

| | |
|------------------------------------|--|
| TITLE | FIRST & FINAL REPORT EXPLORATION LICENCES 6232 & 6233 MT GEORGE AREA NORTHERN TERRITORY |
| PERIOD | 11 OCTOBER 1988 TO 4 JANUARY 1990 |
| TENEMENT HOLDERS & OPERATORS | WENTWEL PTY LTD 20TH FLOOR 140 ST GEORGES TERRACE PERTH |
| DATE | MARCH 1990 |

1:250,000 SD52-8 Pine Creek
1:100,000 5271 McKinlay River

COPY NO: 1
REP.070

DISTRIBUTION:

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2. Wentwel Pty Ltd - Perth
3. Spare

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Summary

Exploration Licences 6232 and 6233 were granted on 11 October 1988. Work completed during the period of tenure involved a review of previous production and exploration undertaken within the area. An aerial photograph interpretation has been undertaken to determine areas of potential mineralisation.

Joint Venture participation for these areas was sought but was not forthcoming. The Exploration Licences were surrendered on 4 January 1990.

1. INTRODUCTION

This report outlines the work carried out over the two Exploration Licences 6232 and 6233 in the Mt George area. The target of the exploration programme was gold mineralisation in quartz veins within or on the contacts of the intrusive Zamu Dolerite or associated with the intrusion of the granite pluton. Work completed during the period included a literature review and a brief aerial photographic interpretation of the area's major geological and structural features.

