

## Firetower Project

Annual Report for E26/2004 and E31/2004  
for the Period 26 November 2006 to 25 November 2007

### Mapsheets:

1:250,000 map sheets:  
(SK55-20  
(SK55-21)

1:100,000 map sheets:  
Forth (8115)  
Tamar (8215)  
Mersey (8114)  
Meander (8214).

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Date: November 2007

## ABSTRACT

This report details the activities carried out within E26/2004 and E31/2004, the Firetower Project, for the period 26 November 2006 to 25 November 2007.

At the Firetower Prospect, diamond drilling continued, with holes FTD023 through to FTD031 completed, for a total of 9 holes. Two diamond holes were also completed at the Firetower West Prospect (FTD032-033). A total of 948.2m were drilled during the period, to total 1727.5m at the completion of the programme.

Drilling at Firetower has increased confidence levels and established the style and continuity of gold mineralisation and lithology as vectors to further exploration. Drilling has shown both crudely stratabound and fault controlled stockwork vein hosted domains, across at least 450m of a fault bounded sequence of felsic volcanoclastic and volcanogenic sandstones and siltstones. High grade hypogene sulphide intersections such as 2m at 9.4 g/t Au from 87m in FTD022 (one of the deepest holes) is encouraging of further depth potential. Better intercepts include 10.1m at 6.2 g/t Au from 0.9m (FTD023), 4.0m at 3.8 g/t Au from 55m (FTD026) and 15.7m at 2.4 g/t Au from 0m (FAT046). Further drilling is proposed.

Fifty five open hole percussion drill holes for a total of 1108.7m were completed along existing access at the Firetower West Prospect (FAT001-039) and the Firetower Prospect (FAT040-055). At Firetower West the shallow percussion drill testing located alteration but failed to enhance soil anomalies. The drilling of two diamond holes (FTD032-033) returned interesting anomalous results. FTD032 returned 1m at 2.65 g/t gold from 97m. FTD033 was broadly anomalous in copper, including 5m at 0.76% Cu from 57m. Host rock and alteration differs somewhat from the Firetower Prospect. The peak of the copper soil anomaly is yet to be drill tested. Further drilling is proposed.

A total of 254 rock chip samples were taken, 96 from the Firetower Prospect (best 1.6m at 10.7 g/t Au) and 78 from Firetower West Prospect (best 3,290

ppm Cu and 0.27 g/t Au). A total of 268 soil samples were taken, mostly from Firetower and Firetower West Prospects, or the Noranda – Gregories Road Prospect. The most encouraging results were from immediately west of Firetower. Weak anomalous lead in soil support previous rock chip anomalies near a tourmalinised diorite contact at the Gregories Road Prospect. Weak copper bearing massive magnetite has been sampled within the tin-tungsten anomaly of the Lobster Rivulet Prospect.

### **KEYWORDS**

Minerals: gold, copper, scheelite, galena, sphalerite, wolframite (ferberite), arsenopyrite (glaucodot).

Deposits/Occurrences: Firetower, Firetower West (Gog), Lobster Rivulet, Gregories, Magog, Noranda, CRA Anomaly No.1, Austamax, Asarco, East Gog.

Mt Read Volcanics, Roland Conglomerate, drilling, stockwork

### **COORDINATES**

All lat/long co-ordinates in this report refer to the AGD66 Datum

All AMG co-ordinates in this report refer to the AGD66 Datum - Zone55

**SUMMARY OF ACTIVITIES FOR THE FIRETOWER PROJECT  
FOR THE PERIOD 26 NOVEMBER 2006 to 25 NOVEMBER 2007**

- Firetower Prospect soil sampling, rock chipping, mapping, drilling, DD, PC
- Firetower West Prospect geology, rock chipping, soil sampling, FTW PC / DD drilling
- Diamond drill holes FTD023 through to FTD033 completed, for a total of 948.2m and 11 holes.
- Open hole percussion drilling of 53 holes (FAT001-055), for a total of 1108.7m each to a maximum depth of 21m.
- Noranda / Gregories Road geology, soil sampling
- Lobster Rivulet Prospect geology , rock chips, soil sampling
- CRA Anomaly No.1 geology , rock chips, soil sampling
- Various prospect rock chipping / recon geology, including Austamax, Asarco, East Gog, Magog, Lobster Rivulet

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**DIGITAL SUBMISSION**  
(File Contents Listing)

File Name Prefix	File Body Name	File Type	Work Type	Contents Description
EL26_312004_2007_A_	01_Reportbody1of2.pdf	pdf	report body	Report abstract, contents, discussion, fig1-3, etc
EL26_312004_2007_A_	02_Reportbody2of2.pdf	pdf	report body	Report abstract, contents, discussion, fig1-3, etc
EL26_312004_2007_A_	03_fig4tofig7.pdf	pdf	Prospect Geology figures	Noranda, CRA No1, Lobster Riv, Firetower figures
EL26_312004_2007_A_	04_fig8tofig9.pdf	pdf	DrillCollars figures	Firetower /Firetower West drill hole location plans
EL26_312004_2007_A_	05_fig10to24.pdf	pdf	Drilling Summary figure	Firetower drill hole cross sections
EL26_312004_2007_A_	06_fig25to26.pdf	pdf	Drilling Summary figure	Firetower West drill hole cross sections
EL26_312004_2007_A_	07_App1SurfaceGeochem.txt	txt	Surface Geochem - rocks	Surface Geochem - all rock chip data
EL26_312004_2007_A_	08_App2SurfaceGeochem.txt	txt	Surface Geochem - soils	Surface Geochem - all soil data
EL26_312004_2007_A_	09_App3DrillCollars.txt	txt	Drill Collars	Drill hole Collar location data
EL26_312004_2007_A_	10_App4DownHoleSurveys.txt	txt	Drill surveys	All down hole survey data
EL26_312004_2007_A_	11_App5aDrillLog.pdf	pdf	Drill log	Drill hole descriptive logs (FTD023-026)
EL26_312004_2007_A_	12_App5bDrillLog.pdf	pdf	Drill log	Drill hole descriptive logs (FTD027-028)
EL26_312004_2007_A_	13_App5cDrillLog.pdf	pdf	Drill log	Drill hole descriptive logs (FTD029-030)
EL26_312004_2007_A_	14_App5dDrillLog.pdf	pdf	Drill log	Drill hole descriptive logs (FTD031-032)
EL26_312004_2007_A_	15_App5eDrillLog.pdf	pdf	Drill log	Drill hole descriptive logs (FTD033)
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EL26_312004_2007_A_	19_App6dDrillLog.pdf	pdf	Drill log	Drill hole descriptive logs (FAT028-035)
EL26_312004_2007_A_	20_App6eDrillLog.pdf	pdf	Drill log	Drill hole descriptive logs (FAT036-045)
EL26_312004_2007_A_	21_App6fDrillLog.pdf	pdf	Drill log	Drill hole descriptive logs (FAT046-055)
EL26_312004_2007_A_	22_App7LithoLog.txt	txt	Drill log	Drill hole lithology intervals (all DD holes to date)
EL26_312004_2007_A_	23_App8DrillLog.txt	txt	Drill log	Drill hole Geotechnical log (FTD013-033)
EL26_312004_2007_A_	24_App9DrillLog.txt	txt	Drill log	Drill hole Structural log (FTD014-032)
EL26_312004_2007_A_	25_App10DrillLog.txt	txt	Drill log	Drill hole UV response log (FTD014-032)
EL26_312004_2007_A_	26_App11DrillLog.txt	txt	Drill log	Drill hole core densities (FTD014-032)
EL26_312004_2007_A_	27_App12DownholeGeochem.txt	txt	Downhole Geochem	Drill Sample Analytical Data (FTD017-FTD033), (FAT001-055)

## 1.0 Introduction

This report details exploration activities conducted within E26/2004 and E31/2004 for the period 26 November 2006 to 25 November 2007. The leases are located in the central-north of Tasmania and form the company's Firetower project (Figure 1). The tenements are primarily prospective for gold mineralisation, but base metal mineralisation is also present.

