



**2001-2002
Annual Report**

Tasmanian Gold Project

Anthony

EL 19/1998

HELD BY: AurionGold Exploration Pty Ltd

MANAGER & OPERATOR: AurionGold Exploration Pty Ltd

AUTHOR(s): Michael Vicary

11 September 2002

PROSPECTS: Basin Lake, Langdon Prospect, Bradshaws Road

MAP SHEETS: 1:250,000: 1:100,000:

**GEOGRAPHIC COORDS Min East: Max East:
Min North: Max North:**

COMMODITY(s): Au, Basemetals

KEY WORDS: Tyndall Group, Anthony Road Andesite, Central Volcanic Sequence,

Distribution:

- o AurionGold Exploration Information Centre Reference:**
- o AurionGold Exploration - Zeehan:**
- o Mineral Resources Tasmania:**

SUMMARY

This report documents exploration completed on EL 19/1998 Anthony during the period September 2001 to August 2002.

The DHEM survey of drill holes TYN017 and TYN018 at the Langdon Prospect confirmed the presence of an off hole conductor near Aberfoyle's BL006 and BL007 drill holes. This anomaly was explained by an intersection of a 3.8m wide zone of semi massive pyrite in drill hole TYN021. The low levels of Au and base metals in the massive pyrite and surrounding alteration although of slightly better tenor than in other holes from the Langdon Prospect were disappointing.

Any additional drilling at the Langdon Prospect should target the alteration zone south of the TYN021 intersection and to the east and down dip of BL004. A second hole could target the northern strike extents of the zone north of TYN019 which are still open. Unfortunately the DHEM survey of TYN019 could not be completed due to hole blockage and the origins the deeper dipole-dipole IP anomaly can not be resolved.

The DHEM survey at TYN020 failed to identify any targets and no further work is planned in this area.

Recommendations

1. The Anthony EL is due to expire in September 2003. The EL should be not be relinquished prior to this date.
2. Additional drill targets in the Tyndall Creek area may become apparent following an exploration program on adjacent EL 28/2001 to be completed by October 2002.
3. A detailed review exploration completed in the region on EL 19/1998 immediately south of Tyndall Creek should be made.
4. A drill hole targeting down dip of the exposure of the Bradshaws Road Alteration zone on the Anthony Road should be considered.

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1 INTRODUCTION

EL 19/98 - Anthony Road is held and explored by AurionGold Exploration Pty Ltd (formerly Goldfields Exploration Pty Ltd). It constitutes the relinquished area of the former EL 103/87 by a joint venture between Aberfoyle Resources Limited, Acacia Minerals Pty Ltd and Resolute Limited (Figure 1). EL 19/1998 was initially granted on 25 September 1998 and comprised two separate blocks: Anthony Road (8 sq km) and Mount Selina (5 sq km). The Lake Selina block was relinquished in September 2001. The Anthony Road portion is located in western Tasmania, approximately 14 km north of Queenstown, and is situated on the flank of the Tyndall Range (Figure 1).

1.1 Location and Access

The major access to the EL is via the sealed Anthony Road, which runs alongside and dissects the tenement approximately 12 km east of the junction with the Zeehan Highway. Access from the eastern side of the tenement is provided by a gravel vehicular track that follows a HEC power line close to the eastern EL boundary. A series of grid lines and rehabilitated tracks provide access by foot within the tenement.

1.2 Topography and Vegetation

The Anthony EL lies along the peneplain between the steep, north - south trending Tyndall Ranges (1000m high) in the east and the 300m deep Henty Gorge to the west. The peneplain is between 450m and 550m ASL. The vegetation consists predominantly of button grass plains and light tea tree scrub with some patches of medium eucalypt forest and rainforest. The area has been extensively glaciated and reliable outcrop is restricted to road cuttings and topographic highs in the north and west of the EL. The EL is largely covered by glacial moraine and outwash.

1.3 Tenure

The EL comprises: Crown Land (Deferred Forest Land)
Crown Land
Land Vested in HEC.

The area is partly within the South West Tasmania Australian Heritage Act - Registered Entry (South West Conservation Area).

1.4 Aims

The Mount Read Volcanics are host to several world class gold rich base metal mineral deposits at Rosebery, Hellyer, Que River, Hercules, and Mount Lyell and to gold mineralisation at the AurionGold operated Henty Mine. Together these deposits constitute Tasmania's most productive gold province. The Henty Mine is the only gold only producer in Western Tasmania, all other deposits produce gold as a by-product of base metal treatment. In 1996 the gold reserves for Henty were 526000 tonnes @ 26.2 g/t Au.

