



**NORMANDY**  
GOLD PTY LIMITED

TENNANT CREEK OPERATIONS  
PO Box 294, Tennant Creek, Northern Territory 0861

ACN 007 511 006

Phone (08) 8962 0399  
Fax (08) 8962 0377

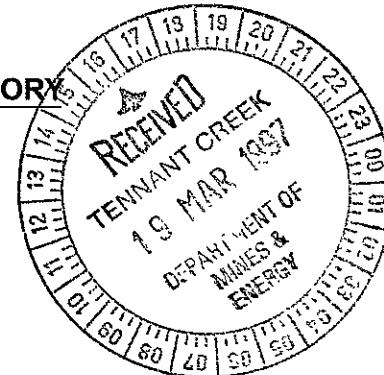
## FINAL REPORT FOR EXPLORATION LICENCE 8822

FOR THE PERIOD 16/9/94 TO 20/12/96

TENNANT CREEK DISTRICT, NORTHERN TERRITORY

### BONNEY WELL PROSPECT

FREW RIVER 1:250,000 SHEET SF 53-3  
BONNEY WELL 1:250,00 SHEET 53-2



### VOLUME 1 OF 1

AUTHOR: B A CLIFFORD  
SENIOR EXPLORATION GEOLOGIST

DATE: MARCH 1997

AUTHORISED BY:

DISTRIBUTION: ✓ NT DEPARTMENT OF MINES & ENERGY -  
- TENNANT CREEK/DARWIN OFFICE 1

NORMANDY GOLD LIMITED  
- TENNANT CREEK OFFICE 1

NORMANDY EXPLORATION LIMITED  
- KENT TOWN LIBRARY 1

The contents of this report remain the property of Normandy Gold Limited and may not be published in whole or in part nor used in a company prospectus without the written consent of the Company.

Tennant Creek Library No: 97017

Kent Town Library No: 21135

EXP:BC:97119  
D:\A\MIPRO\DMER

## **CONTENTS**

	<b>Page</b>
LIST OF FIGURES	
LIST OF TABLES	
LIST OF APPENDICES	
1. SUMMARY	1
2. INTRODUCTION	2
2.1 Location and Access	2
2.2 Climate and Physiography	2
2.3 Tenure	2
2.4 Previous Exploration	2
3. REGIONAL GEOLOGY	3
4. LOCAL GEOLOGY	3
5. EXPLORATION CONDUCTED ON EL 8822 16/9/94 TO 20/12/96	3
5.1 Regional Aeromagnetic Interpretation	3
5.2 Reconnaissance RAB Drilling	3
5.3 Bedrock Lithologies	4
5.4 Geochemistry	4
5.5 Total expenditure for EL 8822 16/9/94 to 20/12/96	4
6. CONCLUSIONS	5
7. ENVIRONMENTAL AND REHABILITATION FACTORS	5
8. REFERENCES	6
COMMODITIES:	Gold, Copper

### LIST OF FIGURES

<u>Figure No.</u>	<u>Title</u>	<u>Scale</u>
1	SEL 8822 - Bonney Well Location Plan	1:250,000
2	EL 8822 Bonney Well 2 interpreted Proterozoic Geology	1:250,000
3	RAB Drilling Hole Location Plan	1:100,000
4	RAB Drilling Bottom of Hole Lithology	1:100,000
5	RAB Drilling Bottom of Hole Au ppb	1:100,000
6	RAB Drilling Bottom of Hole Cu ppm	1:100,000
7	RAB Drilling Bottom of Hole Bi ppm	1:100,000
8	RAB Drilling Bottom of Hole Pb ppm	1:100,000
9	RAB Drilling Bottom of Hole Zn ppm	1:100,000

### LIST OF TABLES

<u>Table No.</u>	<u>Title</u>
1	Total Expenditure EL 8822

### LIST OF APPENDICES

<u>Appendix No.</u>	<u>Title</u>
1	RAB drill holes, locations
2	RAB drill holes, lithological logs
3	Geochemistry
4	Bibliographic Data Sheet

REPORT NO:

97017

TITLE:

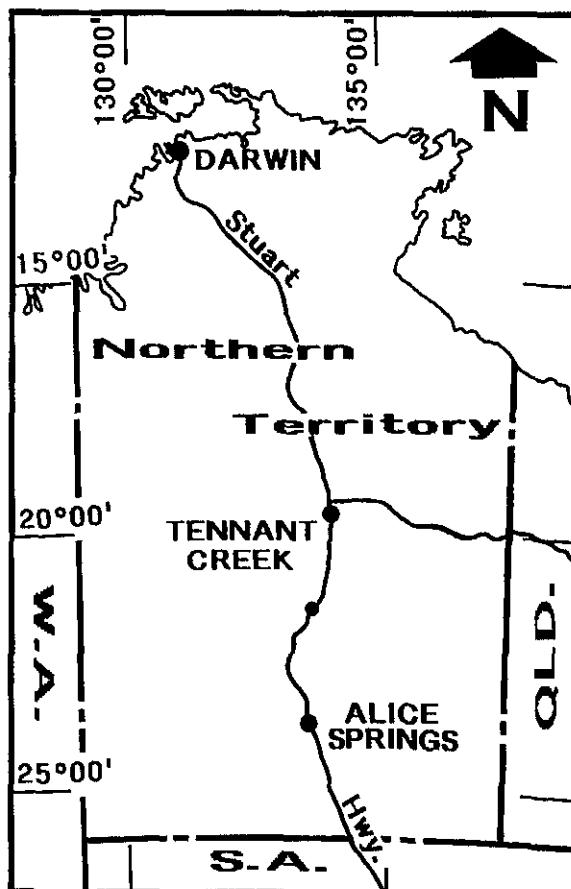
FINAL REPORT FOR EXPLORATION LICENCE 8822 FOR THE PERIOD 16/9/94 TO 20/12/96, TENNANT CREEK DISTRICT, NORTHERN TERRITORY, BONNEY WELL PROSPECT.

AUTHOR:

B A CLIFFORD

DATE:

MARCH 1997



## 1 SUMMARY

Exploration Licence 8822 is located 110 kms SE of the township of Tennant Creek. The tenement was granted to Adelaide Resources NL on 16 September 1994. The tenement is subject to a Joint Venture Agreement between Adelaide Resources and Normandy Gold Ltd (formerly PosGold Ltd), whereby Normandy are managers and solely contribute to the exploration expenditure. The Joint Venture Agreement was signed in August 1995.

The exploration conducted emphasised the identification of ironstone hosted Au-Cu-Bi mineralisation of the Tennant Creek style, but included consideration of the possible occurrence of other styles of mineralisation. The exploration program included:

- (i) Semi-regional interpretation of available openfile aeromagnetic data.
- (ii) Reconnaissance RAB drilling for bedrock assessment.

The conclusion of this work is that the relinquished area has limited potential to host economically significant Au mineralisation, given the thickness of Palaeozoic cover, the subdued bedrock geochemistry and the absence of discrete magnetic anomalies.

## **2 INTRODUCTION**

### **2.1 Location and Access**

Exploration Licence 8822 (Bonney Well Prospect) is centred approximately 110 kms SE of the township of Tennant Creek (refer Figure 1). Access to the tenement from Tennant Creek township is 80 km south via the Stuart Highway, then 50 kms east to Kurundi Station homestead. Access to the tenement requires using station access track for 40 kms, travelling NE of the homestead.

### **2.2 Climate and Physiography**

The climate of the Tennant Creek district is mild to warm and dry throughout autumn, winter and spring, with cool to cold winds in winter. High temperatures (in excess of 30°C) occur in summer with associated seasonal rainfall in December to March, which can impede field programmes.

The physiography of EL 8822 consists of flat, aeolian sand plains in the northern portion with the alluvial flood plain trending east-west through the centre of the tenement.

### **2.3 Tenure**

Exploration Licence 8822 was granted to Adelaide Resources on 16 December 1994 for a period of six years. The licence initially consisted of 32 graticular blocks. A partial reduction, 16 blocks, occurred on the second anniversary of tenure.

The tenement is currently subject to a Joint Venture Agreement between Adelaide Resources NL and Normandy Gold Ltd, whereby Normandy are operators and sole contributors to exploration expenditure. The Joint Venture Agreement was signed in August 1995.

### **2.4 Previous Exploration**

Prior to the grant of EL 8822, there is little evidence of previous exploration for mineralisation within this area. It is probable that the lack of previous exploration was due to the:

- \* lack of outcrop,
- \* extent and depth of cover; and
- \* a lack of intense discrete magnetic anomalies.

Previous regional exploration has been undertaken by Geopeko, CRAE and Australian Ores and Minerals, but no comprehensive prospect-scale evaluation or drilling was completed.