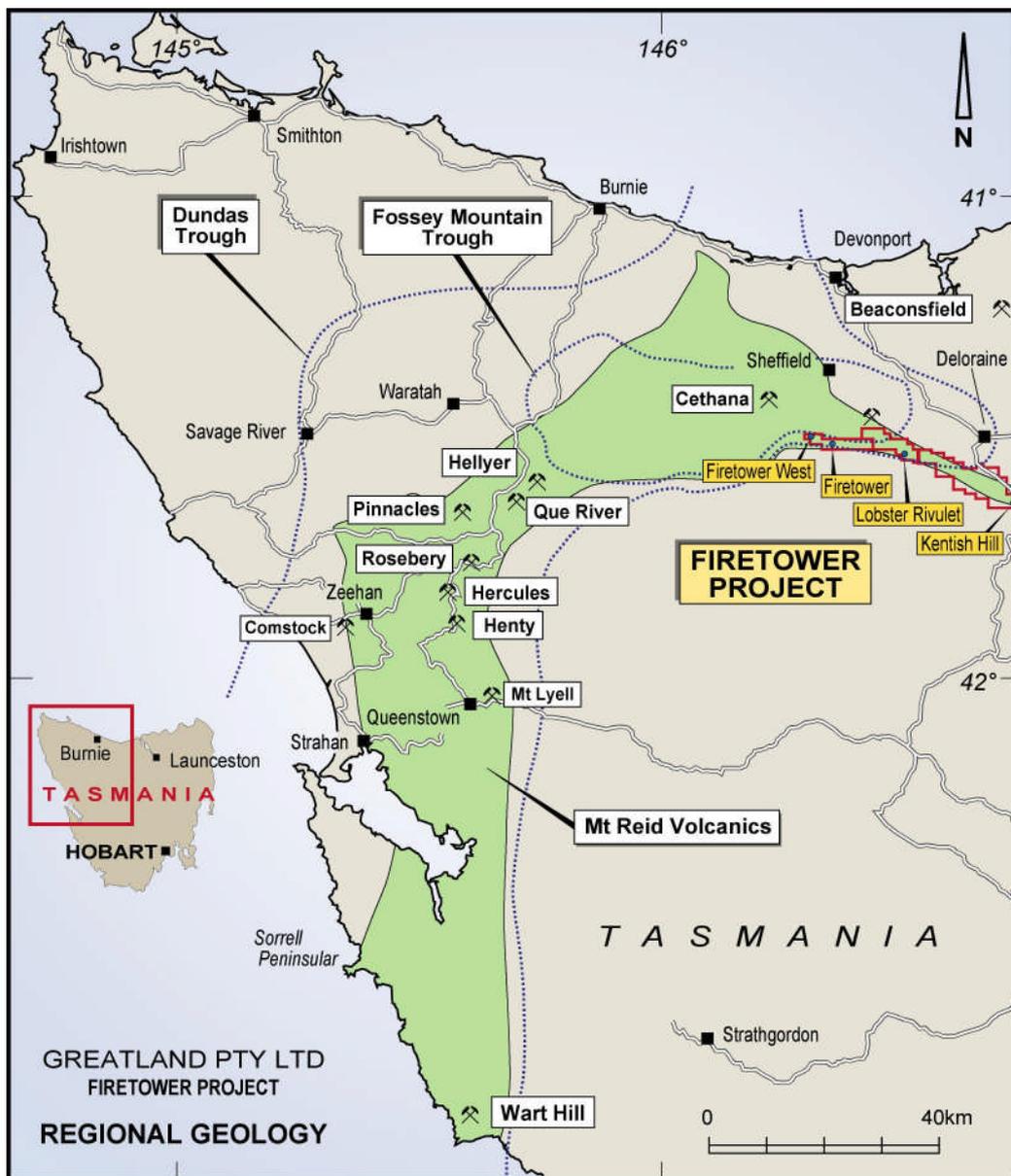


Figure 1 - Locality and Setting

## 1.1 Tenement Details

E26/2004 and E31/2004 were granted to Greatland Pty Ltd on 26 November 2004. The tenements are contiguous and collectively cover an area of approximately 53km<sup>2</sup>. Tenement details are shown in Table 1.

Table 1 – Firetower Project Tenement Details

Tenement	Holder	Date Applied	Date Granted	Size
E26/2004 Firetower	Greatland Pty Ltd 100%	10 Mar 2004	26 Nov 2004	23km <sup>2</sup>
E31/2004 Firetower East	Greatland Pty Ltd 100%	5 Apr 2004	26 Nov 2004	30km <sup>2</sup>

E26/2004 was awarded to Greatland Pty Ltd after successfully bidding through the Mineral Resources Tasmania ('MRT') Exploration Release Area ('ERA') tender process. A subsequent application for E31/2004 was lodged over an additional 30km<sup>2</sup>, extending eastwards along prospective stratigraphy.

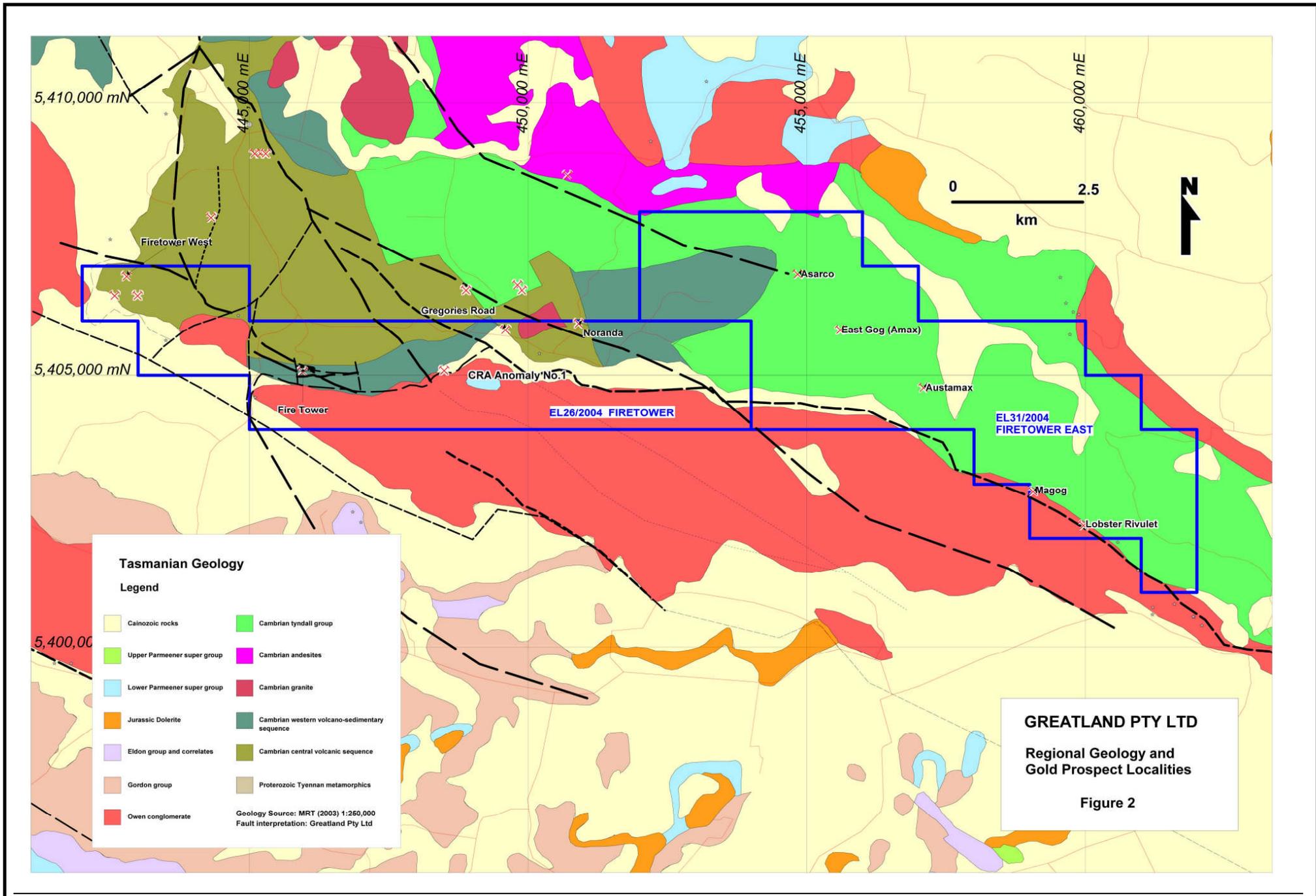
## 1.2 Location and Access

The Firetower project covers sedimentary and volcanoclastic rocks in the eastern parts of the Fossey Mountain Trough; being stratigraphically equivalent to the Mt Read Volcanics of the Dundas Trough (Figure 1). The project area straddles the Tasmania NW (SK55-20) and Tasmania NE (SK55-21) 1:250,000 map sheets, and falls at the junction of the four 1:100,000 map sheets of Forth (8115), Tamar (8215), Mersey (8114) and Meander (8214).

