ANNUAL REPORT

EL20/2003

QUEENSTOWN – MT DARWIN PROJECT

For Period 27th May 2004 – 26th May 2005

I. J. Tedder
Ken Morrison

Distribution:
Mineral Resources Tasmania 1 copy
Newcrest Mining Limited – SE Australia 2 copies

CONTENTS

FIGURES

PLANS

TABLES

APPENDICIES

APPENDICIES (cont'd)

4. Petrographic Descriptions for five rock samples from Drill Hole NCT003 (Mt Read Volcanics, Queenstown Region, Tasmania) By Mason Geoscience Pty Ltd – February 2005

2. Mt Ellen Report (see Digital File EL20_2003_200505_04_Appendix2.pdf Mt Ellen Prospect Preliminary Assessment By Ken Morrison – November 2004

3. Drilling – Collar Data (NCT002 to NCT005) (See Digital File EL20_2003_200505_05_Appendix3.txt)

4. Drilling – Survey Data (NCT002 to NCT005) (See Digital File EL20_2003_200505_06_Appendix4.txt)

5a Drilling - Assay Data (NCT002 to NCT004 – SGS Labs Burnie & Welshpool) (See Digital File EL20_2003_200505_07_Appendix5a.txt)

5b. Drilling – Assay Data (NCT005 & GAR001– Amdel Laboratories, Adelaide) (See Digital File EL20_2003_200505_08_Appendix5b.txt)

6a. Drilling – Lithology Logs – NCT002 (See Digital File EL20_2003_200505_09_Appendix6a.pdf)

6b. Drilling – Lithology Logs – NCT003 (See Digital File EL20_2003_200505_10_Appendix6b.pdf)

6c. Drilling – Lithology Logs – NCT004 (See Digital File EL20_2003_200505_11_Appendix6c.pdf)

6d. Drilling – Lithology Logs – NCT005 (See Digital File EL20_2003_200505_12_Appendix6d.pdf)

6e. Drilling – Scan Logs NCT002-NCT004 (See Digital File EL20_2003_200505_13_Appendix6e.pdf)

6f. Drilling- Strip Logs NCT002-NCT004 (See Digital File EL20_2003_2005_14_Appendix6f.pdf)

7. Previous Drilling - Scan Logs (GAR001 to GAR004) (See Digital File EL20_2003_2005_15_Appendix7.pdf)

8. Drilling – Orientation Structures (NCT002-NCT005) (See Digital File EL20_2003_200505_16_Appendix8.pdf)

APPENDICIES (cont'd)

9. Drilling Magnetic Susceptibility (NCT003 to NCT005)
(See Digital File EL20_2003_200505_17_Appendix9.txt)

10. Report File Listing
(See Digital File EL20_2003_200505_18_Appendix10.txt)

DIGITAL FILES

EL20_2003_2005_01_Text.pdf
(Report Text, Tables & Figure 1)

EL20_2003_200505_02_Plans1-8.pdf
(Report Plans 1-8)

EL20_2003_200505_03_Appendix1.pdf
(Four Petrology Reports)

EL20_2003_200505_04_Appendix2.pdf
(Mt Ellen Report)

EL20_2003_200505_05_Appendix3.txt
(Drilling – Collar Data NCT002 to NCT005)

EL20_2003_200505_06_Appendix4.txt
(Drilling – Survey Data NCT002 to NCT004

EL20_2003_200505_07_Appendix5a.txt
(Drilling – Assay Data NCT002 to NCT004 – SGS Labs)

EL20_2003_200505_08_Appendix5b.txt
(Drilling – Assay Data NCT005 & GAR001 – Amdel Lab - Adelaide)

EL20_2003_200505_09_Appendix6a.pdf
(Drilling – Lithology Logs – NCT002)

EL20_2003_200505_10_Appendix6b.pdf
(Drilling - Lithology Logs – NCT003)

EL20_2003_200505_11_Appendix6c.pdf
(Drilling – Litholgy Logs – NCT004)

EL20_2003_200505_12_Appenidix6d.pdf
(Drilling - Lithology Logs – NCT005)

DIGITAL FILES (cont'd)

EL20_2003_200505_13_Appendix6e.pdf
(Drilling – Scan Logs NCT002-NCT004)

EL20_2003_200505_14_Appendix6f.pdf
(Drilling – Strip Logs NCT002-NCT004)

EL20_2003_200505_15_Appendix7.pdf
Previous Drilling - Garfield - Scan logs (GAR001 to GAR004)

EL20_2003_200505_16_Appendix8.pdf
Drilling Orientated Structures NCT002-NCT004

EL20_2003_200505_17_Appendix9.txt
(Drilling – Magnetic Susceptibility Data)

EL20_2003_200505_18_Appendix10.txt
(Report File Listing)

