

**ANNUAL TECHNICAL REPORT FOR THE PERIOD**

**19 July 2004 to 18 July 2005**

**EXPLORATION LICENCE 13/2002 “Dundas”**

**And**

**EXPLORATION LICENCE 19/2002 “Melba Siding”**

**Western TASMANIA**

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## **ABSTRACT**

Exploration Licences 13/2002 'Dundas' and 19/2002 'Melba Siding' are being explored for collectable and ornamental stones by the licensee Mr Tamas Kapitany. The area is world renowned for producing rare and beautiful mineral specimens of crocoite and cerussite, together with minerals suitable for carving, such as stichtite and barbertonite within serpentinite.

Previous exploration has included the purchase of aerial photos, geological mapping, hand collecting, costeaning, excavation, and bulk sampling. A number of serpentinite boulders were removed from the eastern fringe of the Tunnel Hill quarry. These were stored at Rosebery prior to proposed shipment to China for test carving work and market research. A Mining Lease 9M/2004 was applied for over some serpentinite cuttings west of the West Comet mine. These appeared to have good potential as lapidary material. Market research into the possible use of serpentinite as a paving material was proposed to be carried out. A small amount of stichtite (suitable as specimen pieces) was also located during the excavation/costeaning at Tunnel Hill.

Exploration during the reporting period has included: organizing Bonds and Planning Permits for MLA's 8M/2004 and 9M/2004, which were pegged over Tunnel Hill Quarry (EL 19/2002) and west of the West Comet (EL 13/2002) respectively; transportation of, and cutting and polishing of samples; overseas trips for marketing/promotion of stichtite/serpentinite; return of serpentinite boulders to Tunnel Hill Quarry; field mapping and submission of Work Programs (3); mining of serpentinite/stichtite west of the West Comet; application to have 9M/2004 expanded and shipping of serpentinite/stichtite to Hong Kong.

## **KEYWORDS**

Exploration Licence  
Western Tasmania  
Dundas  
Melba Siding  
Tunnel Hill Quarry  
West Comet mine  
Adelaide mine  
Crocoite  
Serpentinite  
Stichtite  
Barbertonite  
*Epacris glabella*  
*Micrantheum serpentinum*  
Costeaning/Excavation  
Bulk sampling

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## 1. INTRODUCTION

### 1.1 Exploration rationale

Exploration Licences 13/2002 ‘Dundas’ and 19/2002 ‘Melba Siding’ (Figure 1) are being explored by the licensee Mr Tamas Kapitany for collectable and ornamental stones. The area is world renowned for producing rare and beautiful mineral specimens of crocoite and cerussite, together with minerals suitable for carving, such as stichtite and barbertonite within serpentinite.

EL 13/2002 has been granted for Category 3 & 5 Minerals and expires on 18<sup>th</sup> July 2008.

EL 19/2002 has been granted for Category 1 & 5 Minerals and expires on 18<sup>th</sup> July 2008.

Land tenure comprises Crown Land, Multiple Use State Forest and the Mount Dundas Regional Reserve. There are a number of Mining Leases, which were applied for, or in force, prior to the EL’s. These ML’s are excluded from the area of the Exploration Licences (Figures 2 and 3).

EL’s 13/2002 and 19/2002 are contiguous and are located a few kilometres east and northeast of Zeehan in Western Tasmania (Land District of Montagu, Municipality of West Coast). The area is rugged and is mostly densely forested. Although there are numerous minor roads, exploration tracks and grids, access to parts of the area is difficult. Mining Lease 9M/2004 has been taken out over a serpentinite/stichtite outcrop west of the West Comet Mine, and within the area of EL 13/2002.

Access difficulties are compounded by the practice of a number of individuals who hold Mining Leases in the area to erect gates along access roads well outside their ML boundaries but within the areas of the Exploration Licences.

Tenement details are as follows:

Type of Licence	Tenement Number	Tenement Name	Area (Sq. km)	Date of Grant	Date of Expiry	Tenement Holder	Expenditure Commitment
EXPLORATION LICENCE	13/2002	DUNDAS	19	19/07/03	18/07/08	Tamas Kapitany	\$100,000 pa
EXPLORATION LICENCE	19/2002	MELBA SIDING	5	19/07/03	18/07/08	Tamas Kapitany	\$10,000 pa
MINING LEASE	9M/2004	WEST COMET	7 Ha	25/10/04	25/10/09	Australian Mineral Mines	

## **1.2 Geological Setting:**

The geology of the area is varied and structurally complex, and most contacts between major rock units are faulted. An inlier of Mesoproterozoic (?) Oonah Formation, consisting of quartzwacke turbidite and schist, may have been a horst block since the Cambrian. It is surrounded by Middle to Late Cambrian sequences of turbiditic to shallow marine epiclastic sediments and minor volcanoclastic rocks (lower and upper Dundas Group, Rosebery Group). These have a complex contact with the Mt Read Volcanics near the eastern limit of the area.

