

Unity Mining Limited  
Gog Range Joint Venture  
EL 26/2004 Firetower  
Annual Report for Period  
26 November 2012 to 25 November 2013  
Vol. 1 of 1  
November 2013

<b>Held by:</b>	Greatland Pty Ltd
<b>Manager &amp; Operator:</b>	Unity Mining Limited
<b>Author:</b>	D.A. Evans
<b>Date:</b>	November 2013
<b>Map Sheets:</b>	Tasmania 1:25,000 Series Gog (4440) Tasmania 1:100,000 Series Mersey (8114) Forth (8115)
<b>Geographic Co-ord (GDA94):</b>	Minimum East: 442,000 m Maximum East: 454,000 m Minimum North: 5,404,000 m Maximum North: 5,408,000 m
<b>Commodities:</b>	Base metals, gold, silver

## 1.0 ABSTRACT

Unity Mining Ltd (UML) commenced exploration of EL 26/2004 Firetower from late 2011, as manager and operator of the Gog Range Joint Venture, in a farm-in agreement with tenement holder Greatland Pty Ltd.

Exploration undertaken during the 12 months report period, ended 25 November 2013, comprised:

- Petrographic study of host rocks from Firetower West copper prospect and Firetower stockwork vein gold deposit
- Gridding over Firetower West airborne magnetic anomaly
- Soil and rock chip sampling over part of the Firetower West grid
- Volterra 3DIP survey over Firetower West grid (results pending)
- Data compilation and review.

Preliminary results from the 3DIP survey at Firetower West indicate a number of strong chargeability responses. Further diamond drilling is recommended.

Total expenditure on the tenement during the report period was \$289,089.

UML proposes to conduct further field exploration activity in 2014 on the Gog Range JV tenements, including EL 26/2004 Firetower, with continued focus on gold and base metals prospectivity. Although subject to current budgetary constraints, diamond drilling is proposed to test the 3DIP chargeability anomaly at the Firetower West prospect. Further diamond drilling is also warranted to test for along strike and depth extensions of the Firetower gold deposit.

Current tenure expired on 25 November 2013 and UML has lodged an application for a further 12 months extension of term.

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**Digital File Verification Listing**

EL262004\_201311\_01\_Report.pdf

(Report text, plus figures included in report)

EL262004\_201311\_02\_AppendixIA\_&\_IB.pdf

(Appendix I Petrography Reports text, plus figures included in reports)

EL262004\_201311\_03\_SL1.xls

(Appendix IIA Rock Chip Sample data)

EL262004\_201311\_04\_SG1.xls

(Appendix IIB Rock Chip Sample assay data)

EL262004\_201311\_05\_SL2.xls

(Appendix IIIA Soil Sample data)

EL262004\_201311\_06\_SG2.xls

(Appendix IIIB Soil Sample assay data)

EL262004\_201311\_07\_QAQC1.xls

(Appendix IIC Rock Chip Sample assay QAQC data)

EL262004\_201311\_08\_QAQC2.xls

(Appendix IIIC Soil Sample assay QAQC data)

## **2.0 INTRODUCTION**

This report details exploration completed by Unity Mining Limited (UML) for gold and base metals mineralisation on EL 26/2004 Firetower in the year ended 25 November 2013.

The current 12 months extension of term for EL 26/2004 Firetower expired on 25 November 2013. UML intends to undertake further exploration on the EL and has lodged an application for a further 12 months extension of term.

### **2.1 Location and Access**

EL 26/2004 Firetower is located approximately 35.5 km south of Devonport and 64 km west of Launceston in central northern Tasmania. Nearest townships are Sheffield, 14 km to the north-northwest, and Mole Creek, 7 km to the south-southeast (Figure 1).

The majority of the EL lies within the Kentish Municipality except for a narrow section along the southern boundary which falls within the Meander Valley Municipality.

Main access is from Paradise Road – Union Bridge Road (C137), which links Sheffield and Mole Creek and traverses the central western section of the EL. The unsealed graded Gog Road cuts through the central portion of the EL along the northern edge of the Gog Range and connects with a numerous forestry roads and four-wheel drive tracks. The western section of the tenement is accessible from Union Bridge Road (C137) via the unsealed Rising and West Gog forestry roads. Areas of steep rugged terrain along the ridge line of the Gog Range are only accessible on foot.

### **2.2 Tenure**

EL 26/2004 Firetower covers 23 sq km and was granted to Greatland Pty Ltd on 26 November 2004 for a period of five years. The company tendered a successful bid to explore the tenement in accordance with Mineral Resources Tasmania's Exploration Release Areas process. An extension of term of the EL for a further 12 months was notified on 14 June 2013, with minimum expenditure requirement of \$80,000.

UML announced on 12 October 2011 a farm-in agreement with Greatland Pty Ltd to explore on four granted ELs in the Gog Range area, including EL 26/2004 Firetower. Under the terms of the agreement, UML as manager and operator may earn a 51% interest by spending \$2 million within the initial two and a half years.

Proposed exploration activity on the EL requires assessment by and approval from the Mineral Exploration Working Group (MWEg). Approval of exploration programs is conditional upon the proponent operating in accordance with standard requirements of the Mineral Exploration Code of Practice (MECOP) and all site specific conditions.

Much of the northern portion of EL 26/2004 Firetower covers State Forest (Figure 2). Areas of Informal Reserve – State Forest (Forestry Tasmania Managed Land) are located along and adjacent to river and creek drainages. The southwestern section extends over part of the Gog Range Regional Reserve. Small blocks of private land are located within State Forest with access off Paradise Road-Union Bridge Road (C137). Mining Lease 93M/1984, covering 12 ha to the west of Union Bridge Road, is excluded from EL 26/2004 Firetower. The Mining Lease was granted to A E and K H Walters in February 1985 for Category 3 Construction Minerals, with expiry due on 1 February 2016. Quarrying for sand and gravel is currently active within this lease. The southeastern perimeter of the EL abuts the Alum Cliffs State Reserve.

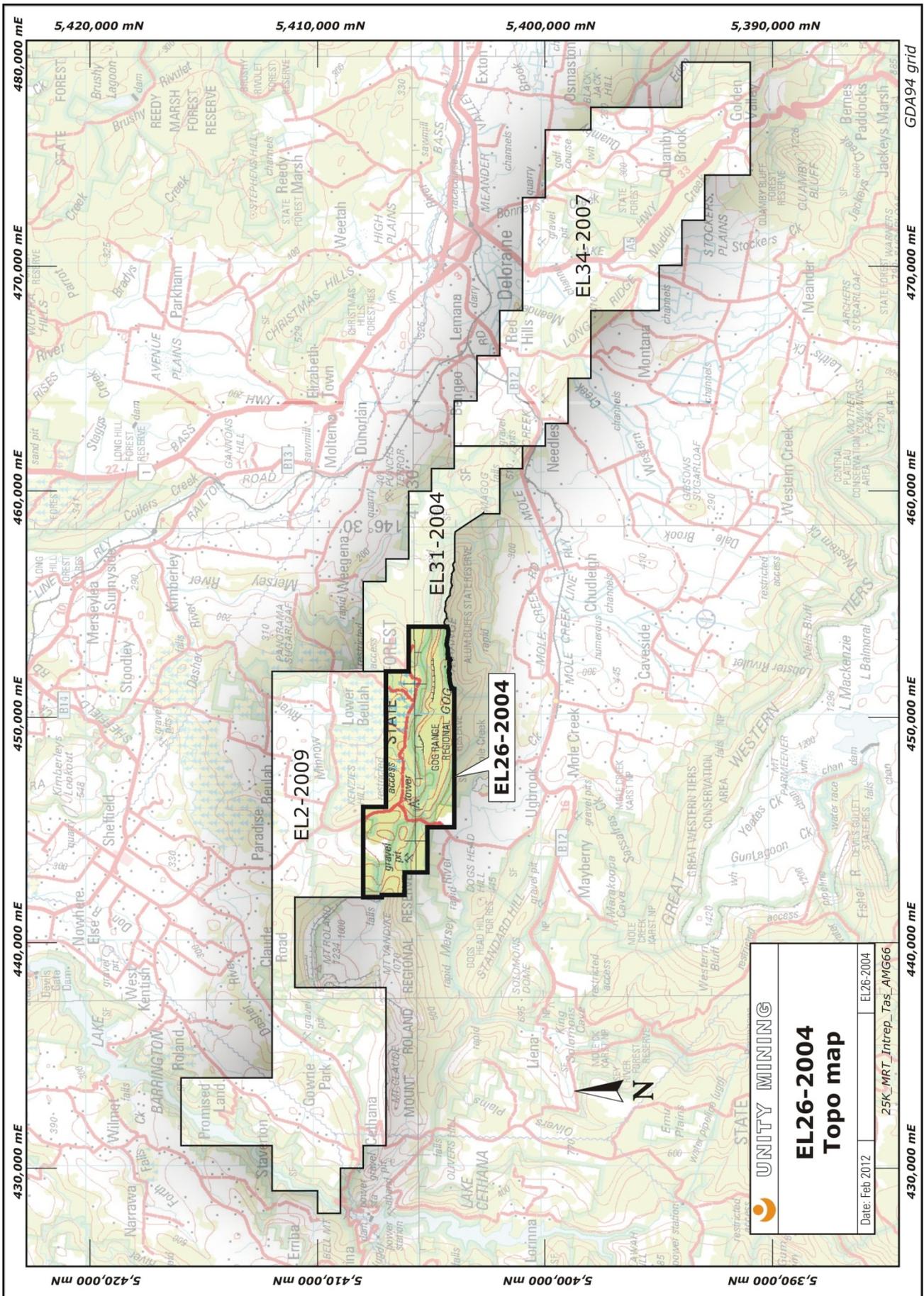


Figure 1: EL 26/2004 Firetower location map. Other tenements in Unity's Gog Range Joint Venture are also shown. Projection is UTM MGA94 Zone 55 co-ordinate system. Base image by TASMAR (www.tasmap.tas.gov.au), © State of Tasmania.