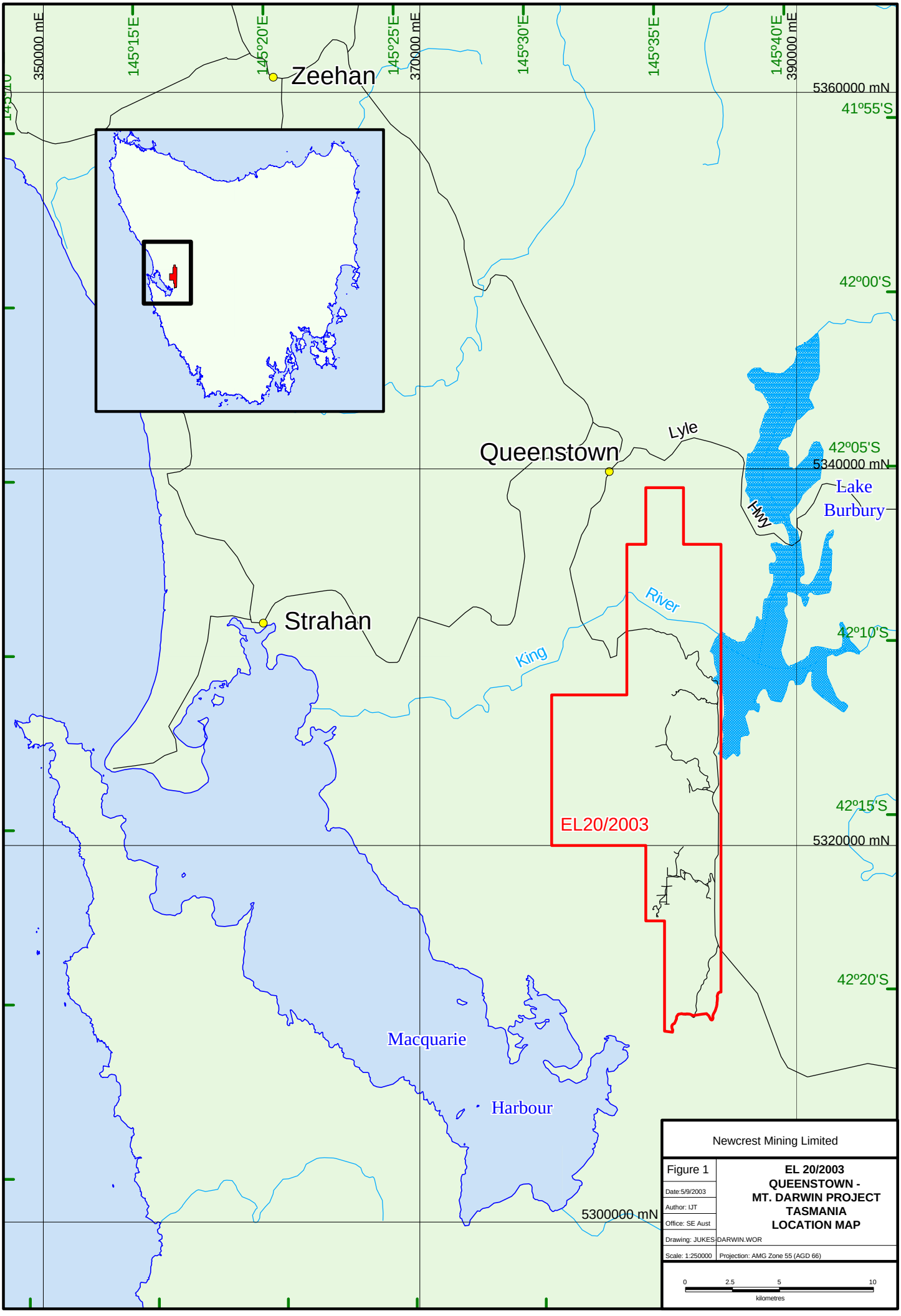
SUMMARY

Newcrest Mining Limited commenced exploration for gold rich deposits on being granted EL20/2003 on the 27th June 2003. The tenement encompasses a large area of prospective Mount Read Volcanics from Mt Owen just outside of Queenstown, south to include Mt Darwin.

Exploration in this second year of work focused on drilling untested geochemical-geological targets and continuing CSAMT surveys over prospective volcaniclastics.

A total of three diamond drill holes, (NCT003 – NCT005) were completed for 2,148.7 m on three targets, being Nasty Nob, Mountain Maid and Mt Ellen. The results of one hole, NCT002 that commenced drilling just south of East Darwin in the previous reporting period are included. Also reported within are the assay results of part of GAR001 drilled previously by RGC Exploration in 1993 but only partially sampled.

Work planned in the third year of exploration will be to conduct further drilling of any CSAMT anomalies that may result from the survey being conducted at the time of writing this report.


350000 mE
145°15'E
145°20'E
145°25'E
370000 mE
145°30'E
145°35'E
145°40'E
390000 mE
5360000 mN
41°55'S
42°00'S
42°05'S
5340000 mN
42°10'S
42°15'S
5320000 mN
42°20'S
5300000 mN
Zeehan
Queenstown
Lyle
Strahan
Lake
Burbury
Hwy
River
King
EL20/2003
Macquarie
Harbour
Newcrest Mining Limited
Figure 1
EL 20/2003
QUEENSTOWN -
MT. DARWIN PROJECT
TASMANIA
LOCATION MAP
Date:5/9/2003
Author: IJT
Office: SE Aust
Drawing: JUKES-DARWIN.WOR
Scale: 1:250000
Projection: AMG Zone 55 (AGD 66)
0
2.5
5
10
kilometres

KEY WORDS

Exploration; Gold; Copper; Diamond Drilling; Geophysics; CSAMT; Mount Read Volcanics; Darwin 3832; Owen 3833.

1 INTRODUCTION

Newcrest Mining Limited is exploring for gold rich deposits in the Mount Read Volcanics. This is the second annual report for EL20/2003 for the period 27th June 2004 to 26th May 2005.

1.1 TITLE

TENEMENT

EL20/2003 was granted on the 27th June 2003 to Newcrest Operations Limited for five years to 27th June 2008. The area was most recently held as two separate tenements (EL5/98 and EL16/98) by Copper Mines of Tasmania (CMT).

LOCATION

The tenement covers an area of 149 square kilometres over parts of the West Coast Range immediately south of Queenstown, down to the Bird River near the southern end of the Macquarie harbour. Refer to Figure 1 for location. Most of the area falls within the West Coast Regional Reserve. At the northern end of the tenement there is some Crown Land, State Forest, HEC land and Public Reserve.

Topographic map sheets covering the area are listed below.

1:25,000 TASMANIA TOPOGRAPHIC MAPS

ENGINEER	3831
DARWIN	3832
OWEN	3833
GORMANSTON	3834
TEEPOOKANA	3632

DATUM

All AMG (Australian Map Grid) references are to AGD66_Zone 55.

2 PREVIOUS EXPLORATION

Previous exploration was summarised in the first annual report for EL20/2003 for the period 27th June 2003 to 26th May 2004.