Fault-bounded and probably allochthonous mafic/ultramafic complexes comprise serpentinite, gabbro, boninite and basalt. In the Devonian these units were further deformed and intruded by the mineralizing but poorly exposed Pine Hill Granite.

The area contains well over 100 historical workings. These include a variety of mineralisation styles (vein, disseminated, stockwork, replacement and skarn deposits, mainly of Ag-Pb-Zn and Cu +/- Sn), are mostly associated with NNW and NE-trending faults, and are probably related to Devonian granite.

The largest resources were at the Kosminsky and South Comet mines (60,000 t @ 8.4%, 7.4% Zn). The Renison tin mine and the Rosebery and Hercules Zn-Pb-Ag mines lie just outside the project area.

The Dundas region has been the world's most significant producer of museum quality crocoite specimens. The Adelaide mine has been the principal specimen producer. The mine is still in operation and remains one of the very few locations producing crocoite. Other specimen producing deposits in the area include:

Red Lead – crocoite, cerussite, dundasite, pyromorphite, gibbsite

Comet-Maestries – crocoite, anglesite, chrome cerussite, phosgenite, siderite, green pyromorphite

Kapi – chrome cerussite, crocoite, anglesite

Sylvester – green pyromorphite, cerussite, anglesite, hinsdalite, cerargyrite

Platt – crocoite, pyrolusite

South Comet – cerussite, crocoite, anglesite

Kosminsky – crocoite, cerussite

## **2. REVIEW OF PREVIOUS WORK**

### **2.1 Prior to current tenement EL 13/2002:**

Numerous companies have explored the area since the 1950's, and there are over 100 exploration drill holes.

Pasminco Exploration (who previously held the area) targeted Cambrian VHMS mineralisation. Pasminco flew a helimag and EM survey (100 m line spacing, 30 m average height) and identified numerous conductors. Five mostly shallow EM anomalies were ranked as high or medium priority for follow-up. This work was not carried out prior to relinquishment.

### **2.2 Prior to current tenement EL 19/2002:**

The area has been explored since the late 1940's by a number of companies including Rio Tinto and most recently by Dragon Mining NL. Exploration activities included detailed geological mapping and geophysical surveys, costeaning, surface sampling, bedrock geochemistry, drilling and basin analysis studies.

### **2.3 During current tenements tenure:**

#### **2.3.1 Literature review:**

A literature review of the Dundas region highlighted the fact that Dundas has been the world's most significant producer of museum quality crocoite specimens. The Adelaide mine has been the principal specimen producer. The mine is still in operation and remains one of the very few locations producing crocoite. Other specimen producing deposits in the area include:

Red Lead – crocoite, cerussite, dundasite, pyromorphite, gibbsite

Comet-Maestries – crocoite, anglesite, chrome cerussite, phosgenite, siderite, green pyromorphite

Kapi – chrome cerussite, crocoite, anglesite

Sylvester – green pyromorphite, cerussite, anglesite, hinsdalite, cerargyrite

Platt – crocoite, pyrolusite

South Comet – cerussite, crocoite, anglesite

Kosminsky – crocoite, cerussite

The area is also famous for producing minerals suitable for carving, such as stichtite and barbertonite within serpentinite.

### **2.3.2 Regional activities:**

Regional exploration activities commenced on EL's 13/2002 and 19/2002 during the first year of tenure. Work carried out included:

#### 2.3.2.1 Colour Aerial Photography

Colour aerial photographs were obtained from Service Tasmania including prints at 1:42,000 scale (Film 1323 Neg 185) and 1:24,000 scale (Film 1346 Neg 110). These photographs were used to help determine available access tracks within the project, which is rugged and mostly densely forested.

#### 2.3.2.2 Maps

1:25,000 scale topographic and geological maps of the Dundas Sheet (3636) were purchased. The plans were acquired to determine the location of historical mines, access tracks and areas interpreted to be underlain by Cambrian serpentinite.

#### 2.3.2.3 Reconnaissance Field Trips

Two (2) reconnaissance field trips were carried out. A number of localities were visited including Tunnel Hill Quarry, Serpentine Hill, Nevada Creek, cuttings along the Emu Bay Railway and the West Comet area. Work programmes were formulated for a number of these areas.

#### 2.3.2.4 Access Arrangements

Arrangements to gain access to large areas of the project area via locked gates erected by ML holders commenced. Copies of a number of keys were obtained. However difficulties still remained with some of the ML holders.

#### 2.3.2.5 Drafting of Plans

A number of plans were drafted in CorelDRAW10 to be included in the Annual Technical Report.

