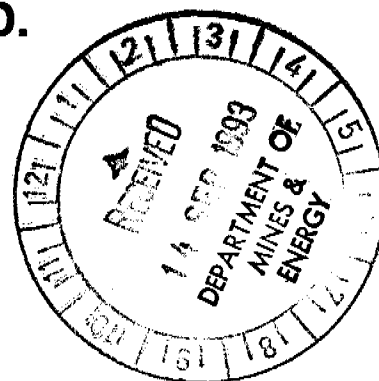


**M.I.M EXPLORATION PTY. LTD.**

**TECHNICAL REPORT**

**No. 1970**



**TITLE:** GEOPEKO - CARPENTARIA GOLD PTY. LTD.  
MOUNT BUNDEY JOINT VENTURE  
NORTHERN TERRITORY

MINERAL CLAIMS N310 AND N311  
TERMINATION REPORT

**ISSUING  
DEPARTMENT:** EXPLORATION

**AUTHOR:** I.N. BRUCE

**INVESTIGATIONS  
CONDUCTED BY:** Darwin Based M.I.M. Exploration Staff

**SUBMITTED BY:** R.D.M. Wilson

**DATE:** September 1993

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**GEOPEKO - CARPENTARIA GOLD PTY LTD  
MOUNT BUNDEY JOINT VENTURE  
NORTHERN TERRITORY  
MINERAL CLAIMS N310 and N311 - TERMINATION REPORT**

**1. INTRODUCTION AND SUMMARY**

Mineral Claims N310 and N311 ("the Claims") were located in the Mount Bunday area in the Northern Territory (see Fig. 1).

Peko Exploration Limited ("Peko") explored the area for uranium and lead in the period 1969 to 1976 under Authority to Prospect No. 2049 and Exploration Licence No.142, and defined the Quest 42 lead prospect immediately northwest of the Claims.

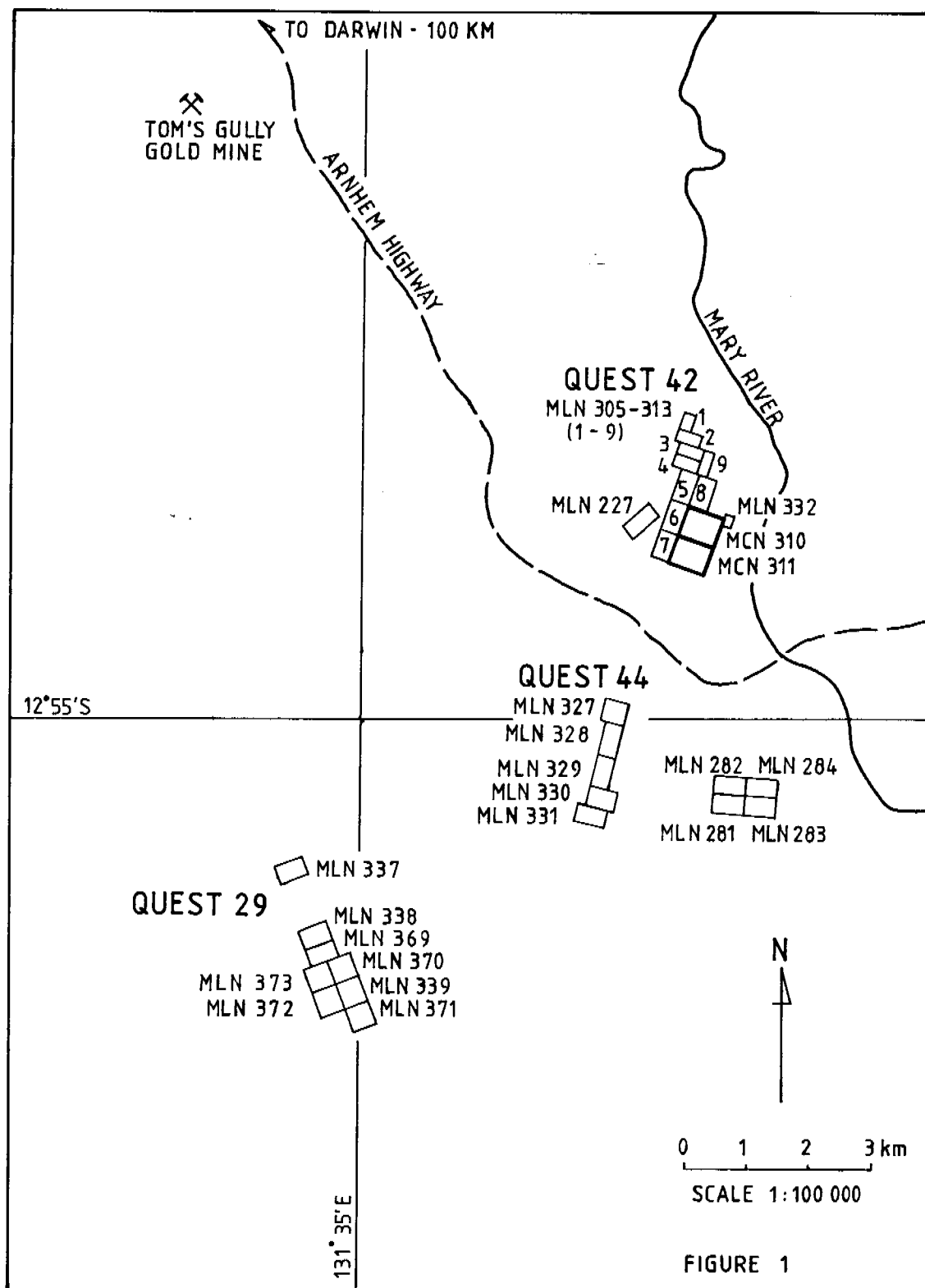
The Claims were applied for by Peko in May, 1974 and were granted in May, 1983 for ten year terms.

