



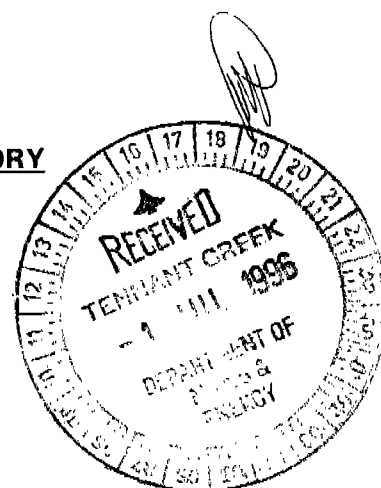
**POSGOLD**  
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**FIRST ANNUAL REPORT**  
**FOR EXPLORATION LICENCE 9088**  
**FOR THE PERIOD 2/6/95 TO 1/6/96**  
**BARROW CREEK DISTRICT, NORTHERN TERRITORY**  
  
**NYALA PROSPECT**  
**BARROW CREEK 1:250,000 SHEET SE 53-6**



**VOLUME 1 OF 1**

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EXPLORATION GEOLOGIST

**DATE:** JUNE 1996

**AUTHORISED BY:**

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# CONTENTS

Page

LIST OF FIGURES  
LIST OF PLANS  
LIST OF TABLES  
LIST OF APPENDICES

1.	SUMMARY	1
2.	INTRODUCTION	1
	2.1 Location and Access	2
	2.2 Tenement Status	2
	2.3 Previous Exploration	2
3.	REGIONAL AND LOCAL GEOLOGY	2
4.	EXPLORATION SUMMARY RESULTS FOR THE PERIOD 2/6/95 TO 1/6/96	3
5.	CONCLUSIONS	3
6.	EXPENDITURE INCURRED FOR THE PERIOD 2/6/95 TO 1/6/96	4
7.	FUTURE WORK PROGRAMME AND EXPENDITURE	4
9.	REFERENCES	5

COMMODITIES: Gold, Copper

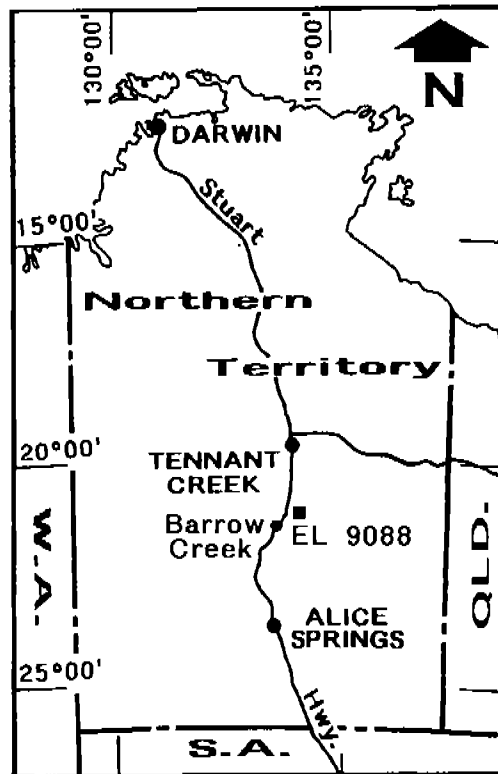
**LIST OF FIGURES**

<b><u>Figure No.</u></b>	<b><u>Title</u></b>	<b><u>Scale</u></b>
1	EL9088 Nyala - Location Plan	1:250,000
2	EL9088 Nyala - Generalised Geology	1:100,000

**LIST OF APPENDICES**

<b><u>Appendix No.</u></b>	<b><u>Title</u></b>
1	Bibliographic Data Sheet

REPORT NO: 96040  
TITLE: FIRST ANNUAL REPORT FOR EL 9088 FOR THE PERIOD 2/6/95 TO 1/6/96, BARROW CREEK DISTRICT, NT. NYALA PROSPECT  
AUTHOR: DR PHILIPPE O J MOUCHET  
DATE: JUNE 1996



## 1 SUMMARY

Exploration Licence 9088 (NYALA) is currently being explored for shear hosted and for "Granites" style gold mineralisation under a Joint Venture Agreement between Poseidon Gold Limited (PosGold), Normandy Exploration (Norex) and Yuendumu Mining Company. Exploration Licence 9088 comprises 1 graticular block covering 3.24km<sup>2</sup> and is located approximately 200 km south of Tennant Creek and 20km north-east of the Barrow Creek Roadhouse. Work completed during year one of tenure includes an assessment of previous exploration data and field reconnaissance.