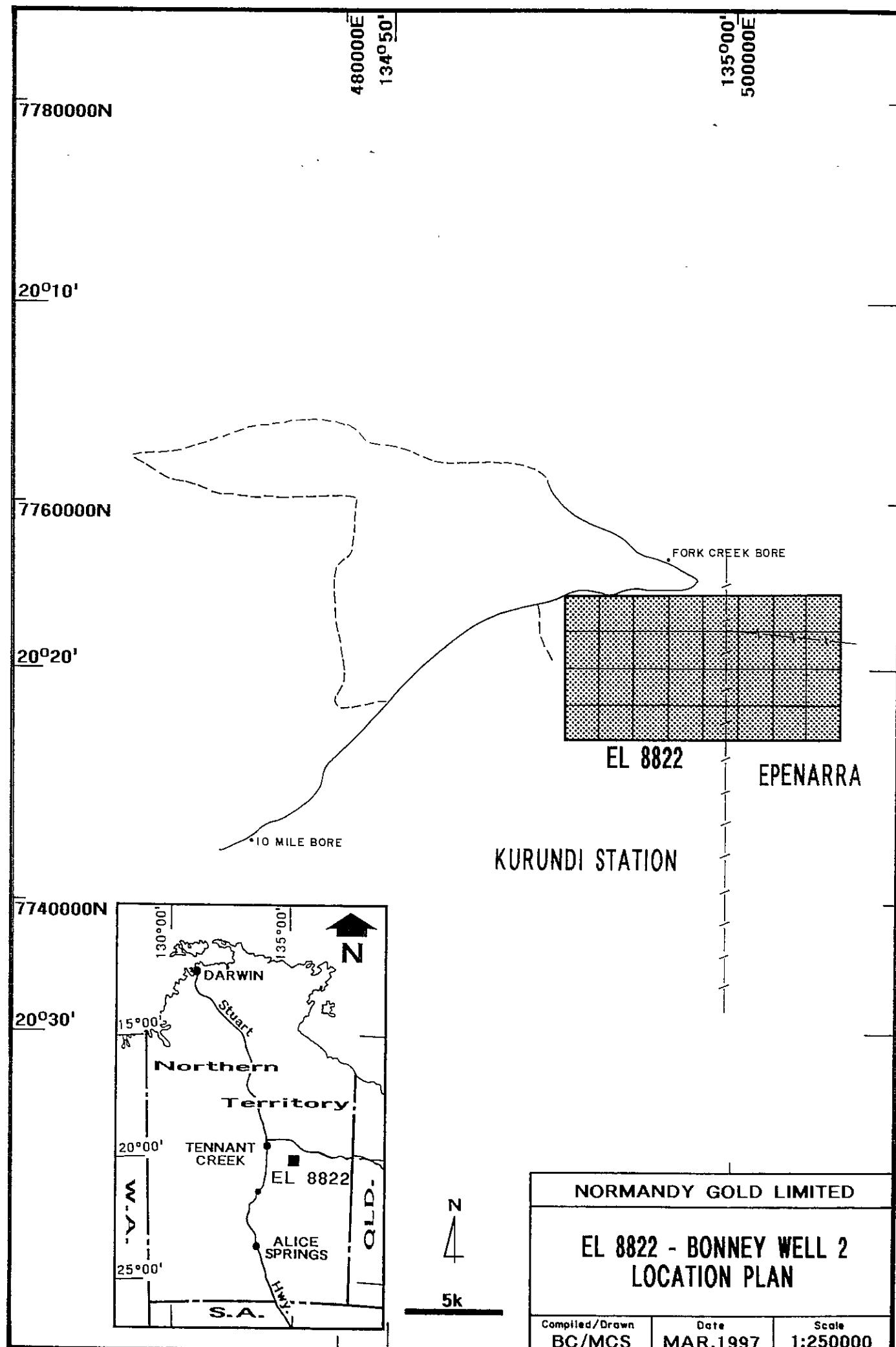


Figure No. 1

### **3 REGIONAL GEOLOGY**

The geological understanding of the Tennant Creek Inlier has been recently advanced by detailed geological mapping over the Tennant Creek and Flynn 1:100,000 map sheets (Donnellan et al. 1995), precision dating of stratigraphic components of the region (Compston, 1995) and regional geophysical interpretations.

The oldest exposed Proterozoic lithofacies in the Tennant Creek Inlier are the metasedimentary rocks of the Warramunga Formation, which are the host to the ironstone-Au-Cu-Bi mineralisation of the Tennant Creek Goldfield. These Palaeoproterozoic metasediments were deposited approximately 1860 Ma. Deformation and intrusion of the Warramunga Formation by voluminous porphyries and granitoids occurred during the Barramundi Orogeny (1858 Ma to 1845 Ma).

Following deformation and uplift the volcanics and volcaniclastics of the Flynn Sub-Group were erupted (1845 Ma to 1827 Ma), with intrusion of porphyries and minor granitoids into the Warramunga Formation. An additional deformation event preceded the deposition of the Hatches Creek Group/Tomkinson Creek Sub-Group (1820 Ma to 1785 Ma) and the intrusion of late-stage granitoids and porphyries into both the Warramunga Formation and Flynn Sub-Group at 1650-1712 Ma.

### **4 LOCAL GEOLOGY**

Exploration Licence 8822 covers an area of poor outcrop. Aeolian and alluvial sand cover dominate the licence area. Limited outcrop to the west and north of the tenement has been interpreted as Cambrian Georgina Basin succession sedimentary rocks and Warramunga Formation metasedimentary rocks (Wyche and Simons, 1987).

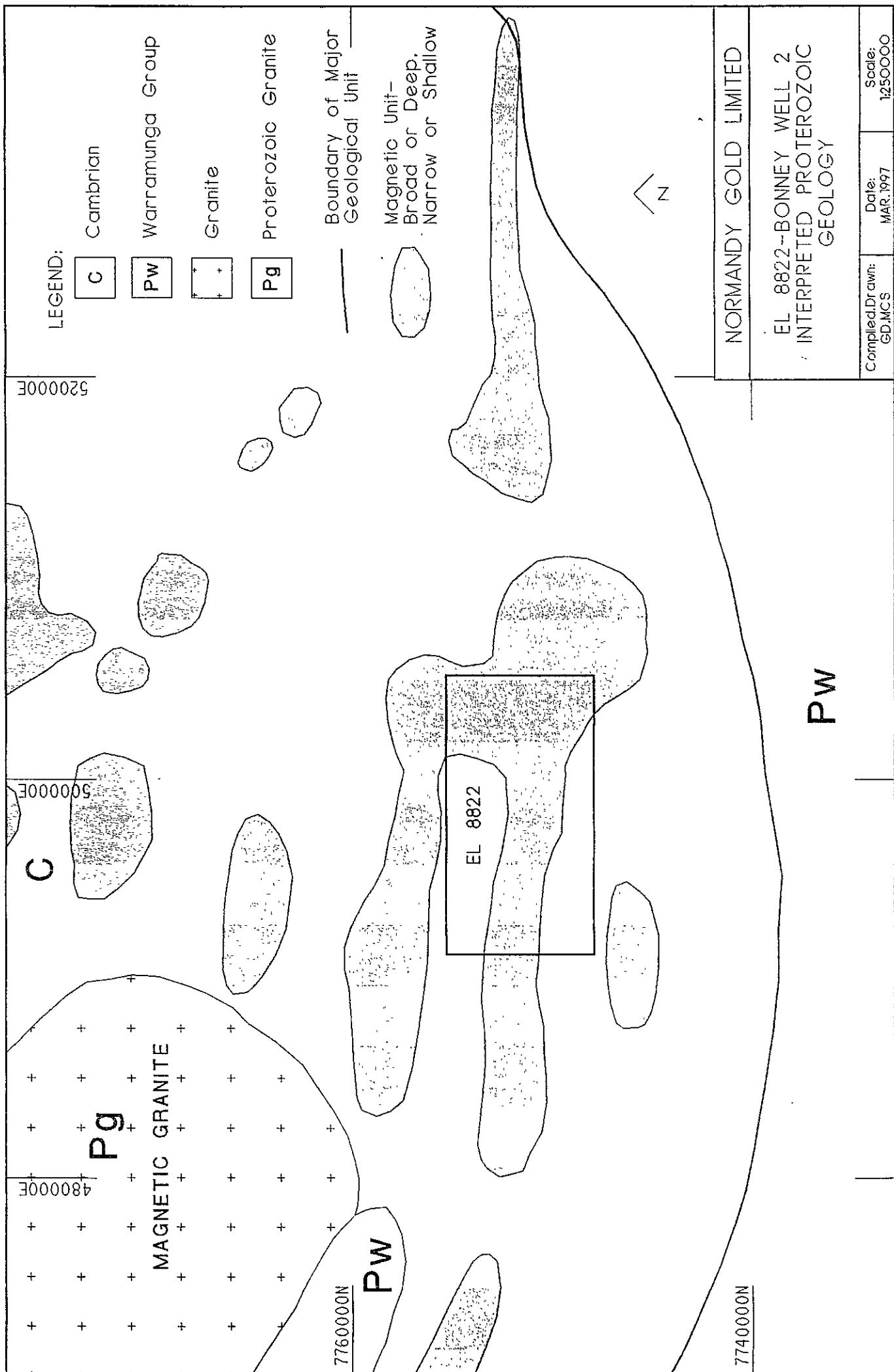
## **5 EXPLORATION CONDUCTED ON EL 8822, 16/9/94 TO 20/12/96**

### **5.1 Regional Aeromagnetic Interpretation**

The geology of the tenement has been previously interpreted as Palaeoproterozoic Warramunga Formation overlain by Palaeozoic and Cainozoic cover (Wyche and Simons, 1987). The BMR aeromagnetics was imaged and interpreted with the same conclusion, as illustrated in Figure 2.

### **5.2 Reconnaissance RAB drilling**

Two RAB drilling programmes were completed on EL 8822. A total of 20 vertical drill holes for 1,402 metres, were drilled. Hole depth varied from 33 to 72 metres. Drill hole locations are shown in Figure 3. The drilling was a reconnaissance programme, conducted to test the extent and thickness of cover, weathering profile, bedrock lithology and bedrock geochemistry. The collar co-ordinates and depth of drill holes are listed in Appendix 1.



### **5.3 Bedrock Lithologies**

Logging of RAB cuttings recorded the details of the Cainozoic, Palaeozoic and possible Palaeoproterozoic lithofacies intersected, which are listed in Appendix 2. Drilling revealed a thin layer of aeolian sands and transported cover overlying a substantial thickness of Cambrian sandstones, chert and quartzite. Drill holes near the centre of the tenement intersected a hematitic siltstone possibly indicating penetration of the Cambrian succession and intersection of Palaeoproterozoic basement.