In June 1989, Carpentaria Gold Pty Ltd signed an agreement with Peko-Wallsend Operations Ltd (PWOL) whereby Carpentaria would explore a group of leases and claims belonging to PWOL, including MCN310 and 311. Carpentaria Exploration Company Limited (renamed M.I.M. Exploration Pty. Ltd. in 1991) acted as operator of the Joint Venture on behalf of Carpentaria Gold Pty. Ltd..

The exploration targets of the Joint Venture were gold and base metal deposits, hosted by sedimentary rocks of the Early Proterozoic Pine Creek Geosyncline.

Geochemical sampling and some geological reconnaissance was carried out by MIMEX over the Claims, but the results were not encouraging and both parties agreed to allow the Claims to terminate on 15th May, 1993.

This report documents the exploration conducted by MIMEX from June, 1989 until the Termination of the Claims. The earlier exploration by Peko was carried out prior to the granting of the Claims.



## **2. LOCATION**

The Claims are located about 100km southeast of Darwin, in the Northern Territory (Figure 1).

Access from Darwin is via the Arnhem Highway and then by a track which turns off north from a point on the highway about 10km south of the Tom's Gully mine entrance. The tracks are usually impassable in the wet season, from December to March.

## **3. TENURE**

Mineral Claims N310 and N311 were applied for by Peko Exploration Limited under the old N.T. Mining Act as MC143B and MC144B, on 3rd May, 1974. The Claims were determined on 16th May, 1983 for terms of 10 years, and were recently terminated on 15th May, 1993.

The proposed Mary River reserve includes the area of the Claims.

## **4. PREVIOUS EXPLORATION**

The area surrounding the Claims was explored by Peko over an eight year period, from 1969 to 1976, firstly under Authority to Prospect No. 2049, and later under Exploration Licence No. 142.

This work is very fully recorded in the annual reports. It included airborne surveys, rock chip and soil geochemistry, geological mapping, costeaning and diamond drilling. The areas with most potential were placed under leases and claims before the programme wound down at the end of 1976.

Between 1976 and 1981, Pan D'Or Mining N.L. conducted exploration through the same district under EL1653, as part of a consortium with Jimberlana Minerals N.L. and Aquitaine Australia Minerals Ltd. As with Geopeko, uranium and base metals were the principal targets.

Carpentaria Gold Pty Ltd intensified its gold exploration programme in the district after the discovery of Tom's Gully in November 1986, and brief discussions about Peko's claims took place (G. Sherrington and P. Simpson) in May 1988. The Mount Bunday Joint Venture Agreement was signed on June 27th, 1989, which included Mineral Claims N310 and N311.

## **5. GEOLOGY**

The reader is referred to the BMR 1:100 000 scale Mary River - Point Stuart geology map and its explanatory notes for a thorough background to the local geology.

The Claims are situated over a southerly plunging syncline of Lower Proterozoic Koolpin Formation, which is estimated to have a true thickness of 200-250m in the Claims area. The underlying Wildman Siltstone is poorly exposed along the western margins of the Claims and in the northwestern corner of MCN310.

The eastern contact of the Mount Bundey Granite is located less than 500m west of the Claims boundaries.