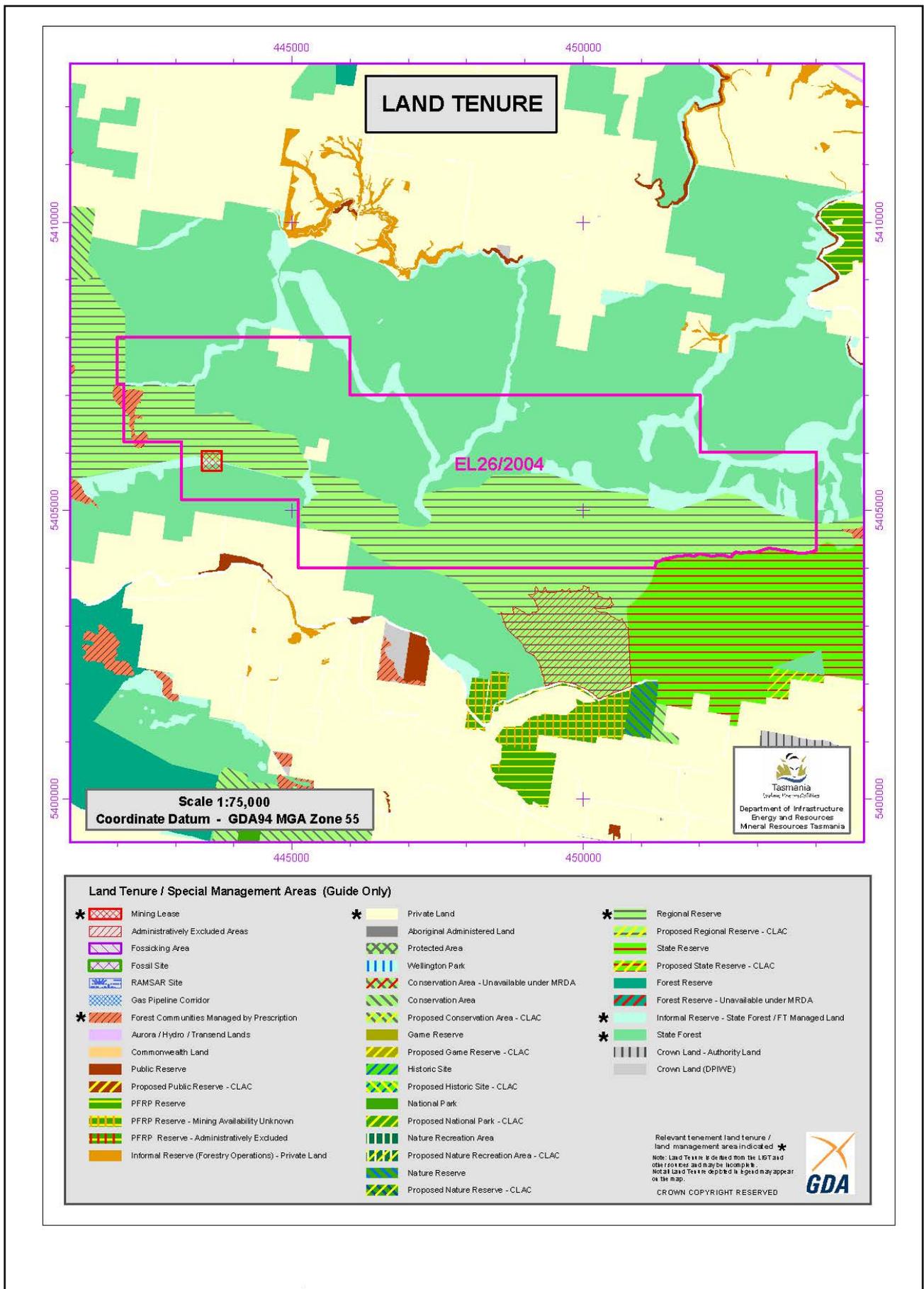


Figure 2: EL 26/2004 Firetower land tenure map. Projection is UTM MGA94 Zone 55 co-ordinate system. Base images by the LIST, Information and Land Services, DPIWVE ([www.thelist.tas.gov.au](http://www.thelist.tas.gov.au)) and Mineral Resources Tasmania, DIER ([www.mrt.tas.gov.au](http://www.mrt.tas.gov.au)), © State of Tasmania.

## 2.3 Topography Climate and Vegetation

EL 26/2004 Firetower area covers steep rugged terrain in the western portion of the Gog Range. Maximum spot elevations along the Gog Range ridge are 689 m AHD at the abandoned fire spotting tower site and 698 m AHD near Granta Pools. Mount Roland, further to the west and part of the Fossey Mountains range, rises to an elevation of 1,233 m AHD.

The Minnow River, a tributary within the Mersey River catchment, has its headwaters on Mount Roland and flows through the westernmost section of the EL.

Average rainfall calculated from observations at nearby Mole Creek weather station (elevation 237 m AHD), over the period from 1915 – 2012, is 1,124 mm per year. Highest rainfall period is from June – August. Occasional snowfalls occur at higher elevations and overnight frosts are frequent throughout the district during winter months.

The Gog Range is located within the Northern Slopes bioregion. Extensive areas of plantation forest, dominantly eucalypt hardwood with some stands of pine (*Pinus radiata*), have been established in silviculture operations throughout the northern section of the EL area. Remnant native forest, both wet and dry sclerophyll, is preserved on the ridge and slopes of the Gog Range and along river and creek valleys. Scattered stands of low scrub, mainly banksia, teatree and eucalypt occur in relatively sheltered and fire resistant areas. Rainforest vegetation, including Myrtle Beech (*Nothofagus cunninghamii*), is preserved in sheltered gullies along the Minnow River and in headwaters of creeks draining off the Gog Range.

## 3.0 GEOLOGY

Detailed description of the geology of the Gog Range area, including the Firetower stockwork vein gold deposit, is contained in open file company reports (Callaghan, 2002; Baxter and Askins, 2005). Most recent regional geological mapping by Mineral Resources Tasmania (McClenaghan et al, 2008), with revisions by Vicary (2008) supported by petrological studies, has advanced understanding of the Cambrian volcanic sequence stratigraphy of the Fossey Mountain Trough.

### 3.1 Regional Geology

The four ELs comprising Greatland/UML's Gog Range Joint Venture cover in excess of 40 km strike length of Cambrian stratigraphy, including sequences correlated with the prospective Mount Read Volcanics (MRV). In western Tasmania the MRV within the Dundas Trough are highly mineralised and host major polymetallic VHMS deposits at Hellyer-Fossey, Que River, Rosebery and Hercules, copper-gold-silver deposits in the Mt Lyell mining field and gold at the Henty mine.

The MRV correlates in the Gog Range area were deposited in the Fossey Mountain Trough and occur in a semi-continuous east-southeast aligned belt which extends from Cethana and Gowrie Park, in the west, to the Kentish Hills - Quamby Brook area in the southeast (Ref. Figure 3). Correlation of the Middle to Late Cambrian stratigraphy in the Fossey Mountain Trough with the MRV in the Dundas Trough remains equivocal.