In brief, EL20/2003 has been previously explored by:

- geological mapping of specific prospects;
- airborne geophysics (magnetics, radiometrics, partially by EM);
- various phases of stream, rock, soil and old workings geochemistry;
- various phases of mostly analogue-era ground geophysics (ground magnetics, IP, old EM methods);
- large grids of blanket-coverage fixed-loop TEM; and
- drilling at eight prospects for twenty-seven holes in all (Garfield 12, Jukes Proprietary 5, East Darwin 3, Snake Spur 2, Lake Jukes 2, Mt Huxley 1, Prince Darwin 1, Flannigan's Flat 1).

3 EXPLORATION STRATEGY

Target

The primary exploration target is a Henty style gold deposit. However, exploration tools used can potentially find any one of a range of gold rich polymetallic deposits of the style that occur in the Mount Read Volcanics.

An assumption is being made that the target does not outcrop and is going to be relatively deep.

Exploration targets are being defined on the basis of geochemical and geophysical anomalies that may reflect the outer edges of a mineralised alteration system. Mineralised systems are often centralised within a much wider, though possibly structurally deformed alteration envelope and these can be detected by geological mapping, geochemistry or geophysics. Common features of Mount Read Volcanic style gold rich deposits that are being used to help define drill targets include:

1) Deposits tend to be hosted near the top of the Central Volcanic Complex (CVC) stratigraphy and/or base of Tyndall.

2) Adjacent to major Cambrian structures that form boundaries to packages of CVC.

3) Alteration envelopes commonly of silica-sericite-pyrite±chlorite and/or chlorite-quartz-pyrite-sericite±carbonate, strongly deformed into schists.

4) Pods of polymetallic massive sulphides, cherts or silica associated with and/or adjacent to mineralisation.

5) Anomalous gold, copper, lead, zinc, barium, manganese elements and minerals such as magnetite.

6) Chargeable and resistive geophysical anomalies.

Strategy

The basic exploration strategy is to compile previous geological mapping and geochemical work, combine with additional selective geochemical and geophysical surveys and interpret to define drill targets.

Newcrest is utilising CSAMT surveys which can provide wide coverage to significant depths to locate either resistive zones (silica-chert bodies) or chargeable zones responding to chalcopyrite rich altered schist. These surveys are being conducted in areas where surface exploration has revealed anomalous geochemical results but not enough to warrant drilling.

Much of the tenement being explored has dozens of old workings and prospects but very few have been drilled and, where drilled, the holes are generally short. Some of these are considered worthy of follow-up.

4 GEOLOGICAL MAPPING AND GEOCHEMISTRY

Reconnaissance geological mapping was conducted at Nasty Nob, Mountain Maid and Mt Ellen prospects north of Mt Huxley. For geological setting refer to previous exploration reports and publications. (e.g. Purvis et al 1983 and FitzGerald F.G. and Pease C.F.D. 1985)

4.1 Nasty Nob

Geological mapping of CVC lithologies south of Nasty Nob essentially confirms previous mapping. Refer to Plan 3 – geology modified after Komyshan 1982 in Purvis et al 1983). The main addition to that map, shown in Plan 3, is structure and bedding orientation readings.

There is an overall fining eastward of the principal Central Volcanic Complex (CVC) lithological units towards the Owen Conglomerate contact. From the southern slopes of Nasty Nob, east, the rocks comprise a thick unit of massive feldspar (±quartz) phyric rhyolites, then a moderately thick sequence (±70 m) of strongly foliated chlorite altered fine grained volcanic siltstone with occasional lapilli sized clasts. East of this unit are some more packages of massive feldspar (±quartz) phyric rhyolites (±70 – 100 m thick) then strongly foliated, un-sorted lapilli volcaniclastics with rhyolite clasts dominant. (Photo 1).

Photo 1: Location A232 on Plan 3 (383413E/5337678N) Lapilli volcaniclastics

This then gives way to volcanic sandstones (Photos 2,5 and 6) and volcaniclastic siltstones, (Photo 3) before returning to coarser clastics up against the Owen Conglomerate.

Photo 2: Location A257 on Plan 3 (383488E/5337445N) Bedded volcaniclastic sandstones with near vertical dip.

Photo 3: Location A206 on Plan 3 (383380E/5337760N) Fine grained strongly cleaved volcanic siltstones. Bedding is sub-parallel cleavage.

Encouraging evidence of mineralisation was observed in the form of stratabound manganese and iron oxides over a minimum strike length of 400 m. The manganese and iron oxides are locally controlled by cleavage and joints within volcaniclastic sandstones (Photo 4). Stratigraphic control is also evident with rare pyrite, galena and arsenopyrite in fine grained volcaniclastic siltstones (Photo 5, rock chip assay Table 1 and petrology report Appendix 1).

Photo 4: Location A207 on Plan 3 (383383E/5337804N) Mn and Fe oxides filling fracture lines in volcaniclastics.

Photo 5: Location A233 on Plan 3 (383431E/5337691N) Fine grained sulphide rich (pyrite-arsenopyrite-galena) volcaniclastic siltstone outcrop in creek.

Some manganese oxide clasts in volcanic sandstone beds appear to be part of the primary bedding. (Photos 6 and 7).

Photo 6: Location A257 on Plan 3 (383488E/5337452N) Bedded manganese-iron oxides in medium and coarse grained volcaniclastic sandstone.

Photo 7: Location A257 on Plan 3 (383488E/5337452N) Manganese-iron oxide clasts(?) aligned along the base(? or top) of a bed of volcaniclastic sandstone bed suggesting some primary sedimentary control. Several of these beds occurred over an outcrop at least 5 m wide.

Previous geochemical soil sampling (reported in Purvis J.G. et al 1983[1], Purvis J.G. et al 1983[2], FitzGerald 1985) showed a significant Ag, Pb, Zn anomaly over a ±300 m strike length adjacent to the Owen Conglomerate contact. Individual rock chips of up to 4.2% Pb, 0.6% Zn and 210 ppm Ag have previously been returned but the anomaly was never drilled. While no significant gold was returned in any of the previous soil sampling (best value of 0.09 g/t Au) the evidence of mineralisation was considered sufficient to justify a drill hole. NCT003 commenced drilling in November 2004. Refer to Section 5.2.