#### 2.3.2.6 Ordering of Geophoto Resources Geological Plans

Copies of geological plans produced by Geophoto Resources Consultants on EL 7/68 (which covered the Dundas region in the late 1960's - early 1970's) were ordered from Ralph Bottrill at Mineral Resources Tasmania. The plans are yet to be received.

### **2.3.3 Prospect based exploration activities:**

Four Work Programme Proposals were submitted as follows:

- Tunnel Hill Quarry (EL 19/2002)– two (2) proposals; one (1) for the sampling of serpentinite boulders on the eastern quarry fringes and one (1) for digging costeans for stichtite and gem quality serpentinite within the central quarry floor.
- Eastern Nevada Creek area (EL 13/2002) – a proposal to costean for barbertonite within serpentinite.
- The cutting adjacent to the Dundas “Tramway” located to the west of the West Comet mine (EL 13/2002) – a proposal to excavate the cutting for serpentinite/stichtite was lodged during the third field trip to the project, when the above three (3) Work Programmes were in progress.

The two (2) Work Programme Proposals at Tunnel Hill Quarry required a Botanical survey of the site before approval to proceed could be given. There are three (3) listed threatened species known from in and around the site – *Epacris glabella*, *Micrantheum serpentinum* and *Orthocerus strictum*. A number of quotes for the survey were obtained.

Consultant Botanist Richard Schahinger carried out the botanical survey in January 2004. He concluded that the Work Programme Proposals would have minimal impact on the threatened species.

A twelve (12) month Permit (Permit No. TFL 04039) for “taking” native flora at Tunnel Hill was subsequently issued by Dr Wendy Potts of the Department of Primary Industries, Water and Environment for the period from 1<sup>st</sup> March 2004.

#### 2.3.3.1 Tunnel Hill Quarry – sampling of serpentinite boulders

A number (24) of serpentinite boulders were removed from the eastern fringe of the quarry. These weighed a total of 32 tonnes and were loaded onto a truck and were stored at Rosebery prior to proposed shipment to China for test carving work. One specimen of *Epacris glabella* was “taken” during the programme.

#### 2.3.3.2 Tunnel Hill Quarry – excavating/costeaining of quarry floor for stichtite/serpentinite

Two large excavations were dug in the central and western part of the quarry. These two excavations were joined by a central costean. Maximum depth of the excavations was 5 metres. In addition three small excavations were also completed adjacent to the western scarp wall at the quarry.

A total of 8 tonnes of serpentinite and 30 kg of stichtite were removed during the excavating/costeaining bulk-sampling program at Tunnel Hill.

#### 2.3.3.3 Eastern Nevada Creek – costeaning for barbertonite

Costeaning of the rock outcrop adjacent to the Nevada Creek was carried out to explore for barbertonite within serpentinite. Upgrading of the existing access track to the site was necessary to enable completion of the program. No earthworks were undertaken in the creek and costeans approximately 10 metres in length were dug on either side of the creek (no closer than 10 metres to the creek). All material exposed during the costeaning was left on site. A trench was dug at the bottom of the track after completion of the program to discourage illegal miners.

#### 2.3.3.4 Cuttings adjacent to Dundas “Tramway” west of West Comet mine – excavation for serpentinite/stichtite

Excavation of a number (4) of cuttings and rock outcrops adjacent to the Dundas “Tramway” for serpentinite/stichtite was completed. Material exposed during the program was very weathered. No material was removed from site.

### **3. EXPLORATION COMPLETED DURING THE REPORTING PERIOD**

#### **3.1 Organizing Bonds and Planning Permits for MLA's 8M/2004 and 9M/2004, which were pegged over Tunnel Hill Quarry (EL 19/2002) and west of the West Comet (EL13/2002) respectively.**

A Bank Guarantee for \$5,700 was obtained for 8M/2004 and a Planning Permit Application lodged with the West Coast Council, Zeehan. The Council and then MRT subsequently refused the Application for 8M/2004 because of the absence of a mineral resource that is sufficient for mining, unavailability of access from the Murchison Highway and the risk associated with fibrous asbestos.

A Bank Guarantee for \$6,400 was obtained for 9M/2004 and a Planning Permit Application lodged with the West Coast Council, Zeehan. The Council subsequently approved the Permit Application and the licence was granted on 25 October 2004 for a period of 5 years.

#### **3.2 Transportation of and cutting and polishing of Samples**

Some of the 8 tonnes of serpentinite and 30 kg of stichtite that were removed during the excavating/costeaning bulk-sampling program carried out at Tunnel Hill during the previous reporting period were transported to Melbourne, Victoria. Trial cutting and polishing of a number of these samples is in progress.