The Koolpin Formation consists of pyritic carbonaceous siltstone and shale with in places chialstolite crystals due to metamorphism from the intrusion of the Mount Bundey Granite. The siltstone, in part highly silicified, contains bands and nodules of chert and recrystallized horizons of sugary silicified dolomite.

The southerly plunging syncline trends 175-180° and has an apparent wavelength of 8km. The western limb of the syncline dip typically 40°-60° east, and the eastern limb has a rather more steep dip to the west.

## **6. M.I.M. EXPLORATION PTY. LTD. EXPLORATION PROGRAMME**

Reconnaissance sampling undertaken in 1989 included eleven stream sediment samples and nine rock chip samples (Drawing No. 32913).

The stream sediment samples were collected as 5-10 kg Bulk Leach Extractable Gold ("BLEG") and -80 mesh fractions, and were sent to Australian Laboratory Services in Townsville for analysis.

The BLEG sample was analysed for Au by method PM216 and the -80 mesh sample analysed for Cu, Pb, Zn, Ag by AAS method G001 and for As by XRF1 (Appendix 1).

The rock chip samples were sent to Classic Comlabs Ltd. (now Amdel) in Darwin where they were fire assayed for Au (FA1) and analysed by AAS1 and AAS2 for Cu, Pb, Zn, Ag and As (Appendix 2).

## **7. RESULTS AND CONCLUSIONS**

Two BLEG results of 0.35 and 1.10 ppb Au from the western part of MCN310 and three results of 0.40, 0.55 and 0.75 ppb Au (the latter supported by 125 ppm Cu in -80#) from the eastern part of MCN311 are considered to be weakly anomalous.

There is however, no surface indication of substantial mineralisation in these areas, and the maximum values obtained from the rock chip samples were 0.07 ppm Au, 280ppm Cu, 660 ppm Pb and 660 ppm Zn.

These results were not considered to be encouraging and no further work was undertaken on the Claims.

The Joint Venture partners decided in early 1992 to allow the Claims to terminate on 15th May, 1993 and to not seek further tenure in the area.



## **APPENDIX 1**

### **STREAM SEDIMENT SAMPLE ASSAY RESULTS**



# Australian Laboratory Services

PTY.  
LTD.

INCORPORATED  
IN QUEENSLAND

CONSULTING ANALYTICAL CHEMISTS

## LABORATORY REPORT

**Brisbane Head Office and Laboratory**  
32 Shand Street, Stafford, Q. 4053  
P.O. Box 66, Everton Park, Q. 4053.  
Phone: (07) 352 5577.  
Fax: (07) 352 5109.  
**Perth Laboratory**  
Lot 197 Victoria Road, Malaga, W.A. 6062.  
Phone: (09) 249 2988. Fax: (09) 249 2942.  
**Townsville Laboratory**  
21 Bombala Street, Garbutt, Q. 4814.  
Phone: (077) 79 9155. Fax: (077) 799 729.

**Charters Towers Laboratory**  
18 Drew Street, Charters Towers, Q. 480.  
Phone: (077) 87 4155. Fax: (077) 87 422.  
**Bendigo Laboratory**  
127A Victoria Street, Eaglehawk, Vic. 31.  
Phone: (054) 46 1390. Fax: (054) 46 138.  
**Orange Laboratory**  
10 Leewood Drive, Orange, N.S.W. 280.  
Phone: (063) 631 722. Fax: (063) 631 18.

Client: **CARPENTARIA EXPLORATION CO PTY LTD**  
Address: **P O BOX 21  
BERRIMAH  
NT**

0828

Batch Number: **H772**

Contact: **MR R WILSON**

Order No. **479145**

Sample Type: **STREAM SEDIMENT**

No. of Samples: **17**  
Date Received: **14/08/89**  
Date Completed: **23/08/89**

QUEST 42

Page 1 of 1

SAMPLE NUMBER

Element  
Unit  
Method

Au  
ppt  
PM216

S. Wt  
Kg

479152	150	5.23
479153	100	5.56
479154	50	8.45
479155	550	7.41
479156	400	6.35
479157	750	8.69
479158	200	6.73
479159	50	5.60
479160	350	6.89
479161	1100	4.87

Detection Limit:

50

Comments:

Quest 42

31

Signed:

*R. Wilson*

### LABORATORY REPORT

**Brisbane Head Office and Laboratory**  
32 Shand Street, Stafford, Q. 4053  
P.O. Box 66, Everton Park, Q. 4053.  
Phone: (07) 352 5577.  
Fax: (07) 352 5109.  
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**Charters Towers Laboratory**  
18 Drew Street, Charters Towers, Q. 481.  
Phone: (077) 87 4155. Fax: (077) 87 4220.  
**Bendigo Laboratory**  
127A Victoria Street, Eaglehawk, Vic. 3521.  
Phone: (054) 46 1390. Fax: (054) 46 1389.  
**Orange Laboratory**  
10 Leewood Drive, Orange, N.S.W. 2800.  
Phone: (063) 631 722. Fax: (063) 631 189.

