TENNANT CREEK JOINT VENTURE
MCDOUALL RANGE GROUP

COMPRISING EXPLORATION LICENCES
E.L. 5723, E.L. 7319 AND E.L. 7555

ANNUAL REPORT ON EXPLORATION
COMPLETED DURING THE 12 MONTH
PERIOD TO 15 NOVEMBER, 1992.

OPEN FILE

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1. McDouall Range Tenement Group Location Plan
   Scale 1:100,000
1. INTRODUCTION

The McDouall Range Group of tenements comprises Exploration Licences 5723 (McDouall Range - 17 graticular blocks), 7319 (Caroline - 3 graticular blocks) and 7555 (Three Keys - 17 graticular blocks). These tenements cover a total area of about 119.8 square kilometres.

Access can be gained via various graded and ungraded tracks. The sealed Stuart Highway passes through E.L. 5723.

Preliminary geological mapping, regional photo-interpretation and aeromagnetic interpretation resulted in a work programme which has been previously reported in Roebuck Resources N.L. Technical Report No. 286 - The McDouall Range Prospect, Exploration Licence 5723: Annual Exploration Report for 1991 by K. Fox, April, 1992. This work was done during late November and early December, 1991 - within the current reporting year.

Large areas of the tenement group are soil covered and work was deferred pending development of suitable surface geochemical exploration techniques.

A programme of surface sampling and bedrock geochemical RAB drilling is planned for 1993.

2. PROPOSED EXPLORATION METHODS

2.1 Surface Sampling

A large proportion of the Tennant Creek Goldfield area is soil covered. These soils are often thick and are generally transported.

A review of all published data relating to geochemical exploration done in the field prior to about 1987 was completed. This revealed that bedrock geochemical techniques appeared to be reliable as an indicator of near surface mineralisation. The review also suggested that conventional soil sampling methods produced reliable results only in areas of residual soil. Such areas are generally confined to elevated ground with scattered outcrop and are comparatively rare.

Since 1987 a number of explorers have conducted first pass exploration using the BLEG (bulk leach extractable gold) technique in which 2 to 5 kilograms of surface soil which has been screened to remove large rocks is treated in an unprepared state. All available data was reviewed and particular emphasis was placed on those of Newmont Australia Limited from sampling over areas now held by the Joint Venture.

It was noted that substantially high clearly anomalous BLEG results were relatively rare. Most of these were from samples proximal to either roads, well used tracks, or old mine workings. Some were located in areas of thin soil close to previously known mineralisation. Almost
all of the anomalous BLEG values were discounted as being a product of contamination of one kind or another. Few anomalies had been followed up and then only by single line RAB traverses. In some areas of mineralisation recently located by Joint Venture Exploration the BLEG values were somewhat elevated but such 2 x background type values which fall within the normal distribution range could never be adjudged to be anomalous.

The writer is not aware of any discovery of Tennant Creek type mineralisation which can be attributed to BLEG survey results.

The BLEG sample technique has been concluded to be inappropriate to the Tennant Creek environment.

In the second half of 1991 Roebuck Resources NL commenced a series of orientation surveys in a number of areas of known mineralisation. These surveys included some areas of thick soil cover and one in which soil cover 5 to 15 metres thick included gravels in a drainage system.

Samples were collected from 30 centimetres depth, from the soil surface and from above the soil surface (biologically derived). The samples included various size fractions of soils collected in a variety of ways. This work continued throughout the early part of 1992 when the company's consultant geologist, Dr. N. Marshall introduced some novel techniques of sample collection. These methods, resulting from Dr. Marshall's considerable knowledge as both an analytical chemist and exploration geochemist remain the property of Marshall Geoscience Services. They are safeguarded by confidentiality agreements which have been signed by all members of the Roebuck exploration team.

The Marshall "M" sampling technique appears to be an extremely effective and powerful exploration tool which enables the identification of mineralisation in areas of both thick and thin soil cover.

2.2 Bedrock Geochemical RAB Drilling

Anomalies resulting from the surface sampling programmes will be followed up by bedrock geochemical sampling utilising a Mole percussion drill rig.

Samples are collected from at least 3 metres below the soil-bedrock interface. Optimum first pass sample spacings have been found to be 40 metres apart along 80 metres spaced lines (usually north-south).
3. PROPOSED EXPLORATION PROGRAMME FOR THE YEAR ENDING 15TH NOVEMBER, 1993

3.1 E.L. 5723 - "McDouall Range"

Surface Sampling (320 samples) $8,000
Analyses $4,800
Gridding $2,200
Bedrock Geochemical RAB drilling $4,500
Analyses $3,000
Supervision and reporting $2,500

$25,000

3.2 E.L. 7319 - "Caroline"

Surface sampling (160 samples) $4,000
Analyses $2,500
Gridding $1,500
Bedrock Geochemical RAB drilling $3,500
Analyses $2,000
Supervision $1,500

$15,000

3.3 E.L. 7555 - "Three Keys"

Surface sampling (400 samples) $10,000
Analyses $5,500
Gridding $3,000
Bedrock Geochemical RAB drilling $5,000
Analyses $2,500
Supervision and reporting $3,000

$29,000
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MCDOWALL RANGE TENEMENT GROUP

LOCATION PLAN

Scale 1: 100,000 Fig.1