4.2 Mountain Maid

Reconnaissance geological mapping was conducted on three old grid lines at Mountain Maid. The grid lines mapped (7000N, 7200N and 7400N Plan 2) straddle a target area defined by previous mapping and soil-rock chip sampling as containing very low level gold anomalism associated with sericite-pyrite-silica±pyrophyllite altered fine grained cherty volcaniclastics. Alteration covers an area of approximately 200 m x 300 m. (Report by Halley et al 1996). Highest rock chip gold values returned previously were up to 0.3 g/t Au.

Mapping revealed a deformed sequence dominated by coarse lapilli volcaniclastics and massive feldspar phyric rhyolites.

Photo 8: Location A282 on Plan 2 (383808E/5334526N) Coarse volcanic breccia with some limonite stains.

Photo 9: Location A289 on Plan 2 (383587E/5334440N). Coarse volcanic breccia

Within this sequence are some units of fine grained volcaniclastic siltstone and cherty units containing locally abundant pyrite striking NNW sub-parallel cleavage. Strike of the bedding trends more ENE across cleavage both to the south and north of the three grid lines mapped.

Photo 10: Fine grained strongly cleaved volcanic siltstones with minor limonite stains - located approximately 383432E/533456 on Plan 2.

A small trench located at 383410E/5334489N between lines 7000N and 7200N is centred on the cherty units and exposes silica-pyrite-sericite alteration.

Photo 11: Silica-pyrite-sericite altered volcanic location at 383416E/5334488 on Plan 2 on side of old trench.

Photo 12: Example of bedded cherty siltstones at A219 on Plan 2 (383436E/5334463N)

Down dip extensions of the altered cherty units were the target for drill hole NCT004 completed in February 2005. Refer to Section 5.3.

4.3 Mt Ellen

Mt Ellen prospect is located 1.2 kilometres to the north west of Mountain Maid. It consists of an east-west aligned box cut up to 10 m deep and approximately 35 m long with two ±25 m long adits driven off the eastern end. A number of shafts are located around the box cut. The box cut exposes moderately dipping sheeted quartz veining in massive weathered rhyolites. The quartz veins vary from hairline veinlets up to 1 cm thickness generally and occur at a rate of around 5 – 15 per metre (only those greater than 5mm counted). They strike around 260 – 290° (AMG) and dip about 50° to the north.

Over a number of years previous explorers have conducted stream sediment sampling and lines of soil sampling locally and rock chip sampling of the box cut. Previous work is described by FitzGerald et al 1985 and Cameron et al 1991.

The northern wall of the box cut was channel chip sampled and five pan concentrate stream sediment samples collected in November 2004 by Newcrest. A report on that work forms Appendix 2. Seven of the twelve one metres samples returned anomalous gold with the highest value being 1 m with 2.36g/t Au (Table 1). These results confirmed previous sampling indicating significant gold anomalism in the old working which had not been drill tested. A diamond drill hole NCT005 was drilled under the Mt Ellen box cut in March – April 2005 and is reported in the next section. Section 5.4.

Photo 13: Mt Ellen box cut, showing northern wall which was channel chip sampled.

Photo 14: Example of sheeted quartz vein in feldspar phyric rhyolite in box cut at Mt Ellen.

4.4 Garfield Core

Scan logs were completed on four old diamond drill holes completed by RGC Exploration on the Garfield prospect in 1993 and 1994. Copies of the scan logs are in Appendix 7.

Hole GAR001 was previously sampled from 175 to 280 m. This zone was all mineralised and it was evident from scan logging that mineralisation continued below 280 m albeit at low grades. Consequently, core sampling was extended from 66 m (beginning of NQ core) to 175 m and from 280 m through to end of hole at 388.5 m. Results are listed in Appendix 5b.

TABLE 1
ROCK CHIP SAMPLES – EL20/2003
(* AGD 1966/ 55 AMG)

			Description	Assays							
				Au	Au(R)	Cu	Pb	Zn	As	Ag	
			Method	Au-AA22	Au-AA22	ME-ICP42	ME-ICP42	ME-ICP42	ME-ICP42	ME-ICP42	
			Lower Detection	0.001	0.001	5	5	5	2	1	
	Easting	Northing	Upper Detection	10000	10000	10000	5000	10000	10000	100	
Sample ID	AMG*	AMG*	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
A190	383250	5330800	Chlorite-pyrite altered volcanics	0.003	-	18	<5	164	<2	<1	
				Au	Au(R)	Cu	Pb	Zn	As	Ag	Ba
			Method	FAA505	FAA505	ICP40Q	ICP40Q	ICP40Q	ICP40Q	ICP40Q	ICP40Q
			Lower Detection Limit	0.01	0.01	5	50	5	10	5	5
	Easting	Northing	Upper Detection Limit	10000	10000	10000	5000	10000	10000	100	10000
Sample ID	AMG*	AMG*	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
A232	383413	5337678	Strongly cleaved rhyolite with occasional clast: FeO&MnO stains on cleavages	<0.01	-	60	476	1780	34	<5	820
A233	383431	5337691	Bedded f.g. volc siltstone with ~10% pyrite including arsenopyrite	<0.01	-	47	1113	4058	420	11	1060
A258	383491	5337459	Strongly cleaved, ser-chl altered fine to gritty/pebbly volcaniclastic. FeO/MnO stains	<0.01	-	82	215	1060	<10	<5	1140
A266	383506	5337398	Coarse gritty volc mudstone - strong MnO/FeO stains	<0.01	-	83	90	680	<10	<5	1620

5 DRILLING

A three hole diamond drilling program was completed during this reporting period. The holes drilled are listed in Table 2. In addition, the results of one hole (NCT002) completed late in last years reporting period are also presented here.