## 2 INTRODUCTION

Exploration Licence 9088 which forms part of the Barrow Creek Group of tenements is currently being explored for "Granites" style and/or shear hosted gold mineralisation under a joint venture agreement between Poseidon Gold Limited (PosGold), Normandy Exploration (Norex) and Yuendumu Mining Company (YMC).

## 2.1 Location and Access

Exploration Licence 9088 is located approximately 200km south of Tennant Creek and 20km north-east of the Barrow Creek Roadhouse (refer Figure 1). Access is gained via the Home of Bullion Mine track.

## 2.2 Tenement Status

Exploration Licence 9088 comprises 1 graticular block covering 3.24km<sup>2</sup> and was granted to PosGold on 2/6/1995 for a period of two years. As the Exploration Licence falls within the Barrow Creek Joint Venture (BCJV) Area of interest, the licence has been included under the Joint Venture Agreement.

## 2.3 Previous Exploration

There is little evidence of past exploration within the area of interest. The only evidence of exploration within or adjacent to Exploration Licence 9088 area is by Allender et al. and Aberfoyle Resources Limited Joint Venture (on EL 6910) who is currently exploring this region for Cu/Zn/Pb/Ag ± Au deposits similar to the mineralisation at the old Home of Bullion Mine. Exploration activity undertaken by Allender et al and Aberfoyle Resources Limited Joint Venture comprises geological compilation, airborne magnetic survey, geomagnetic mapping (Allender and Drown, 1992) and GEOTEM survey (Walker and Drown, 1993). The area was not considered prospective and subsequently relinquished in 1992 and 1993.

## 3 REGIONAL AND LOCAL GEOLOGY

The oldest exposed basement in central Australia comprises metamorphic and igneous rocks of the Arunta Inlier (Haines et al., 1991). Rocks of the Arunta Inlier are interpreted as at least partly correlative with sedimentary and volcanic sequences of the adjacent Tennant Creek and Granites-Tanami inliers. Barrow Creek lies on the SW margin of the Late Proterozoic to Paleozoic Georgina Basin. Block faulting during the Tertiary has produced a number of small non-marine basins in central Australia. Also preserved are relics of a Tertiary silicified land surface. A thin Quaternary veneer of soil, sand and gravel covers most of the lowland areas in that region.

The Arunta Inlier (Early-Middle Proterozoic) is characterised by metamorphosed sedimentary and igneous rocks of low to medium pressure facies. Deformation and regional metamorphism to upper greenschist facies took place between 1810-1750 Ma (Black, 1981). Shaw and Stewart (1975) established three broad stratigraphic subdivisions based on facies assemblages and lithological correlations. From oldest to youngest, these subdivisions are named Division 1, 2 and 3. Using this model defined by Shaw and Stewart (1975), the orthogneiss east of Osborne Range, the calc-silicate rocks west of Crawford Range and the Bullion Schist would be included in Division 2, and the Ledan Schist in Division 3 of the Arunta Inlier.

Unconformably overlying these rocks are the Hatches Creek Group sediments and volcanics. Blake et al. (1987) formally subdivided the Group into the Ooradidgee, Wauchope and Hanlon Subgroups, comprising a total of 20 Formations and two Members. The Hatches Creek Group is a folded sequence of shallow-water