The tenements are located in logged State Forest, 60km east of Launceston in northern Tasmania. From Launceston, access to the project area is by sealed road to Deloraine, then into the tenements via the sealed Mole Creek – Sheffield Road (Union Bridge Road). Local roads and logging tracks provide limited access within the project area.

### **1.3 Regional Geology and Mineralisation**

The Firetower project lies in the central north of Tasmania within equivalents of the Mt Read Volcanics (Figure 1). These Cambrian rocks are highly mineralised and host major polymetallic VHMS deposits. The Cambrian volcanics and sediments are unconformably overlain by late Cambrian to early Ordovician Owen and Gordon Groups consisting of siliclastics of the Roland Conglomerate and Moina Sandstone overlain by the Gordon Group Limestone (Figure 2). The regional and economic geological setting has been detailed in a previous report (Baxter and Askins, 2005). Gold mineralisation has been established at the Firetower Prospect, where an initial inferred resource of approximately 90,000oz has been outlined from surface (Callaghan, 2002). Gold and basemetal mineralisation, outlined by soil and rock chip sampling, extends east and west of the prospect for some kilometres but is still inadequately explored for gold. At the Firetower West prospect, sericite-silica altered volcanics with fine quartz-limonite-hematite veining, similar to the Firetower prospect, are present.



## 2.0 Review of Previous Work

A full review of previous company work is provided in Askins and Baxter, (2005) and Baxter and McLean, (2006). A brief summary follows.

The Firetower Prospect was initially identified in the mid 1970's by Asarco as a base metal anomaly. CRAE (Weber, 1984) identified localised high grade gold in stream drainage. Noranda and the Noranda-Plutonic JV (1989-1993), performed detailed investigations including mapping, soils, rock chipping and diamond drilling. Sirrocco (2000) completed further surface sampling and IP geophysics, as did Auriongold (2001-2002), including a further 8 diamond holes. Greatland Pty Ltd have to date completed a further 19 diamond holes (Table 2). Greatland Pty Ltd has also completed fifty-five 21m deep small diameter percussion holes, of which only 6 are directly relevant to the Firetower Prospect (FAT046-051).

Table 2 : Summary of All Firetower Prospect Drilling to November 2007

<b>Company</b>	<b>No. of Holes</b>	<b>Hole Type</b>	<b>Total metres</b>
Noranda	3	TT46	75.1
Plutonic	14	TT46	425.35
Plutonic	4	NQ	542.1
Auriongold	8	HQ	950.2
Greatland	19	NQ2	1458
Greatland	6	89mm percussion	126
<b>Total</b>	<b>54</b>		<b>3576.75</b>

Work completed during the first period of this tenure (Askins and Baxter, 2005) was focused on developing targets for drill testing. This included acquisition and compilation of all previous exploration data. All data, including geology, geochemistry, geophysics and drilling was compiled into a standard format for GIS and 3D downhole modeling. Following review and synthesis of data a number of greenfields areas worthy of follow-up were outlined, while geophysical and drill data showed targets for further drilling. Drill program planning was also completed.

In year two, various other prospects were reviewed and/or inspected. These include Lobster Rivulet, the nearby Magog and the Austamax Gog East soil grid. Quartz-tourmaline alteration as breccia matrix near a diorite contact was located at Gregory's Road Prospect. Core from approximately 20 of 29 pre-existing holes at Firetower were inspected, photographed and scanned by UV lamp. Structural measurement of outcrop vein orientations at the Firetower Prospect showed some systematic trends. At the Firetower Prospect, diamond drilling commenced, with holes FTD013 through to FTD022 completed, for a total of 780m and 10 holes. At the Firetower West Prospect, 255 soil samples along 6 line km of grid returned two main areas of gold anomalism. Copper in soils is closely spatially related to gold.

### **3.0 Work Carried Out During the Period**

#### **3.1 Geological Mapping**

Geological mapping was completed in conjunction with prospect evaluation at various areas across the tenements. Mapping is shown in Figures 4 to 8.

#### **3.2 Rock Chipping**

Analytical Method for Reconnaissance Rock Chips (codes: B/EETA, B/AAS, B/MS): Reconnaissance rock chips are generally collected during first pass mapping or wide spaced grab rock chip sampling. Some 2-3kg is entirely is entirely pulverised to -75 micron (80% passing), and homogenised. Digested by Aqua Regia with 10g aquilot extracted, for gold with solvent extraction finished by enhanced sensitivity graphite furnace AAS reported to detection level 0.1ppb. Other elements (similar to drill core) are by MS reported to detection levels 0.02-0.5ppm, except Cu and Zn by flame AAS to 1ppm.

Analytical Method for Routine Rock Chips (codes: B/SAAS, B/OES, B/EOES): Routine rock chips include most closed spaced or follow up sampling and channel samples. Some 2-3kg is entirely is entirely pulverised to -75 micron

(80% passing) and homogenised. Digested by Aqua Regia with 10g aquilot extracted for solvent extraction flame AAS gold to detection level 0.01ppm. Other elements are by OES reported to detection levels 1-2ppm. To every 30-50 samples is inserted a commercially prepared gold standard (pulp sample) from a suite of samples of similar grades and rock types. To every 100 or so samples is inserted a multi-element standard.

Rock chip analytical summaries (Table 3) for the Firetower Prospect are separated for convenience into four geographic regions. Firetower Prospect (Resource Area) is defined as the area of drilling east to the north trending cross fault between FTD019 and FTD020. Firetower Prospect (West Extensions) is defined as that area for 200-300m immediately west of this cross fault. Firetower Prospect (Far West Extensions) refers to the area around and immediately west of Union Bridge Road. Firetower Prospect Stream sediment samples relate to all areas described above. Localities for other areas are shown on Figure 2.

Firetower Stream Sediment samples; Ten stream sediment pan concentrate samples from around the Fire Tower Prospect were point counted under UV light for scheelite to assess a potential use as a quick reconnaissance tool. Scheelite was observed in concentrates directly draining the Firetower Prospect, but the counts fall dramatically with increased distance making statistical analysis on count alone unreliable. Point count ratios of samples were confirmed by geochemical analysis (Table 3).

Table 3: Rock chip sampling statistics

Prospect*	No. Samples	SampleType	Au(ppm) Maxima	SampleID Maxima	Other Element
FT (Resource)	88	79 channel 9 grab	1.6m @ 10.68	07136	2,249ppm Pb
FT (West)	4	2 channel 2 grab	0.84	07368	-
FT (Far West)	2	2 grab	0.07	07240	1,670ppm As
FT West	53	53 grab	0.29 0.27	07307 07263	806ppm 3,290 ppm Cu
FT West Road	25	5 channel	5m @ 0.02	07146	
CRA Anomaly 1	5	5 grab	<0.01		
Asarco Area	17	17 grab	0.22	07433	
East Gog (Amax)	8	8 grab	<0.01		
Austamax	19	19 grab	<0.01		
Mersey East Bank	6	6 grab	<0.01		
Magog	3	3 grab	<0.01		300ppm Cu
Lobster Rivulet	8	5 grab 3 channel	0.4m @ 0.09	07391	2,179ppm Cu
FT Streams	10	Stream pan con	0.017	20060906 - 02	72 ppm W
others	6	6 grab	<0.01		
<b>TOTAL</b>	<b>254</b>				

\* (see text for locality descriptions)

\* FT = Firetower

\* FT West road = road channel traverse for 170m west of 443850mE, 5406530mN.

### 3.3 Soil Sampling

Soil Sample Analytical Method (B/EETA, B/AAS, B/MS); B-C horizon soil samples are dry screened to -80mesh and submitted for direct digest, apart from Firetower West samples, that were collected at -2mm and pulverised prior to digestion. Digested by Aqua Regia with 10g aquilot extracted, for gold with solvent extraction finished by enhanced sensitivity graphite furnace AAS reported to detection level 0.1ppb. Other elements (similar to drill core) are by MS reported to detection levels 0.02-0.5ppm, except Cu and Zn by flame AAS to 1ppm.

To every 30-50 samples is inserted a commercially prepared gold standard pulp sample from a suite of samples of similar grades and rock types. To every 100 or so samples is inserted a multi-element standard.