Based on regional mapping the Cambrian volcanic and volcanoclastic sequences are assigned to three main stratigraphic units. From oldest to youngest these units are as follows:

- Gog Range Greywacke (a regionally extensive unit of quartz+feldspar-phyric pumiceous volcanoclastics, siliceous conglomerate, interbedded greywacke, siltstone and shale, with minor felsic lavas)
- Beulah/Dasher Andesite (including a lower feldspar+pyroxene-phyric andesitic volcanoclastic unit)

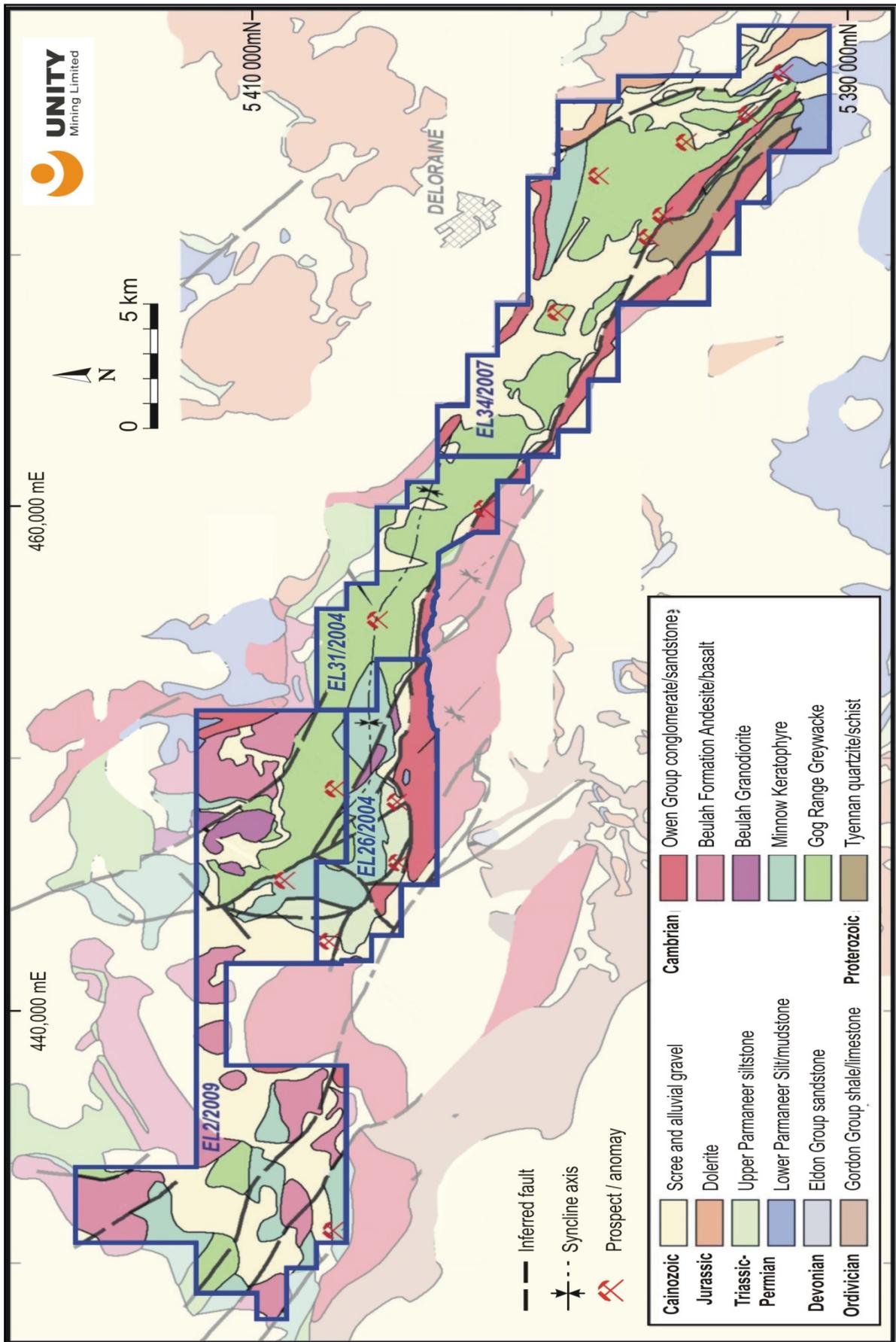


Figure 3: Gog Range JV Project regional geology. Projection is UTM MGA94 Zone 55 co-ordinate system. Base image by Mineral Resources Tasmania, DIER ([www.mrt.tas.gov.au](http://www.mrt.tas.gov.au)), © State of Tasmania.

- Minnow Keratophyre (intruding both of the older units).

Vicary (2008) proposed correlation of the Gog Range Greywacke with the Western Volcano-sedimentary Sequence of the MRV and the Beulah/Dasher Andesite with the Lynchford Member of the Tyndall Group.

To the south, in a belt extending from Mount Roland through the Gog Range to Gardners Ridge - Needles Ridge and Long Ridge - Native Hop Hill south of Deloraine, the stratigraphy is dominated by the Roland Conglomerate. Assigned to the Late Cambrian-Early Ordovician Owen Group, the Roland Conglomerate consists of an overlap sequence of coarse-grained siliciclastic sediments, including large volumes of very coarse siliciclastic conglomerate, which unconformably overlie the MRV sequences. Clasts within the conglomerate are dominantly metaquartzite, derived from the Neoproterozoic Tyennan basement.

South of the Gog Range, in the Mole Creek area, the Roland Conglomerate is unconformably overlain by the Moina Sandstone, which in turn is conformably overlain by the Ordovician Gordon Limestone. The Mole Creek karst system, of high scientific and conservation significance, is developed on the Gordon Limestone.

Further to the southeast, in the Quamby Brook – Golden Valley area, glaciomarine rocks of the Permian Lower Parmeener Supergroup unconformably overlie the older Palaeozoic strata. Jurassic dolerite occurs as flat lying sills which have intruded the Permian sediments. The northern and eastern parts of the district are largely covered by Tertiary basalt.

Stratigraphy of the pre-Tertiary rocks in the Gog Range region is presented in Figure 4.

A highly complex structural architecture is evident along the boundary between the Cambrian volcanic stratigraphy and the younger overlap sequences (Owen Group Roland Conglomerate and Gordon Group Moina Sandstone). Successive thrust faulting events in the Early and Middle Palaeozoic have been proposed from observed stratigraphic and structural relationships throughout the region (Woodward et al, 1993).

Older rocks in the region have been subjected to major polyphase deformation. The Cambrian volcanic sequences along the southern margin of the Fossey Mountain Trough are tightly folded, with more open folding preserved in the Roland Conglomerate (Berry and Bull, 2012). East - west trending folds, initiated in the late Cambrian and preserved in the Gog Range Greywacke (Keele, 1993), were reactivated and tightened during Devonian deformation (the Tabberabberan Orogeny).

### **3.2 Local Geology**

EL 26/2004 Firetower covers approximately 10 km strike length of the Middle Cambrian volcanic, volcanoclastic and siliciclastic sequence stratigraphy, correlated with the MRV. These rocks are located on the southern limb of a large syncline, interpreted to be a recumbent to overturned structure, which extends along the northern edge of the Gog Range. The volcanic and volcanoclastic sequences strike west-northwest to east-southeast and dip steeply and young to the north.

The Firetower gold deposit, located in the central portion of the EL, is hosted by an upper felsic volcanoclastic unit of the Gog Range Greywacke, in close contact with andesitic sequences which have been correlated with the Lynchford Member of the Tyndall Group in the MRV (Vicary, 2008). A cross section through the Gog Range, illustrating the geological setting of the Firetower deposit, is shown in Figure 5.

Sandstone and siliceous conglomerate of the Late Cambrian-Early Ordovician Owen Group (Roland Conglomerate) form the steep ridge line that extends on an east-southeast trend from the base of Mt Roland, near the Minnow Falls, through the Gog Range. The overlying Moina Sandstone forms the very rugged steep southern flank of the range. Debris flow lobes derived from the Roland Conglomerate frequently obscure the older Palaeozoic rocks along the northern edges of the Gog Range.

Comprehensive descriptions of the geological setting of the Gog Range district and Firetower deposit area are contained in open file company reports (Callaghan, 2002; Baxter and Askins, 2005; McLean and Baxter, 2006; McLean 2007) and in Hooper (2003).