#### **3.3 Overseas trips for marketing/promotion of stichtite/serpentinite**

A number of overseas trips were undertaken for marketing/promotion of the stichtite/serpentinite, which has good potential as lapidary, carving and paving material and also. Trips included China (x3 – including Hong Kong), USA (x2 – including the Tucson Show), Germany and Japan.

#### **3.4 Return of serpentinite boulders to Tunnel Hill Quarry**

Trial cutting and polishing of serpentinite material containing chrysotile veins was carried out. This work returned unsatisfactory results and it was decided to transport the serpentinite boulders from Rosebery back to the Tunnel Hill Quarry. Rehabilitation was carried out so as not to expose the chrysotile veins to the public.

#### **3.5 Field mapping and Submission of Work Programmes (3)**

Field reconnaissance and geological mapping was carried out around the newly granted 9M/2004. This work identified a number of areas of good stichtite/serpentinite outcrop immediately northeast of 9M/2004. A Work Program was submitted for the use of an excavator to sample a stichtite/serpentinite ridge in this area (Figure 4).

Work Programs were also submitted for Tunnel Hill. A program was submitted to sample four to five tonnes of iron-stained serpentinite/pyroxene boulders in the north-central quarry. In addition a program was submitted to sample ten tonnes of dark green serpentinite from the south wall of the quarry (Figure 5).

### **3.6 Mining of serpentinite/stichtite west of the West Comet**

A total of 46 tonnes of serpentinite/stichtite was mined from the area west of the West Comet Mine (9M/2004) during the reporting period (Figure 4, Photos 1 and 2).

### **3.7 Application to have 9M/2004 expanded**

An Application was made to the Department on the 19<sup>th</sup> May 2005 to have the area of the licence expanded to cover a number of significant outcrops of serpentinite/stichtite encountered during field reconnaissance/geological mapping to the northeast of 9M/2004 (refer to Figure 6). The original Application area of 9M/2004 was much larger than the 7 hectares granted by the Department. The Department has recently refused the proposed expansion of the lease. A new Mining Lease will have to be applied for over this area.

### **3.8 Shipping of serpentinite/stichtite to Melbourne and Hong Kong**

Thirty (30) tonnes mined from the area west of the West Comet Mine is currently being shipped to Hong Kong for trial cutting and polishing, lapidary, carving and paving material.

## **4. DISCUSSION OF RESULTS**

Trial cutting and polishing of some of the serpentinite boulders containing chrysotile veins yielded unsatisfactory results and the remaining boulders were returned to Tunnel Hill.

Field reconnaissance and geological mapping has identified a number of areas of good stichtite/serpentinite outcrop immediately northeast of 9M/2004. A Work Program has been submitted for the use of an excavator to sample a stichtite/serpentinite ridge in this area. An Application has been submitted to Mineral Resources Tasmania to have the area of the licence expanded to cover these areas.

The stichtite/serpentinite has good potential as lapidary, carving and paving material. Overseas marketing/promotion of the material has continued. A large sample (30 tonnes) of the stichtite/serpentinite mined from 9M/2004 is currently being shipped to Hong Kong.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

Trial cutting and polishing of some of the serpentinite boulders containing chrysotile veins yielded unsatisfactory results and the remaining boulders were returned to Tunnel Hill.

Two new Work Programs have been submitted for Tunnel Hill. A program has been submitted to sample four to five tonnes of iron-stained serpentinite/pyroxene boulders in the north-central quarry. In addition a program has been submitted to sample ten tonnes of dark green serpentinite from the south wall of the quarry.

Field reconnaissance and geological mapping has identified a number of areas of good stichtite/serpentinite outcrop immediately northeast of 9M/2004. A Work Program has been submitted for the use of an excavator to sample a stichtite/serpentinite ridge in this area. An Application has been submitted to the Department to have the area of the licence expanded to cover these areas. The Department has recently refused the proposed expansion of the lease. A new Mining Lease will have to be applied for over this area.

The stichtite/serpentinite has good potential as lapidary, carving and paving material. Overseas marketing/promotion of the material has continued. A large sample (30 tonnes) of the stichtite/serpentinite mined from 9M/2004 is currently being shipped to Hong Kong for trial work.

## **6. ENVIRONMENT**

Rehabilitation carried out during the reporting period has included adequate containment and safety of returned serpentinite boulders at Tunnel Hill Quarry, some of which contained chrysotile veins.

Rehabilitation west of West Comet on 9M/2004 is to be carried out during the next reporting period.