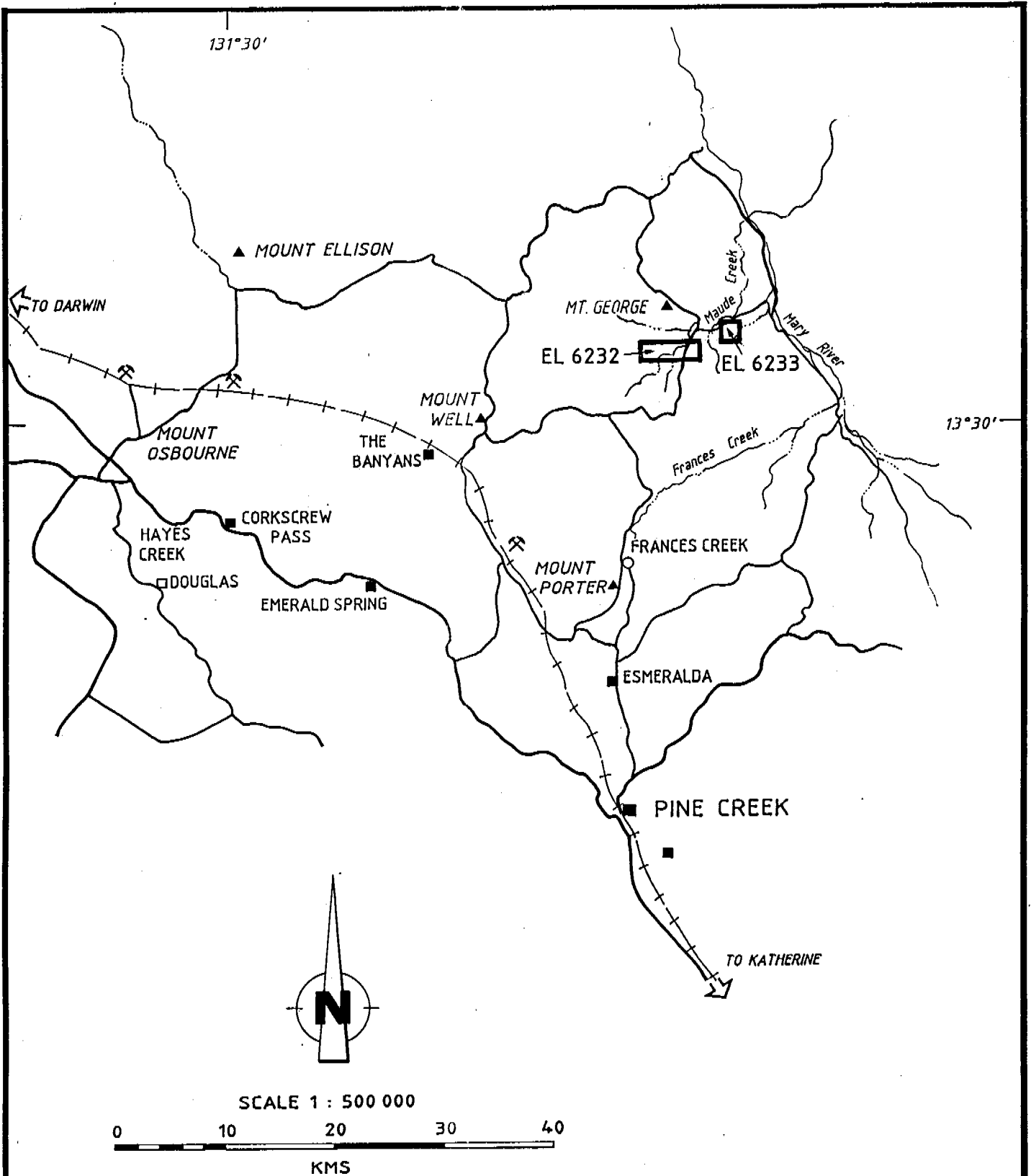
2. LOCATION AND ACCESS

The Exploration Licences are located approximately 155 kilometres southeast of Darwin and approximately 40 kilometres north-northwest of Pine Creek. Access is via the Stuart Highway from Darwin to Pine Creek and hence via unsealed road to the Frances Creek diggings. Access to the tenement area is via tracks off the Frances Creek to Mary River Road which passes through the eastern end of EL 6232 and through the northwestern corner of EL 6233 (Drawing WW 3-1).

3. TENURE

| <u>Tenement Number</u> | <u>Area</u> | <u>Date Granted</u> | <u>Period</u> |
|----------------------------|------------------------------|-------------------------|---------------|
| EL 6232 | 3 blocks (9km ²) | 11-10-88 | 2 years |
| EL 6233 | 1 block (3km ²) | 11-10-88 | 2 years |

The Exploration Licences were surrendered on 4 January 1990. A considerable number of pre-existing Mining Claims are present within the western-most blocks of EL 6232 and are excised from the Licence.



| REVISIONS | | WENTWEL PTY. LTD. | | |
|-----------|----|-------------------|--|------|
| DATE | BY | ORIGINATOR | EL 6232 & 6233 Mt. George Prospect LOCATION AND ACCESS PLAN | |
| | | MGM | | |
| | | DRAWN | | |
| | | VJW | | |
| | | DATE | SCALE 1 : 500 000 | |
| | | March 1990 | | |
| | | | DWG. No | REV. |
| | | | WW 3.1 | |

4. ENVIRONMENT AND ECOLOGY

The region has a monsoonal climate with an average rainfall of approximately 1500mm per year, the bulk of which falls in the period between December and May. From June to October, high temperatures prevail resulting in high evaporation rates.

