out.

The tenement includes sediments of the Burrell Creek and Mt Bonnie Formations. Quartz veining occurs along a low ridge of outcropping tuffaceous and carbonaceous sediments of the Mt Bonnie Formation and these rock types have been sampled and auger drilled to a limited extent. One channel sample taken from an old pit on the northern most outcrop returned a significant assay of 8.9 g/tonne Au. A sample collected nearby assayed 3% Cu and 0.46 g/tonne Ag.

In 1983 the licence will be mapped and a geophysical survey using the R.R.M.I.P. technique will be employed to define sulphide bodies at depth. Percussion drilling will follow to test for gold mineralization associated with the sulphides.

## 1. INTRODUCTION

Talmina Trading Pty. Ltd. controls interest in a total area of 139 square kilometres covered by fifteen exploration licences in the Howley Area. (Fig. 1).

The area is located 140 to 160 Kilometres south of Darwin and straddles the Stuart Highway north of Hayes Creek.

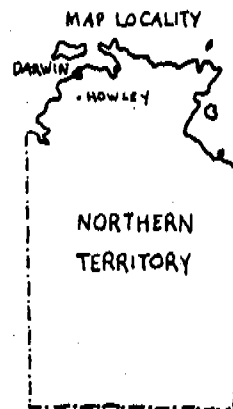
The tenements contain large areas of the South Alligator Group of rocks, which are hosts to gold mineralisation in these tenements and elsewhere. Several extensive gold reef systems occur within the tenements, marked by lines of old shafts and pits, and many square kilometres of shallow alluvial gold workings occur nearby.

Active mining ceased in the area before the first World War, after recorded production within and adjacent to these tenements of several tonnes of gold from reefs, and unknown gold production from alluvial workings.

EL3006 is the northern most licence and access is via the Stuart Highway which crosses the south west corner. The lease covers an area of some 16 square kilometres and was granted to Tamlina Trading Pty. Ltd. on the 2nd February 1982.