Pre-Tertiary Stratigraphy of the Gog Range Region					
	Stratigraphy			Lithology	MRT Map Symbols
Jurassic				Tholeiitic dolerite	Jb
Late Carboniferous - Permian	Lower Parmeener Supergroup			Glaciomarine sediments; pebbly quartz sandstone, conglomerate	Pj
Late Cambrian - Ordovician	Wurawina Supergroup	Gordon Group	Gordon Limestone	Limestone, siltstone (shallow marine deposits)	OI
			Moina Sandstone correlate	Siliceous conglomerate, sandstone (marine deposits)	COsm
	Owen Group	Roland Conglomerate	Siliceous conglomerate, sandstone	COcl	
Middle Cambrian	Mount Read Volcanics correlates	? Tyndall Group correlates	Minnow Keratophyre	Quartz+feldspar+/-pyroxene phyric porphyry	Cqfpz
			Beulah/Dasher Andesite	Feldspar+pyroxene phyric andesitic lavas, lava breccias, volcanoclastics	Cdta
				Lower feldspar+pyroxene phyric volcanoclastic	Cdtav
Middle Cambrian	Mount Read Volcanics correlates	? Western Volcano-Sedimentary Sequence correlates	Gog Range Greywacke	Quartz+feldspar phyric pumiceous volcanoclastics, siliceous conglomerate, interbedded greywacke, siltstone and shale, minor felsic lavas <b>**Firetower deposit host sequence**</b>	Cdsv/Cdsvgv + Cdtp
Early - Middle Cambrian			? Motton Spilite	Pillowed to massive tholeiitic basalt	Ccwb
			? Barrington Chert	Laminated to brecciated chert	
Precambrian (Meso Proterozoic)	Tyennan Metamorphic Region			Quartzite, schistose micaceous quartzite, phyllite, pelitic schist (poly-deformed continental basement)	

Figure 4: Stratigraphy of the Gog Range region. Compiled from Digital Geological Atlas 1:25,000 Scale Series, Mineral Resources Tasmania, DIER ([www.mrt.tas.gov.au](http://www.mrt.tas.gov.au)), © State of Tasmania, 2004 and 2008.

### 3.2.1 Alteration and Mineralisation

Alteration in the Firetower deposit area is localised in a 250-500 m wide zone which lies sub-parallel to the contact between the Middle Cambrian volcanic sequences and the overlying Owen Group Roland Conglomerate. The dominant alteration assemblage is comprised of pervasive silica+sericite+carbonate+pyrite.

Gold mineralisation at Firetower is hosted by fine quartz and carbonate vein stockworks, with 2-5% sulphides (mainly pyrite, with trace-minor chalcopyrite, arsenopyrite/glaucodot, sphalerite and galena). Tungsten mineralisation, occurring as scheelite, is also associated with the carbonate veining.

Copper mineralisation is recorded at the West Gog/Firetower West prospect in the northwestern section of EL 26/2004 Firetower. A broad copper+low detection level gold in soils geochemical anomaly is coincident with the Minnow Falls airborne magnetic anomaly. Auriongold recorded assays of up to 3.3% copper in rock chip samples from outcrop on the West Gog grid. Greatland completed two shallow diamond drillholes at Firetower West in 2007, one of which intersected a zone of 5.0 m apparent thickness averaging 0.76% copper and 0.19% lead. UML's 2012 diamond drillhole FTD038 intersected chalcopyrite mineralisation as veins hosted by hematite and magnetite altered rhyolitic lava breccia or ignimbrite.

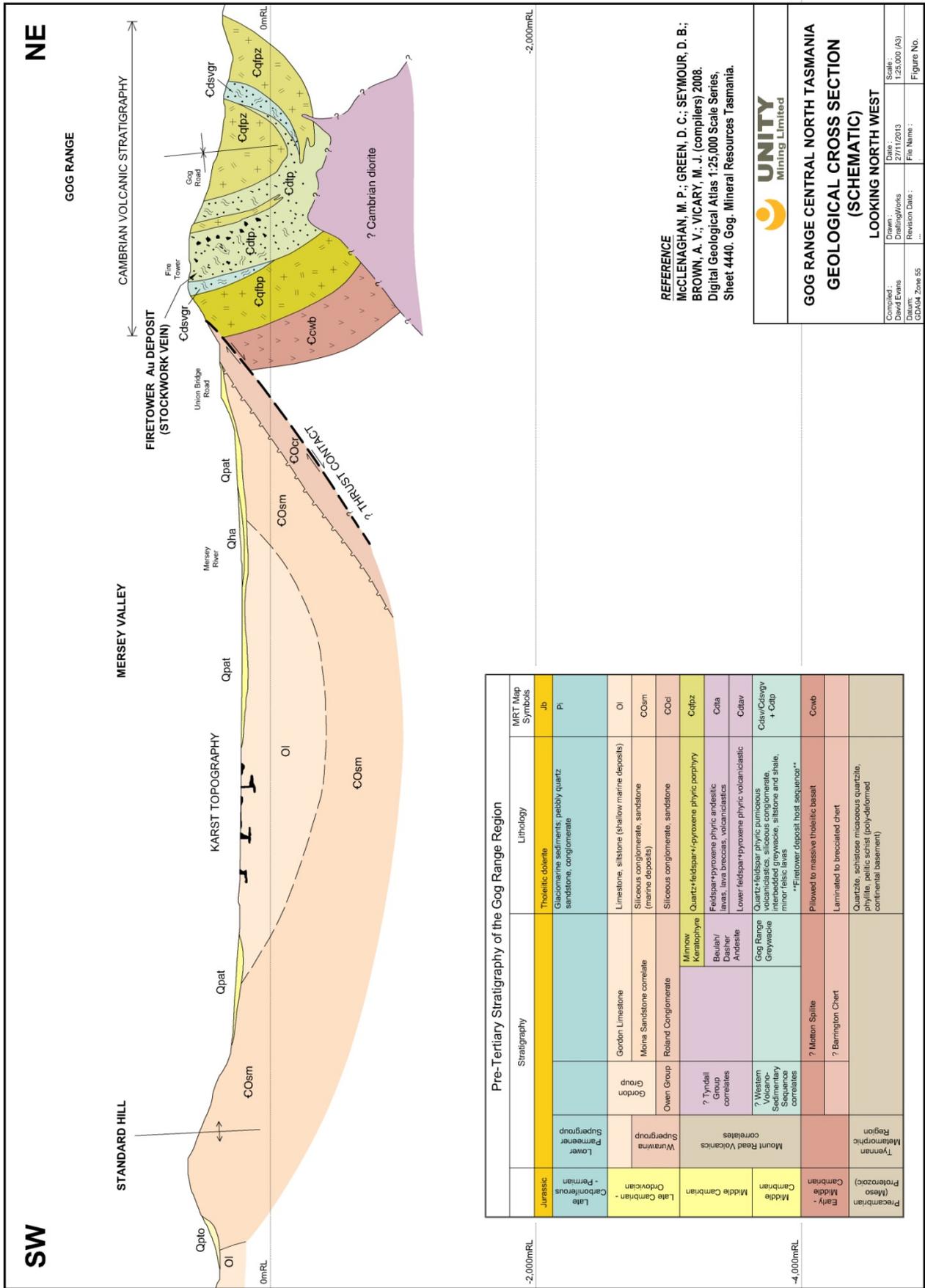


Figure 5: Gog Range Central North Tasmania Geological Cross Section (Schematic). Compiled from Digital Geological Atlas 1:25,000 Scale Series, Mineral Resources Tasmania, DIER (www.mrt.tas.gov.au), © State of Tasmania, 2008.

The East Gog area, centred on Eel Hole Creek, was explored by Austamax in 1983 - 1984. Outcropping tourmaline and silica alteration zones associated with quartz diorite intrusions in the Gregory's Road area returned anomalous gold and base metals assays, up to 0.24 g/t gold in one rock chip sample (Vivian, 1984).

Locations of recorded metallic mineral occurrences in the EL area are shown in Figure 6.

#### **4.0 PREVIOUS EXPLORATION**

Past prospecting and exploration activities within the area now covered by EL 26/2004 Firetower are recorded in company reports available on open file at Mineral Resources Tasmania. Comprehensive research of previous exploration has been undertaken by Greatland, as summarised in Baxter and Askins (2005) and Baxter (2008), and by Newcrest (Kitto and Morrison, 2008).

First recorded prospecting activity in the Gog Range district took place in the 1880s, when gold was recovered from alluvial deposits along the Minnow River. Hard rock mining for gold commenced in the late 19<sup>th</sup> Century at the Star of the West mine. Several shafts and adits were sunk on the northern slopes of the Star of the West Hill, approximately 4 km to the north of the Firetower deposit near the Minnow River. These shallow workings were mined to prospect for and extract gold contained in lenticular quartz veins within quartz+feldspar phyric rhyolitic host rocks.

Systematic exploration of the Cambrian volcanic sequences within the Fossey Mountain Trough was commenced in 1973 by Asarco Australia Pty Ltd. Initial work comprised a regional stream sediment sampling program. Asarco's exploration focus was on VHMS base metals prospectivity, with few samples assayed for gold.

Exploration continued in a joint venture, with CRA Exploration as operator, from 1976. CRAE expanded the tenement holding through the Cethana to Gog Range district and completed diamond drilling and limited percussion drilling programs to test for VHMS base metals mineralisation at the Cethana, Lake Barrington and Staverton prospects.

CRAE also conducted reconnaissance stream sediment sampling in the Gog Range area during the early 1980s. Significant gold assays, including 320 ppm gold from a panned concentrate sample collected in creek drainage near the Union Bridge Road immediately to the south of the Firetower deposit, were recorded. The drainage sampling results were not followed up prior to CRAE terminating exploration in Tasmania in 1988.