TABLE 2
Drill Hole Locations
(* AGD 1966/ 55 AMG)

Hole	East-AMG*	North-AMG*	RL	Depth
NCT003	383158	5337400	665	800
NCT004	383579	5334611	518	749.3
NCT005	382230	5335100	358	599.4

The holes were completed by Boart Longyear using a CS1000 P4 drill rig. For the first two holes at Nasty Nob and Mountain Maid (NCT003 and NCT004), a total of 1000 m of track were prepared by excavator to provide vehicular access. For the third site (NCT005) at Mt Ellen the drill rig was flown in by helicopter. Support throughout the drilling of NCT005 was maintained by Seair Adventures helicopters. Double shifts were worked by the drill crew for most of the program.

All holes commenced with HQ bit size, drilling with chrome barrel down to about 200 m in order to keep the hole as straight as possible for the initial stages and then changed down to NQ for completion of the hole.

The drill core was marked up, photographed, logged and cut in Queenstown.

The BallMark orientation system is used during drilling of the NQ core to obtain as much continuous oriented core as possible. Unfortunately, drilling conditions and technical problems were such that possibly less than 30% of the NQ core had usable oriented core. The reference line for all oriented structure data is marked on the bottom of the hole side of the core.

Core was sawn in half, with half bagged at one metre intervals (except with hole NCT005 which was sampled at 2 m intervals) and the other half return to the core tray as reference material. Assays for Au (method FAA505) were by SGS Analabs in Burnie while Cu, Pb, Zn, Ag, As, Ba and S (method ICP40Q) were completed by SGS Analabs in Townsville. Standards are submitted with every batch of samples. The SGS Analabs laboratory in Burnie closed operations at the beginning of March 2005 so the samples from NCT005 were despatched for preparation and analysis at Amdel in Adelaide. Analytical techniques used were FA1 for Au and IC3E for the Cu, Pb, Zn, Ag, As, Ba and S.

Detailed logging was completed using graphic logs. Logging symbols are based on those of McPhie et al 1993. The lithology section of the graphic log was also summarised into computer code after scan logging the core and entered into Micromine to allow plotting of cross sections.

5.1 NCT002

NCT002 was drilled in May 2004 to test a resistive target at 384475E/5322100N (AMG) on CSAMT grid line 15, about 1 km south of the East Darwin prospect. The target was interpreted from the results of the CSAMT survey completed in November 2003 – January 2004. Refer to Tedder 2004. The target point on line 15 was defined approximately 400 m below the surface close, to or at the interpreted Tyndall Group/CVC contact.

TABLE 3
Drill Hole Location
(* AGD 1966/ 55 AMG)

Hole	East-AMG*	North-AMG*	RL	Depth
NCT002	384690	5322150	335	489.50

TABLE 4

NCT002 Down Hole Survey Data*			
Depth	**Dip**	**Azimuth-mag**	**Azimuth-AMG**
0.00	-60.0	235.0	248.0
25.00	-61.0	235.5	248.5
50.00	-61.0	236.5	249.5
100.00	-61.0	236.0	249.0
150.00	-61.0	236.0	249.0
200.30	-60.0	237.0	250.0
240.00	-59.0	241.0	254.0
308.30	-58.0	243.5	256.5
350.00	-57.0	244.0	257.0
400.00	-54.0	241.0	254.0
450.00	-52.5	241.0	254.0
489.00	-50.0	241.0	254.0

*Survey data collected with Eastman Camera shots.

Results

The hole drilled through thick sequences of unsorted medium grey sandy quartz phyric volcaniclastics, commonly with volcaniclastic siltstone clasts. Interbedded with this lithology are thinner units of dark gray-green, polymictic pebble-cobble volcanic breccia. All units had a quartz phyric component in the matrix suggesting they are part of the Tyndall Group. Minor flattened dark porphyritic pumice fragments were logged in several units and rare reddened granite clasts were also observed . Refer to logs in Appendix 6a and scan log in Appendix 6e.

The source of the resistive anomaly was not determined and the hole failed to reach recognisable Central Volcanic Complex rocks. The hole was one of two (NCT001 being the other – refer to Tedder 2004) that had the opportunity of assessing the idea that Tyndall Group lithologies on the east side of the Mt Juke to Mt Darwin CVC complex covered prospective CVC. See Morrison 2002. The tentative conclusion with this limited drilling is that the rocks drilled are Tyndall

Group equivalents but that the contact between them and CVC appears to dip steeply toward the west and is therefore overturned.

A summary of significant assay results are listed below and illustrated in Appendix6f (Strip Log). Refer to Appendix 5a for complete assay results.

TABLE 5

NCT002 East Darwin
Anomalous Intersections

From	To	Metres	Au (g/t)	Cu ppm	Pb ppm	Zn ppm	As ppm
73	75	2	0.20	182	78	250	40
203	209	6	0.31	178	1531	2560	44
222	224	2	0.13	286	2857	6500	85

The best gold anomalous zone contains 2 m (203 – 205 m) with 0.75 g/t Au, 272 ppm Cu, 0.34% Zn, 0.67% Zn and 55 ppm As. The highest assay is in the interval 204 – 205 m with 1.3 g/t Au, 0.45% Pb and 0.89% Zn. Small pyrite-quartz-magnetite shears within a breccia at 72.9 to 75.6 m proved to be gold anomalous as well returning 0.20 g/t Au.

The main mineralisation is related to a number of strongly foliated volcanic breccia intervals dominated by sericite-pyrite altered fine grained volcaniclastic fragmentals that may have been derived from a VHMS deposit. The sulphide rich clastics mostly occur between 201.1 – 205.1, 208.1 – 208.9 and 222.2 – 224.0 m. A petrology report that includes samples from this hole is appended to this report (Appendix 1). The mineralised zones were intersected at an oblique angle suggesting the mineralised zone are thin and is dipping west at around the same attitude as the general cleavage orientation which is ±70 – 75° west dip. Refer to Plan 5 for an interpreted section.