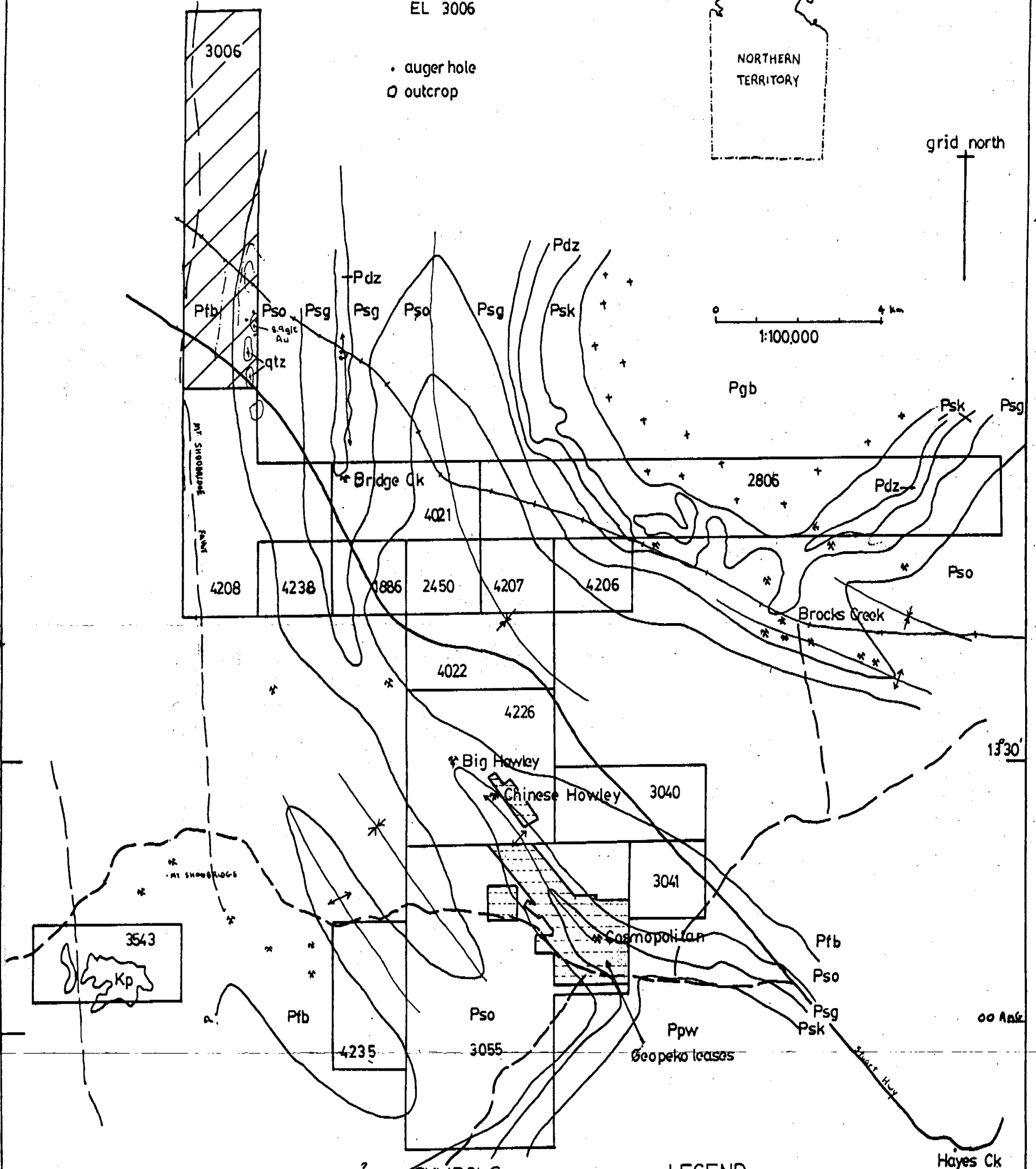
EXPLORATION ACTIVITY  
EL 3006

• auger hole  
○ outcrop



grid north

0 100 200 km  
1:100,000



SYMBOLS

- old workings
- × anticline
- \* syncline
- ⋈ overturned anticline

LEGEND

- |          |                   |
|----------|-------------------|
| Cret. Kp | Petrel Fm         |
| Pgb      | Burnside Granite  |
| Pdz      | Zamu Dolerite     |
| Pfb      | Burrell Creek Fm  |
| Pso      | Mt Bonnie Fm      |
| Psg      | Gerowie Tuff      |
| Psk      | Koolpin Fm        |
| Ppw      | Wildman Siltstone |

Fig1

geology from Geology Batchelor-Hayes Ck

1:100,000

TALMINA TRADING

EXPLORATION LICENCES

HOWLEY AREA

Feb '83

compiled & drawn BDR Aug '83

## 2. GEOLOGY

The host rocks of all the gold in the tenements are the Koolpin, Gerowie Tuff and Mt Bonnie Formations of the South Alligator Group. These rock types are siltstones, shales, graphitic shales, cherts, tuffs and minor iron formations. They contain many quartz veins both parallel to, and cross cutting the sediments, along hinge lines of anticlines, the most prominent of which is the Howley Line that runs from Cosmopolitan Howley to Bridge Creek, a distance of 16 kilometres. Gold is contained in the quartz lodes, where it is characteristically erratic, but also in graphitic shales, siltstones and laminated cherts and iron formations. It is, in some places, concentrated in the more sulphide-rich bands.

The largest concentrations of gold so far mined within the tenements were at the noses of tight anticlinal folds, at Metropolitan and Chinese Howley, but the limbs of the folds at both places also contain ore.

EL3006 is bounded on the western side by the Shoobridge Fault, and covers the sediments of the Burrell Creek and Mt Bonnie Formations. The shales and siltstones of the Burrell Creek Formation crop out west of the fault line and tuffaceous and carbonaceous shales and siltstones of the underlying formation occur along a low, north south striking ridge in the south of the licence area. Running along the centre of this ridge are several quartz veins following a fault or hinge line.