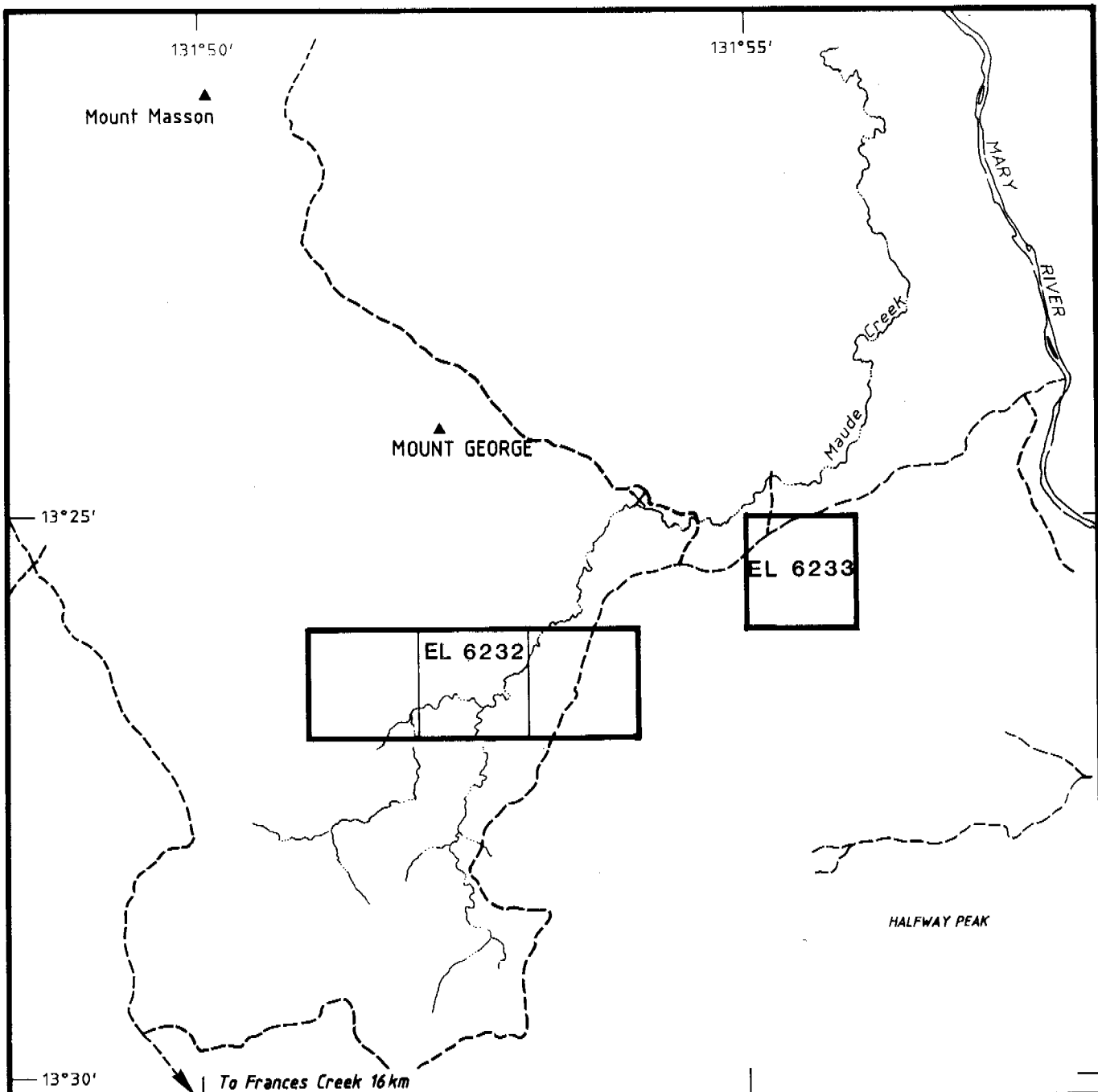
The average mean temperature is in excess of 27°C. Day temperatures are high throughout the year with maximum summer temperatures exceeding 44°C.

The prevailing winds are the southeast trade winds for the 'dry' season and the northwest monsoons for the 'wet' season. Relative humidities average 40% to 75% respectively during these periods. The area is subject to the effects of tropical cyclones.

The drainage patterns are largely broad open swales around a dominant channel. Small areas of close spaced dendritic patterns occur in the headwaters of the main drainages. Surface water is scarce and not permanent with the drainage systems only flowing during the wet season. The vegetation within the area consists of predominantly wet season grasses with open eucalyptus woodlands.

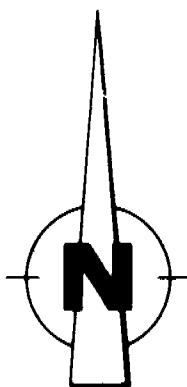
5. PREVIOUS WORK AND PRODUCTION

No evidence of previous mining activity has been recorded from within either of the two tenements. A small alluvial gold prospect known as McKeddies is located within excised Mining Claims in the western end of EL 6232. No information relating to previous production has been located. Extensive mining of tin deposits has taken place to the north of the tenements at Mt George and Mt Masson. Mining activities included both alluvial mining and hardrock mining via small pits and small underground adits on the tin (\pm gold) mineralisation.