### **5.4 Geochemistry**

Overburden samples, consisting of at least 2kg of sieved <1mm material from the paleosol horizon, were submitted to Analabs Pty Ltd (WA) for BLEG analysis of Au, Cu and Ag.

Five metre composite bedrock samples were submitted to Australian Laboratory Services, Alice Springs for ZARG analysis of Au (fire assay, method PM205, 1 ppb detection limit), Ag, Cu, Pb, Zn, As, Bi, Cd, Mo, Se and Te (ICP method IC588). All results are summarised in Appendix 3 and Au, Cu, Bi, Pb and Zn illustrated in Figures 5 through 9.

All gold assays were below the 1 ppb Au detection limit, and copper assays ranged from 1 ppm to 92 ppm in the west of the tenement. Bismuth values were uniformly low, but the peak values coincide with peak copper values in the west. Lead values appear erratic in their distribution with a range of 1 to 340 ppm and no systematic pattern.

There is a relatively good correlation between lead and zinc. The geochemical response from possible Warramunga Formation hematitic metasediments was subdued.

### **5.5 Total Expenditure for EL 8822 for the period 16/9/94 to 20/12/96.**

EXPENSE	COST
Employee Costs	\$ 8,469
Overheads	\$ 3,845
Drilling	\$ 15,438
Assays	\$ 2,829
Operating Costs	\$ 8,452
Specialist Services	\$ 2854
Tenement Costs	\$ 960
 TOTAL	 <u>\$ 42,847</u>

4900000

## NORMANDY GOLD LIMITED

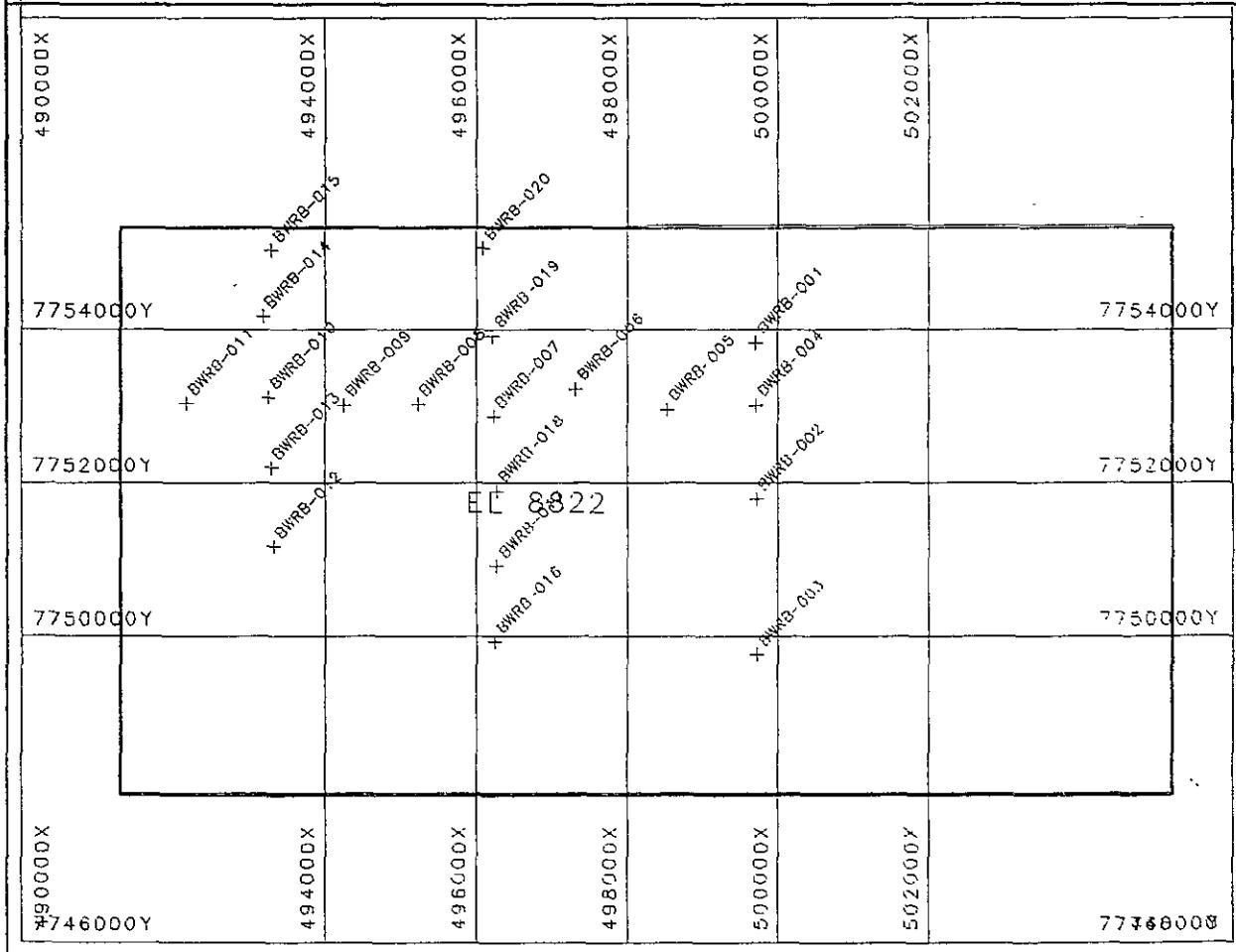
EPENARRA JV - EL 8822

RAB Drilling

Hole Location Plan

SCALE 1:100000	DRAWN DATAMINE	DATE 7 OCT 96	CHECKED MIH
-------------------	-------------------	------------------	----------------

Figure No. 3



49000

## NORMANDY GOLD LIMITED

EPEÑARRA JV - EL 8822

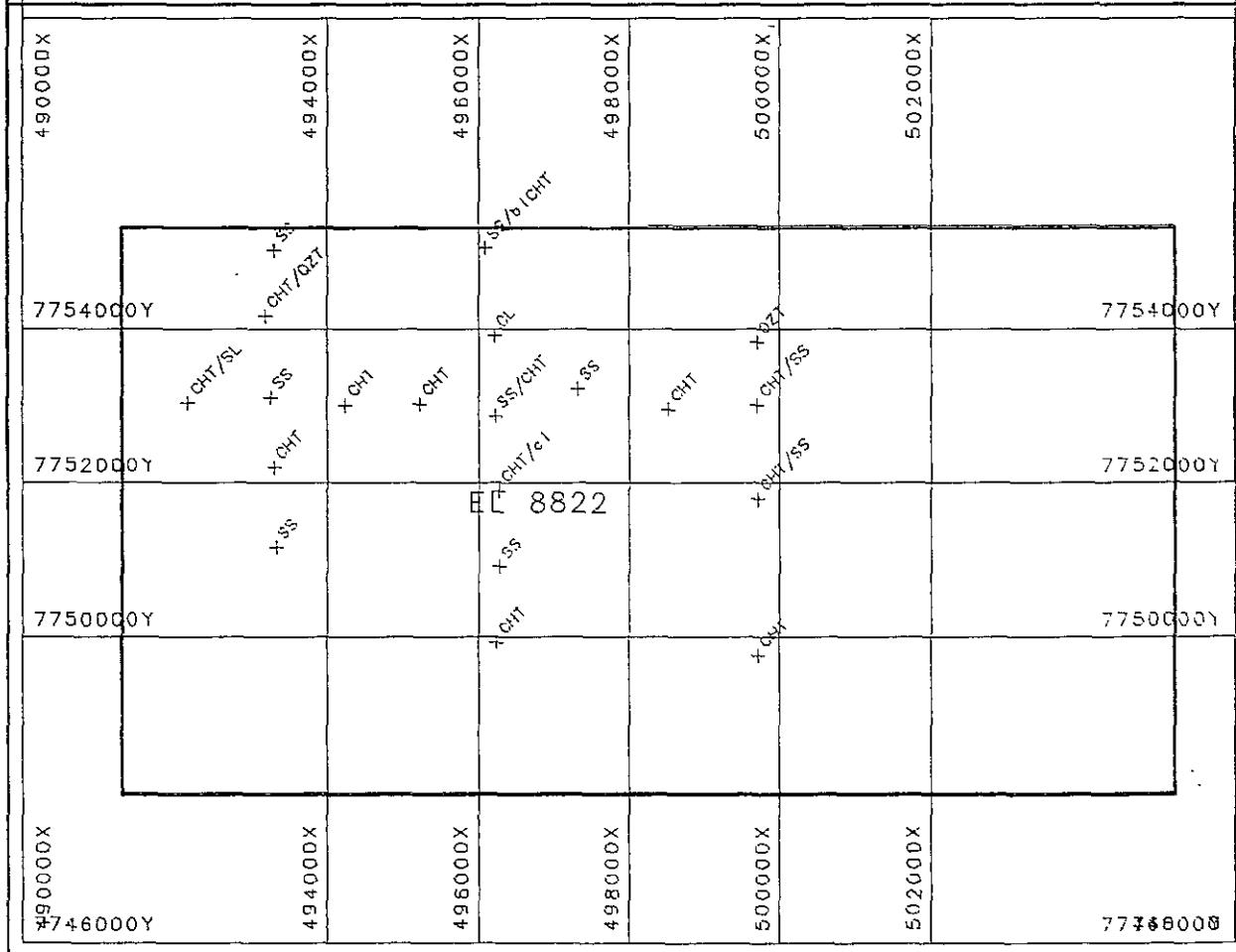
RAB Drilling

## Bottom-of-Hole Lithology

SCALE 1:100000	DRAWN DATAMINE	DATE 7 OCT 96	CHECKED M J H
-------------------	-------------------	------------------	------------------