Subsequent exploration by Noranda Pty Ltd in 1989 led to the discovery of stockwork vein gold mineralisation in outcrop at Firetower. This mineralisation was drill tested initially by Noranda, then by Plutonic Operations from 1992 – 1998 and also by Auriongold in 2001 - 2002.

EL 26/2004 Firetower was granted to Greatland Pty Ltd in late 2004 from a successful bid through Mineral Resources Tasmania's Exploration Release Areas process. The adjoining EL 31/2004 Firetower East was granted at the same time. Subsequent grant of another two tenements, EL 34/2007 Quamby Brook and EL 2/2009 Beulah, extended Greatland's land holding over a continuous 40 km plus strike length of prospective Cambrian stratigraphy.

A summary of exploration activities undertaken by Greatland on the Firetower gold deposit and immediate surrounding area is reported in Evans (2012).

In 2012, UML as manager and operator in joint venture with Greatland Pty Ltd, acquired high resolution QuickBird satellite imagery covering the four ELs of the Gog Range JV project area. Film based colour aerial photography was flown over the tenements in March - April 2012 by Information and Land Services, DPIPW. A regional litho-structural interpretation was also completed with the aim of generating targets for further exploration.

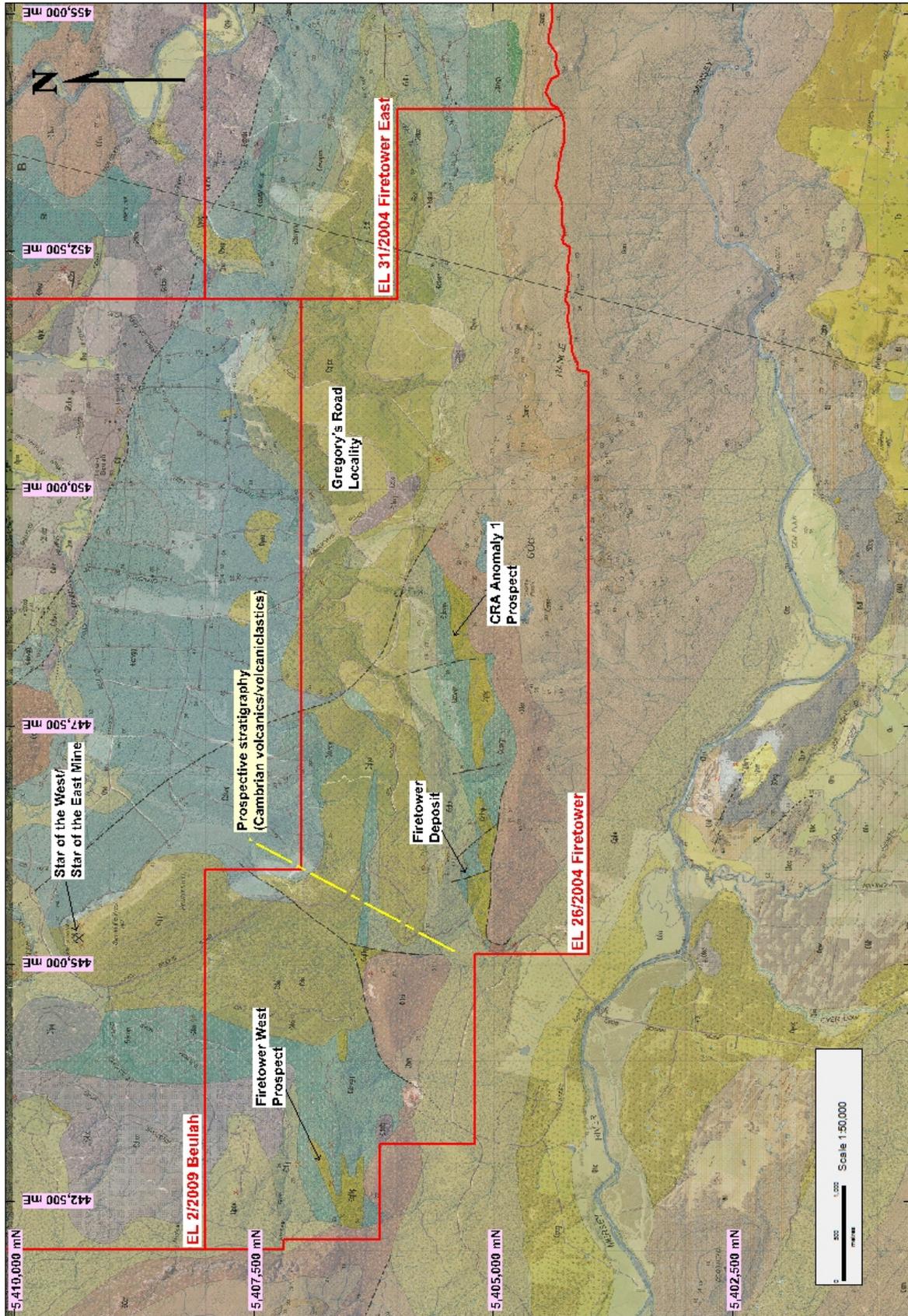


Figure 6: EL 26/2004 Firetower interpreted geology and mineral prospects. Projection is UTM MGA94 Zone 55 coordinate system. Background image is half-resolution aerial photographic mosaic. Base image by TASMAR (www.tasmap.tas.gov.au), © State of Tasmania, 2012. Additional translucent base image by Mineral Resources Tasmania, DIER (www.mrt.tas.gov.au), © State of Tasmania, 2008.

UML also completed field based exploration on EL 26/2004 from mid 2012 comprising:

- Aboriginal heritage assessment of proposed drill sites and surrounding areas
- Access track and drill site preparation earthworks
- Diamond drilling at Firetower West prospect (1 hole) and Firetower deposit (4 holes)
- Drillhole logging
- Drill sample preparation and assaying
- Mineragraphic study of samples from Firetower West drillhole.

## 5.0 WORK COMPLETED (2012/2013)

UML continued exploration of EL 26/2004 Firetower in 2012-2013, as manager and operator of the Gog Range JV, in a farm-in agreement with tenement holder Greatland Pty Ltd.

Work was concentrated on the Firetower West prospect, with limited follow up studies of samples from UML's 2012 diamond drilling program on the Firetower deposit.

Work completed by UML in the year ended 25 November 2013 is detailed below.

### 5.1 Petrography

Eleven samples from UML's 2012 diamond drillholes were submitted for petrographic study. Offcuts of sawn half NQ samples and one full NQ core sample were selected. The majority of the samples were from UML's 2012 drillhole FTD038 which tested the Firetower West prospect. Two samples from hole FTD040, which was drilled to test the Firetower gold deposit at depth, were also submitted.

The petrographic study was completed in May and July 2013 by A & A Crawford Geological Research Consultants. Drill core samples selected for petrography are tabled below:

Drillhole	Depth (m)	Sample Size	Field nomenclature
FTD038	169.04-169.13	Full NQ core	Non-foliated, very coarse, quartz+feldspar crystal-rich, lithic, ?glassy/pumiceous, rhyolitic sandstone
FTD038	195.41-195.50	Half NQ core	Strongly magnetic, magnetite rich, fine-grained, aphyric, basaltic lava or intrusive
FTD038	201.00-201.09	Half NQ core	Veined, strongly altered, fine to medium-grained, feldspar phyrlic, lithic, rhyolitic sandstone; contact zone with basaltic lava or intrusive
FTD038	250.00-250.08	Half NQ core	Massive, in places magnetic, fine-grained, aphyric to porphyritic, andesitic/basaltic lava or intrusive
FTD038	253.85-253.98	Half NQ core	Strongly magnetic, massive, fine-grained, aphyric to porphyritic, andesitic/basaltic lava or intrusive
FTD038	263.93-264.00	Half NQ core	Massive, ?flow banded, fine-grained, feldspar phyrlic, andesitic/basaltic lava or intrusive
FTD038	320.04-320.11	Half NQ core	Altered magnetite-bearing, coarse, quartz eye and feldspar crystal-rich, lithic, dacitic sandstone to breccia
FTD038	426.18-426.25	Half NQ core	Magnetic, altered, coarse, feldspar crystal-rich, quartz eye phyrlic, lithic, dacitic volcanoclastic breccia
FTD038	479.30-479.40	Half NQ core	Altered very coarse, feldspar crystal and quartz eye phyrlic, lithic-rich, dacitic lava to breccia
FTD040	121.62-121.73	Half NQ core	Strongly altered, devitrified, medium to coarse, quartz phyrlic, rhyolitic sandstone to breccia
FTD040	144.34-144.42	Half NQ core	Strong pervasively altered, devitrified, medium to coarse, quartz phyrlic, rhyolitic sandstone to breccia

Petrographic descriptions of each of these samples are attached in Appendix I.

Samples from the deeper sections of drillhole FTD038 at the Firetower West prospect represent a thick sequence of weakly welded, fiamme free rhyolitic ignimbrite. A possible correlation with a welded ignimbrite facies of the Tyndall Group Mt Julia Member of the MRV within the Dundas Trough has been proposed from the petrographic study.