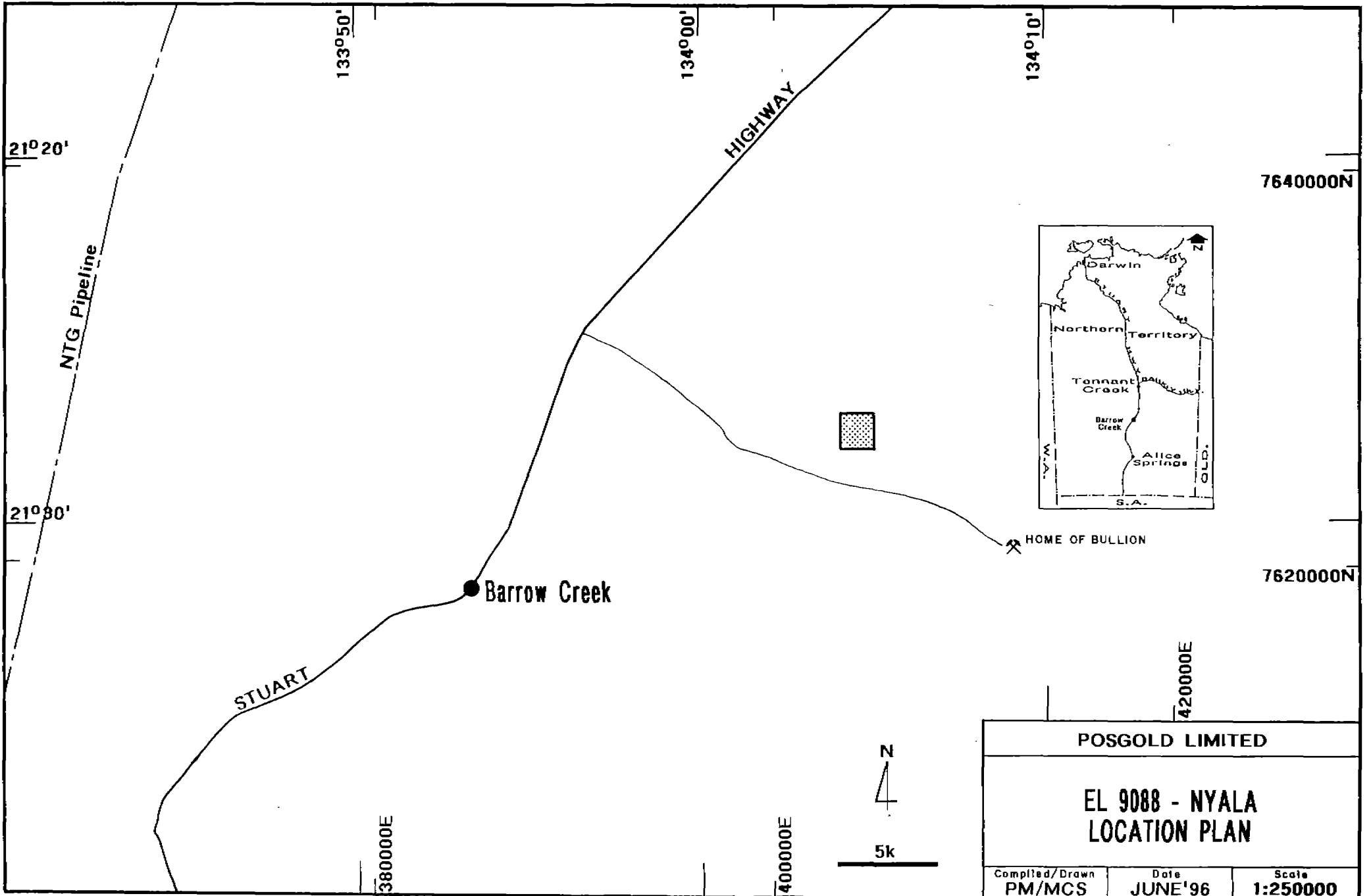


Figure No. 1

sediments with interbedded volcanic units which reach thicknesses up to at least 10,000 meter.

The sediments include ridge-forming quartzites, felspathic, lithic and minor conglomeratic arenites and friable arenite, siltstone, shale and carbonate. The Ooradidgee Subgroup consists mainly of fluvial sediments and sub-aerial volcanics which partly interfinger. The Wauchope Subgroup is characterised by large volumes of volcanics and sediments probably in both marine and fluvial origin, whereas the Hanlon Subgroup may be entirely marine and lacks volcanics (Blake et al., 1987). Following deposition, the Hatches Creek Group was folded about NW trending axes and metamorphosed to upper greenschist facies.

Later intrusion of both the Arunta basement and the Hatches Creek Group by granitoids took place around 1660 Ma (Blake et al., 1987). A long erosional period followed with subsequent weathering during the Tertiary to produce silcrete and ferricrete horizons. A thin veneer of Quaternary sands and soils overlays this area.

The majority of the licence area is covered by arkose and feldspathic quartz arenite with interbeds of siltstone representing the Tops Member of the Georgina Basin and Bullion Schist in the southern part of the area according to the DME 1:250,000 Geological Map (sheet 53-6).