Figure No. 4

Refer Appendix 1 for  
Lithological Legend



490000

NORMANDY GOLD LIMITED

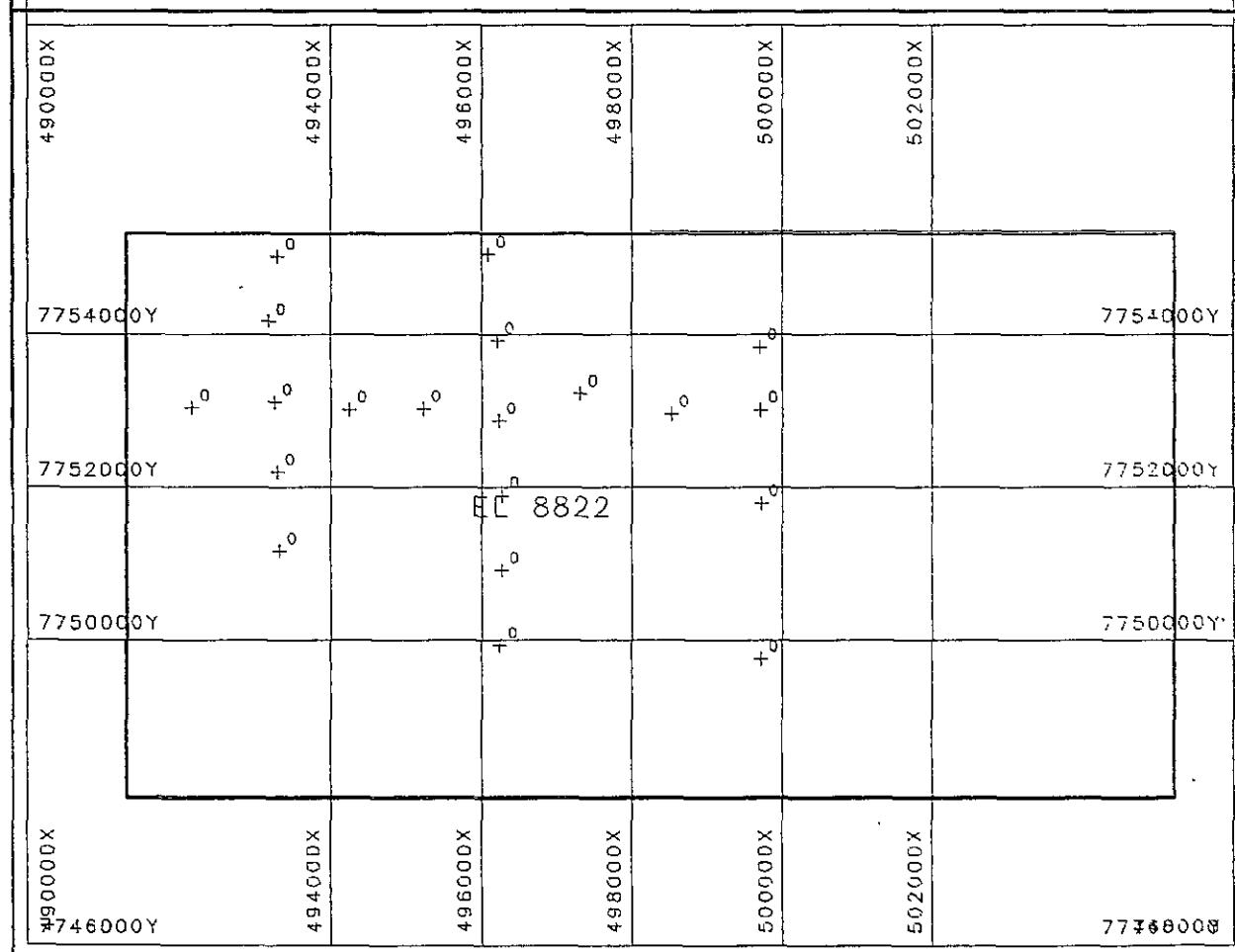
EPENARRA JV - EL 8822

RAB Drilling

Bottom-of-Hole Geochemistry Au (ppb)

SCALE 1:100000	DRAWN DATAMINE	DATE 7 OCT 96	CHECKED MIH

Figure No. 5



4900000

## NORMANDY GOLD LIMITED

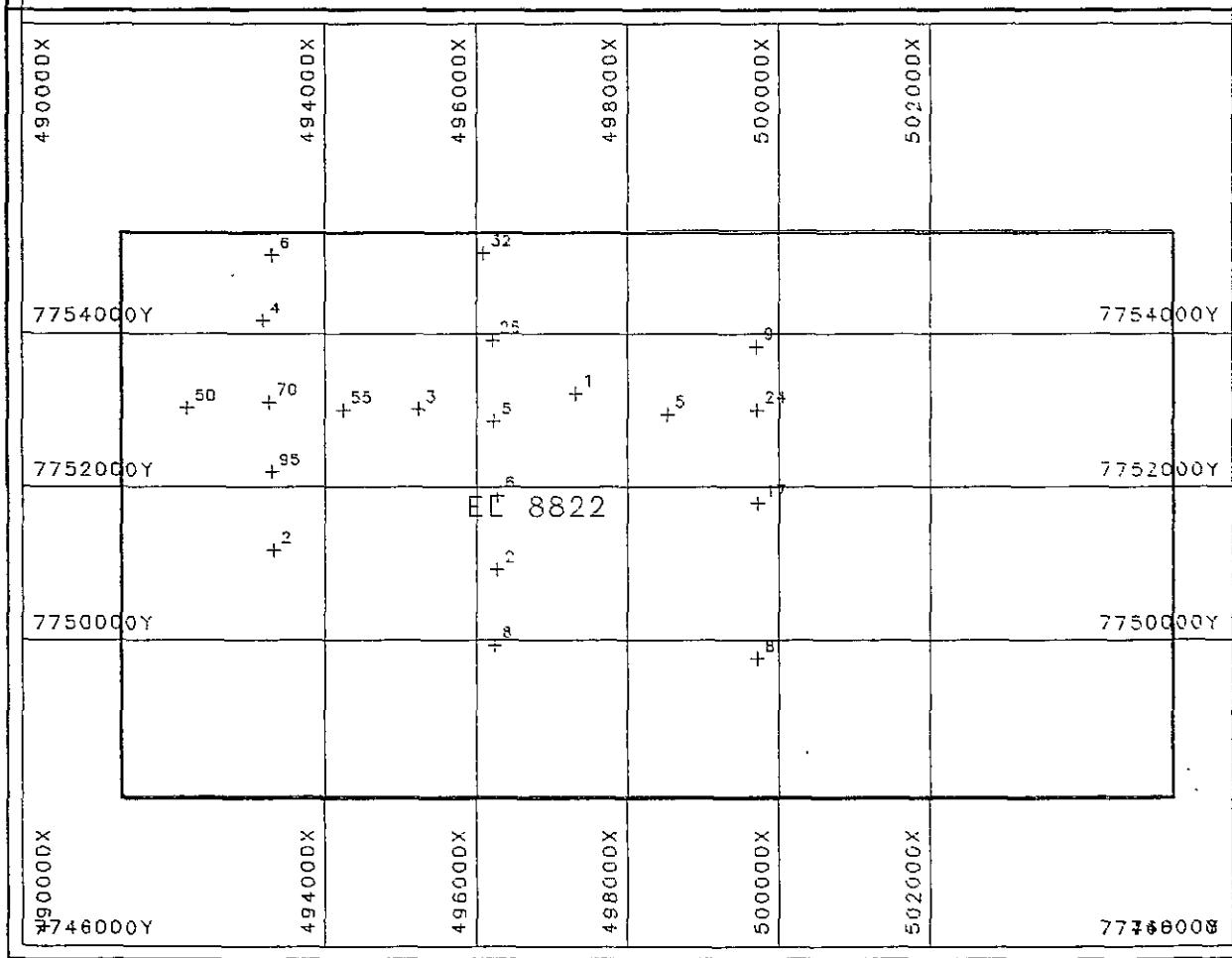
EPENARRA JV - EL 8822

RAB Drilling

Bottom-of-Hole Geochemistry Cu (ppm)

SCALE 1:100000	DRAWN DATAMINE	DATE 7 OCT 96	CHECKED MIH
-------------------	-------------------	------------------	----------------