AurionGold Exploration is actively exploring the Mount Read Volcanics in the Henty and South Henty areas immediately north of the Anthony EL. Exploration to date has focused on systematic drill testing of the Henty Horizon, which is defined as a zone of mineralisation, alteration and carbonate developed at the contact between the basal Tyndall Group and the underlying Central Volcanic Sequence. The exploration

program has been highly successful and an inferred gold resource of 731000 tonnes @ 7.6g/t Au at Mount Julia in the south of the Henty Mine Lease has recently been delineated.

In early 1998 a joint venture with Resolute Limited was formed to enable testing of the southern strike extents of the Henty Horizon in the South Henty area. This highly prospective EL also includes known mineralisation at the stratigraphically lower *Spillway Horizon*. Both the *Henty* and *Spillway* Horizons are being actively explored and a recent drill hole SHD16 intersected a wide zone of moderate to strong sericite-pyrite-chalcopyrite mineralisation. The copper-gold association in SHD16 is spatially associated with a complex of Suite II andesite and quartz porphyry and is considered to be analogous to the mineralisation at Prince Lyell and Garfield.

The Anthony EL is situated adjacent to the South Henty and Basin Lake ELs and includes the southern strike extents of the *Henty* and *Spillway* Horizons. Both these horizons are considered to be highly prospective for gold and gold-base metal mineralisation. The EL is largely covered by Suite II andesites and has considerable potential for porphyry related copper-gold mineralisation.

AurionGold's Tasmanian exploration program targets the discovery of Henty style mineralisation and polymetallic gold rich base metal mineral deposits in the Cambrian Mount Read Volcanics. The results of previous exploration in the Anthony area suggest that this area is highly prospective. Discovery of an economic gold deposit in the Anthony Road area is important to supplement gold production at the nearby Henty mine.

1.5 Exploration Model

The current exploration model used in the Mount Read Volcanics is based on the recognition of several distinctive characteristic features of volcanic hosted massive sulphide deposits and Henty style gold deposits (Figure 2). These include:

- occurrence of mineral deposits in clusters along favourable horizons,
- spatial control of synvolcanic growth faults,
- distinctive zoned and asymmetric footwall alteration zones, and
- chemical sediments (exhalites) and sulphide clast rich mass flow units at the favourable horizon.

The initial phase of an exploration program is to define the favourable mineralised horizon. A systematic program of detailed geological mapping and logging of any existing core is performed with emphasis on delineating potential syn-volcanic growth faults and other target areas that are considered to have the greatest possibility for an economic grade mineral discovery.

The target areas identified in Phase 1 are prioritised and systematically drilled in Phase 2 of the program. A nominal drill spacing of 800m to 1000m along the favourable horizon is used to provide maximum geological information. Where significant mineralisation or alteration is intersected the spacing between adjacent drill holes is reduced. In areas that have been covered by surface geophysical surveys (e.g., IP) it is considered that the upper 200m of the bedrock have been adequately explored and drill holes generally target the favourable horizon about 300 to 350m down dip of the surface. It is hoped that any off hole conductors at depths greater than 200m will be found by routine DHEM surveying. Thus, each drill hole in this phase of the program will test a volume of rock and will provide maximum

geological information.

Specific geochemical and isotopic techniques are also employed in Phase 3 of the program to determine the proximity to the mineralisation system. Advanced exploration targets are rigorously tested by drilling in Phase 4 of the exploration program.

The exploration program depends entirely on the quality of the targets generated. Once a target worthy of advanced testing has been identified additional regional exploration targets are assessed. In this way a project could have several Phase 1 and Phase 4 targets that are simultaneously explored.

2 PREVIOUS EXPLORATION

Exploration prior to 1997 is comprehensively set out in Lewis (1995) and MacDonald & Ikstrums (1998).

During 1997-1998, Resolute Samantha Ltd, who held the ground in joint venture with Acacia Metals Pty Ltd and Aberfoyle Resources Limited, completed three short (~50m each) Diamond drill holes for a total of 170.5m. These holes, LHD 1-3, were drilled to test a single anomalous Cu wacker sample (0.34% Cu) associated with a structure interpreted by Aberfoyle to be a WNW-ESE trending Cambrian growth fault - the *Pyrite Corner Fault* (see MacDonald & Ikstrums, 1998). Pyritic alteration was only intersected in LHD1 where it was most intense (~3% Pyrite) from 25.5m to 30.0m and apparently associated with shearing at 28.2 and 30.0m. Coherent to hyaloclastic Anthony Road Andesite was the only rock type intersected and assay results were disappointing throughout with all Au <0.10g/t and all Cu <946ppm. As, Ag, Pb and Zn results are all low (i.e. background).