#### **4 EXPLORATION SUMMARY RESULTS FOR THE PERIOD 2/6/95 TO 1/6/96**

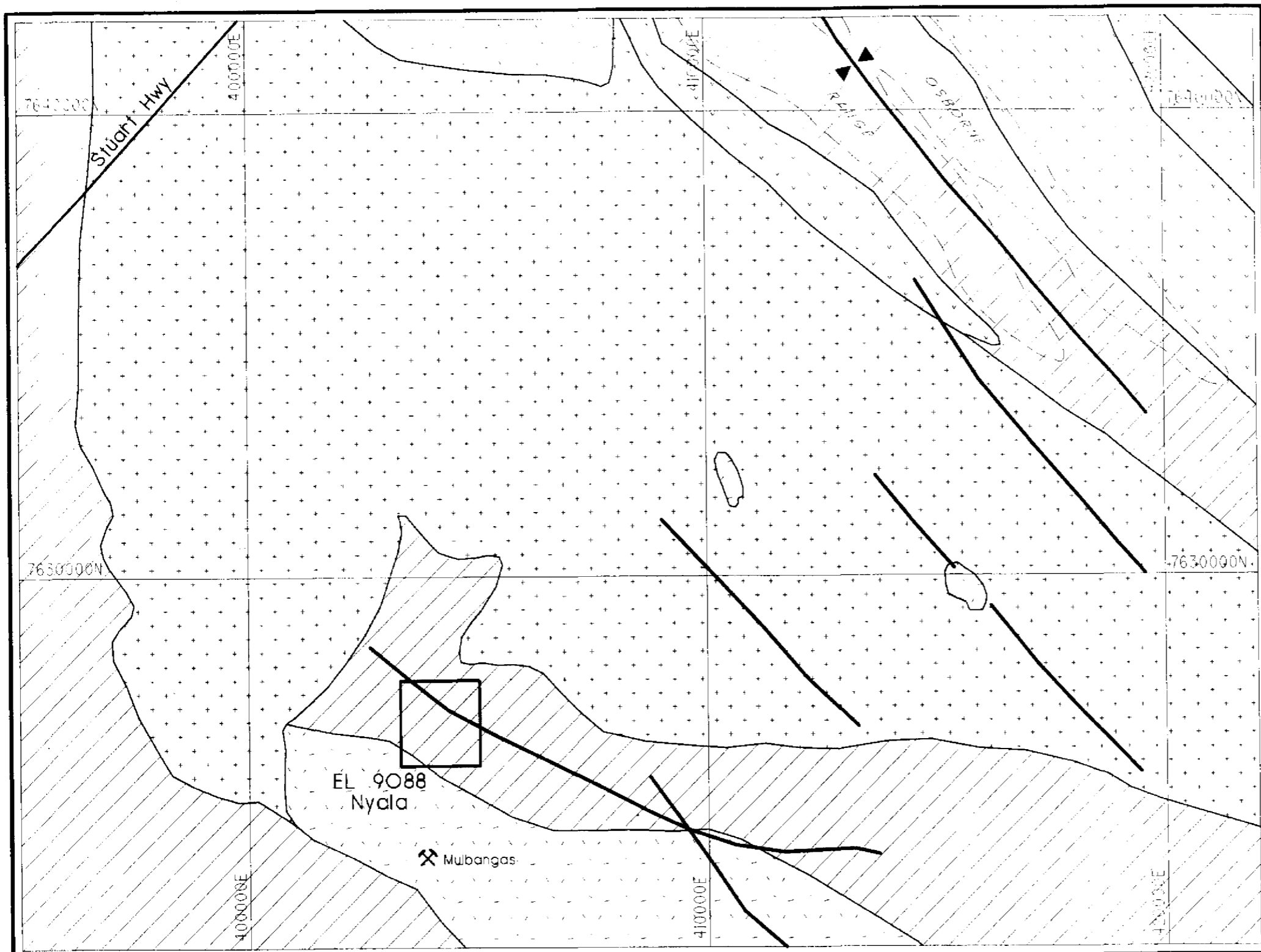
Exploration started with a full assessment of all available past exploration records (BMR aeromagnetic survey, Northern Territory Geological Survey and Allender et al. & Aberfoyle Resources Limited Joint Venture) pertaining this area and field reconnaissance work. A simplified generalised geological map was generated from former exploration results (refer Figure 2) presenting Hatches Creek Group sediments in the northern and central portion of EL 9088 and Quartz-mica Schist with Amphibolites (equivalent to the Bullion Schist) in the southern part.