Figure No. 6



49000

## NORMANDY GOLD LIMITED

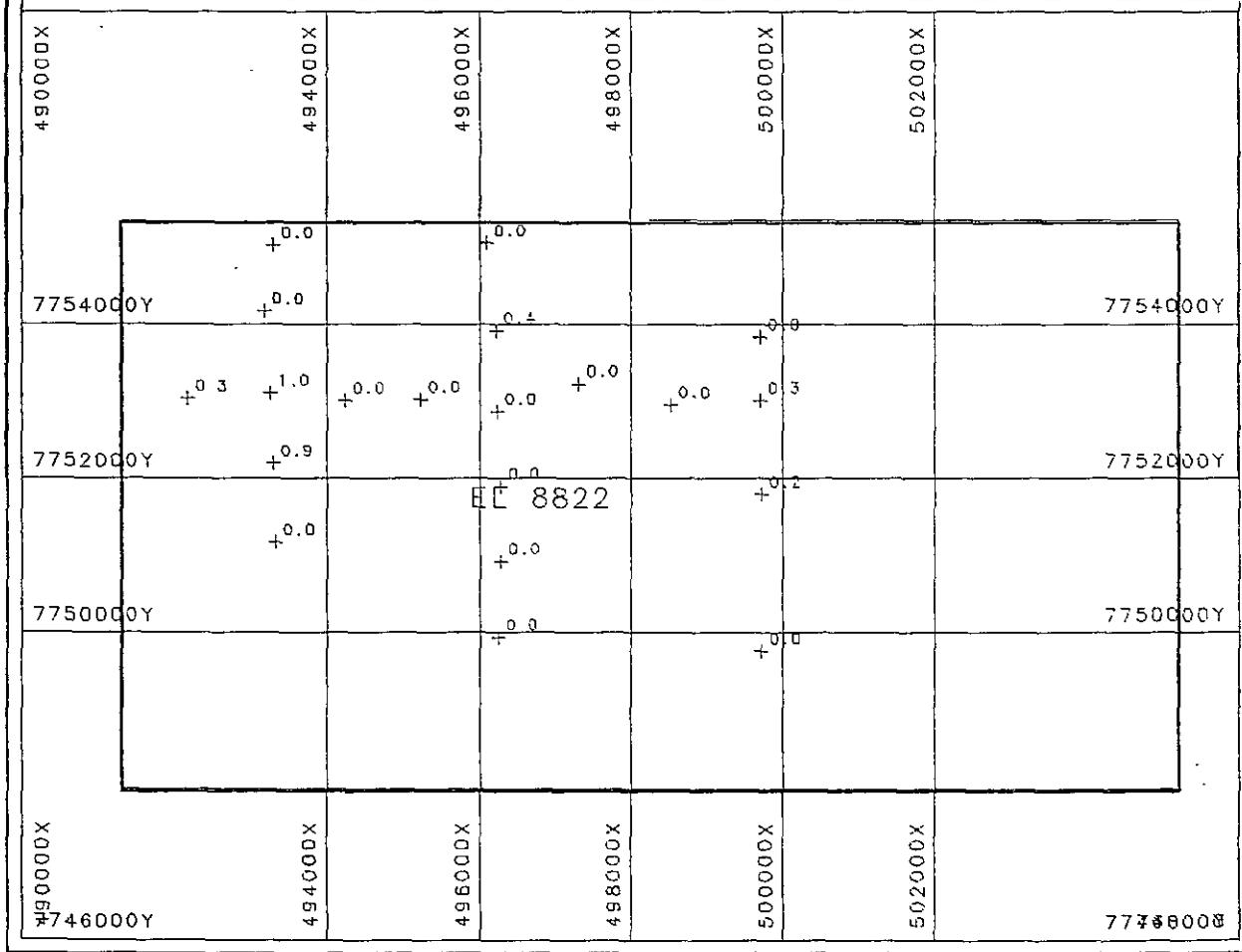
EPENARRA JV - EL 8822

RAB Drilling

### Bottom-of-Hole Geochemistry Bi (ppMO)

SCALE	DRAWN	DATE	CHECKED
1:100000	DATAMINE	7 OCT 96	MIH

Figure No. 7



4900000

## NORMANDY GOLD LIMITED

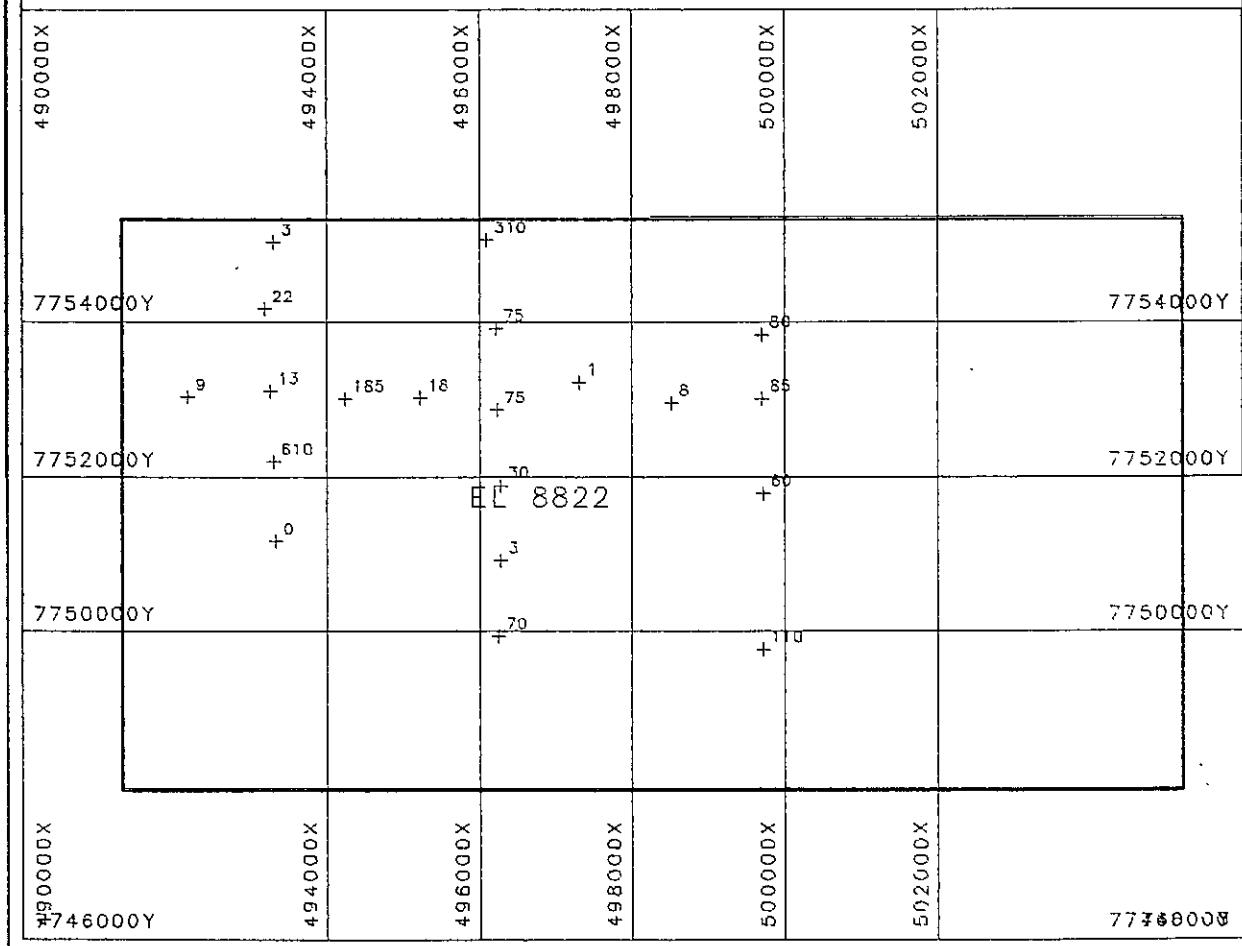
EPENARRA JV - EL 8822

RAB Drilling

Bottom-of-Hole Geochemistry Pb (ppm)

SCALE 1:100000	DRAWN DATAMINE	DATE 7 OCT 96	CHECKED MIH

Figure No. 8



4900000

## NORMANDY GOLD LIMITED

EPENARRA JV - EL 8822

RAB Drilling

Bottom-of-Hole Geochemistry Zn (ppm)

SCALE 1:100000	DRAWN DATAMINE	DATE 7 OCT 96	CHECKED M IH
-------------------	-------------------	------------------	-----------------

Figure No. 9

4900000X

494000X

496000X

498000X

500000X

502000X

7754000Y

+<sup>3</sup>+<sup>30</sup>

7754000Y

7752000Y

+<sup>26</sup>+<sup>48</sup>+<sup>60</sup>+<sup>1</sup>+<sup>2</sup>+<sup>30</sup>+<sup>300</sup>

7752000Y

7750000Y

+<sup>0</sup>

EL 8822

+<sup>1</sup>

7750000Y

4905000X

494000X

496000X

498000X

500000X

502000X

4746000Y

77366008

## **6 CONCLUSIONS**

The reconnaissance RAB drilling programme indicated a substantial thickness of Cambrian Georgina Basin succession overlying interpreted Palaeoproterozoic basement within EL 8822. The thickness of cover requires testing of specific geophysical targets for efficient exploration. The lack of intense discrete magnetic anomalies and disappointing geochemical results from RAB drilling significantly down graded the prospectivity of the tenement.

## **7 ENVIRONMENTAL AND REHABILITATION FACTORS**

Normandy Gold Ltd has commenced an active rehabilitation programme over much of the Tennant Creek Goldfield. Several rehabilitation programmes are currently being conducted at Nobles Nob, Eldorado, White Devil, the smelter site and Warrego.

An Environmental Management Plan for the company's Tennant Creek Operation (Fowler, 1993) has been submitted to the Department of Mines and Energy under separate cover. This plan details the strategies to be implemented over various areas following the completion of exploration programmes and mining operations.

Exploration over the relinquished portions of EL 8822 which caused substantial disturbance was restricted to RAB drilling. All drill holes were plugged and the clearance of access was kept to an absolute minimum.

## **8 REFERENCES**

- Compston, D.M., 1995. Time constraints on the evaluation of the Tennant Creek Block, northern Australia. Precamb. Res. 71, 107-29.
- Donnellan, N., K.J. Hussey and R.S. Morrison. 1995. Flynn (5759) and Tennant Creek (5758) 1:100,00 Geological Map Series. Dept Mines and Energy, NT Geol Surv.
- Fowler, B., 1993. Environmental Management Plan 1993. Report No. 94177. PosGold Limited.
- Hatcher, M.I., 1996. Second Annual Report for Exploration Licence 8822 for the period 16/9/95 to 15/9/96, Tennant Creek District, Northern Territory, Bonney Well Prospect. Report No. 96094 PosGold Ltd.
- Lowe, G.M. 1995. First Annual Report for Exploration Licence 8822 for the period 16/9/94 to 15/9/95, Tennant Creek District, Northern Territory. Bonney Well Prospect. Report No. 95100. PosGold Ltd.
- Morris, T. 1996. First Relinquishment Report for Exploration Licence 8822 for the period 16/9/94 to 15/9/96, Tennant Creek District, Northern Territory. Bonney Well Prospect. Report No. 96124. PosGold Ltd.
- Walley, A.M. and B.A. Simons, 1987. Frew River, Northern Territory - 1:250,000 Geological Series Explanatory Notes SF 53-3. Dept Mines & Energy NT Geol Surv.