3 WORK COMPLETED

The exploration completed by Goldfields on EL 19/98 to date is summarised on the table on Page 6.

Figure 1

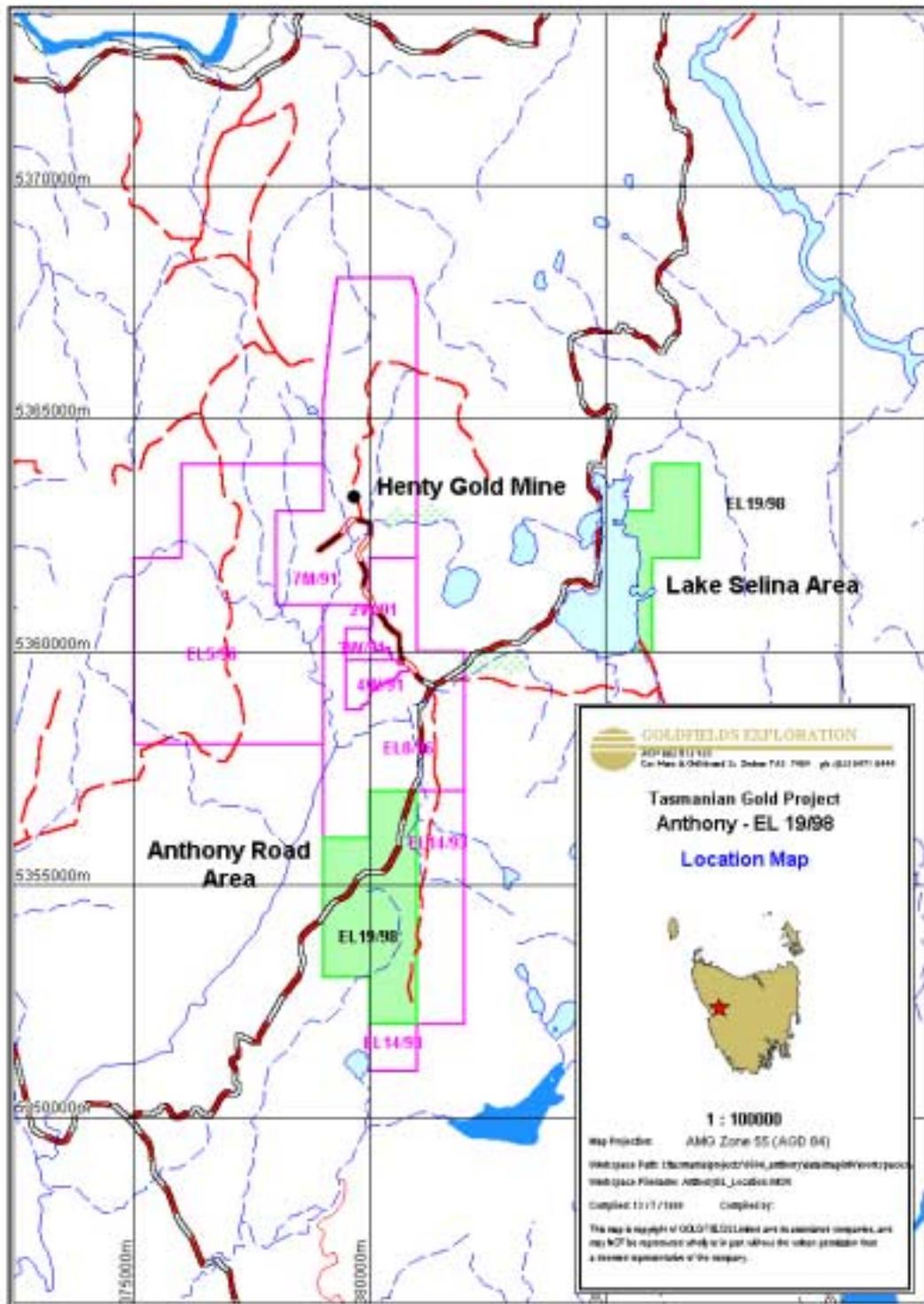


Figure 2

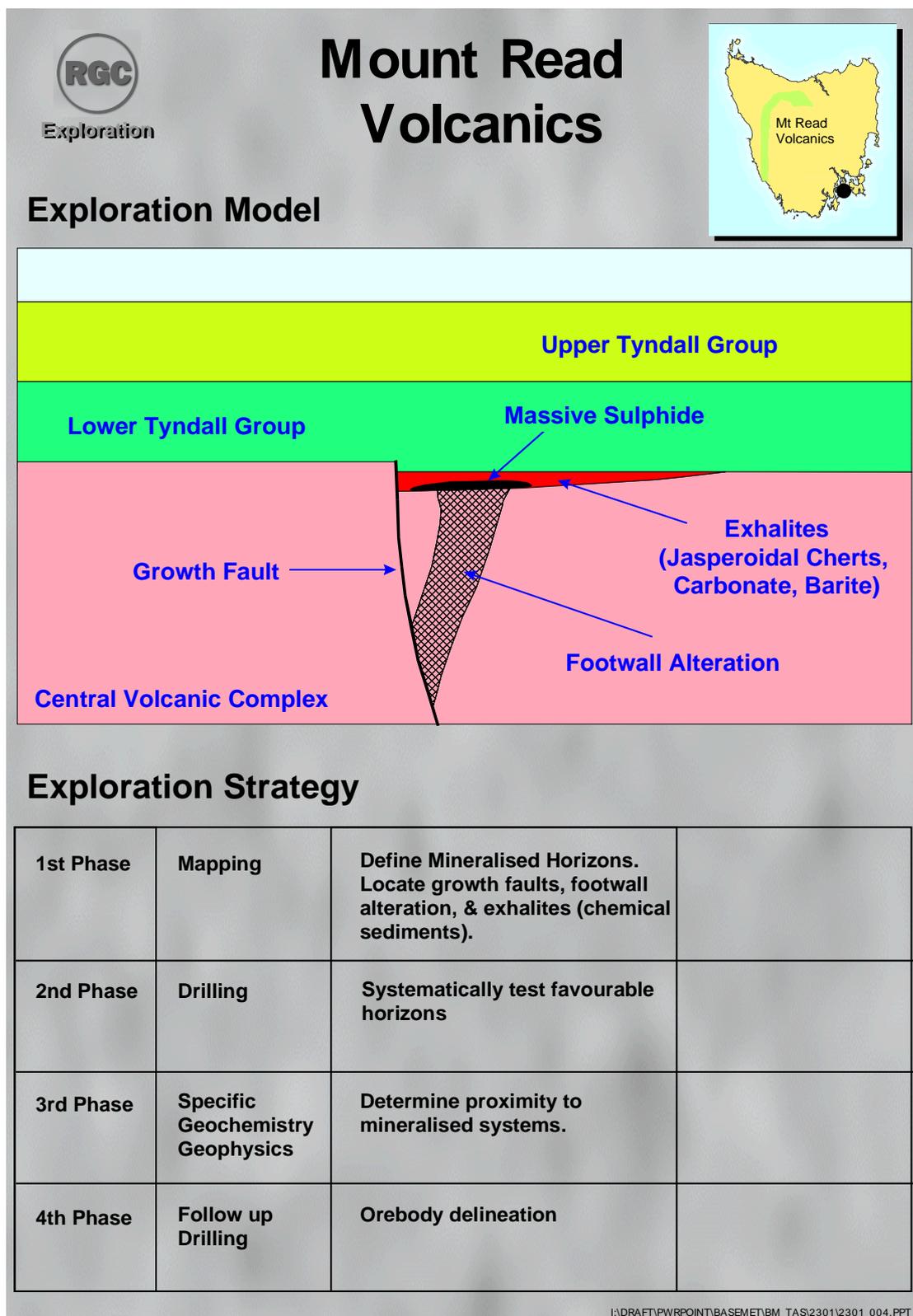


Table 1. Work completed on EL 19/1998. 1998-2002

	1998-1999	1999-2000	2000-2001	2001-2002
General	1:5000 mapping and compilation Literature Review Mt Selina Review	1:5000 mapping and compilation 24.7 km of grid re-established Nick Williams (BSc(Hons) Project	Relinquishment of Lake Selina area	
Drilling	Relog old holes	TYN017 (305.4m) TYN018 (339.6m)	TYN019 (351.3m) TYN020 (300.0m)	TYN021 (350.8m)
Geochemistry Soils Rocks Core Isotopes General	38 samples by AAS, XRF and NAA 20 samples by AAS, XRF and NAA Compilation of soil + wacker data	19 samples by AAS, XRF and NAA 164 samples by AAS. 46 samples by XRF and NAA 1 XRD determination	90 samples by AAS, 3 by NAA + XRF	67 samples by AAS
Geophysics	Compilation of 1986 gradient IP data Reprocessing of CSAMT data Helimag data processing	Inversion of 1967 dipole-dipole IP data Review of BL006-BL007 DHEM Review of IP Data from Bradshaws Road area Dipole – Dipole IP Survey (24.7 line km)	Dipole – Dipole IP Survey Technical Report	DHEM of TYN017-TYN020
Reference	Hill and Vicary, 1999	Vicary, 2000. Williams, 2000	Vicary, 2001a and 2001b	This report