Gridding, surveying and a vacuum drilling programme are planned over Exploration Licence 9088 to investigate the potential of this area to host mineralisation. All these activities were meant to be undertaken during year one of tenure as soon as an Aboriginal Areas Protection Authority (AAPA) Sacred Site Protection Certificate was delivered.

PosGold submitted an Application for an Aboriginal Areas Protection Authority (AAPA) Sacred Site Protection Certificate on 1/2/96; on 1/6/96, the response to this application is still awaited.

#### **5 CONCLUSIONS**

The area covered by Exploration Licence 9088 is considered as prospective and a vacuum drilling programme is planned to explore the potential of this licence to host Au, Cu mineralisation.



- Ali Curung Granite (type 2):  
Biotite Muscovite Granite
- Ali Curung Granite (type 1):  
Muscovite Biotite Granite
- Undifferentiated Granite
- Hatches Creek Group
- Strzeleckie Volcanics
- Quartz-Mica Schist with Amphibolites  
(equivalent to Bullion Schist)
- Fault
- Syncline

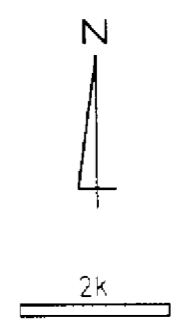


Figure No. 2

POSGOLD LIMITED

**EL 9088 - NYALA  
GENERALISED GEOLOGY**

Compiled/Drawn: SM-MCS	Date: MAY 1996	Scale: 1:100000
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## 6 EXPLORATION EXPENDITURE FOR THE PERIOD 2/6/95 TO 1/6/96

Expenditure on EL 9088 for the first year of tenure are listed below:

EXPENSE	COST
Employee Costs	\$ 1,030
Overheads	\$ 155
Drilling	\$ -
Assays	\$ -
Operating Costs	\$ 566
Specialist Services	\$ -
Tenement Costs	\$ 10
	<hr/>
TOTAL	\$ 1,761
	<hr/>

Covenant \$ 7,900

During year one of tenure, EL 9088 incurred a total expenditure of \$1,761 which is under the covenant of \$8,000. This difference is due to the fact that the planned activities over EL 9088 could not start during this year of tenure in absence of an Aboriginal Areas Protection Authority (AAPA) Sacred Site Protection Certificate.

## 7 FUTURE WORK PROGRAMME AND EXPENDITURE

Work on EL 9088 during year two of tenure will include, depending from the granting of the Aboriginal Areas Protection Authority (AAPA) Sacred Site Protection Certificate, a vacuum drilling programme and eventually a ground magnetic survey to help to define targets.

The proposed expenditure for the second year of tenure is as follow:

EXPENSE	COST
Employee Costs	\$ 2,000
Overheads	\$ 500
Drilling	\$ 2,000
Assays	\$ 1,000
Operating Costs	\$ 500
Specialist Services	\$ 1,000
Tenement Costs	\$ 300
	<hr/>
TOTAL	\$ 7,300
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## 8 REFERENCES

- Allender, J. F. and Drown, C. G., 1992. Exploration Licence 6910, Home of Bullion, Barrow Creek - Northern Territory, Relinquishment Report 19 Nov. 1992. Report to the NTDME, Allender et al. and Aberfoyle Resources Limited Joint Venture.
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- Walker, G. B. and Drown, C. G., 1993. Exploration Licence 6910 Home of Bullion. Relinquishment Report on Exploration Activities on the area reduced at the year ended 19th November 1993. Report to the NTDME, Allender et al. and Aberfoyle Resources Limited Joint Venture.

**APPENDIX ONE**

**BIBLIOGRAPHIC DATA SHEET**

BIBLIOGRAPHIC DATA SHEET

REPORT NUMBER	96040
REPORT NAME	FIRST ANNUAL REPORT FOR THE PERIOD 2/6/95 TO 1/6/96, BARROW CREEK DISTRICT, NT.
PROSPECT NAME(S)	EL 9088 NYALA PROSPECT
OWNER/JV PARTNERS	POSGOLD LIMITED
KEYWORDS	BARROW CREEK ARUNTA INLIER, HOME OF BULLION SHIST
COMMODITIES	GOLD, COPPER
TECTONIC UNIT	TENNANT CREEK INLIER
1:250,000 MAP SHEET	BARROW CREEK SE 53-6
1:100,000 MAP SHEET	BARROW CREEK