Table 4: Soil Sample Statistics

Prospect	No. Lines	No. Samples	Au ppb maxima	SampleID	Other maxima
Firetower West	2	19	18.4	FT0605278	728ppm Cu 128 ppm W
FT (Far West)	4	43	3.6	070567	
FT (West Extensions)	6	48	891.2	07381	1410 ppm W
CRA Anom No1	3	28	916.4	07349	
Noranda /Gregories	10	100	4.2	070570	
Lobster Rivulet	6	30	6.2	07414	365 ppm Cu
<b>TOTAL</b>		<b>268</b>			

Soil sampling at Firetower West comprised minor infill to gather more detail and allow base level comparison with adjacent previous company sampling. Results did not significantly change the interpretation or conclusions presented in the previous annual report (Figure 3). Soil sampling at Firetower (West extensions) was in an area previously sampled by other companies. It

comprised hand held power auger soil sampling in an attempt to get below mobile scree regolith (machine capability to about 1.6m depth). Results showed a better and more consistent response than for shallower sampling (Table 4). Should not refer forward

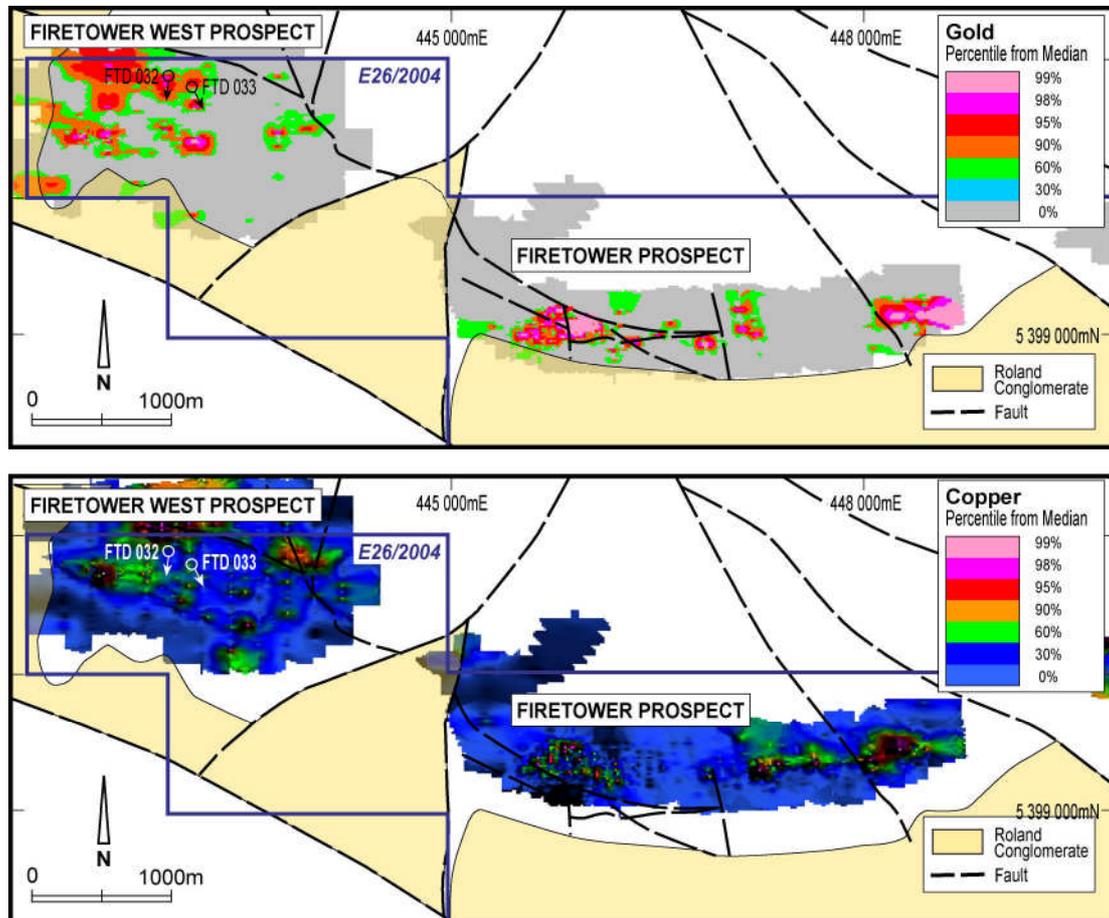
### **3.4 Drilling**

An Onram 1000 drill rig (capable of >150m NQ) from Boart Longyear Pty Ltd commenced drilling at Fire Tower on 26 July 2006 (previous reporting period), and continued drilling until March 2007. Drilling was designed to establish the style and continuity of trends as a guide for further exploration, as well as increase confidence levels. Drilling was NQ2, with core orientations in-core-barrel using the ACE System.

Although drilling was well in progress during the last reporting period (reported to FTD022), final analyses for only the initial four drill holes could be reported at that time (FTD013-016). Data not reported last year is included in this report. During the current period 9 diamond core holes were completed at the Firetower Prospect (FTD023-031), and 2 diamond core holes were completed at the Firetower West Prospect (FTD032-033). A total of 948.2m were drilled during the period, to bring the programme total to 1727.5m of diamond drilling (Figure 8). All hole collars to FTD031 were located as AMG co-ordinates by a registered surveyor; Darcy Peacock Anderson, Burnie Office (the same Company as used for all previous collar pick-ups). Collar pipe heights were recorded at ground level (Appendix 3).

During the period 55 open hole percussion holes (Figure 9) for a total of 1108.7m were drilled at the Firetower West Prospect (FAT001-039) and the Firetower Prospect (FAT040-055). Holes were located in soil anomalies where access was possible via existing tracks. Drilling was openhole percussion by an Atlas Copco Rock 812 hydraulic rig from G & G Drilling Pty Ltd, to a nominal 89mm diameter hole. Maximum drill hole depth was 21.1m (the limit of auto-loading rods). Collar locations for FAT001-039, 052-055 were

GPS located (+/-10m). Others were located by a registered surveyor or by tape-compass from surveyed points (Appendix 3).



**GREATLAND PTY LTD  
 FIRETOWER PROSPECT  
 DRILLING AND SOIL  
 GEOCHEMISTRY**

Figure 3  
 Firetower Project – Combined Soil Sampling  
 (all companies leveled by median)

**3.5 Down Hole Surveys**

Diamond drill holes were regularly surveyed with a down hole digital compass. (Appendix 4).

### **3.6 Geological Logs and Down Hole Geology Codes**

Descriptive geological logs for holes FTD023-033 are presented in Appendix 5. Descriptive geological logs for holes FAT001-055 are presented in Appendix 6. Lithological assemblages were interpreted for all diamond drill holes to date from drill logs, based on a scheme used by Auriongold (Callaghan, 2002) and Hooper (2003). Intervals were assigned according to the codes described in Table 5 (Appendix 7)

### **3.7 Geotechnical Data**

Geotechnical data from diamond drill hole core is only available for Greatland drilling (Appendix 8). Some duplication of previously reported information is included for uniformity of presentation. Data is recorded using the codes presented in Table 6, representing the average value over one meter (or other interval where a metre division is not possible). Note that schistosity and foliation CA refers to any penetrative surface; it may be bedding or foliation (bedding as default). BOCO represents base of complete weathering, and BOPO base of partial weathering (fresh rock).

Table 5: Lithologic Assemblage Codes

Preferred Descriptors (after Callaghan, 2002 & Hooper, 2003)	MapCode
<p>☐ Massive, coarse, polymict volcanoclastic conglomerate that appears to be unmineralised. This unit has been mapped on surface as lapilli tuffs (MacDonald and Tomlinson 1992) and appears to form the northern boundary of the prospective area. A coarse basal breccia composed of compositionally variable coherent angular clasts of andesite to rhyolite composition, quickly grades into a homogenous mass of crystal bearing pumice, siltstone dominated volcanoclastic fragments, and reported limestone clasts.</p>	<b>Cggci</b>
<p>☐ Numerous cycles of undifferentiated well bedded, graded volcanoclastic turbidites of 1-2m thickness. The sandstones are well sorted, often graded and quartz-feldspar crystal rich. Generally shows the best preservation of primary features such as load casts, and ripples.</p>	<b>Cggsi</b>
<p>Stratigraphically identified subdivision of Cggsi, as graded, laminated black siltstones and beige green-cream siltstones, characteristically preserving delicate bedding structures. Typically located at fault bounded base of Cggsi.</p>	<b>Cggsi-bs</b>
<p>variably altered, finely laminated black chloritic (tuffaceous?) siltstones and beige green-cream siltstones. Includes slumped or soft sediment disrupted beds.</p>	<b>Cggbs</b>
<p>☐ A (gradational with Cggt?) quartzose rhyolitic pumice breccia with abundant flattened, weakly altered pumice fragments to 5cm in length and abundant coarse quartz crystals. Clast outlines are often well preserved.</p>	<b>Cggmi</b>
<p>☐ Coarse, massive, poorly sorted, crystal-lithic sandstones with quartz megacrysts to 5mm. Quartz occupies 10-20% modal volume of samples giving porphyritic coarse-grained texture. Crystal sizes range from sub-millimetre to 3.5 mm, modal = 1.5 to 2mm.</p>	<b>Cggt</b>
<p>Poorly sorted, crystal lithic greywackes containing approximately 5% lithics and large volcanic quartz crystals interbedded with minor siltstones. Sparsely plagioclase quartz phyric crystal vitric tuff shown on the map as vitric tuffs. (not differentiated from Cggt in this study).</p>	<b>Cggti</b>
<p>Undifferentiated quartz-felds phyric rhyolite. Biotite phenocrysts preserved in extreme south and west.</p>	<b>Cpb</b>