### 3. RECENT EXPLORATION

No records exist of any significant exploration within the tenements after the end of mining activity early this century until work by BHP Co. Ltd. and Homestake Mining Ltd., from 1976-81.

The BHP-Homestake exploration was concentrated from the Big Howley mine southward to the Cosmopolitan Howley. They found areas of significant gold grades at surface and at depth but did not find continuity of grade or controls of ore localisation and therefore follow-up work was not done. One area of alluvial ground was pitted and drilled but found to be sub-economic.

At present the Cosmopolitan Howley area is being actively explored by Geopeko.

### 4. EXPLORATION POTENTIAL

The area covered by the Talmina leases have potential for low grade but high tonnage gold resource. The zone of greatest potential is the extension of the Howley Line north and south of the Geopeko leases. This line has been extensively worked by the Chinese but they mined only to a shallow depth and generally never below the water table into the sulphide zone. Anticlines paralleling the Howley Line, such as the one near Brocks Creek known as the John Bull - Zapopan Line and the one occurring to the west all have gold potential as have any minor anticlines or drag folds not yet discovered. The extensive alluvials that have not as yet been systematically explored to any large degree are also areas of potential economic gold resource.

EL3006, though not on the Howley Line, still has potential for gold mineralisation associated with the hinge line of minor anticlines, especially when carbonaceous shales are present.

## 5. WORK DONE AND RESULTS

The work carried out so far on the tenement concentrated on the low ridge of outcropping Mt Bonnie Formation rocks (fig 1.) At the northern end and highest point on the ridge, the quartz veining is over 5m wide and the strike is  $173^{\circ}$  dipping west. Hematitic and carbonaceous shales occur between the veins and gossans are developed to a limited extent. A horizontal 2.5m channel sample collected through shales in an old trench returned an assay of 8.9 g/tonne gold. A sample collected from a nearby shear zone assayed 3% copper and 0.46 g/tonne silver.

Bulk or composite samples taken from the north west corner showed inconsistent traces of gold around 0.5 gr/tonne.

Four auger holes using the vehicular mounted proline rig were put down either side of the outcrop and one each end. These holes returned similar results as the bulk samples.

Where the ridge is cut by the Stuart Highway samples were panned and trace gold was noted.



## 6. CONCLUSIONS AND RECOMMENDATIONS

Very little work has been carried out on the EL3006 as yet. The gold assay of 8.9 g/tonne from the old pit is significant and follow up work along this ridge is required. The northern extension under the alluvium needs to be traced and the structure determined to see if indeed it is a minor anticline paralleling the Howley Line.

A statement of expenditure for the 1982 season is found in Appendix 1.

## 7. FUTURE PROGRAMME

In the 1983 season the prospective area of EL3006 will be gridded and the area mapped using 1:15000 colour photographs. Detailed photo-interpretation will be carried out to try and trace the units to the north and to determine the structure.

A geophysical method, known as the Rapid Reconnaissance Magnetic Induced Polarization (R.R.M.I.P.) will be used over the most propsective areas to delineate sulphide zones and percussion drilling will follow to test for gold mineralization associated with the sulphides.

An estimate of expenditure for the 1983 season cannot be supplied at this date as Talmina's interest in all leases in the Howley area will soon be taken over by Northern Gold N.L. Estimated expenditure for the first two years by this company on all leases is \$1,500,000, a portion of which will be spent on EL3006.

APPENDIX      1.

Statement of Expenditure Feb 82 - Feb 83.