## **APPENDIX ONE**

RAB DRILL HOLE LOCATIONS

## APPENDIX 1: RAB DRILL HOLE LOCATIONS

HOLE NUMBER	Easting AMG	Northing AMG	RL (m) ASL	Total Depth metres
BWRB-001	499700.00	7753830.50	316.00	63.00
BWRB-002	499710.00	7751795.00	322.00	64.00
BWRB-003	799715.00	7749758.50	316.70	65.00
BWRB-004	499703.20	7753012.00	321.00	60.00
BWRB-005	498527.30	7752956.00	320.92	67.00
BWRB-006	497320.30	7753225.50	327.92	59.00
BWRB-007	496225.30	7752865.00	325.63	61.00
BWRB-008	495224.50	7753024.00	326.22	53.00
BWRB-009	494240.20	7753011.00	327.88	64.00
BWRB-010	493251.30	7753112.00	330.50	72.00
BWRB-011	492167.00	7753031.00	333.19	72.00
BWRB-012	493319.20	7751172.00	330.97	60.00
BWRB-013	493291.50	7752200.00	328.64	72.00
BWRB-014	493176.20	7754160.00	330.33	72.00
BWRB-015	493298.40	7755010.50	329.34	66.00
BWRB-016	496244.60	7749932.00	327.12	72.00
BWRB-017	496276.10	7750920.00	334.93	72.00
BWRB-018	496273.20	7751900.00	326.93	72.00
BWRB-019	496212.40	7753912.00	336.34	72.00
BWRB-020	496091.20	7755033.50	330.70	72.00

## **APPENDIX TWO**

### **RAB DRILL HOLE LITHOLOGICAL LOGS**

**APPENDIX 2: RAB DRILLING - LITHOLOGICAL LOGS**

HOLE NUMBER	Easting AMG	Northing AMG	RL (m) ASL	FROM metres	TO metres	LITHOLOGY
BWRB-001	499700.00	7753830.50	316.00	0.00	5.00	SAND
BWRB-001	499700.00	7753830.50	307.00	5.00	13.00	CO
BWRB-001	499700.00	7753830.50	290.00	13.00	39.00	SS/h
BWRB-001	499700.00	7753830.50	271.00	39.00	51.00	SS/CHT
BWRB-001	499700.00	7753830.50	263.50	51.00	54.00	SL/CHT
BWRB-001	499700.00	7753830.50	257.50	54.00	63.00	QZT
BWRB-002	499710.00	7751795.00	322.00	0.00	4.00	SAND
BWRB-002	499710.00	7751795.00	317.00	4.00	6.00	CO
BWRB-002	499710.00	7751795.00	310.50	6.00	17.00	CO/SS/h
BWRB-002	499710.00	7751795.00	302.50	17.00	22.00	CO
BWRB-002	499710.00	7751795.00	288.00	22.00	46.00	CL/h
BWRB-002	499710.00	7751795.00	268.50	46.00	61.00	CL/CHT
BWRB-002	499710.00	7751795.00	259.50	61.00	64.00	CHT/SS
BWRB-003	799715.00	7749758.50	316.70	0.00	4.00	SAND
BWRB-003	799715.00	7749758.50	307.70	4.00	14.00	CO/SS/h
BWRB-003	799715.00	7749758.50	300.20	14.00	19.00	CO
BWRB-003	799715.00	7749758.50	284.70	19.00	45.00	SS/h
BWRB-003	799715.00	7749758.50	265.70	45.00	57.00	SS/CL
BWRB-003	799715.00	7749758.50	255.70	57.00	65.00	CHT
BWRB-004	499703.20	7753012.00	321.00	0.00	5.00	CO
BWRB-004	499703.20	7753012.00	312.50	5.00	12.00	GRAVEL
BWRB-004	499703.20	7753012.00	294.50	12.00	41.00	SS/h
BWRB-004	499703.20	7753012.00	279.00	41.00	43.00	SS/blcl
BWRB-004	499703.20	7753012.00	272.50	43.00	54.00	CHT/q
BWRB-004	499703.20	7753012.00	264.00	54.00	60.00	CHT/SS
BWRB-005	498527.30	7752956.00	320.92	0.00	5.00	CO
BWRB-005	498527.30	7752956.00	312.92	5.00	11.00	SS/q
BWRB-005	498527.30	7752956.00	309.42	11.00	12.00	GRAVEL
BWRB-005	498527.30	7752956.00	305.92	12.00	18.00	SS/CG
BWRB-005	498527.30	7752956.00	290.92	18.00	42.00	SS
BWRB-005	498527.30	7752956.00	269.92	42.00	60.00	SL/blq
BWRB-005	498527.30	7752956.00	257.42	60.00	67.00	CHT
BWRB-006	497320.30	7753225.50	327.92	0.00	4.00	CO/q
BWRB-006	497320.30	7753225.50	321.92	4.00	8.00	GRAVEL
BWRB-006	497320.30	7753225.50	304.92	8.00	38.00	SS
BWRB-006	497320.30	7753225.50	279.42	38.00	59.00	SS
BWRB-007	496225.30	7752865.00	325.63	0.00	3.00	CO
BWRB-007	496225.30	7752865.00	314.13	3.00	20.00	SS
BWRB-007	496225.30	7752865.00	295.63	20.00	40.00	SS
BWRB-007	496225.30	7752865.00	279.13	40.00	53.00	SS
BWRB-007	496225.30	7752865.00	268.63	53.00	61.00	SS/CHT
BWRB-008	495224.50	7753024.00	326.22	0.00	3.00	CO
BWRB-008	495224.50	7753024.00	315.22	3.00	19.00	SS/clh
BWRB-008	495224.50	7753024.00	305.22	19.00	23.00	GRAVEL
BWRB-008	495224.50	7753024.00	297.22	23.00	35.00	SS
BWRB-008	495224.50	7753024.00	283.72	35.00	50.00	SS
BWRB-008	495224.50	7753024.00	274.72	50.00	53.00	CHT
BWRB-009	494240.20	7753011.00	327.88	0.00	4.00	CO
BWRB-009	494240.20	7753011.00	322.88	4.00	6.00	CO/cl
BWRB-009	494240.20	7753011.00	314.38	6.00	21.00	SS
BWRB-009	494240.20	7753011.00	297.88	21.00	39.00	SS
BWRB-009	494240.20	7753011.00	283.38	39.00	50.00	SS

**APPENDIX 2: RAB DRILLING - LITHOLOGICAL LOGS**

HOLE NUMBER	Easting AMG	Northing AMG	RL (m) ASL	FROM metres	TO metres	LITHOLOGY
BWRB-009	494240.20	7753011.00	270.88	50.00	64.00	CHT
BWRB-010	493251.30	7753112.00	330.50	0.00	4.00	CO
BWRB-010	493251.30	7753112.00	319.00	4.00	19.00	SS
BWRB-010	493251.30	7753112.00	304.00	19.00	34.00	SS
BWRB-010	493251.30	7753112.00	287.50	34.00	52.00	SS
BWRB-010	493251.30	7753112.00	271.50	52.00	66.00	CHT
BWRB-010	493251.30	7753112.00	263.00	66.00	69.00	CL
BWRB-010	493251.30	7753112.00	260.00	69.00	72.00	SS
BWRB-011	492167.00	7753031.00	333.19	0.00	4.00	CO
BWRB-011	492167.00	7753031.00	328.19	4.00	6.00	GRAVEL
BWRB-011	492167.00	7753031.00	321.19	6.00	18.00	SS
BWRB-011	492167.00	7753031.00	312.69	18.00	23.00	SS
BWRB-011	492167.00	7753031.00	305.69	23.00	32.00	CG
BWRB-011	492167.00	7753031.00	299.69	32.00	35.00	SS
BWRB-011	492167.00	7753031.00	292.19	35.00	47.00	SS/SL
BWRB-011	492167.00	7753031.00	284.69	47.00	50.00	CHT
BWRB-011	492167.00	7753031.00	280.19	50.00	56.00	CHT
BWRB-011	492167.00	7753031.00	272.94	56.00	64.50	CHT
BWRB-011	492167.00	7753031.00	264.94	64.50	72.00	CHT/SL
BWRB-012	493319.20	7751172.00	330.97	0.00	4.00	CO
BWRB-012	493319.20	7751172.00	325.97	4.00	6.00	SS
BWRB-012	493319.20	7751172.00	321.97	6.00	12.00	SS
BWRB-012	493319.20	7751172.00	302.47	12.00	45.00	SS
BWRB-012	493319.20	7751172.00	278.47	45.00	60.00	SS
BWRB-013	493291.50	7752200.00	328.64	0.00	3.00	CO
BWRB-013	493291.50	7752200.00	323.64	3.00	7.00	SS
BWRB-013	493291.50	7752200.00	320.64	7.00	9.00	GRAVEL
BWRB-013	493291.50	7752200.00	311.64	9.00	25.00	SS/CG
BWRB-013	493291.50	7752200.00	291.64	25.00	49.00	SS
BWRB-013	493291.50	7752200.00	274.14	49.00	60.00	SS/QZT
BWRB-013	493291.50	7752200.00	262.64	60.00	72.00	CHT
BWRB-014	493176.20	7754160.00	330.33	0.00	3.00	CO
BWRB-014	493176.20	7754160.00	325.83	3.00	6.00	SS
BWRB-014	493176.20	7754160.00	316.33	6.00	22.00	SS
BWRB-014	493176.20	7754160.00	307.33	22.00	24.00	SS
BWRB-014	493176.20	7754160.00	301.83	24.00	33.00	SS
BWRB-014	493176.20	7754160.00	288.33	33.00	51.00	SS
BWRB-014	493176.20	7754160.00	271.33	51.00	67.00	SS/QZT
BWRB-014	493176.20	7754160.00	260.83	67.00	72.00	CHT/QZT
BWRB-015	493298.40	7755010.50	329.34	0.00	4.00	CO
BWRB-015	493298.40	7755010.50	324.34	4.00	6.00	CL
BWRB-015	493298.40	7755010.50	322.84	6.00	7.00	GRAVEL
BWRB-015	493298.40	7755010.50	310.84	7.00	30.00	SS/CL
BWRB-015	493298.40	7755010.50	286.34	30.00	56.00	SS
BWRB-015	493298.40	7755010.50	268.34	56.00	66.00	SS
BWRB-016	496244.60	7749932.00	327.12	0.00	4.00	SAND
BWRB-016	496244.60	7749932.00	321.12	4.00	8.00	GRAVEL
BWRB-016	496244.60	7749932.00	310.62	8.00	25.00	CO/CL
BWRB-016	496244.60	7749932.00	300.62	25.00	28.00	SS/h
BWRB-016	496244.60	7749932.00	285.62	28.00	55.00	SS/blcl
BWRB-016	496244.60	7749932.00	263.62	55.00	72.00	CHT
BWRB-017	496276.10	7750920.00	334.93	0.00	3.00	CO/q