SCALE 1 : 100 000

0 1 2 3 4 5
Kilometres



| REVISIONS | | WENTWEL PTY. LTD. | | | |
|-----------|----|-------------------|--|---------------|------|
| DATE | BY | | | | |
| | | ORIGINATOR | EL 6232 & 6233 Mt. George NORTHERN TERRITORY TENEMENT MAP | | |
| | | MGM | | | |
| | | DRAWN | | | |
| | | VJW | | | |
| | | DATE | | | |
| | | March 1990 | | | |
| | | | SCALE | DWG. No. | REV. |
| | | | 1:100 000 | WW 3.2 | |

3

A small tin prospect called Glenys is located approximately 1.5 kilometres northwest of EL 6233 but there is no record of production (Crohn 1968).

No record of previous exploration activity has been located following a search of the open file data in Darwin. Exploration Licence 6232 covers an area that was once part of EL 4460 held by Total Mining Australia. The area covered by Exploration Licence 6232 was surrendered in 1988 however, no record of the work carried out has been located to date.

Exploration Licence 6233 covers an area formerly held by CSR Ltd under EL 4729. The area was surrendered as part of a statutory reduction in August 1988. Evidence of recent costeaning is present on some of the excised MCNs within Exploration Licence 6232, however results are not known.

6. REGIONAL GEOLOGY

The tenements lie in the central part of the Pine Creek Geosyncline which consists of a succession of Lower Proterozoic basinal metasediments underlain by Archaean granite and gneiss basement. The sedimentary rocks consist mainly of shale, siltstone, greywacke, chemical sediments and minor conglomerate with occasional interbedded tuff horizons. The sedimentary sequence has been locally intruded by a lobe of the Cullen Granite batholith.

The tin mineralisation at Mt Masson and Mt George area located to the north of the tenements is confined to quartz filled fault breccias in arkosic sediments or hornfelsed sediments adjacent to the granite contact. Minor gold values have been recorded accompanying the tin mineralisation.