Refer to Appendix 6a for the graphic log of NCT002. Oriented structural data is in Appendix 8. Assay results for NCT002 are listed in Appendix 5a.

5.2 NCT003

This hole was drilled towards the north east from a collar position of 383158E/5337400N (AMG) just south of Nasty Nob, off the Whip Spur track. Refer to Plan 1 for location. The aim of the hole was to test the northern end of a 400 plus metre surface anomaly consisting of stratabound manganese and iron oxides up close to the Owen Conglomerate. The manganese and iron oxides are locally controlled by cleavage and joints within volcaniclastic sandstones. Rare pyrite, galena and arsenopyrite can be found at the surface in fine grained volcaniclastic siltstones. (Refer to Section 4.1). While there is negligible gold anomalism recorded in previous soil sampling, the target is of significant size and its location in CVC units abutting interpreted extensions of the Great Lyell Fault just 4.5 km south of Prince Lyell made it an attractive target.

The only previous drilling in the Mt Huxley area consists of a single diamond drill hole (HX1) drilled in 1985 by Gold Fields Exploration to a depth of 340.5 m on an IP anomaly 400 m south

of NCT003. (FitzGerald, F.G and Cartwright, A.J.1986). The hole was directed towards the south east so did not test the same anomaly as NCT003. The best results obtained in HX1 were 22 m (162.3 – 184.3 m) @ 0.08% Pb, 0.27% Zn (FitzGerald and Cartwright 1986).

TABLE 6

NCT003 Down Hole Survey Data*			
Depth	**Dip**	**Azimuth-mag**	**Azimuth-AMG**
0.00	-50.0	17.0	30.0
25.00	-51.0	18.0	31.0
50.00	-51.0	18.0	31.0
100.00	-50.8	19.0	32.0
150.00	-50.0	20.0	33.0
209.00	-49.2	20.0	33.0
239.00	-48.8	19.0	32.0
270.00	-48.0	19.5	32.5
302.00	-47.0	19.0	32.0
362.00	-44.5	22.0	35.0
395.00	-43.5	22.0	35.0
426.00	-42.0	22.0	35.0
476.00	-39.8	24.0	37.0
528.00	-37.0	24.0	37.0
575.00	-32.0	25.5	38.5
638.00	-30.0	27.0	40.0
677.00	-28.0	28.0	41.0
731.00	-25.0	30.0	43.0
775.00	-22.5	30.0	43.0

*Survey data collected with Eastman Camera shots.

Results

NCT003 drilled through sequences of massive feldspar phyric rhyolites and volcaniclastics, similar to that seen at the surface until it intersected a slightly mineralised pumice rich fragmental between 491.8 and 638 m. This unit generally consists of pale pink to pale grey 'fluffy' textured clastics. Clasts are interpreted to be originally of feldspar phyric pumice drawn out in irregular rounded blobs with diffuse boundaries into greyer/greener matrix of silica-feldspar and chlorite-sericite. The hole did not intersect any units of sulphidic volcaniclastic shale as seen in outcrop indicating either structural complications and/or facies changes between surface geology and drill hole. Refer to scan log located in Appendix 6e.

Minor disseminated sphalerite and rare galena occurs in little patches in the groundmass through an interval from around 478.4 m through to 574.5 m. Sphalerite distribution is sparse, particularly below 500 m. Generally there is less than 1% pyrite throughout the hole and only slight increase is evident within the sphalerite rich zone.

Overall alteration in the mineralised unit appears to be calcite and iron carbonate (pervasive) with zones of more intense sericite.

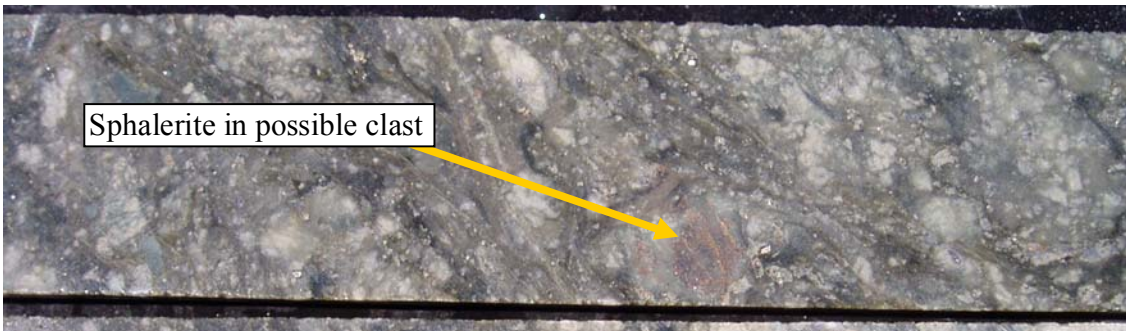


Photo 15: 495.2 m showing typical pumice rich clastics and minor sphalerite.

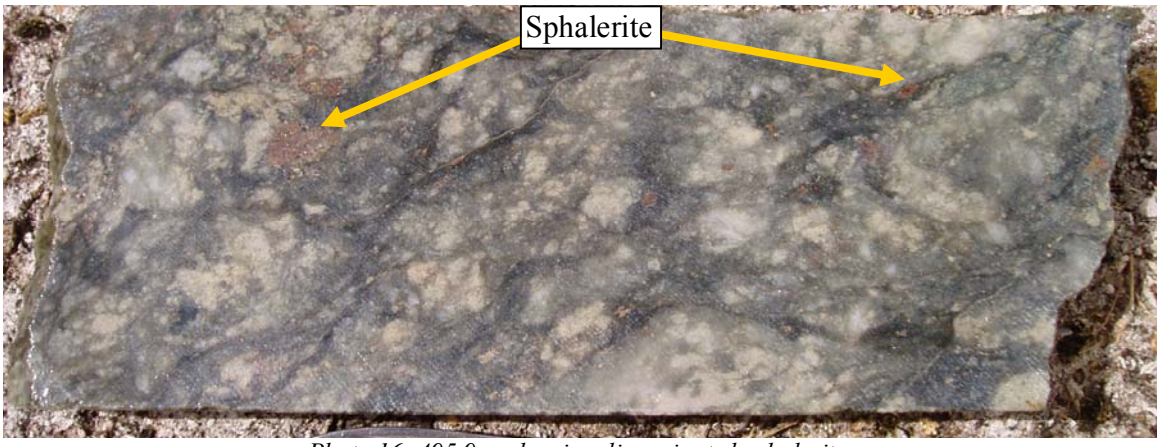


Photo 16: 495.9 m showing disseminated sphalerite.