Table 6: Drill Core Geotechnical Codes

<b>Recovery</b>	Core recovery (%) over interval
<b>RQD</b>	Rock Quality Designation (%) over interval
<b>Weathering Codes</b>	
EW	Extremely weathered Mottled, no remnant textures
HW	Highly weathered Mottled clays, remnant textures may be present
MW	Moderately weathered remnant textures present, some mineral grain boundaries are discernible
SW	Slightly weathered oxidation on joints & fractures; some minor pervasive weathering on grain boundaries
(FR)	Fresh rock (with minor weathered patches)
FR	Fresh rock
<b>Schistosity Codes</b>	
M	Massive
WS	Weakly Schistose
MS	Moderately Schistose
HS	Highly Schistose
<b>Rock Strength Codes</b>	
W	Weak
M	Moderate
S	Strong
VS	Very Strong
<b>Foliation CA</b>	Penetrative surface angle to core axis

### 3.8 Drill Core Structural Measurements

An ACE System of drill tube mounted inertial core orientation was used on all possible core runs. Data was recorded from surfaces as listed in Table 7. Oriented core was measured by mounting core in a frame simulating the collar attitude of the drill hole, with measurements recorded by compass. 402 data points were recorded from measured holes (FTD014-032), as AMG dip direction and dip angle from the horizontal (Appendix 9).

Table 7: Drill Core Structure Codes

<b>Code</b>	<b>Description</b>
Bdg	bedding plane
Bdg?	probable bedding plane, or disrupted bedding
S vein	sulphide or kspar alteration bearing vein
B vein	barren (sulphide absent) vein, typically either vermicular chlorite bearing or crack-seal quartz-carbonate/feldspar veins
Fol	foliation, typically defined by a sericite-enhanced stylolitic flattening fabric to lithic clasts. Occasionally discordant to preserved adjacent bedding planes.
Shear	fault zone plane with strong preferred orientation
FA	inferred meso-scale open buckle fold axis lineation
Lin	plane intersection lineation, generally bedding to foliation
Contact	Lithologic contact plane

### 3.9 Drill Hole Scheelite Logging

Short wave ultra violet lamp inspection for scheelite of selected previous core (located at MRT Hobart Core Store), and all Greatland diamond holes was documented. The drill hole depth, character and core axis angle of well defined veins were noted for some 250 observations (Appendix 10). Steep vein dip values were predominant.

### 3.10 Drill Hole Core Density Determinations

A total of 110 half NQ core samples from across the prospect, of average dry weight 1.9 kg, having gold grades more than about 1 g/t Au were weighed in air and water (Appendix 11). The arithmetic global average density was 2.91. Weathering codes were simplified into completely oxidised (CO), partly oxidised (PO), or fresh (FR) classes. When classed by weathering and then grade, clear trends were visible. Fresh samples over 3 g/t averaged 2.90, fresh samples under 3 g/t averaged 2.85, and weathered samples averaged 2.82. Excluding the few outliers, samples ranged from 3.1-2.7. For simple

resource calculations it is proposed that oxidised intercepts be assigned a density of 2.8 and fresh intercepts 2.9. Waste (non-mineralised) rock may be less than 2.8.

### **3.11 Drill Hole Analytical data**

Drill Core Analytical Method: Half core (typically 2-3kg over 1m interval) was entirely pulverised to -75micron (80% passing), homogenised and 50g was separated out for lead collection fire assay with a flame AAS finish, reported to a 0.01 ppm detection level (code: FA50/AAS). Other elements (Ag, As, Co, Cu, Pb, Sb, Zn, +/-Bi, Mo) were multi-acid digest (four acid) with an ICP OES finish (code:A/OES), reported to detection levels of 1-5ppm (except Sb, W to 10ppm).

To every 30-50 samples was inserted a commercially prepared gold standard (pulp sample) from a suite of samples of similar grades and rock types. To every 100 or so samples was inserted a multi-element standard. Data is presented in Appendix 12 and Figures 10 to 26.

Percussion Drill Sample Analytical Method (B/EETA, B/AAS, B/MS); Samples were collected in 1.8m intervals with a 2-3kg sub-sample composited to 3.6m for analysis. After pulverisation to -75micron (80% passing), a sub-sample was digested by Aqua Regia with 10g aquilot extracted, for gold with solvent extraction finished by enhanced sensitivity graphite furnace AAS reported to detection level 0.1ppb (code B/EETA). Other elements were by MS reported to detection levels 0.02-0.5ppm, except Cu and Zn by flame AAS to 1ppm. Selected anomalous zones were subsequently re-submitted as 1.8m intervals for gold (FA50/AAS).

## 4.0 Discussion

### 4.1 Firetower Prospect Geology

Gold mineralisation is hosted within the Middle Cambrian Mt. Read Volcanics. All rocks are weakly metamorphosed although sedimentary structures (e.g. laminations and grading) are generally well preserved in unaltered rocks. The stratigraphic sequence youngs north. Progressing from the south of the Fire Tower Prospect and appearing from beneath younger (Owen Group) rocks, is a thick quartz-plagioclase biotite phyric rhyolite, that is variably sericitised. In the southern areas, phenocrysts of feldspar and biotite are generally preserved along with the quartz. To the north the rhyolite is more phaneritic, but due to alteration quartz is generally the only primary phenocryst clearly recognisable in hand specimen. Hooper (2003) noted magnetite in this unit. These rhyolites may comprise both lavas and shallow intrusives, but separate units have not been subdivided.

Overlying the rhyolite to the north is a sparsely plagioclase quartz phyric crystal vitric tuffaceous meta-sediment. The rock is variably sericite altered and possibly silica altered. Channel sampling by the Noranda/Plutonic JV has revealed this unit to be barren. Succeeding this unit is the mineralised host package consisting of volcanoclastic sandstones and lesser lithic crystal tuffs / tuffaceous siltstones. The volcanoclastics/lithic crystal tuffs consist of quartz phenocrysts fragments of quartz phenocrysts and devitrified quartz +/- plagioclase phyric felsic lavas, all in a devitrified, recrystallised and now variably altered matrix (Figures 10 to 24). Many of the black siltstones show evidence of soft sediment (slump) deformation.

Further north, and in generally faulted contact is a thick unit that is laterally extensive and overlies the Firetower mineralised sequence. A coarse basal breccia composed of compositionally variable coherent angular clasts of andesite to rhyolite composition, quickly grades into a homogenous but still polyolithic mass of crystal bearing pumice, coherent volcanoclastic fragments,

and siltstone clasts in a matrix of quartz and altered feldspar crystals. This monotonous unit is typical of the Gog Greywacke.

The rock units described above are cross-cut by a number of narrow brittle-ductile faults. Gold mineralisation occurs dominantly south of the X Fault (figure 8), a WNW trending vertical fault (and sub-parallel faults) separating weakly altered, calcite veined immature psammites, chloritic pelites to the north, typical of the "Gog Greywacke" (eg. units Cggsi, Cggci), from the gold hosting altered volcanogenic sequence containing a less diverse lithic fragment assemblage (e.g. Cggbs, Cggt, Cggmi). A late N-S fault of about 75m dextral separation occurs near the western limit of the resource area.