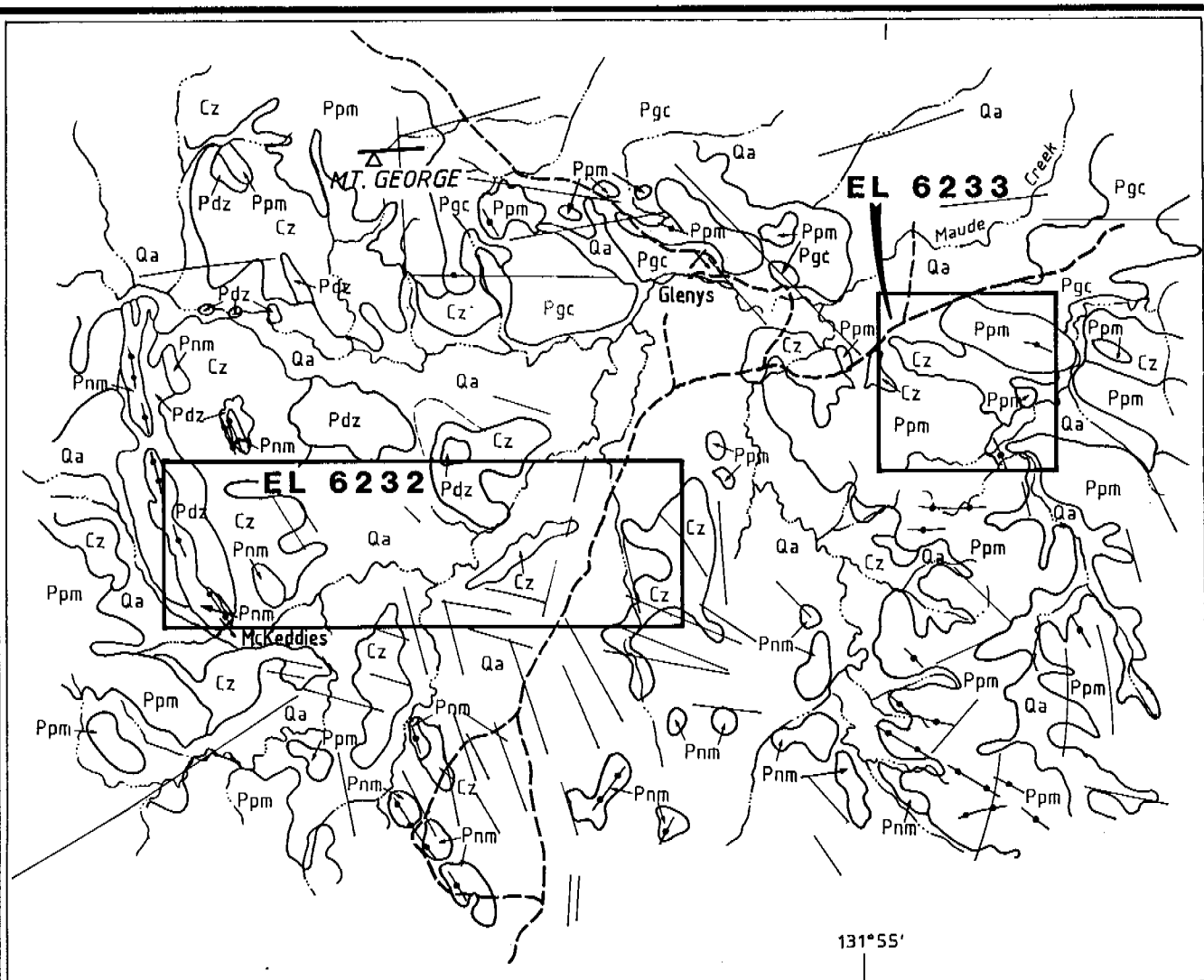
7. WORK COMPLETED

A literature review of the area covered by the Exploration Licences was undertaken. The majority of the early production reports relate to the mining of the shallow oxidised tin deposits at the Mt Masson (Jessops, Billy Can and Big Julie mines) and the Mt George areas. Anomalous gold and silver values were also recorded from the ore produced at the Big Julie mine. Minor base metal mineralisation has been recorded in sediments of the Masson formation in areas to the east of the tenements. Minor gold mineralisation is reportedly associated with the base metal mineralisation.

No records were located that indicated that any previous mining activity had been undertaken within the current boundaries of the two Exploration Licences. The recent 1:100,000 McKinlay River geology map indicates an alluvial gold prospect known as McKeddies located within Exploration Licence 6232. This area is covered by pre-existing Mining Claims, however no record of any production from this area has been located. A small tin deposit called the Glenys is located a short distance to the northwest of Exploration Licence 6233 but similarly no record of any production exists (Crohn 1968).

A review of previous exploration within the area indicates that the areas have been previously held under Exploration Licences, however no reports were located. In the absence of significant surface disturbance within the area it must be assumed that the work carried out was primarily of a reconnaissance nature.

A brief geological appraisal of the area covered by the two Exploration Licences was undertaken using colour aerial photographs. The interpretation suggests that the majority of Exploration Licence 6232 was underlain by subcropping areas of Zamu Dolerite with occasional inliers of Proterozoic metasediments. These sediments have been assigned to the Masson Formation on the 1:100,000 McKinlay River geology map. The area is largely soil covered with some evidence of a lateritic profile being developed. Small areas of transported alluvium and black soil occur along the drainage channels.



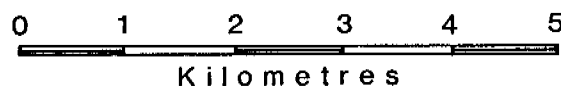
LEGEND

| | |
|-----|--------------------|
| Qa | Alluvium |
| Cz | Lithosoils |
| Pgc | Undivided granite |
| PdZ | ZAMU DOLERITE |
| Ppm | MUNDOGIE SANDSTONE |
| Pnm | MASSON FORMATION |

| | |
|-------|-------------|
| — | Fault |
| — | Lineament |
| —•— | Quartz vein |
| --- | Track |
| ~~~~~ | Drainage |



SCALE



GEOLOGY BASED ON THE MCKINLAY RIVER, 1:100,000 SHEET, GEOLOGY N.T.