Samples from the upper sections of drillhole FTD038 include variably altered dolerite, probably representing a shallow intrusive, and andesitic to basaltic extrusives. Quenched textures were noted in samples of the latter rock type.

Two samples selected from hole FTD040 were also examined. Tourmaline was noted in the petrographic study, associated with pervasive quartz+sericite and later stage carbonate alteration, in the sample from 144.34 m.

## **5.2 Gridding**

Following approval by MRT a grid was cut and pegged over the Firetower West prospect to provide access for proposed 3DIP geophysical surveying. The gridding was completed in August - September 2013 by Rogers Exploration Services. Extremely wet weather hampered progress of the line cutting, especially in the northern section where the grid lines cross over the Minnow River.

The grid was cut to the following specifications:

- 17.2 line km of line cutting
- 100 m spaced north – south cross lines
- Minimum easting 442,000 m
- Maximum easting 443,400 m
- 6 receiver lines (each of 1000 m in length)
- 7 transmitter/current lines (each of 1,600 m in length)
- 50 m peg spacing (GPS positioned; not slope corrected).

Additional line cutting was undertaken to clear a foot access track along the northern side of the Minnow River. A foot bridge was also constructed using a felled tree to allow safer crossing of the river during periods of higher water levels after heavy rainfall.

The 3DIP survey grid layout, with nominal peg locations, is shown in Figure 7.

## **5.3 Soil and Rock Chip Sampling**

UML personnel carried out rock chip and C Horizon soil sampling over the eastern portion of the 3DIP survey grid at Firetower West. The sampling was undertaken intermittently prior to commencement of the 3DIP geophysical survey. Soil samples were collected from small shallow pits dug using a geological pick.

Sampling over the remaining sections of the grid has yet to be completed.

Sample locations, descriptions and assays for rock chip samples are listed in Appendix II. Data for soil samples are presented in Appendices III.

## **5.4 Sample Preparation and Assaying**

Soil and rock chip samples were collated and documented at UML's Henty mine prior to dispatch to ALS Geochemistry Burnie at Wivenhoe, Tasmania. Gold standard sample pulps and feldspar blanks were included with each sample batch for QAQC purposes. Sample preparation was completed at ALS Geochemistry Burnie.

Pulverised samples were dispatched to ALS Geochemistry laboratories in Orange NSW and Brisbane and Townsville QLD for trace level gold assay and multi element ICP-AES analysis. Fire assaying of the very few samples reporting gold above trace levels was undertaken at ALS Geochemistry Burnie.

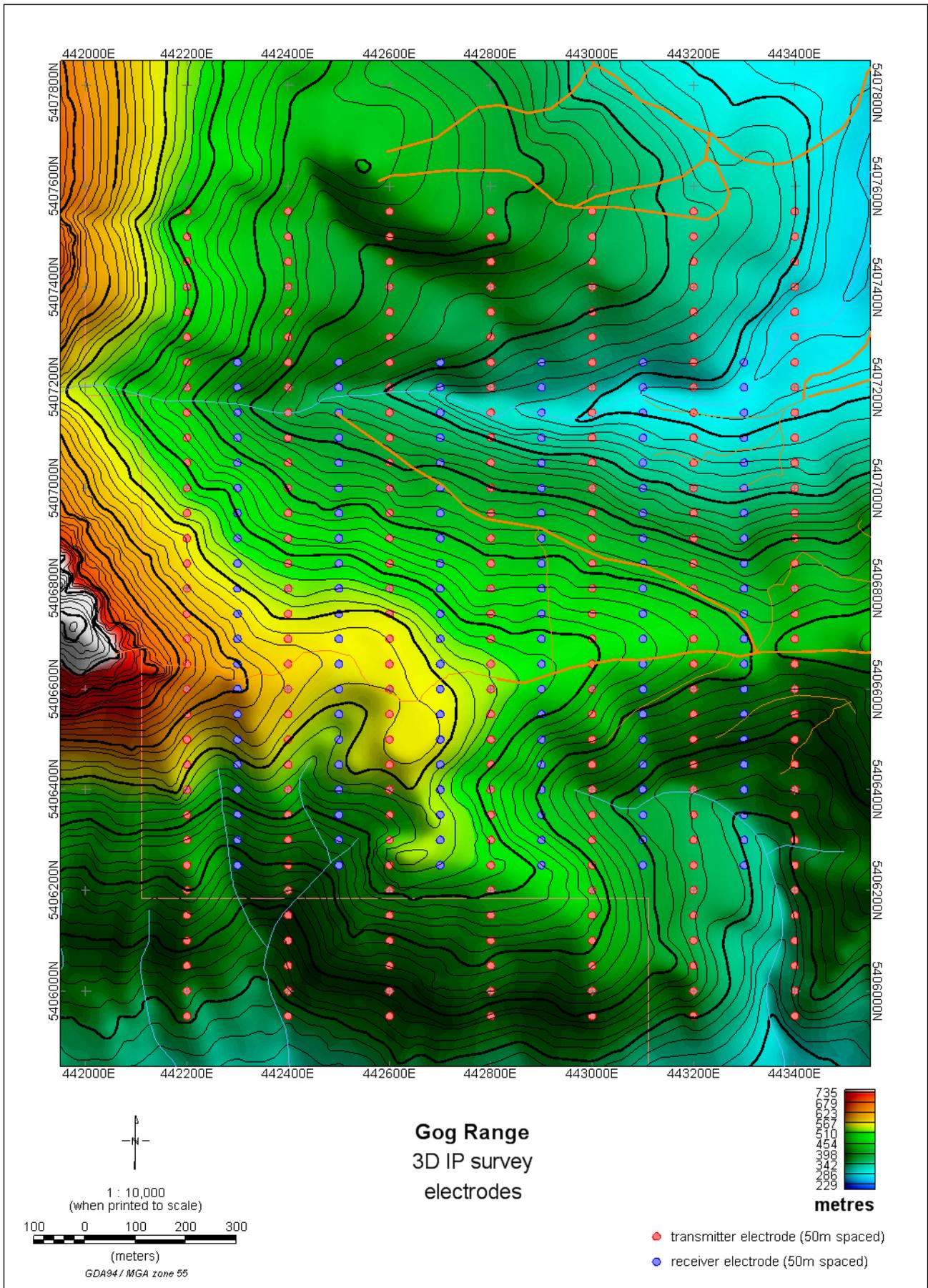


Figure 7: Firetower West prospect 3DIP survey grid layout. Projection is UTM MGA94 Zone 55 co-ordinate system. Background image is digital elevation model from gridded 10 m contour data. Base image includes data from TASMMap ([www.tasmap.tas.gov.au](http://www.tasmap.tas.gov.au)), © State of Tasmania.

Assay methods utilised were as follows:

Sample Preparation	Entire sample pulverised in LM5 mill to 80% (nominal) passing 75 micron
Au-AA21 assay method	Pulverised sample fused with flux mixture, inquarted with 6 mg of gold-free silver and cupelled to produce precious metal bead; bead digested initially in dilute nitric acid, then in concentrated hydrochloric acid; resultant solution cooled, diluted and then analysed for gold by ICP-AES against matrix-matched standards
Detection limit:	0.002 ppm gold
Au-AA25 fire assay method	30 g pulverised sample fired, muffled and digested in aqua regia; AAS finish for gold Detection limit: 0.01 ppm gold
ME-ICP61 method	0.25 g pulverised sample, four acid (hydrochloric, hydrofluoric, nitric, perchloric) digest, residue topped up with hydrochloric acid; analysis by ICP-AES for antimony, arsenic, barium, bismuth, cobalt, chromium, copper, lead, molybdenum, nickel, silver, tellurium, tin, tungsten, zinc  Detection limits: 5 ppm antimony 5 ppm arsenic 10 ppm barium 2 ppm bismuth 1 ppm cobalt 1 ppm chromium 1 ppm copper 2 ppm lead 1 ppm molybdenum 1 ppm nickel 0.5 ppm silver 10 ppm tellurium 10 ppm tin 10 ppm tungsten 2 ppm zinc

Repeat assaying was carried out on selected samples (i.e. laboratory duplicates). Assay data were reported to UML by email as comma-delimited text files and also in PDF format.

### 5.5 3DIP Surveying

A 3DIP geophysical survey was completed on the Firetower West grid just prior to the end of the report period. Consultant geophysicist Phil Muir, Southern Mineral Exploration Geophysics, oversaw the tendering and technical aspects of the survey. SJ Geophysics, of Vancouver Canada, was contracted to complete the field survey and data post-processing.

The field component of the 3DIP survey was undertaken from 6 – 16 November 2014. SJ Geophysics mobilised two operators and electronic equipment from Vancouver. Additional personnel and logistical support was provided by UML and consultant geophysicist Phil Muir, Southern Mineral Exploration Geophysics, was also in the field for the duration of the survey.