Mineralisation of the system is stockwork vein hosted and geochemically zoned. The Main Zone domain (figure 8), parallels the north bounding X Fault shear zone, and is strongly lead anomalous, being locally discordant to bedding. Lead has a strong rock chip and drill hole analytical expression over this area, continuing along its SE projection towards another inferred fault that may be contemporary with the X Fault. This lead trend is complicated by the common proximity of lead bearing black siltstones/shales (unit Cggbs). A combination of elevated lead and zinc is spatially associated with the Cggbs (siltstone dominated) lithology assemblage, either within it, or near a contact. Finely disseminated cobaltian-arsenopyrite (glaucodot?) is noted in some black siltstones. Galena veins are commonly observed as being late.

Sulphide is common from near surface, in sheeted or stockwork veins. At the Firetower Prospect (resource area) almost all of the total 88 rock chip samples collected this period were anomalous, with 16 (predominantly channel samples) returning more than 1 g/t Au (Figure 7). The highest value is 1.6m at 10.68 g/t Au. Sulphides include pyrite- galena- cobaltian arsenopyrite (glaucodot) -chalcopyrite-sphalerite. In addition, vein selvages may contain significant scheelite and minor wolframite (best intercept, 5m at 0.34%W from 38m in FTD013). Lead, zinc and copper are anomalous but generally less than 1000ppm (better intervals include - 4.5m at 0.3% Pb from 23m in FTD013; 3.0m at 0.6% Cu from 97m in FTD019). The Ag:Au ratio is

about 1.5:1. Alteration is zoned, and extensive, with high temperature vein kspars-scheelite potassic alteration (overprinting biotite alteration) evolving to replacive sericite (illite)-siderite-sulphide phyllic alteration. Minor barite and pyrrhotite have been recorded. This alteration and veining is weakly overprinted by brittle-ductile deformation (foliation and barren veining) and extensive boundary faulting. The better gold mineralisation (Table 8) accompanies a 50m thick, rhyolite proximal, lead-zinc anomalous black shale bearing sequence, or (remobilised into?) a cross-cutting fault parallel zone of the Main Zone (Figure 27).

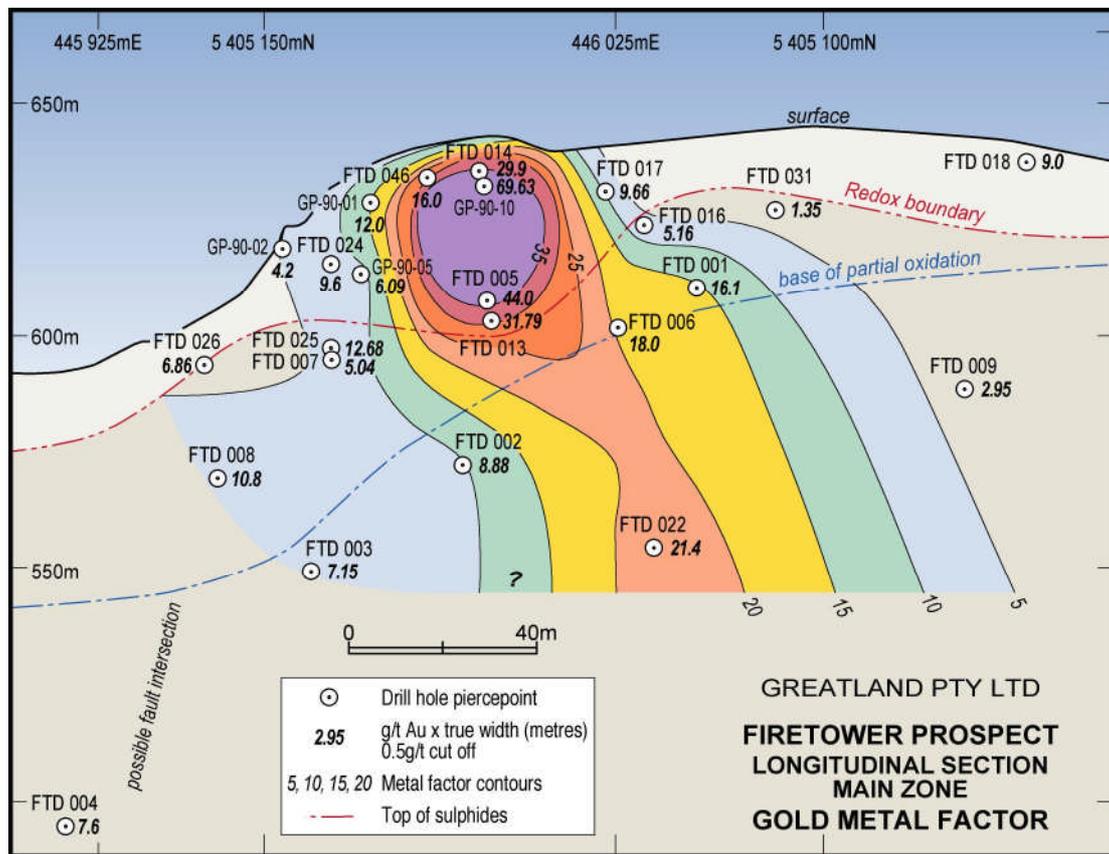


Figure 27 - Firetower Prospect – Longitudinal Section Main Zone

Table 8: Significant Firetower Prospect Analytical Results (all Greatland drilling)

HoleNo	From	To	Interval	Au g/t	W %	Pb %	Zn %	Cu %	Co %
<b>FTD013</b>	21.0	27.5	6.5	2.4	<0.01	0.22	0.12	0.02	0.06
<b>incl.</b>	23.0	27.5	4.5	3.1	<0.01	0.31	0.17	0.02	0.08
<b>best zone</b>	25.5	26.5	1.0	7.2	<0.01	0.33	0.12	0.02	0.30
<b>FTD013</b>	32.0	43.0	11.0	3.4	0.17	0.07	0.20	0.23	0.14
<b>incl.</b>	38.0	43.0	5.0		0.34				
<b>best zone</b>	40.5	41.0	0.5	10.4	0.73	0.02	0.07	1.28	0.14
<b>FTD014</b>	1.0	12.0	11.0	2.4	0.07	0.10	0.12	0.02	0.02
<b>FTD015</b>	1.0	10.0	9.0	2.1	0.00	0.10	0.14	0.02	0.02
<b>FTD016*</b>	25.0	27.0	2.0	1.8	0.02	0.01	0.04	0.09	0.05
<b>FTD017</b>	7	8	1	1.5	0.06	0.33	0.33	0.04	0.03
<b>FTD017</b>	13	24	11	1.6	0.04	0.04	0.06	0.06	0.02
<b>including</b>	21	23	2	2.6	0.16	0.01	0.02	0.10	0.01
<b>FTD018</b>	0	4	4	1.7	0.01	0.03	0.07	<0.01	0.03
<b>FTD019</b>	60	64	4	1.3	0.12	0.12	0.01	<0.01	<0.01
<b>FTD019</b>	97	100	3	2.4	0.13	<0.01	<0.01	0.59	0.21
<b>including</b>	98.5	99	0.5	5.3	0.13	<0.01	<0.01	0.91	0.22
<b>FTD020</b>	No significant result								
<b>FTD021</b>	No significant result								
<b>FTD022</b>	40.2	41	0.8	1.5	0.04	0.13	0.24	0.01	0.02
<b>FTD022</b>	82	93	11	4.3	0.09	0.09	0.06	0.05	0.07
<b>including</b>	87	89	2	9.4	0.01	0.02	0.13	0.05	0.08
<b>FTD023</b>	0.9	11.0	10.1	6.2	0.04	0.03	0.09	0.04	0.08
<b>FTD023</b>	23.0	24.0	1.0	3.0	<0.01	<0.01	<0.01	<0.01	<0.01
<b>FTD023</b>	38.0	39.0	1.0	3.5	<0.01	<0.01	<0.01	<0.01	<0.01
<b>FTD024</b>	0.0	1.0	1.0	12.2	<0.01	0.06	0.01	<0.01	0.02
<b>FTD024</b>	11.5	12.5	1.0	1.0	<0.01	0.03	0.07	<0.01	0.02
<b>FTD024</b>	19.0	24.0	5.0	1.1	0.01	0.05	0.12	0.04	0.07
<b>FTD024</b>	26.0	28.0	2.0	2.7	<0.01	0.03	0.02	<0.01	<0.01
<b>FTD024</b>	31.0	38.5	7.5	1.6	0.03	0.18	0.19	0.06	0.03