## 7. EXPENDITURE

Expenditure during the second twelve months of tenure totals \$57,814 on EL 13/2002 & 9M/2004, and \$29,558.95 on EL 19/2002, made up as follows:

<b>WORK CARRIED OUT</b>	<b>EL 13/2002 &amp; 9M/2004</b>	<b>EL 19/2002</b>
<b>Geology (incl. Field Work, Geol. Interp., Planning &amp; Submission of Work Programmes, Organizing Bonds/Planning Permits, Drafting of Plans, Compilation of Annual Tech. Report, Salaries &amp; Wages)</b>	<b>\$23,033</b>	<b>\$6,832</b>
<b>Transportation to Melbourne, Cutting and Polishing of Samples</b>		<b>\$9,734</b>
<b>Mining - excavator/machinery</b>	<b>\$5,000</b>	
<b>Transportation of Samples to Hong Kong</b>	<b>\$3,000</b>	
<b>Vehicles, Fuel</b>	<b>\$1,999</b>	<b>\$99</b>
<b>Staff Transportation (Air Fares, Ferry)</b>	<b>\$1,824</b>	
<b>Accommodation, Food</b>	<b>\$2,699</b>	<b>\$276</b>
<b>Overseas Marketing – USA, China, Germany, Japan</b>	<b>\$15,004</b>	<b>\$9,931.95</b>
<b>Administration (10%)</b>	<b>\$5,255</b>	<b>\$2,686</b>
<b>TOTAL</b>	<b>\$57,814</b>	<b>\$29,558.95</b>

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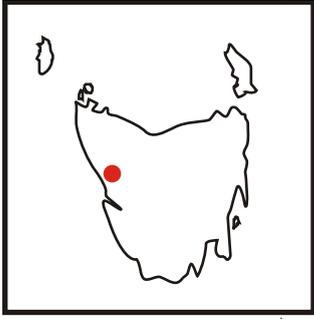
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## **APPENDIX 1**

Diskette 1 and 2 – Digital copy of Annual Report on EL 13/2002 & 19/2002.  
June 2005 (EL132002\_192002\_200506.pdf)



5370000N

5360000N

5350000N

360000E

370000E

RENISON BELL

Dreadnought Hill

Excluded

Serpentine Hill

EL 19/2002

Melba Siding

Heemskirk Road

ZEEHAN

Emu Bay Railway

Murchison Highway

Black Hill

Carbine Hill

Mount Razorback

DUNDAS

Dundas 'Tramway'

Kosminski Hill

EL 13/2002

Mount Dundas

Mount Zeehan

Zeehan Highway

Henty Road



Figure 1

Location Plan EL13/2002 & EL 19/2002

1:25,000 Mapsheet : Dundas (3636)

Scale 1:100,000

AGD 66 AMG ZONE 55

368000E

370000E

372000E

Figure 2. EL 13/2002  
 Exploration Activity Map  
 1:25,000 Mapsheet : Dundas (3636)  
 Scale 1:25,000  
 AGD 66 AMG ZONE 55