Client: **CARPENTARIA EXPLORATION CO PTY LTD**  
Address: **P O BOX 21**  
**BERRIMAH**  
**NT**

Page 1 of 1

0828

Batch Number: H772-1

Contact: **MR R WILSON**

No. of Samples: 17  
Date Received: 14/08/89  
Date Completed: 31/08/89

Order No. 479145 Sample Type: -80# STREAM SED

SAMPLE NUMBER	Element Unit Method	Cu ppm G001	Pb ppm G001	Zn ppm G001	Ag ppm G001	As ppm XRF1
---------------	---------------------------	-------------------	-------------------	-------------------	-------------------	-------------------

479152		30	15	15	<1	12
479153		10	10	10	<1	<4
479154		10	10	5	<1	4
479155		30	25	25	<1	16
479156		65	45	25	<1	24
479157		125	45	65	<1	40
479158		95	85	30	<1	28
479159		75	60	15	<1	16
479160		30	15	10	<1	8
479161		70	55	15	<1	28

Detection Limit:	2	5	2	1	5
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Comments:

LESS NOTIFIED PULPS WILL BE DUMPED ON 14/02/90 AND SPLITS (IF ANY) ON 14/11/89

Signed: *SA Wilson*

**APPENDIX 2**  
**ROCK CHIP SAMPLE ASSAY RESULTS**



# CLASSIC COMLABS LTD

Analytical Laboratories (INC. IN WA.)

Marjorie Street, Berrimah, Northern Territory 0828  
P.O. Box 58, Berrimah, Northern Territory 0828  
Telephone: (089) 32 2669; Fax: (089) 32 3531

21st August 1989

Our Ref : 9DN1064

REPORT NUMBER 9DN1064

CLIENT : Carpentaria Exploration Company

CLIENT REFERENCE : Order Number QP 67850

REPORT COMPRISING : Cover Sheet  
Page G1

*Geoprobe Mt Burdey  
Quest 42*

*31*

DATE RECEIVED : 2nd August 1989

*For* Alan CIPLYS  
Manager  
CLASSIC COMLABS LTD

This report relates specifically to the sample(s) tested in so far as that the sample(s) is truly representative of the sample source as supplied.



Analysis code FA1  
AAS1  
AAS2

Report 9DN1064  
Order No. QP67850

Page G1  
Results in ppm

Sample		Au	Cu	Pb	Zn	Ag	As
QP67985		0.02	71	290	48	1	210
QP67986	0.02	0.03	48	52	51	1	460
QP67987		<0.01	44	240	660	<1	100
QP67988		0.01	29	21	280	<1	230
QP67989		0.06	58	41	52	1	90
QP67993		0.07	280	37	60	<1	75
QP67994		0.05	150	82	65	<1	370
QP67995	0.01	0.02	145	385	43	<1	590
QP67996		<0.01	76	155	110	<1	75
QP67997		<0.01	145	660	375	<1	130
Detn limit		(0.01)	(2)	(5)	(2)	(1)	(50)

## **DRAWINGS**

12° 53' S

131° 38' E

MLN 309

MLN 313

QUEST  
42

MLN 310

MCN 310

MLN 332

MLN 311

MCN 311

# LEGEND

Esk Koolpin Formation

 Banded chert / quartz vein

 BLEG sample number  
(Au ppb)

 Rock chip sample number  
(Au g/t)

Esk

Esk

479160  
(0.35)

479158  
(0.20)

479157  
(0.75)

479159  
(0.05)

QP67985  
(0.02)

QP67996  
(0.01)

Esk  
banded chert

Esk

QP67995  
(0.02)

QP67994  
(0.05)

QP67989  
(0.06)

Esk

Esk

479152  
(0.15)

479154  
(0.05)

479156  
(0.40)

479153  
(0.10)

479155  
(0.55)

## GEOPEKO - CARPENTARIA GOLD

PROJECT  
MOUNT BUNDEY JOINT VENTURE

TITLE  
MCN 310 - MCN 311  
RECONNAISSANCE SAMPLING

Author	RDMW	IB	Scale	1:5000
Drawn	EIK		Date	9 '93 Revised
Drawing No	32913		Fig No	