Technical aspects of the 3DIP survey are summarised below:

- SJ Geophysics' Volterra geo-imaging acquisition system utilised

- 6 receiver lines
- 7 transmitter/current lines
- Cluster interlaced array, with dipoles set up in clusters of 4 along each receiver line
- Interlaced dipoles ranging in length from 100 – 150 m
- Time domain IP technique
- Square wave current pulse injected into ground via pairs of current electrodes
- Ground responses measured via series of full-waveform, 24-bit, 4 channel Digital Acquisition Board (Dabtube) units.

Coverage of the IP survey is shown in Figure 7. Inversion of the IP data to produce digital resistivity and chargeability 3D models was still in progress at SJ Geophysics' Vancouver offices at the end of the reporting period. Preliminary comments from SJ's lead operator in the field were very encouraging. High chargeability zones are apparent at depth and also nearer to surface in the central section of the grid.

Full specifications and additional information on the 3DIP survey will be presented in the logistics report by SJ Geophysics in the next reporting period.

## **5.6 Data Compilation and Review**

All available geospatial, geophysical, geochemical and drillhole datasets have been compiled as a GIS project for evaluation at regional and prospect scales. Open file company reports on previous exploration completed in the EL 26/2006 Firetower area were also researched.

Post-processing of the 3DIP geophysical survey data for the Firetower West prospect was still in progress at the end of the report period. Data inversion and 3D modelling work is being undertaken by SJ Geophysics in Vancouver, Canada. Further interpretation of the 3DIP data and integration with other datasets will be undertaken to refine targeting of drillholes.

## **6.0 RESULTS**

Interpretation of the 3DIP survey is still in progress. Soil sampling over the cut grid shows negligible gold anomalism, but highlights the copper anomaly at Firetower West over the northern part of the grid, in the vicinity of drillholes FTD032, FTD033 and FTD038 (Figures 9 and 10).

## **7.0 CONCLUSIONS**

Recent challenges affecting production at the Henty gold mine and setbacks in commissioning of the Dargues Reef mine in NSW have had a major adverse impact on UML's cash position. As a consequence all work proposed on UML's exploration tenements in Tasmania is currently under review.

Overall, prospectivity of the Cambrian volcanic and volcanoclastic stratigraphy in the EL 26/2004 Firetower area for gold and base metals mineralisation remains high. The priority target for follow up exploration is the 3DIP chargeability anomaly at Firetower West copper prospect.

Compilation and review of all available exploration data for the Gog Range JV project area will be continued to more fully assess and test the potential for gold and base metals mineralisation.

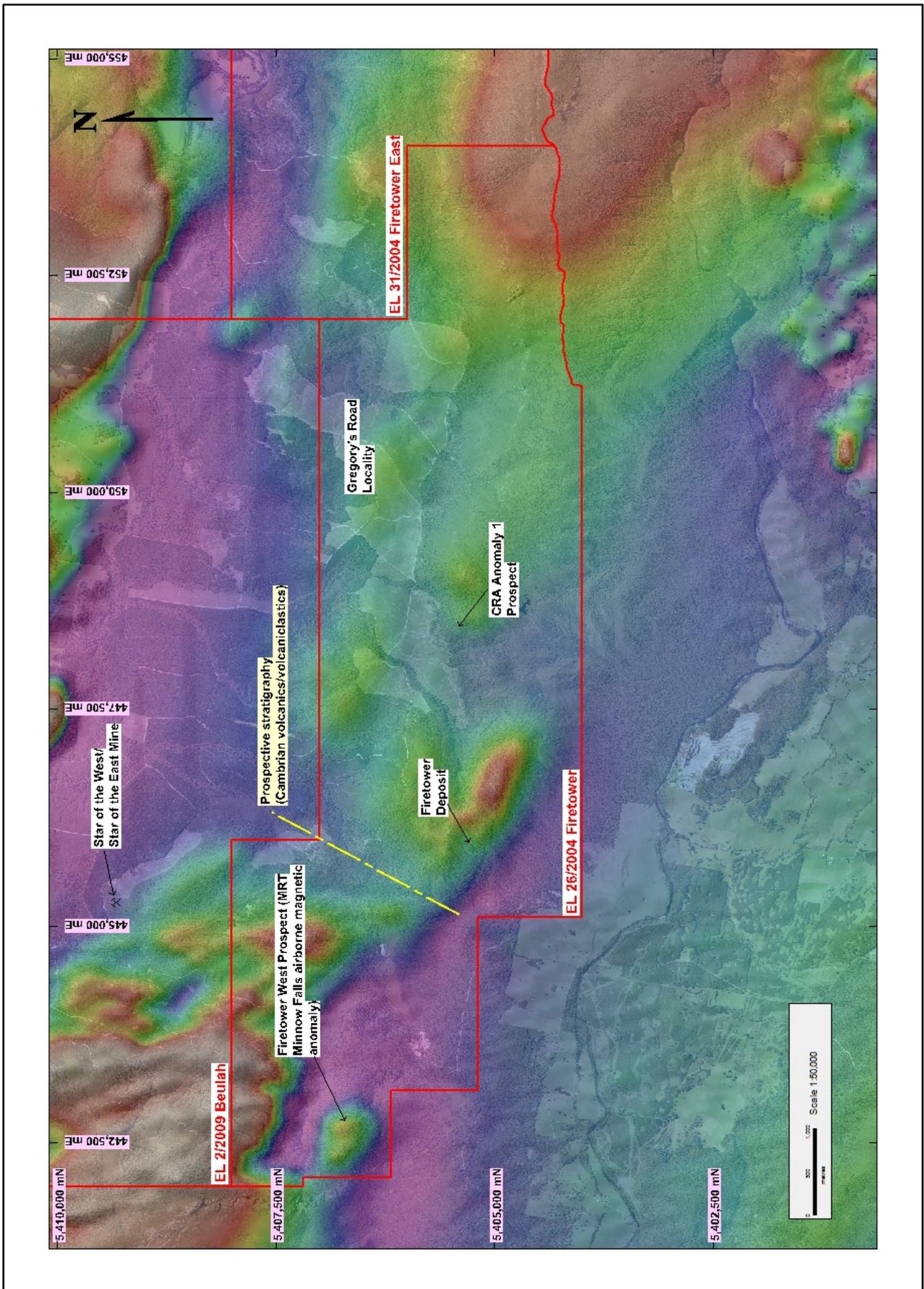


Figure 8: EL 26/2004 Firetower magnetics image (total magnetic intensity) and mineral prospects. Projection is UTM MGA94 Zone 55 co-ordinate system. Background image is half-resolution aerial photographic mosaic. Base image by TASMAR (www.tasmap.tas.gov.au), © State of Tasmania, 2012. Additional base image is Total Magnetic Intensity (TMI\_45), from Northeast Tasmania raster dataset. Image includes data which are © Copyright Commonwealth of Australia (Geoscience Australia), 1999.