| REVISIONS | | WENTWEL PTY. LTD. | | |
|-----------|----|-------------------|---|------|
| DATE | BY | ORIGINATOR | EL 6232 & 6233 NORTHERN TERRITORY GEOLOGY MAP | |
| | | M.G.M. | | |
| | | DRAWN | | |
| | | V.J.W. | | |
| | | DATE | SCALE As Shown | |
| | | March, 1990 | | |
| | | | DWG. No. | REV. |
| | | | WW 3.3 | |

5

The regional strike of the outcropping dolerite and metasediments is north-northwest with steep dips to the west. Due to the extensive soil cover, no evidence of folding or fold axes could be determined. Areas of probable quartz veining within the metasediments occurs in the excised Mining Claims adjacent to the contact with the Zamu Dolerite. The general trend of the quartz veining is parallel to the regional strike of the sediments and may possibly reflect an anticlinal hinge zone.

The sequence within Exploration Licence 6232 tenements has been disrupted by several generations of faulting. Several small northwest and northeast trending faults appear to cut the sequence at a low angle to the regional strike. Two late stage east-west trending cross faults can also be defined although displacements along the faults cannot be determined.

Exploration Licence 6233 straddles the contact between the northwestern lobe of the Minglo Granite and a thin wedge of coarse felspathic sediments that has been assigned to the Mundogie Sandstone unit. The contact is characterised by the development of moderate relief hornfels ridges where the sediments have been altered to a mixed assemblage of muscovite-quartz biotite \pm andalusite \pm cordierite. The level of outcrop exposed reduces sharply away from the hornfelsed zone with the majority of the western area of the Exploration Licence having very subdued relief.

The regional strike of the metasedimentary sequence is northwest with steep dips (60°) to the east in areas close to the granite contact, however the dips tend to flatten somewhat further to the west. The granite contact is grossly conformable with the regional strike of the area, however local cross cutting of the sequence occurs and metasediment xenoliths are common in the granite.

The sequence within Exploration Licence 6233 appears to be disrupted by numerous small north-south trending faults of limited displacement. There is some evidence to suggest a significant late stage fault trending northeast-southwest passing through the northwestern corner of the tenement broadly paralleling the drainage course of Maude Creek.

8.

DISCUSSION

The position of the two Exploration Licences with respect to the regional structures and lithologies indicated that they have some 'grass roots' potential, however given that the majority of the area is covered by soil and/or transported alluvium, the decision was taken to seek joint venture participation for these areas. Discussions were held with a number of interested groups, however no suitable agreements were reached. In the absence of any joint venture partners and given the area's moderate level of prospectivity, the decision was taken to surrender the Exploration Licences.

References

CROHN P W, 1968

The mines and mineral deposits of the Katherine - Darwin region.
BMR Bulletin 82 Bureau of Mineral Resources

MIDDLETON DD 1988

Memorandum for the Information of Shareholders,
Java Black Mining NL

STUART-SMITH P G, NEEDHAM R S, WALLACE D A, ROARTY M J 1986

McKinlay River 1:100,000 Geological Map Commentary
Bureau of Mineral Resources, Northern Territory Geological Survey

| Major activity | Staff salaries | Staff wages | Consultants/ contractors' fees | Vehicles | Travel Other | Accom. | Field Accom. | Field Equip. | Office Equip. | Other | Sub-Totals |
|----------------|-----------------------|-------------|--------------------------------|----------|--------------|--------|--------------|--------------|---------------|-------|------------|
| Geology | 570 | | | | | | | | 25 | 10 | 605 |
| Geochemistry | | | | | | | | | | | |
| Geophysics | | | | | | | | | | | |
| Access | | | | | | | | | | | |
| Gridding | | | | | | | | | | | |
| Drilling: | | | | | | | | | | | |
| - diamond | | | | | | | | | | | |
| - other | | | | | | | | | | | |
| Drafting | | | 156 | | | | | | | | 156 |
| Metallurgy | | | | | | | | | | | |
| Engineering | | | | | | | | | | | |
| Environmental | | | | | | | | | | | |
| Other | TELEPHONE MAINTENANCE | | 153 | | | | | | | | 153 |
| SUBTOTALS | 570 | | 309 | | | | | | 25 | 10 | 914 |