SALARIES - WAGES	\$ 6,400
GEOLOGICAL SERVICES INCLUDING ASSAYS	2,270
CAMP & STORES	1,340
FUEL	1,200
VEHICLE COST	2,380
EQUIPMENT COSTS	1,890
MISCELLANEOUS	625
	<hr/>
TOTAL EXPENDITURE	\$ 16,105
	<hr/>

\*see over for Explanatory Notes

REPORT TITLE

Talmuna Trading Pty Ltd Exploration Licence 3006  
in the Northern Territory of Australia - Annual  
Report for the Year Ended February 1983

AUTHOR(S)

B. O. Richardson

PUBLISHER

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PAGES OF TEXT

6

NO. AND PAGES OF APPENDICES

1 / 1

\* NO.S OF

(1) PHOTOS

(2) DIAGRAMS

(3) TABLES

ACCOMPANIMENTS

(4) PLANS

1

(5) GRAPHS

(6) LOGS

LICENCE NO.(S)

EL3006

PROJECT YEAR(S)

LICENSEE(S)

Talmuna Trading P/L

JOINT VENTURE(S)

OPERATOR(S)

Talmuna Trading P/L

1:1 000 000 map name(s) and No(s)

1: 250 000 map name(s) and No(s)

Pine Creek5052-8

1: 100 000 map name(s) and No(s)

Batchelor5171

1: 50 000 map name(s) and No(s)

PROSPECT NAME

\*\* SITE LOCATION

LAT:

LONG:

EAST:

NORTH:

\*\*\* TECTONIC UNIT

Pine Creek Geosyncline

MAJOR TERM



METALS



NONMETALS



PETROLEUM

OTHER

\*\*\*\*MINOR TERMS

DRILLINGAERIAL/GRND GEOPHYSICSGEOCHEMISTRYGENERAL☐ DIAMOND

MAGNETIC

☐ DRAINAGE TESTING☐ GEOL MAPPING☐ PERCUSSION

RADIOACTIVITY

☐ DRILL CORE ANALYSIS☐ PHOTOGEOLOGY☐ AUGER

E.M. SURVEY

☐ ASSAYING☐ GRIDGING☐ ROTARY

IP SURVEY

☐ GEOCHEMICAL ANOM☐ METHODSCOMMODITIES

SEISMIC

SAMPLING☐ REGIONAL GEOL☐ U ☒ Au ☐ Ag

RESISTIVITY

☐ STREAM SEDIMENT☐ LOCAL GEOLOGY☐ Cu ☐ Pb ☐ Zn

GRAVITY

☐ SOIL☐ STRATIGRAPHY☐ Sn ☐ W ☐ Dmd

GEOPHYSICAL ANOM

☒ ROCK CHIP☒ RECONNAISSANCE

Other

☐ WATER☐ LOGGINGOTHER TERMS:

NOTES

ABSTRACT ATTACHED

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DATA TYPE

## EXPLANATORY NOTES

This sheet facilitates the entry of information from your report to the computerized, reference data base of the NTGS. Your effort will assist the NTGS in providing a rapid access and information retrieval service to the exploration/ mining industry.

Explanation of some terms on data sheet:

- \* Commonly utilized categories, whether in Text or Appendices, viz:
  - Photos - usually geological on macro, meso or micro scales.
  - Diagrams - includes sketches, not-to-scale maps, geological profiles, etc.
  - Tables - numerical compilations of any types.
  - Plans - scaled maps, whether in text or in rear envelopes or in separate binder.
  - Graphs - all scaled, graphical representations or plots of data (geophysical, geochemical profiles, etc.)
  - Logs - scaled, profile-type representations of drilling data.
- \*\* Site Location: Use only where a specific locality, e.g. mine, geochemical anomaly, geophysical anomaly, etc. is the principal focus of exploration.
- \*\*\* Tectonic Unit: Use the Tectonic Unit(s) applicable to your area based on the map across. If Tectonic Units overlap in your area, refer to the one which is the focus of your exploration effort.
- \*\*\*\* Minor Terms: Tick all appropriate to your report. The terms are based on the "Thesaurus of Earth Science and Related Terms" of the Australian Mineral Foundation. Note that "ASSAYING" refers to chemical analysis of material other than drill core.

## TECTONIC UNITS OF THE NORTHERN TERRITORY

