REPORT ON

THE EXPLORATION LICENCE 9/71 KING ISLAND

PRELIMINARY ASSESSMENT

BY

L. G. SZABO

MELBOURNE, 25TH JANUARY, 1971.

I. SUMMARY

The area of Exploration Licence is favourably situated in relation to a postulated granite intrusive which might have been the source of economic mineralisation.

Regional reconnaissance is recommended in order to locate target areas for detailed exploration.

L. G. SZABO, Dip. Geol.

25th January, 1971.

II. INTRODUCTION

In 1969, the author of this report carried out regional exploration in the north-eastern quarter of King Island, on behalf of Geopeko Limited. This work was restricted to outcrop mapping and geochemical rock chip sampling of pebbles and floates the sources of which were doubtful. Despite the inadequate field data, the author attempted to give some sort of evaluation of the area using mainly the geophysical records by previous explorers. This work outlined four anomalous areas one of which was held under Exploration Licence by Hawkes Alluvial Tin Limited. The anomaly was interpreted "as being parts of the contact zone, with high content of magnetic minerals", and consequently it was recommended to Geopeko Limited : "some agreement should be reached with Hawkes Alluvial Tin Limited to sink an additional 182 auger holes in E.L. 18/68."(Appendix I.)

On the 15th January, 1970, the author resigned from Geopeko Limited.

In August 1970, E.L. 18/68 expired, and about two thirds of the area was relinquished by Hawkes Alluvial Tin Limited.

The relinquished area had been vacant for three months when the author of this report and Mr. D. C. Pursell pegged the area (14.11.1970), and applied for Exploration Licence. The Department of Mines disapproved the application, as Exploration Licences could be granted only for one person or for a company registered in Tasmania.

The area was re-pegged on the 21st of November 1971 on behalf of Mr. D. C. Pursell, but the rights, benefits and liabilities, etc. derived from the Exploration Licence have been equally shared between Mr. D. C. Pursell and Mrs. A. Szabo on the basis of a private agreement. (Appendix II.).

III. GEOLOGY

King Island has an exceptionally good mineral potential. Besides minor gold, disseminated and vein type occurrences of sulphide mineralisation, mineable alluvial tin deposits and one of the largest tungsten deposits in the world occur at King Island.

King Island is situated within the Tasman Geosyncline area which suffered several periods of tectonism accompanied by acid and ultrabasic intrusions. The intrusions resulted in different types of mineral deposits. The region has consequently had an extensive history of production of gold, silver, tin, tungsten, base metals, etc. Most of these deposits are associated with the Devonian granite which resulted in tin and very rich tungsten mineralisation at King Island.

The regional geology and geophysics suggest that the area of Exploration Licence is made up of regionally and contact altered sequences of sedimentary and volcanic rocks, the northerly striking beds of which dip to the east at a steep angle.

A large acid intrusive and its offshoots of Devonian system has been postulated to be present in the property. The main intrusive is bounded to the east and west by pre-Cambrian and Cambrian rocks. The majority of all rock types, however, are obscured by extensive sand and alluvium covers.

The interpretation of the geological and geophysical information suggests that the area of the Exploration Licence contains potential geological environments in which economic mineralisation could have developed. These are:

1. Skarn type deposits of tungsten, molybdenum and bismuth;
2. Disseminated copper/lead - zinc or chromium/nickel deposits;
3. Alluvial tin and gold deposits.

IV. PROPOSAL

It is recommended that reconnaissance exploratory work comprising:

1. photomapping, scale : 1" = $\frac{1}{2}$ mile;
2. outcrop mapping on traverse lines spaced 1,000 ft. apart;
3. interpretation of all geological and geophysical data;
4. re-evaluation of all reports by previous explorers,

be carried out over the area. This work is to provide basis for planning further exploration.

The estimated cost of the above work is approximately $2,500.

APPENDIX I

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GEOPEKO LIMITED

KING ISLAND GROUP

PROGRESS REPORT

EXPLORATION LICENCE 4/68

by

L. SZABO

KING ISLAND JANUARY, 1970.

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ACCOMPANYING PLANS

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1. RECOMMENDATION

It is recommended that a total of 312 auger holes be sunk in the area of E.L. 4/68.

If this phase warrants the extension of exploration, some agreement should be reached with Hawkes Alluvial Tin Limited to sink an additional 182 auger holes in E.L. 18/68.

In Anomaly 8, either an I.P. or V.L.F. survey is recommended.

L. Szabo,
SENIOR GEOLOGIST.

January, 1970.

2. SUMMARY

Outcrop mapping was carried out in very difficult field conditions with inadequate equipment.

An assessment of the potential of the area has been made in the present report on the basis of regional gravity and magnetic surveys, and very sparse outcrops.

Nine anomalous areas have been outlined, three of which could be favourable to mineralisation being associated with granitic intrusions.

A fourth anomaly, to the south of E.L. 4/68, has also been found and may indicate a sulphide or chromite mineralisation.

An exploration programme has been outlined to provide further information on the potential of the area. Due to lack of time approximately 5 square miles located near the south east corner of E.L. 4/68 have not been investigated.

APPENDIX II

INFORMATION NOT AVAILABLE.