RELINQUISHMENT REPORT

EXPLORATION LICENCES No 7426

14 October 1992 - 13 October 1993

1:250000 - PINE CREEK (SD52-08)
1:100000 - BATCHelor (5171)

Compiled: R D Sowerby
November 1993

Report No NT94/03S
SUMMARY

Exploration Licences 7426 is located approximately 110km south-east of Darwin and is contained within the Batchelor 1:100 000 map sheet. The EL was acquired to explore for gold mineralisation associated with folded and sheared rocks of the Finniss River and South Alligator Groups. On 3/8/93 21 blocks were relinquished to comply with statutory requirements.

Exploration over the relinquished portion has included:-

- acquisition and interpretation of multichannel airborne geophysical data
- reconnaissance mapping and rock chip sampling

After evaluation of data from this work as well as data from retained areas, it was concluded that there is low potential for significant Au mineralisation within the area.
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FIGURES

Figure 1 1:500 000 Project Location Diagram
Figure 2 1:50 000 Rock Chip Locations
Figure 3 1:25 000 TMI Contours

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Appendix 1 - Analytical Results - Rock Chip Samples
1. **INTRODUCTION**

This report covers exploration activities undertaken by Geopeko (A Division of Peko Wallsend Operations Ltd) within areas relinquished from Exploration Licence No 7426.

The relinquished area covers a total of 21 graticular blocks, located approximately 105 km southeast of Darwin and are contained within the Batchelor 1:100 000 map sheet.

Access to the area is via the Stuart Highway from Darwin to Adelaide River and then via the Goodall and Fischer roads and various station tracks. The licence area is located on Mt.Ringwood and Ban Ban pastoral leases.

The region is subject to a tropical climate which sees greater than 90% of the mean annual rainfall of 1400mm occurring between the months of November and April. During this period access may be severely restricted.

Exploration over the relinquished areas was directed at regional mapping, rock chip sampling and acquisition of multi-client airborne geophysical data.
2. **PREVIOUS EXPLORATION**

Exploration in the area now contained within EL's 7426 and 7511 has previously been undertaken by B.N. Douglass and Nobelex Ltd (1985-1989) and Oceania Pty. Ltd. (1987-1990). Previous work has concentrated on stream sediment geochemistry and reconnaissance mapping and rock chipping areas of outcrop.

3. **REGIONAL GEOLOGY**

The licence area lies in the central part of the Pine Creek Geosyncline which is well documented by numerous workers.

The licence areas contain tightly folded lower proterozoic greywackes and siltstones of the Burrell Creek Formation underlain by carbonaceous phyllites, siltstones and banded cherts of the Mt Bonnie Fm., tuffaceous siltstones of the Gerowrie Tuff and sills of Zamu Dolerite. These rocks are intruded by the Burnside and Margaret Granites. A zoned contact metamorphic aureole is evident around these granites. The relinquished area is dominated by siltstones and greywacke of the Burrell Ck. Formation which outcrop as low rubbly rises.

A prominent north trending anticline is evident through the centre of the project area which is affected by later NW trending shears.
4. WORK COMPLETED ON RELINQUISHED PORTION

4.1 MULTI-CLIENT AIRBORNE MAGNETIC DATA AND INTERPRETATION

A portion of an Aerodata multi-client survey was purchased to use for interpretation of structure in the E.L. areas. A total of 1210 line km covering 220 sq km was acquired. "ER Mapper" was used to image process the gridded magnetic data supplied by Aerodata. Using a combination of TMI, first and second derivative images, it is possible to better define the structure of the area. A prominent N-S trending anticline as well as a number of NW trending linear features are immediately evident in TMI contoured maps (Fig 3). The NW trending lineaments are interpreted to be related to strike slip shearing.

4.2 RECONNAISSANCE MAPPING AND ROCK CHIP SAMPLING

Reconnaissance mapping was conducted over areas of outcrop to aid and confirm interpretations made from the airborne magnetic data. Mapping confirmed the existence of a prominent north trending anticline through the centre of the E.L.s which is affected by later NW trending strike slip shears. Reasonable outcrop is present within the relinquished area, however no significant development of quartz-sulphide veinining is evident. As a result only two rock chip samples were taken in this area. Both samples were analysed by Amdel at their Darwin laboratories for Au(Fire assay) and As(AAS).

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5. CONCLUSIONS

(a) Interpretation of multi-client airborne magnetic data and subsequent follow up mapping indicates the presence of a prominent north trending anticline.

(b) As a result of evaluation of data obtained from this area as well as retained areas, it is considered that there is low potential for a significant gold deposit within the relinquished area.
APPENDIX 1

Analytical Results - Rock Chip Samples
Mr. T. Hoschke
GEOPEKO
PO BOX 39443
WINNELLIE
NT 0821

ANALYSIS REPORT :

Your Reference : D 34835
Samples Received : 05/07/93
Number of Samples : 249

Our Reference : 3DN0537
Results Reported : 12/07/93
Report Parts : A to B

This report relates specifically to the samples tested in so far as the samples supplied are truly representative of the sample source.

If you have any enquiries please contact the undersigned quoting our reference as above.

Report Codes:
N.A. - Not Analysed
L.N.R. - Listed But Not Received
I.S. - Insufficient Sample

Approved Signature:  

for

ALAN CIPLYS
Manager - Darwin
AMDEL LABORATORIES LIMITED
A.C.N. 009 076 555
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