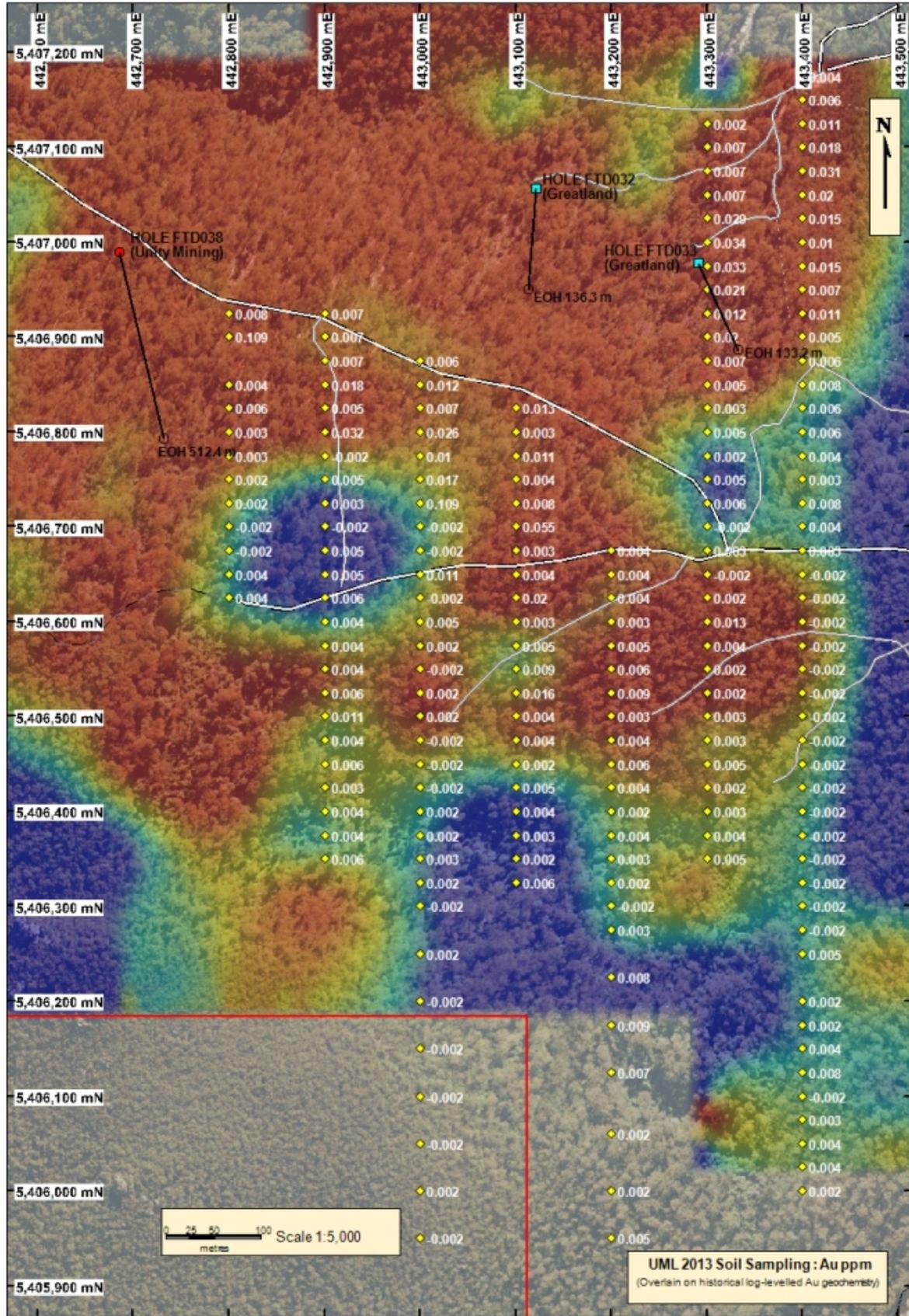


Figure 9: Firetower West prospect gold geochemistry and diamond drillholes. Projection is UTM MGA94 Zone 55 co-ordinate system. Background image is half-resolution aerial photographic mosaic. Base image by TASMAPP (www.tasmap.tas.gov.au), © State of Tasmania, 2012.

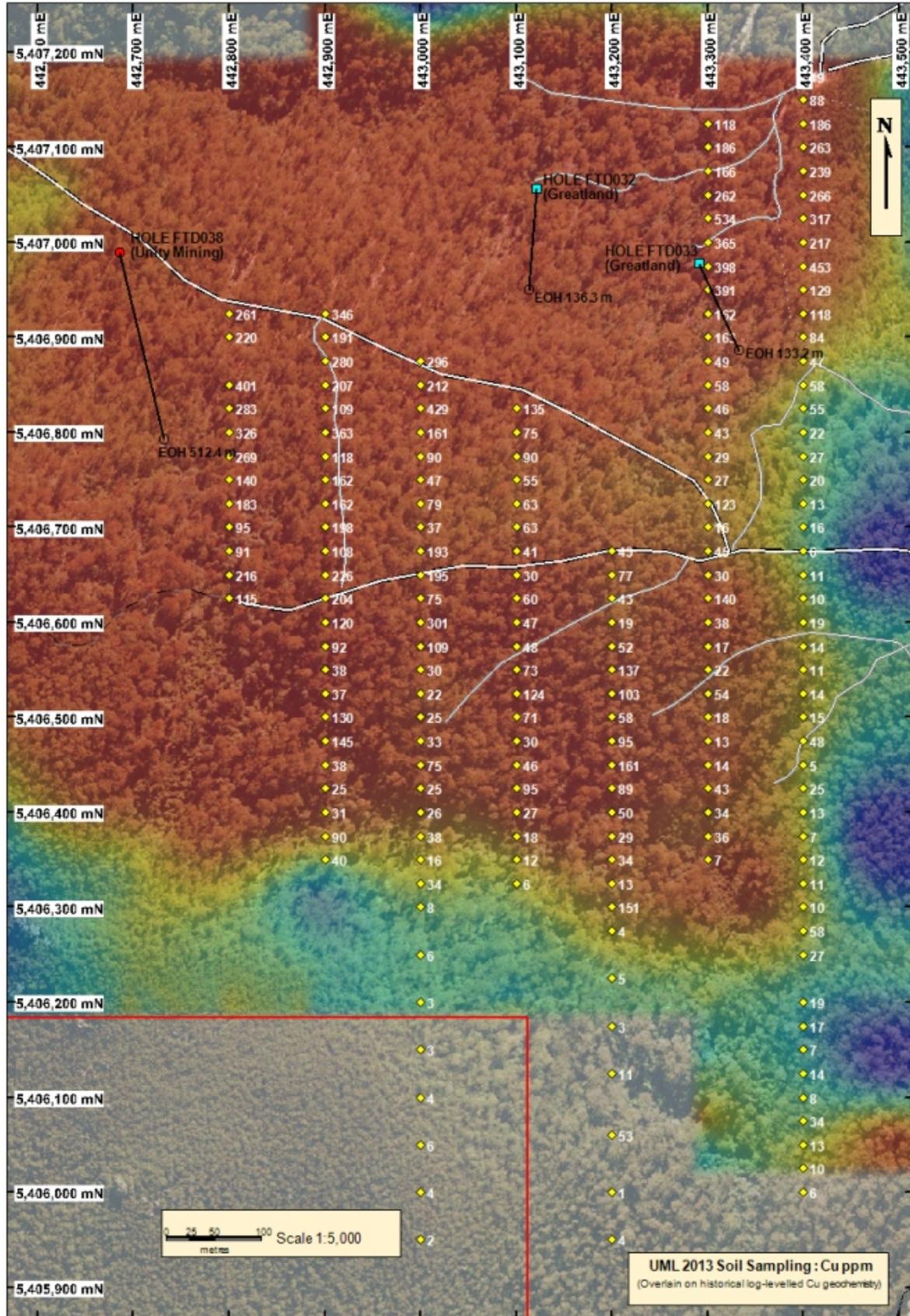


Figure 10: Firetower West prospect copper geochemistry and diamond drillholes. Projection is UTM MGA94 Zone 55 co-ordinate system. Background image is half-resolution aerial photographic mosaic. Base image by TASMAR (www.tasmap.tas.gov.au), © State of Tasmania, 2012.

## 8.0 EXPENDITURE FOR 2012/2013

Expenditure by UML on EL 26/2004 Firetower for the year ended 25 November 2013 was \$289,089, as follows:

Expenditure Item	\$
Personnel	112,191
Geochemistry (rock chips and soils; drillhole samples) <sup>#</sup>	39,239
Geophysics (consultant; 3DIP contractor) <sup>*</sup>	31,285
Geology (consultant)	13,586
Petrography	2,050
Access (gridding)	74,341
Surveying	8,140
Rehabilitation (drill sites)	1,380
Administration	2,718
Other (core shed rent; accommodation; food; fuel)	3,259
Freight	900
<b>Total</b>	<b>289,089</b>

**Note:** # Final costs for assaying of diamond drillhole samples from UML's 2012 drilling program included.  
 \* Final payment pending for costs of 3DIP survey completed on Firetower West grid; expenditure includes deposit remitted to SJ Geophysics, Vancouver BC as surety.

## 9.0 PLANNED WORK AND EXPENDITURE FOR 2013/2014

Detailed planning and scheduling of field exploration activities on UML's Tasmanian tenements for 2014 is under review at the time of reporting. Given sufficient funding UML intends to undertake further exploration on EL 26/2004 Firetower, with work programs comprising:

- Interpretation of recently completed 3DIP survey at Firetower West to delineate targets for drill testing. At least one diamond drillhole is proposed.
- Geological mapping and rock chip and soil sampling of the Cambrian volcanic sequence stratigraphy throughout the EL area
- Evaluation and, if applicable, implementation of shallow RAB or RC-DTTH drilling on traverses across strike of the Cambrian volcanic stratigraphy. This will allow for deeper testing in areas of currently known geochemical anomalies.

Estimated expenditure on EL 26/2004 Firetower in the 12 months report period, ending 25 November 2014, is \$180,000. UML has lodged an application for a 12 months extension of term for the tenement.

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**APPENDICES 1A & 1B: PETROGRAPHIC REPORT – 3 ROCKS FROM DRILLHOLE FTD038,  
W TASMANIA “AND” PETROGRAPHIC REPORT – 8 ROCKS FROM UNITY’S W  
TASMANIA PROSPECTS (COMBINED)**

**APPENDIX II – FIRETOWER WEST PROSPECT ROCK CHIP SAMPLE DATA**

**APPENDIX III – FIRETOWER WEST PROSPECT SOIL SAMPLE DATA**