Finer grained gritty and sandy pumice rich clastics continued to end of hole at 800 m. The Owen Conglomerate was not intersected as predicted, suggesting that the area is structurally complicated. Refer to cross section Plan 6.

NCT003 failed to intersect any gold mineralisation. Zinc returned the best analytical results. These results are summarised in Table 7 below.

TABLE 7

NCT003 Nasty Nob
Anomalous Intersections

From	To	Metres	Au (g/t)	Cu ppm	Pb ppm	Zn ppm	As ppm
478	481	3	0.01	16	1881	4320	10
491	512	21	0.02	28	1203	3138	10
533	557	24	0.01	47	3662	5483	12

The best zone is of 17 m from 540 m to 557 m with 0.49% Pb and 0.72% Zn. The highest one metre values are at 546-547 m with 0.69% Pb and 1.1% Zn and at 553-554 m with 0.67% Pb and 1.1% Zn.

Refer to Appendix 6b for the graphic log of NCT003. Oriented structural data is in Appendix 8. Assay results for NCT003 are listed in Appendix 5a.

5.3 NCT004

The Mountain Maid prospect consists of an area some 200 m x 300 m of silica-pyrite-sericite±pyrophyllite alteration within a package of predominantly fine grained cherty volcaniclastic siltstones and volcaniclastic sandstones. Previous exploration showed low grade gold anomalism in rock chip samples and a gradient array IP produced a chargeable anomaly beneath the surface alteration. (Halley et al 1996). NCT004 was designed to test down dip of these anomalies. The hole was planned to be relatively deep as the surface mapping showed that the stratigraphy is steeply dipping to the west and difficult access prevented the hole being drilled in a more optimal orientation. Final depth of the hole was 749.3 m. Refer to Plan 1 for location.

TABLE 8

NCT004 Down Hole Survey Data*			
Depth	**Dip**	**Azimuth-mag**	**Azimuth-AMG**
0.00	-60.0	214.0	227.0
15.00	-60.0	217.5	230.5
40.00	-60.0	217.5	230.5
65.00	-59.5	218.0	231.0
116.00	-59.5	218.0	231.0
218.00	-57.0	219.0	232.0
260.00	-55.5	221.0	234.0
290.00	-54.0	221.5	234.5
320.00	-53.0	222.0	235.0
371.00	-53.0	222.0	235.0
422.00	-50.0	222.5	235.5
470.00	-48.0	221.0	234.0
520.00	-46.0	223.0	236.0
570.00	-43.5	224.0	237.0
620.00	-39.5	224.0	237.0
670.00	-37.0	224.0	237.0
746.00	-33.5	228.0	241.0

*Survey data collected with Eastman Camera shots.

Results

NCT004 is interpreted to have drilled obliquely across the predicted package of massive volcanics, giving way to volcaniclastics. Refer to cross section Plan 7. However, the hole did not intersect any fine grained volcaniclastics and alteration in the hole was minimal. Refer to Appendix 6c for the graphic log of NCT004. Scan log is in Appendix 6e. Oriented structural data is in Appendix 8. Assay results for NCT004 are listed in Appendix 5a.

There were only two anomalous results. The sample interval from 413 – 414 m returned 2.0 g/t Au but there was no anomalism above or below this interval. A second 1 m interval from 583 to 584 contained 0.44 g/t Au. There are no obvious reasons (eg quartz veins or alteration) for the gold anomalism in either metre.

5.4 NCT005

The helicopter supported drill hole NCT005, was completed down to 599.4 m at Mt Ellen gold prospect on the northern slopes of Mt Huxley. Refer to Plan 1 for location. The gold prospect centred on some workings has previously returned gold anomalous rock chip samples collected by various parties including Newcrest. Refer to Section 4.3 and Appendix 1.

TABLE 9

NCT005 Down Hole Survey Data*			
Depth	**Dip**	**Azimuth-mag**	**Azimuth-AMG**
0.00	-55.0	167.0	180.0
44.00	-56.0	167.5	180.5
70.00	-56.0	167.0	180.0
122.00	-56.0	169.0	182.0
173.00	-55.0	169.0	182.0
221.00	-54.0	171.0	184.0
272.00	-52.0	172.0	185.0
326.00	-49.5	174.0	187.0
371.00	-47.0	176.0	189.0
420.00	-45.0	177.5	190.5
476.00	-43.0	179.0	192.0
527.00	-41.0	181.5	194.5
571.00	-39.0	182.5	195.5
599.00	-37.0	184.0	197.0

*Survey data collected with Eastman Camera shots.

Results

The hole drilled a massive unit of mauve to orange coloured feldspar-(quartz) phyric rhyolites and was still in the unit at the end of hole. Generally alteration was minimal with feldspars often clear, but there is anomalous amounts of magnetite down to about 450 m and disseminated coarse

pyrite throughout. Quartz veins from millimetre scale up to 10's of centimetres occurred throughout the hole. The main zone of interest appears to be a paler altered (sericite?) zone from around 490 to 540 m where significantly more disseminated pyrite and quartz veining was observed. Magnetite is destroyed by this alteration. Minor traces of sphalerite and galena gave hint to possible gold mineralisation in this zone.

Analytical results for NCT005 were returned from Amdel Laboratories in Adelaide. (Refer to Appendix 5b for analytical results.) A summary of the best results are listed in Table 10 below. Refer to Plan 8 for an interpreted cross section.