**APPENDIX 2: RAB DRILLING - LITHOLOGICAL LOGS**

HOLE NUMBER	Easting AMG	Northing AMG	RL (m) ASL	FROM metres	TO metres	LITHOLOGY
BWRB-017	496276.10	7750920.00	329.93	3.00	7.00	SS
BWRB-017	496276.10	7750920.00	327.43	7.00	8.00	SS
BWRB-017	496276.10	7750920.00	318.43	8.00	25.00	GRAVEL
BWRB-017	496276.10	7750920.00	299.43	25.00	46.00	SL/SS
BWRB-017	496276.10	7750920.00	275.93	46.00	72.00	SS
BWRB-018	496273.20	7751900.00	326.93	0.00	3.00	CO/q
BWRB-018	496273.20	7751900.00	322.93	3.00	5.00	CL/q
BWRB-018	496273.20	7751900.00	319.43	5.00	10.00	SS
BWRB-018	496273.20	7751900.00	312.93	10.00	18.00	SS/h
BWRB-018	496273.20	7751900.00	307.93	18.00	20.00	SS
BWRB-018	496273.20	7751900.00	296.43	20.00	41.00	SS
BWRB-018	496273.20	7751900.00	276.43	41.00	60.00	SL/bL
BWRB-018	496273.20	7751900.00	260.93	60.00	72.00	CHT/cl
BWRB-019	496212.40	7753912.00	336.34	0.00	4.00	CO/cl
BWRB-019	496212.40	7753912.00	320.34	4.00	28.00	SS
BWRB-019	496212.40	7753912.00	298.84	28.00	47.00	SS
BWRB-019	496212.40	7753912.00	285.84	47.00	54.00	SS
BWRB-019	496212.40	7753912.00	279.34	54.00	60.00	SL/bLCHT
BWRB-019	496212.40	7753912.00	271.34	60.00	70.00	CHT/q
BWRB-019	496212.40	7753912.00	265.34	70.00	72.00	CL
BWRB-020	496091.20	7755033.50	330.70	0.00	4.00	CO/qcl
BWRB-020	496091.20	7755033.50	325.70	4.00	6.00	SAND
BWRB-020	496091.20	7755033.50	317.70	6.00	20.00	GRAVEL
BWRB-020	496091.20	7755033.50	301.70	20.00	38.00	SS/hcl
BWRB-020	496091.20	7755033.50	285.70	38.00	52.00	SS/h
BWRB-020	496091.20	7755033.50	268.70	52.00	72.00	SS/bLCHT

## **APPENDIX THREE**

### **GEOCHEMISTRY**

### APPENDIX 3: RAB DRILLING - GEOCHEMISTRY

HOLE NUMBER	SAMPLE NUMBER		Au PPB	Cu PPM	Ag PPM
		DL	0.01	0.01	0.50
BWRB-004	552208		0.35	0.17	0.5
BWRB-005	552209		0.45	0.24	1
BWRB-006	552210		0.2	0.22	0.5
BWRB-007	552211		0.5	0.21	1
BWRB-008	552212		0.6	0.3	1
BWRB-009	552213		0.4	0.16	1
BWRB-010	552214		0.45	0.2	1
BWRB-011	552215		0.45	0.24	1
BWRB-012	552216		0.4	0.16	2
BWRB-013	552217		0.5	0.17	1.5
BWRB-014	552218		0.6	0.19	1
BWRB-015	552219		0.4	0.23	1.5
BWRB-016	552220		0.45	0.17	1
BWRB-017	552221		0.5	0.23	1
BWRB-018	552222		0.6	0.22	1.5
BWRB-019	552223		0.5	0.2	1
BWRB-020	552224		0.45	0.11	0.5

**APPENDIX 3: RAB DRILLING - GEOCHEMISTRY**

HOLE NUMBER	SAMPLE NUMBER	FROM metres	TO metres		AU PPB	AG PPM	CU PPM	PB PPM	ZN PPM
				DL	1.00	0.10	1.00	1.00	1.00
BWRB-001	548209	48.00	53.00	TR	0.20	10.00	95.00	15.00	
BWRB-001	548210	53.00	58.00	TR	0.60	24.00	640.00	380.00	
BWRB-001	548211	58.00	63.00	TR	0.30	9.00	80.00	85.00	
BWRB-002	548519	5.00	6.00	TR	TR	13.00	7.00	17.00	
BWRB-002	548521	21.00	22.00	TR	TR	13.00	11.00	15.00	
BWRB-002	548218	52.00	57.00	TR	TR	5.00	34.00	5.00	
BWRB-002	548219	57.00	62.00	TR	0.10	15.00	170.00	130.00	
BWRB-002	548220	62.00	64.00	TR	0.10	17.00	60.00	70.00	
BWRB-003	548523	18.00	19.00	TR	TR	12.00	8.00	15.00	
BWRB-003	548227	49.00	54.00	TR	TR	7.00	8.00	3.00	
BWRB-003	548228	54.00	59.00	TR	TR	7.00	17.00	6.00	
BWRB-003	548229	59.00	65.50	TR	0.10	9.00	110.00	7.00	
BWRB-004	552415	4.00	5.00	TR	TR	9.00	6.00	6.00	
BWRB-004	552874	45.00	50.00	TR	TR	2.00	3.00	1.00	
BWRB-004	552875	50.00	55.00	TR	TR	26.00	22.00	105.00	
BWRB-004	552876	55.00	60.00	TR	TR	24.00	85.00	300.00	
BWRB-005	552415	4.00	5.00	TR	TR	9.00	6.00	6.00	
BWRB-005	552887	55.00	60.00	TR	TR	2.00	2.00	3.00	
BWRB-005	552888	60.00	65.00	TR	TR	3.00	4.00	30.00	
BWRB-005	552889	65.00	67.00	TR	TR	5.00	8.00	30.00	
BWRB-006	552898	44.00	49.00	TR	TR	2.00	1.00	1.00	
BWRB-006	552899	49.00	54.00	TR	TR	2.00	TR	1.00	
BWRB-006	552900	54.00	59.00	TR	TR	1.00	1.00	2.00	
BWRB-007	552910	48.00	53.00	TR	TR	3.00	4.00	1.00	
BWRB-007	552911	53.00	58.00	TR	TR	4.00	42.00	3.00	
BWRB-007	552912	58.00	61.00	TR	TR	5.00	75.00	5.00	
BWRB-008	552920	38.00	43.00	TR	TR	3.00	3.00	1.00	
BWRB-008	552921	43.00	48.00	TR	TR	3.00	3.00	1.00	
BWRB-008	552922	48.00	53.00	TR	TR	3.00	18.00	1.00	
BWRB-009	552932	49.00	54.00	TR	TR	3.00	28.00	1.00	
BWRB-009	552933	54.00	59.00	TR	TR	6.00	65.00	3.00	
BWRB-009	552934	59.00	64.00	TR	0.30	55.00	185.00	60.00	
BWRB-010	552946	59.00	64.00	TR	TR	4.00	34.00	2.00	
BWRB-010	552947	64.00	69.00	TR	0.20	170.00	80.00	48.00	
BWRB-010	552948	69.00	72.00	TR	TR	70.00	13.00	48.00	
BWRB-011	552960	59.00	64.00	TR	TR	6.00	60.00	5.00	
BWRB-011	552961	64.00	69.00	TR	0.50	220.00	105.00	145.00	
BWRB-011	552962	69.00	72.00	TR	TR	50.00	9.00	26.00	
BWRB-012	552972	44.00	49.00	TR	TR	3.00	7.00	1.00	
BWRB-012	552973	49.00	54.00	TR	TR	3.00	2.00	2.00	
BWRB-012	552974	54.00	60.00	TR	TR	2.00	TR	TR	
BWRB-013	552986	58.00	63.00	TR	TR	2.00	17.00	1.00	
BWRB-013	552987	63.00	68.00	TR	TR	7.00	260.00	11.00	
BWRB-013	552988	68.00	72.00	TR	0.60	95.00	610.00	830.00	
BWRB-014	553000	58.00	63.00	TR	TR	2.00	6.00	7.00	
BWRB-014	552701	63.00	68.00	TR	TR	5.00	4.00	5.00	
BWRB-014	552702	68.00	72.00	TR	TR	4.00	22.00	3.00	
BWRB-015	552713	54.00	59.00	TR	TR	3.00	6.00	2.00	