5367000N



Nevada Creek

Carbine Hill

5365000N

**EL 13/2002**

Mount Razorback

Mine Tailing Ponds

5363000N

**TOWN OF DUNDAS**

Work Program Proposal  
 for serpentinite/stichtite  
 ridge excavation

Mining of cuttings  
 adjacent to 'Tramway'  
 west of West Comet

West Comet Mine

Kosminski Hill

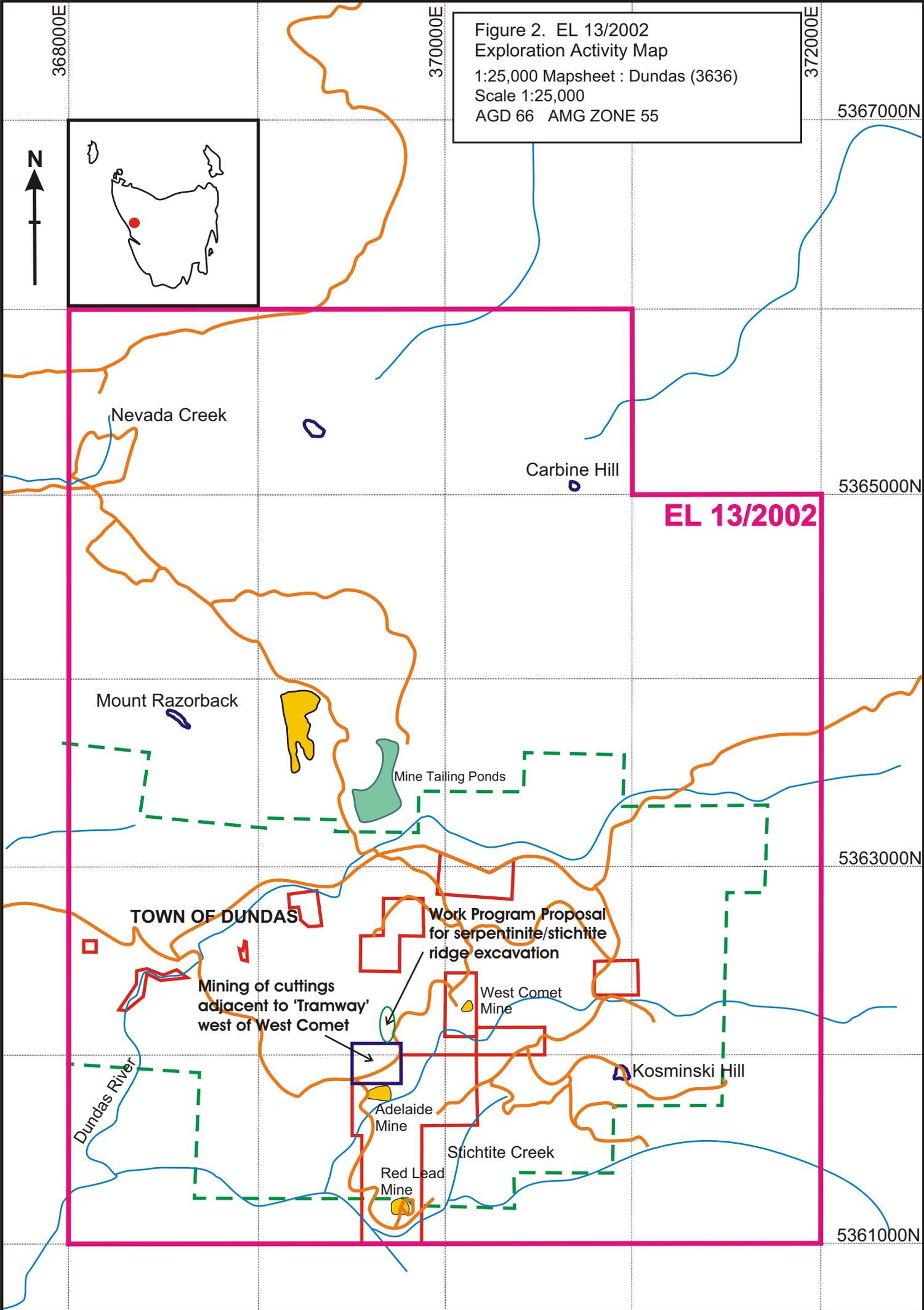
5361000N

Dundas River

Adelaide Mine

Stichtite Creek

Red Lead Mine



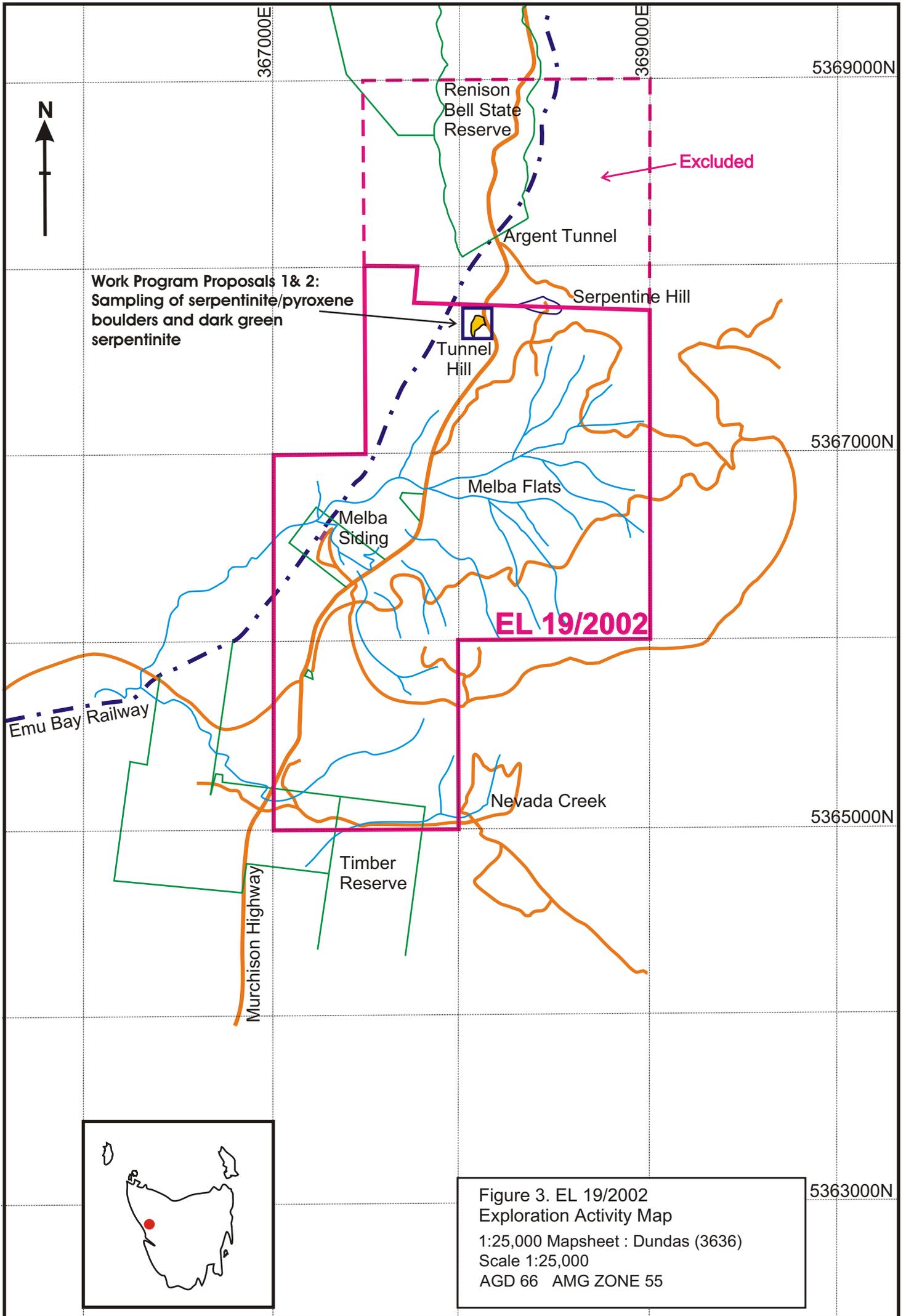
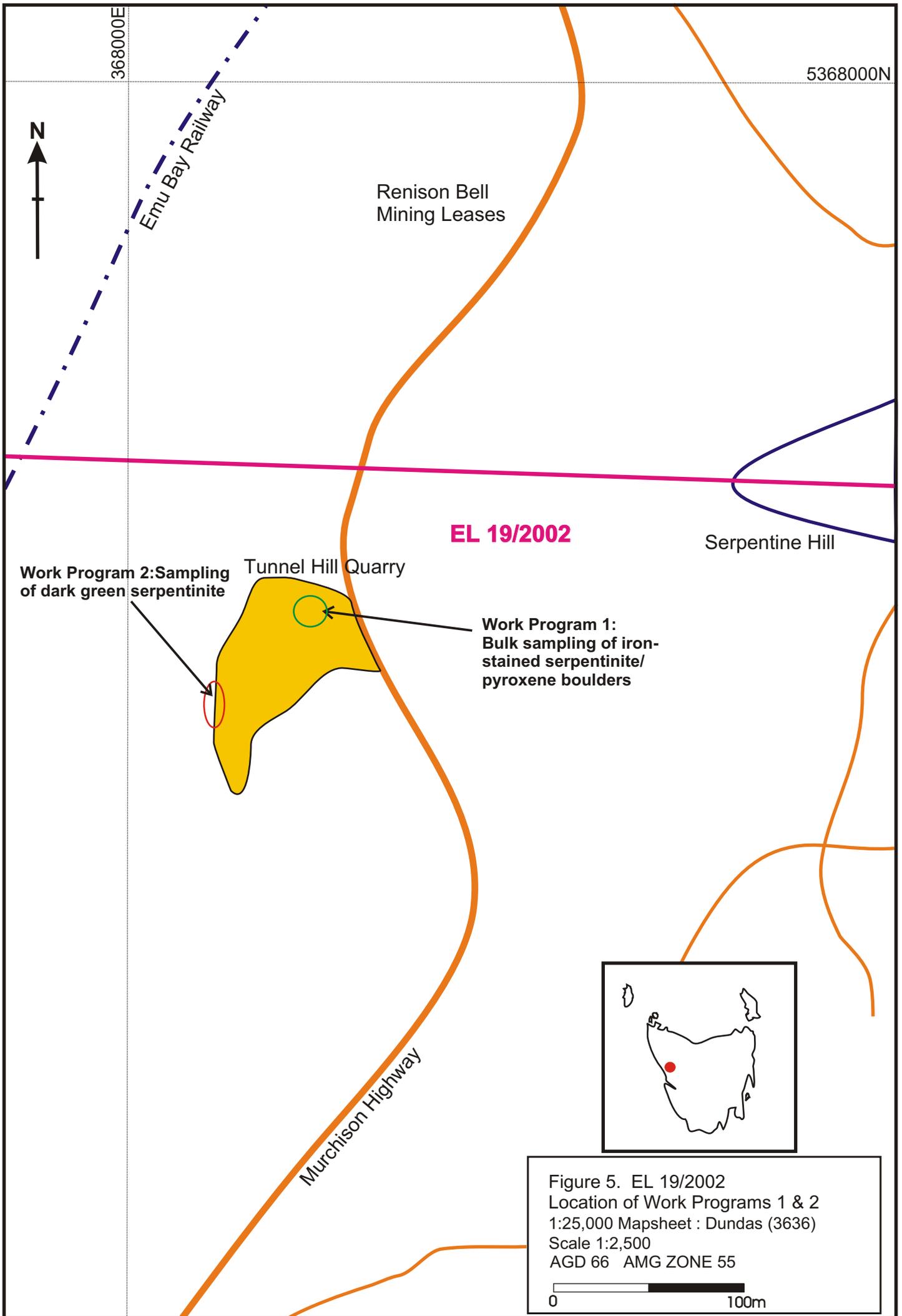