TABLE 10

NCT005 Mt Ellen
Anomalous Intersections

From	To	Metres	Au (g/t)	Cu ppm	Pb ppm	Zn ppm	As ppm
496	540	44	0.23	23	45	89	28
556	560	4	0.22	6	5	23	24
598	599.4	1.4	0.44	14	6	21	42

The best single sample result for NCT005 was 2 m @ 1.27 g/t Au from 530 to 532 m.

A summary log for NCT005 has not been completed at this stage and a review of the core along with some petrology is required to fully interpret the significance of the results.

6 CSAMT PROGRAM

At the time of writing this report a 50 m dipole scalar Controlled Source Audio-Frequency Magnetotellurics (CSAMT) survey was being conducted over eight grid lines south of Nasty Nob down to the Mountain Maid prospect. A single line is also to be run over Jukes Pty prospect and a further two lines on the Garfield prospect.

The results of the CSAMT survey will be reported in the 2005 – 2006 annual report.

7 ENVIRONMENT

A total of 1000 m of vehicular access tracks were prepared into two drill sites – NCT003 (630 m) and NCT004 (370 m). The tracks were prepared by an excavator lifting the top soil to one side of the track and cutting drainage channels to minimise erosion. The two drill pads required some excavation work to produce a flat area and in-ground sumps. The tracks and drill pads are to be

rehabilitated once the results of the CSAMT survey are known and any further drilling, if required, has taken place.

One temporary helipad and drill site was cleared just north of the Mt Ellen workings for NCT005. The Mt Ellen area has locally disturbed the soils (due to decades old alluvial and hard rock gold mining, timber cutting and numerous bush fires) so the area is now covered by secondary re-growth predominantly of thin *Leptospermum*. An access walking track 1.9 km long was cut along a ridge line south from the Whip Spur track to Mt Ellen. About 1.1 km of this track followed old grid lines which were partly overgrown and last used in the early 1990's.

Inspections of the drill sites after drilling were conducted to ensure the holes are properly sealed and capped and the sites cleaned up.

The CSAMT program required the re-cutting of 9.23 km of old grid lines in the Mt Huxley – Nasty Nob area. The old grid lines were previously cut in the 1980's and were partially overgrown. Much of the Mt Huxley – Nasty Nob area was cleared for timber and burnt out in the late 19th and early 20th century disturbing both the original vegetation and soil cover. It was also affected by the Mt Lyell smelter fallout. There are a variety of vegetation communities mapped by Tas Veg in the area but the dominant group is '**Br** - Restionaceae flatland' and '**Sq** - Queenstown re-growth'. Parts of these areas are treeless, with dense scrub and rushes up to 1m tall around Nasty Nob. The vegetation communities includes reed beds dominated by various rushes and sedges. Smaller zones of '**Sn** - Western wet scrub', **LA** and **NR** are marked on TasVeg maps.

All the areas worked in were treated as if contaminated by '*Phytophthora*' so all boots and gaiters were washed before going to a new area/line and at the end of each day. All new timbers were used as base plates for the each drill site and the rig and associated equipment washed down prior to moving to the next site.

8 PLANNED WORK

The planned program of work for the next 12 months is as follows:

1) Complete the CSAMT survey in the Mt Huxley – Nasty Nob area and analyse the results.
2) Drill any targets identified by the CSAMT survey.
3) Drill a minimum of one diamond drill hole at Garfield prospect.
4) Complete a stream sediment sampling program in the Intercolonial Spur area.

9 BIBLIOGRAPHY

Cameron, J., Read, J. and Gregory, P. 1991 BHP, Joint Report on Exploration Licences 102/87 Queenstown and 55/89 Mt Darwin, NW Tasmania for the year ending 21st March 1991. MRT Open File Report 91-3252

FitzGerald, F.G and Pease, C.F.D 1985 Gold Fields Exploration Pty Ltd, Annual Report EL9/66 for 1984-1985. MRT Open File Report 85-2459

FitzGerald, F.G and Cartwright, A.J.1986 Gold Fields Exploration Pty Ltd, Annual Report EL9/66 for 1985-1986. MRT Open File Report 86-2566

Halley, S., Vicary, M., Corlett, S. and Wyman W. 1996 RGC Exploration, Annual Report EL102/87 and EL12/92 for 1995/1996. MRT Open File Report 96-3834

McPhie J., Doyle M., Allen R. 1993 'Volcanic Textures. A guide to the interpretation of textures in volcanic rocks'. Centre of Ore Deposit and Exploration Studies. University of Tasmania

Morrison K.C. 2002. 'Report of field investigations Mt Darwin – Mt Murchison Region' Mineral Resources Tasmania, Tasmanian Geological Survey Record 2002/18 Western Tasmanian Regional Minerals Program Mount Read Volcanics Compilation.

Purvis, J.G., Jones, M.T., FitzGerald, F.G and Poltock, R.A.1983 Gold Fields Exploration Pty Ltd, "A Geological Review of the Tyndall Exploration Licence EL9/66 Western Tasmania" MRT Open File Report 83-1995

Purvis, J.G., Jones, M.T., FitzGerald, F.G and Poltock, R.A.1983 Gold Fields Exploration Pty Ltd, Annual Report EL9/66 for 1982-1983. MRT Open File Report 83-1996

Tedder, I.J., Holliday, J., Mackey, C. and Morrison K. C. 2004 Newcrest Mining Limited, First Annual Report EL20/2003 for period 27th June 2003 – 26th May 2004.

EXPENDITURE
EL20/2003
QUEENSTOWN – MT DARWIN PROJECT

For Period 1st May 2004 – 30th April 2005

ITEM	EXPENDITURE
SALARIES	$265,549
DRILLING	$415,100
FIELD COSTS	$95,394
MISCELLANEOUS OFFICE COSTS	$43,879
TRAVEL/ACCOMM	$27,764
VEHICLES	$3,921
ANALYSES	$74,520
GEOPHYSICS	$100,000
OTHER	$10
TOTAL EXPENDITURE	**$1,026,137**