TOTAL

\$914

LOCAL OFFICE OVERHEADS

\$262

HEAD OFFICE OVERHEADS

\$176

GRAND TOTAL

\$1352

| Major activity | Staff salaries | Staff wages | Consultants/ contractors' fees | Vehicles | Travel Other | Accom. | Field Accom. | Field Equip. | Office Equip. | Other | Sub-Totals |
|----------------|-----------------------|-------------|--------------------------------|----------|--------------|--------|--------------|--------------|---------------|-------|------------|
| Geology | 570 | | | | | | | | 25 | 10 | 605 |
| Geochemistry | | | | | | | | | | | |
| Geophysics | | | | | | | | | | | |
| Access | | | | | | | | | | | |
| Gridding | | | | | | | | | | | |
| Drilling: | | | | | | | | | | | |
| - diamond | | | | | | | | | | | |
| - other | | | | | | | | | | | |
| Drafting | | | 156 | | | | | | | | 156 |
| Metallurgy | | | | | | | | | | | |
| Engineering | | | | | | | | | | | |
| Environmental | | | | | | | | | | | |
| Other | TELEPHONE MAINTENANCE | | 153 | | | | | | | | 153 |
| SUBTOTALS | 570 | | 309 | | | | | | 25 | 10 | 914 |

TOTAL

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LOCAL OFFICE OVERHEADS

\$262

HEAD OFFICE OVERHEADS

\$176

GRAND TOTAL

\$1352

NORTHERN TERRITORY GEOLOGICAL SURVEY - GEOSYSTEM DATA SHEET

REPORT NO
REPORT TITLE

SECURITY

First and Final Report Exploration Licence
6232 and 6233 Mt George area,
Northern Territory

AUTHOR (S)

PUBLISHER

PLACE OF PUB'N

DATE OF PUB'N

DATA TYPE

Unpublished

PAGES OF TEXT

ACCOMPANIMENTS

DRILL CORE?

LICENCE NO.

ELS 6232 and 6233

PROJECT YEAR(S)

1

LICENSEE(S)

Wentwell Pty Ltd

JOINT VENTURE(S)

1

OPERATOR(S)

Wentwell Pty Ltd

1:1 000 000

1: 250 000

Pine Creek SDS2 -

1: 100 000

Mackinlay River 5271

1: 50 000

PROSPECT NAME

Mt George

SITE LOCATION

LAT: 13°25'

LONG: 131°55'

EAST:

NORTH:

TECTONIC UNIT

Pine Creek Geosyncline

MAJOR TERM



PETROLEUM GEOL.



METALLIFEROUS MINERALS



NONMETALLIFEROUS MINERALS

MINOR TERMS

DRILLING

☐ DIAMOND

☐ PERCUSSION

☐ AUGER

☐ ROTARY



GEOPHYSICS

AERIAL SURVEYS

☐ MAGNETIC

☐ RADIOACTIVITY

☐ E.M. SURVEYS

GROUND

☐ E M SURVEY METHOD

☐ I P SURVEY METHOD

☐ SEISMIC SURVEYS

☐ RESISTIVITY SVTS

☐ GEOPHYSICAL ANOM

☐ GRAVITY



GEOCHEMISTRY

SAMPLING

☐ STREAM SEDIMENT

☐ SOIL

☐ ROCK CHIP

☐ WATER

GEOCHEMISTRY

☐ DRAINAGE TESTING

☐ DRILL CORE ANALYSIS

☐ ASSAYING

☐ GEOCHEMICAL ANOM

GENERAL

☐ GEOL MAPPING

☒ PHOTOGEOLOGY

☐ GRIDGING

☐ METHODS

☐ REGIONAL GEOLOGY

☐ LOCAL GEOLOGY

☐ STRATIGRAPHY

☐ RECONNAISSANCE

☐ LOGGING

NOTES

ABSTRACT ATTACH

INDEXED BY/DATE

CHECKED BY/DATE

TECH/AA