Figure 3. EL 19/2002  
 Exploration Activity Map  
 1:25,000 Mapsheet : Dundas (3636)  
 Scale 1:25,000  
 AGD 66 AMG ZONE 55





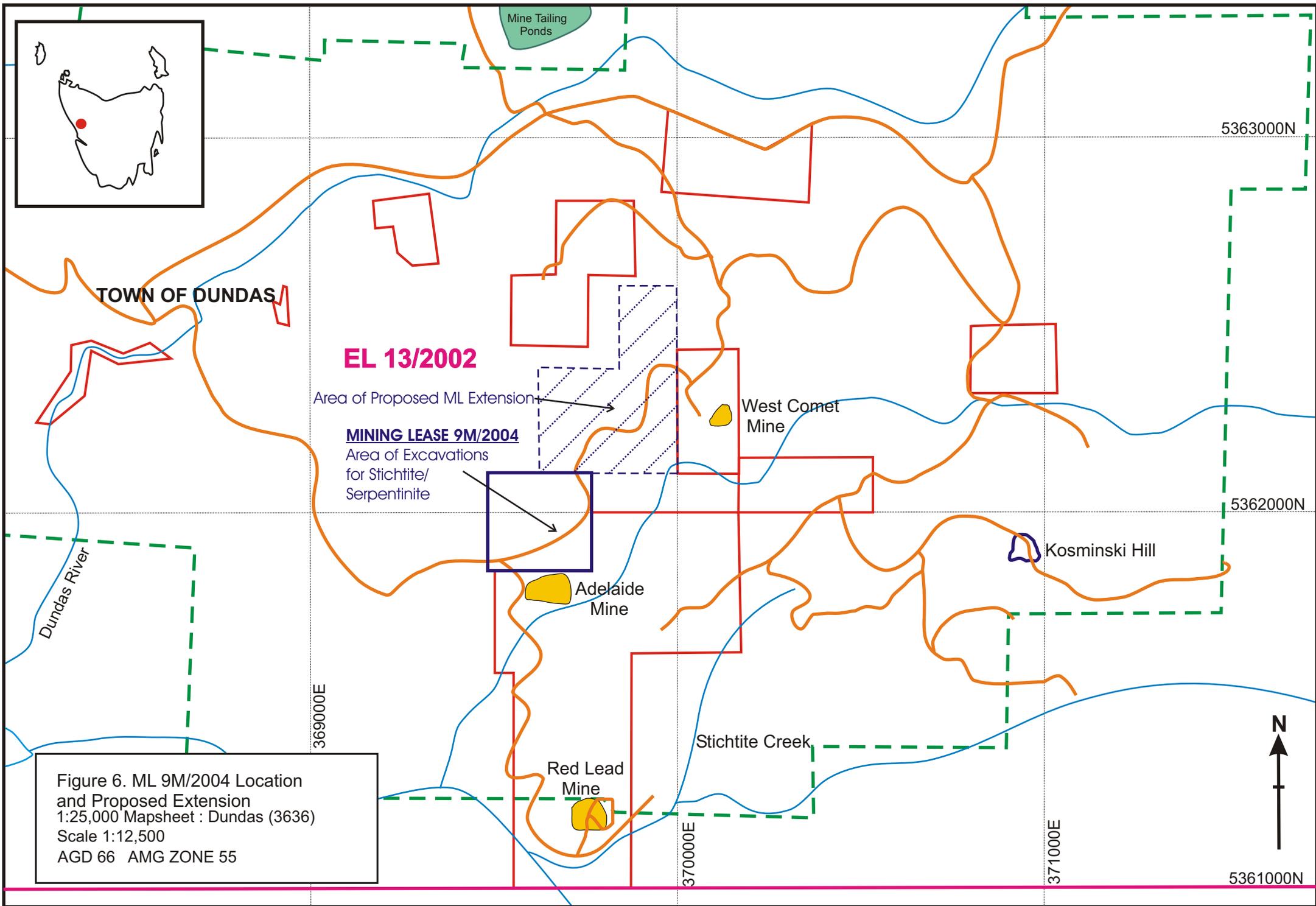


Figure 6. ML 9M/2004 Location and Proposed Extension  
 1:25,000 Mapsheet : Dundas (3636)  
 Scale 1:12,500  
 AGD 66 AMG ZONE 55