**APPENDIX 3: RAB DRILLING - GEOCHEMISTRY**

HOLE NUMBER	SAMPLE NUMBER	FROM metres	TO metres	BI DL	AS PPM 0.20	CD PPM 0.20	MO PPM	SE PPM 0.50	TE PPM 0.50
BWRB-001	548209	48.00	53.00	TR	0.20	TR	1.70	TR	TR
BWRB-001	548210	53.00	58.00	0.30	12.00	0.30	1.20	TR	TR
BWRB-001	548211	58.00	63.00	TR	4.90	0.30	1.30	TR	TR
BWRB-002	548519	5.00	6.00	0.20	1.60	TR	0.80	TR	TR
BWRB-002	548521	21.00	22.00	0.30	1.80	TR	1.80	TR	TR
BWRB-002	548218	52.00	57.00	TR	TR	TR	1.50	TR	TR
BWRB-002	548219	57.00	62.00	0.20	6.10	0.30	3.10	TR	TR
BWRB-002	548220	62.00	64.00	0.20	6.20	0.10	3.20	TR	TR
BWRB-003	548523	18.00	19.00	0.30	3.40	TR	0.90	TR	TR
BWRB-003	548227	49.00	54.00	TR	0.60	TR	1.30	TR	TR
BWRB-003	548228	54.00	59.00	0.20	2.20	TR	2.90	TR	TR
BWRB-003	548229	59.00	65.50	TR	1.90	TR	4.20	TR	TR
BWRB-004	552415	4.00	5.00	0.30	1.40	TR	1.30	TR	TR
BWRB-004	552874	45.00	50.00	TR	TR	TR	1.30	TR	TR
BWRB-004	552875	50.00	55.00	TR	1.20	TR	1.10	TR	TR
BWRB-004	552876	55.00	60.00	0.30	11.00	0.50	2.80	TR	TR
BWRB-005	552415	4.00	5.00	0.30	1.40	TR	1.30	TR	TR
BWRB-005	552887	55.00	60.00	TR	TR	TR	1.00	TR	TR
BWRB-005	552888	60.00	65.00	TR	2.10	TR	2.90	TR	TR
BWRB-005	552889	65.00	67.00	TR	1.60	TR	1.80	TR	TR
BWRB-006	552898	44.00	49.00	TR	TR	TR	0.70	TR	TR
BWRB-006	552899	49.00	54.00	TR	TR	TR	0.50	TR	TR
BWRB-006	552900	54.00	59.00	TR	TR	TR	1.40	TR	TR
BWRB-007	552910	48.00	53.00	TR	TR	TR	0.50	TR	TR
BWRB-007	552911	53.00	58.00	TR	0.50	TR	2.80	TR	TR
BWRB-007	552912	58.00	61.00	TR	0.50	TR	1.40	TR	TR
BWRB-008	552920	38.00	43.00	TR	TR	TR	0.80	TR	TR
BWRB-008	552921	43.00	48.00	TR	TR	TR	0.60	TR	TR
BWRB-008	552922	48.00	53.00	TR	0.30	TR	2.70	TR	TR
BWRB-009	552932	49.00	54.00	TR	0.60	TR	1.90	TR	TR
BWRB-009	552933	54.00	59.00	TR	1.00	TR	4.10	TR	TR
BWRB-009	552934	59.00	64.00	TR	3.10	0.40	1.10	TR	TR
BWRB-010	552946	59.00	64.00	TR	0.40	TR	4.50	TR	TR
BWRB-010	552947	64.00	69.00	0.40	10.00	0.10	2.10	TR	TR
BWRB-010	552948	69.00	72.00	1.00	3.80	0.10	2.40	TR	TR
BWRB-011	552960	59.00	64.00	TR	0.30	TR	1.20	TR	TR
BWRB-011	552961	64.00	69.00	1.10	15.00	0.40	2.70	TR	TR
BWRB-011	552962	69.00	72.00	0.30	2.90	TR	0.80	TR	TR
BWRB-012	552972	44.00	49.00	TR	0.30	TR	0.90	TR	TR
BWRB-012	552973	49.00	54.00	TR	0.40	TR	1.40	TR	TR
BWRB-012	552974	54.00	60.00	TR	TR	TR	0.60	TR	TR
BWRB-013	552986	58.00	63.00	TR	0.70	TR	2.30	TR	TR
BWRB-013	552987	63.00	68.00	TR	1.40	TR	1.40	TR	TR
BWRB-013	552988	68.00	72.00	0.90	30.00	1.10	3.90	TR	TR
BWRB-014	553000	58.00	63.00	TR	0.20	TR	0.60	TR	TR
BWRB-014	552701	63.00	68.00	TR	0.40	TR	0.60	TR	TR
BWRB-014	552702	68.00	72.00	TR	0.60	TR	3.10	TR	TR
BWRB-015	552713	54.00	59.00	TR	0.20	TR	0.60	TR	TR

**APPENDIX 3: RAB DRILLING - GEOCHEMISTRY**

HOLE NUMBER	SAMPLE NUMBER	FROM metres	TO metres		AU PPB	AG PPM	CU PPM	PB PPM	ZN PPM
				DL	1.00	0.10	1.00	1.00	1.00
BWRB-015	552714	59.00	64.00		TR	TR	5.00	3.00	2.00
BWRB-015	552715	64.00	66.00		TR	TR	6.00	3.00	3.00
BWRB-016	552727	59.00	64.00		TR	TR	5.00	4.00	5.00
BWRB-016	552728	64.00	69.00		TR	TR	5.00	12.00	5.00
BWRB-016	552729	69.00	72.00		TR	0.10	8.00	70.00	38.00
BWRB-017	552741	58.00	63.00		TR	TR	1.00	2.00	TR
BWRB-017	552742	63.00	68.00		TR	TR	1.00	1.00	TR
BWRB-017	552743	68.00	72.00		TR	TR	2.00	3.00	1.00
BWRB-018	552755	58.00	63.00		TR	TR	3.00	1.00	2.00
BWRB-018	552756	63.00	68.00		TR	TR	4.00	5.00	1.00
BWRB-018	552757	68.00	72.00		TR	TR	6.00	30.00	3.00
BWRB-019	552769	59.00	64.00		TR	TR	2.00	4.00	1.00
BWRB-019	552770	64.00	69.00		TR	TR	4.00	55.00	4.00
BWRB-019	552771	69.00	72.00		TR	TR	26.00	75.00	200.00
BWRB-020	552783	59.00	64.00		TR	TR	4.00	30.00	5.00
BWRB-020	552784	64.00	69.00		TR	0.10	5.00	590.00	4.00
BWRB-020	552785	69.00	72.00		TR	0.20	40.00	400.00	40.00
BWRB-020	552786	69.00	72.00		TR	0.30	32.00	310.00	30.00

**APPENDIX 3: RAB DRILLING - GEOCHEMISTRY**

HOLE NUMBER	SAMPLE NUMBER	FROM metres	TO metres		BI	AS	CD	MO	SE	TE
					PPM	PPM	PPM	PPM	PPM	PPM
		DL	0.20	0.20	0.10	0.20	0.50	0.50		
BWRB-015	552714	59.00	64.00		TR	2.50	TR	1.50	TR	TR
BWRB-015	552715	64.00	66.00		TR	1.00	TR	1.20	TR	TR
BWRB-016	552727	59.00	64.00		TR	0.60	TR	3.20	TR	TR
BWRB-016	552728	64.00	69.00		TR	0.30	TR	1.00	TR	TR
BWRB-016	552729	69.00	72.00		TR	1.10	TR	3.30	TR	TR
BWRB-017	552741	58.00	63.00		TR	TR	TR	0.40	TR	TR
BWRB-017	552742	63.00	68.00		TR	TR	TR	0.90	TR	TR
BWRB-017	552743	68.00	72.00		TR	TR	TR	1.10	TR	TR
BWRB-018	552755	58.00	63.00		TR	0.30	TR	3.70	TR	TR
BWRB-018	552756	63.00	68.00		TR	TR	TR	1.30	TR	TR
BWRB-018	552757	68.00	72.00		TR	0.40	TR	5.10	TR	TR
BWRB-019	552769	59.00	64.00		TR	TR	TR	2.10	TR	TR
BWRB-019	552770	64.00	69.00		TR	0.70	TR	4.10	TR	TR
BWRB-019	552771	69.00	72.00		0.40	11.00	0.20	2.40	TR	TR
BWRB-020	552783	59.00	64.00		TR	1.40	TR	4.30	TR	TR
BWRB-020	552784	64.00	69.00		TR	0.70	TR	1.10	TR	TR
BWRB-020	552785	69.00	72.00		0.30	3.40	TR	3.20	TR	TR
BWRB-020	552786	69.00	72.00		TR	2.40	TR	1.60	TR	TR

## **APPENDIX FOUR**

### **BIBLIOGRAPHIC DATA SHEET**

## BIBLIOGRAPHIC DATA SHEET

REPORT NUMBER 97017

REPORT NAME FINAL REPORT FOR EXPLORATION LICENCE  
8822 FOR THE PERIOD 16/9/94 TO 20/12/96,  
TENNANT CREEK DISTRICT, NORTHERN  
TERRITORY, BONNEY WELL PROSPECT

PROSPECT NAME(S) EL 8822  
BONNEY WELL PROSPECT

OWNER/JV PARTNERS NORMANDY GOLD LIMITED  
ADELAIDE RESOURCES NL

KEYWORDS WARRAMUNGA FORMATION, RAB DRILLING,  
CAMBRIAN SEDIMENTS, AEROMAGNETIC  
TARGETS.

COMMODITIES GOLD, COPPER

TECTONIC UNIT TENNANT CREEK INLIER, GEORGINA BASIN

1:250,000 MAP SHEET FREW RIVER SF 53-3  
BONNEY WELL SF 53-2

1:100,000 MAP SHEET OORADIDGEE (58/3)  
EPENARRA (59/1)