HoleNo	From	To	Interval	Au g/t	W %	Pb %	Zn %	Cu %	Co %
FTD025	0.0	4.0	4.0	4.4	<0.01	0.03	0.04	0.02	<0.01
incl.	0.0	2.0	2.0	8.1	<0.01	0.04	0.03	<0.01	0.02
FTD025	20.0	21.0	1.0	1.8	<0.01	0.03	0.03	0.01	<0.01
FTD025	28.0	30.0	2.0	1.1	<0.01	0.03	0.07	0.16	0.22
FTD025	42.0	51.0	9.0	2.3	0.05	0.02	0.04	0.15	0.05
incl.	42.0	46.0	4.0	3.9	0.08	0.03	0.05	0.08	<0.01
incl.	43.0	44.0	1.0	10.8	0.23	<0.01	0.02	0.13	<0.01
FTD026	5.0	6.0	1.0	4.6	<0.01	0.04	0.08	0.17	0.03
FTD026	12.0	13.0	1.0	2.2	0.13	<0.01	0.09	0.03	0.05
FTD026	46.0	50.0	4.0	2.0	0.03	0.06	0.28	0.08	0.06
FTD026	52	53	1.0	5.7	0.38	0.06	0.09	0.06	0.22
FTD026	55.0	59.0	4.0	3.8	0.06	0.29	0.90	0.27	0.05
incl.	55	56	1.0	3.5	0.09	0.02	0.07	0.15	0.02
incl.	57.6	59	1.4	8.3	0.10	0.70	2.02	0.22	0.12
FTD026	61	62	1.0	1.0	0.06	0.01	0.03	0.47	<0.01
FTD026	79	81	2.0	1.7	<0.01	<0.01	0.06	0.22	<0.01
FTD027	0.7	6.0	5.3	1.6	<0.01	0.05	0.15	0.04	0.02
FTD027	10.0	11.0	1.0	1.3	<0.01	0.05	0.38	0.02	0.06
FTD027	13.0	14.0	1.0	1.0	<0.01	0.02	0.09	<0.01	<0.01
FTD027	19.0	21.0	2.0	1.2	<0.01	<0.01	0.03	<0.01	0.14
FTD027	28.0	34.0	5.0	2.0	<0.01	0.02	0.02	<0.01	0.04
FTD027	36.0	37.0	1.0	3.1	<0.01	<0.01	0.02	0.01	0.03
FTD027	39.0	40.0	1.0	1.7	<0.01	<0.01	0.01	<0.01	<0.01
FTD028	46.0	47.0	1.0	1.1	<0.01	<0.01	<0.01	<0.01	<0.01
FTD028	52.0	53.0	1.0	1.0	<0.01	<0.01	0.02	<0.01	0.01
FTD028	63.0	67.0	4.0	2.6	0.15	0.14	0.30	0.17	0.15
FTD028	125.0	127.0	2.0	1.2	0.23	<0.01	0.05	0.40	0.19
FTD029	30.0	31.0	1.0	1.2	<0.01	<0.01	<0.01	<0.01	0.09
FTD029	43.0	50.0	7.0	2.3	<0.01	<0.01	<0.01	<0.01	0.01
incl.	43.0	45.0	2.0	3.6	<0.01	<0.01	<0.01	0.02	0.03
FTD029	56.0	59.0	3.0	3.8	0.31	0.16	0.59	0.06	0.12
incl.	57.0	58.0	1.0	6.1	0.45	0.35	0.42	0.07	0.24
FTD029	66.0	67.0	1.0	1.3	<0.01	<0.01	0.01	0.06	<0.01
FTD029	73.0	74.2	1.2	14.9	<0.01	<0.01	0.03	0.02	0.04
FTD030	60.0	61.0	1.0	1.1	0.16	<0.01	0.01	0.04	0.08
FTD030	68.0	69.0	1.0	1.0	0.02	0.04	0.05	0.02	0.03
FTD031	22	23	1	1.1	0.05	<0.01	0.01	0.04	0.03
FAT046	0	15.7	15.7	2.4	<0.01	0.13	0.11	<0.01	<0.01
FAT047	3.1	6.7	3.6	1.1	0.01	<0.01	0.06	<0.02	0.03
FAT049	8.5	10.3	1.8	1.5	<0.01	0.02	0.07	0.11	0.10

\* Full interval results for FTD013-16 are in previous annual report.

## 4.2 Firetower Prospect Structural Measurements

Stereonet plots of orientated core measurement (dip direction/dip) for holes FTD014-031 show that globally for sulphide bearing veins (156 points) the greatest density (8%) strike NW (broadly spread about 230/80-90). Very few sulphidic veins strike ENE. "Barren", late, non sulphidic veins cluster tightly with very low dips, generally dipping northerly (80 points). Bedding statistically dips very steeply north through to NW (151 points).

From structure orientation measurement in FTD028, the average foliation/bedding orientation is 335/76 (22 values), and the average sulphide bearing vein (from a broad dip range) is 325/63 (21 values), although another value cluster centres on 313/50. This typifies the bedding concordant domains of veining.

From combined structure orientation measurement in fanned holes FTD024 and 25, the average foliation/bedding orientation is poorly defined as very steep dipping to N - NE (14 values), and the average sulphide bearing vein (from a broad dip range) is 225/90 (24 values). Holes further east show a more consistent bedding at 004/80 (35 values) with sulphide bearing veins tending towards 250/60 (34 values). This typifies the fault parallel Main Zone domains.

A foliation is only well expressed in some units, best defined by flattening of sericitic clasts (eg unit Cggmi) occurring sub-parallel in strike to the X Fault. It can be oblique to bedding and appears to post date the peak of alteration as all alteration sericite is now largely parallel to foliation. It is clearly overprinted by "barren" flat northerly dipping crack-seal quartz-carbonate veins. Mineralised veins are only weakly ductile deformed as evidenced by their variable orientation and well preserved selvage textures, even in strongly sericite altered (easily deformed) rock.

N=242 (□)  
Grid Density = 1% (blue)  
2% (purple)  
4% (pink)  
(maximum 8.7%)

Girdles indicate maxima trends

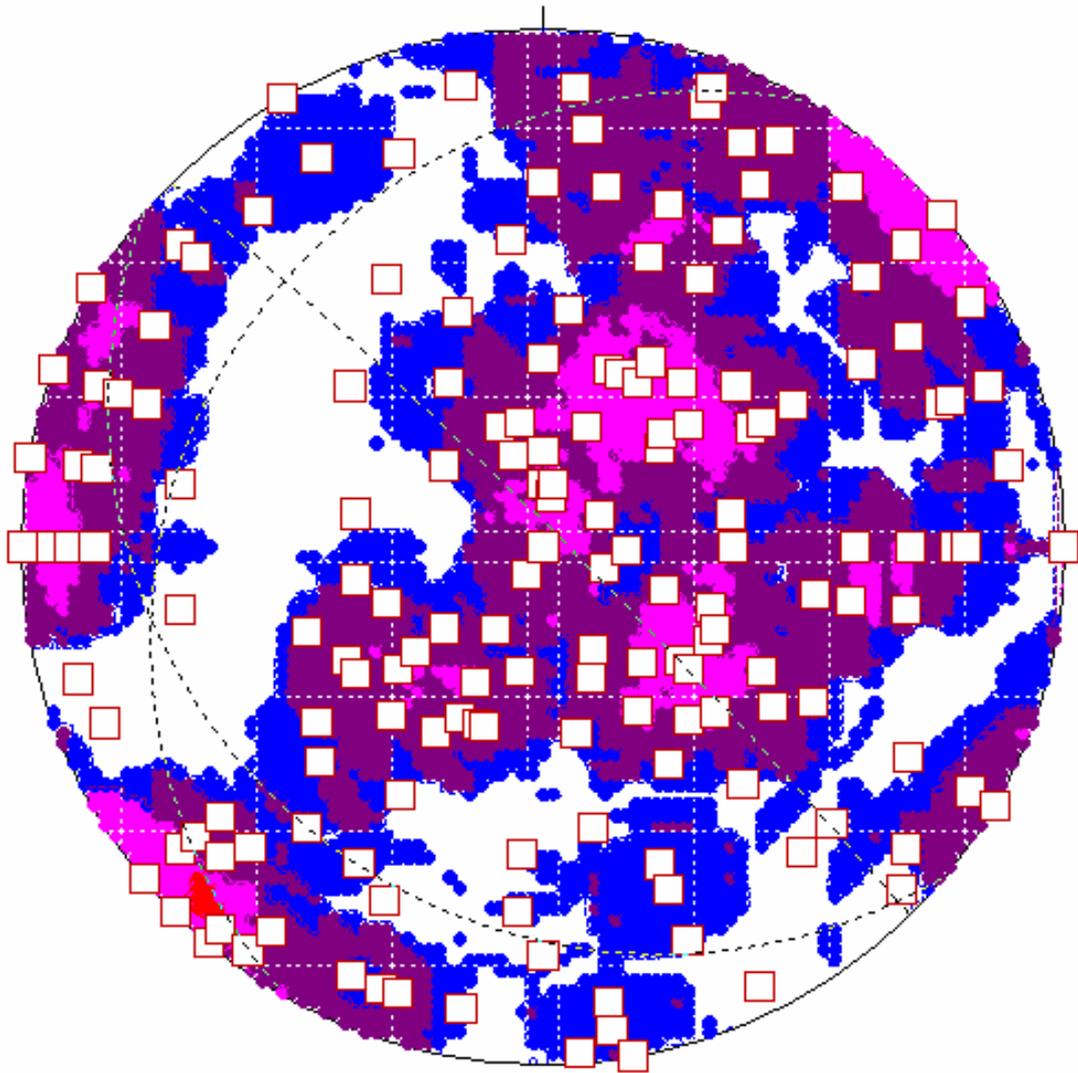


Figure 28 Stereonet view of vein orientations for Firetower Prospect (sulphidic drill hole and all outcrop)