4. RESULTS

4.1 GEOPHYSICS

4.1.1 DHEM Survey

Drill holes TYN017, TYN018 and TYN020 were surveyed with DHEM by Outer Rim in January 2002. The survey planned for hole TYN019 was not completed due to a hole blockage above the zone of interest. Three reports detailing the survey, including modelling of holes TYN017 and TYN018 are included in Appendix 4. Digital data is supplied.

4.2 DRILLING

4.2.1 TYN021

TYN021 was designed to test a DHEM anomaly on Line 5354375mN. The anomaly was defined from the modelling of the DHEM data from TYN017 and TYN018. The hole was drilled in May 2001 by DDTas using a P4 drill rig.

Collar location, surveys and detailed logs are presented in Appendix 2. A cross section of the drill hole is presented as Plan 1. A summary log of the hole is:-

0 – 13.2	Glacial deposits (Qg)
13.2 – 73.5	Highly weathered andesite (Ca)
73.5 – 234.3	Andesite (Ca)
234.3 – 283.0	Andesitic volcanoclastic sandstone and minor carbonate (Cav)
283.0 – 320.0	Quartz porphyry (Cp)
320.0 – 323.8	Semi massive pyrite
323.8 – 350.8	Quartz porphyry (Cp)

The quartz porphyry contained a wide zone of intense sericite(±pyrophyllite) – pyrite – silica alteration from 313.8 to 327.8m. A 3.8m wide zone of semi massive pyrite with trace enargite was intersected from 320.0 to 323.8m. This is considered to be the source of the DHEM anomaly. The quartz porphyry was still highly altered and faulted when the hole was stopped by bad ground conditions at 350.8m.

4.3 GEOCHEMISTRY

4.3.1 TYN021

Sixty seven samples were collected from TYN021 and analysed by Analabs in Burnie for Cu, Pb, Zn, Ag, and As by AAS and Au by fire assay. The entire section of the altered quartz porphyry was sampled. The results are tabulated in Appendix 3.

The massive pyrite assayed 4.8m @ 0.7 g/t Au from 320.0 – 324.8m, includes 1m @ 1.8 g/t Au from 322 to 323m

The faulted and veined upper contact of the quartz porphyry from 283 to 287m returned 4m @ 0.4% Pb.

5. DISCUSSION and RECOMMENDATIONS

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6. References

Hill, R and Vicary, M.J., 1999 1998-99 Annual Report. Tasmanian Gold Project. Anthony EL 19/98. Part 1 – Anthony Road area. Goldfields Exploration Pty Ltd.

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Vicary, M.J., 2000 1999-2000 Annual Report. Tasmanian Gold Project. Anthony EL 19/98. Part 1 – Anthony Road area. Goldfields Exploration Pty Ltd.

Vicary, M.J., 2001a 2000-2001 Annual Report. Tasmanian Gold Project. Anthony EL 19/98. Goldfields Exploration Pty Ltd.

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Williams, N., 2000 The Basin Lake High Sulphidation Alteration System, Western Tasmania. BSc(Hons) thesis (unpubl.) University of Tasmania.

APPENDIX 1

Symbols and Codes used in drill logs

APPENDIX 2

Diamond Drill Hole Logs and Summaries

APPENDIX 3

Analyses

APPENDIX 4

DHEM Survey

APPENDIX 5

Index of Digital Report

Index of Digital Data accompanying this report:-

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191998_200210_03_Appendix 1_Symbols and Codes used in Drill Logs
191998_200210_04_Appendix 2_TYN021 Drill Log
191998_200210_05_Appendix 2_TYN021 Geology
191998_200210_06_Appendix 3_TYN021 Assays
191998_200210_07_Appendix 4_Anthony_DHEM_Specifications
191998_200210_08_Appendix 4_Anthony_DHEM_Outerrim_Report
191998_200210_09_Appendix 4_TYN017_DHEM_Modelling
191998_200210_10_Appendix 4_Anthony_DHEM_Raw Data
191998_200210_11_Plan_1_TYN021_Cross_section

PLANS