### 4.3 Firetower West

Geological mapping has established that most mapped rhyolites are volcanoclastic. On the basis of a graded conglomerate mapped 50m west of hole FTD032, the sedimentary sequence youngs to the north.

Mineralisation at Firetower West is identified by a large (1km long) copper-gold soil geochemistry anomaly located 3km WNW of the Firetower Prospect. The better gold values appear coincident with elevated copper values for both soils and drill holes. Copper values are generally higher than at Firetower Prospect.

Rock chipping returned repeatable but now typical upper limit copper values at 1000-2000ppm (up to 3,290ppm), with 3 samples returning the best Greatland generated rock chip gold results to date, although this is only 100, 270 and 290 ppb Au (Figure 9). Significant anomalism is restricted to copper-gold (+/- lead). Better recent rock chip samples are included in Table 9. Rock chip sampling by previous explorers returned copper up to 3.3% , but gold was generally low, although anomalous. Copper occurs in botryoidal 'beer-bottle' limonitic veins across often pinkish altered, weathered volcanoclastics. Specularite in late, flat dipping, massive or crack seal quartz veins is common.

Open-hole percussion drilling of 39 holes (holes FAT001-039) to a maximum depth of 21m was undertaken along existing road access close to anomalous soil responses (Figure 9). Although alteration and sulphides were intersected, geochemical anomalism was generally low. Drill holes show element correlations for Firetower West that differ from those of Firetower, with a weak gold-copper correlation being apparent. Tungsten has a moderate correlation with copper but is very weak against gold. At Firetower the percussion hole elemental correlations are similar to the diamond drilling results, with good gold-arsenic and gold-tungsten correlations, although contrastingly, only a weak gold-copper correlation.

Table 9: Selected Anomalous Fire Tower West Rock Chip Samples

Sample ID	AMGE	AMGN	Description	Au ppb	Cu ppm	Pb ppm	Zn ppm
7262	442915	5406794	Outcrop, cream, siliceous rhyolite	20	187	<b>1072</b>	625
7263	442910	5406800	Outcrop, Gossanous and PYRITIC veined, hematite mottled, siliceous, (chloritic), metasediment in qtz pebble cgl sst. (Looks lively)	<b>270</b>	<b>3290</b>	829	603
7264	442915	5406800	Outcrop, Gossanous and PYRITIC veined, hematite mottled, (siliceous), chloritic metasediment in qtz pebble cgl sst. (Looks lively)	40	<b>1896</b>	148	482
7303	443062	5406849	Extremely weathered, clayey, ferruginous, mottled, buff-cream to brown-black, altered, fine-grained, quartz-phyric, rhyolitic tuff or possibly rhyolite (float).	-10	<b>1518</b>	867	510
7307	442930	5406868	Extremely weathered, altered, hematitic-limonitic, coarse to very coarse-grained, quartz pebble volcanogenic sandstone to volcanic conglomerate; almost like Roland Conglomerate, but more matrix-rich (float).	<b>290</b>	806	331	492
7309	442936	5406808	Extremely weathered moderately soft, buff to pink-brown, altered, hematitic after chlorite/sericite, coarse-grained, quartz-phyric, rhyolitic tuff or possibly rhyolite; scattered large aggregates or eyes of clear quartz, up to 1cm long.	-10	<b>1166</b>	54	223
7311	442791	5406856	Moderately weathered, massive to very weakly foliated, very weakly hematitic, after ?chlorite, moderately sericite/chlorite altered, mottled pink-cream to grey-green, fine to medium-grained, ?feldspar-phyric, volcanogenic sandstone or rhyolitic tuff.	100	855	<b>1516</b>	215

The maximum percussion hole gold value (over 3.6m) for Firetower West was 171.4 ppb in hole FAT020, however the best anomalous element assemblage was within hole FTD031 with maximum gold, copper and tungsten at 105, 1486, and 14.6 ppm respectively. Lesser values in the same elements were noted in nearby FAT029. The encouraging alteration and sulphide that was logged in holes FAT036-039 returned patchy weak gold and tungsten, with elevated copper, lead and zinc. FAT029-039 were within the Auriongold generated gold-in-soil anomaly. The more accessible and comprehensively

tested Greatland gold anomalies to the east (FAT001-028) have generally poorer responses, with patchy gold mostly near surface, lacking anomalies in other elements. The exceptions are FAT010, 022 and 023 (these holes were also the only holes anomalous in bismuth, at more than 10ppm).

Diamond hole FTD032 targeted the broadest anomalous gold soil geochemistry. It was collared in magnetite bearing polyolithic conglomeratic immature sandstones, that become more dominantly of rhyolitic tuffaceous origin down hole. The magnetite may be sedimentary and suggest a mafic (andesitic?) contribution to upper sandstones and quartz conglomerate. Hole FTD032 returned 1m at 2.65 g/t gold from 97m, located at an alteration front near the contact of intermediate and rhyolitic volcanoclastics (Figure 25). Two other shallower zones exceeded 0.5 g/t over 1m intervals. The rhyolitic volcanogenic sandstones were elevated in copper to 0.58% (over 1m from 114m).

The more uniformly rhyolitic meta-sandstone sequence of FTD033 was broadly anomalous in copper, including 5m at 0.76% Cu from 57m, in an altered, faulted sequence hosting common vughy pyrite-chalcopyrite veinlets (Figure 26). The hole was not significantly anomalous in gold (except 3m at 0.18 g/t from 4.2m).

Both holes showed variable but locally intense texturally destructive silicification and a mottling- to- flooding of pink K-spar(?) +/- sericite (Figures 25 and 26). Some bands were suspected to contain pink hematite alteration (eg FTD032, 95-98m). Pyrite-chalcopyrite-galena as clots, veins and lesser disseminations were associated with this alteration. Carbonate veinlet hosted alteration was not common, and was often vughy leached. Hole FTD032 also showed trace pyritic scheelite veinlets but not necessarily at the most altered intervals. The least altered rocks were chloritic. Lithology at the bottom of hole FTD032 is tentatively correlated with the upper portion of FTD033. There were no appreciable black tuffaceous siltstones intersected in the drill holes, as at Firetower Prospect.

#### **4.4 CRA Anomaly No.1**

CRA Anomaly No.1 is a small zinc-lead soil anomaly generated by CRAE during 1983 located 2.5km due east of the Firetower Prospect. To date there had been no systematic gold soil geochemistry over the area. Three lines across 250m of the CRA Anomaly No.1 on the pre-existing (base-metals) grid were soil sampled (lines 47, 48 and 49E). Base metal anomalism was confirmed and spot high gold values, open to the east, were detected up to 916ppb (sample 07349 – locally with no base metal anomalism).

Brief follow up of anomalous gold soil samples identified remnant alluvial terrace gravels adjacent to the best spot- high gold-in-soil response (Figure 5). No nearby significant bedrock alteration could be located in spite of extensive surrounding outcrop. These gravels are considered the probable gold source. Although the source of the weak base metal anomaly is still not explained, no further soil sampling at CRA Anomaly No.1 is recommended.

#### **4.5 Gregories Road and Noranda**

A weak gold stream sediment anomaly near 451000mE, 5406000mN identified by Noranda was followed up with 200 x 50m spaced soil sampling (seived to -80#). Roadside sampling was extended at a lesser density west to include the lead anomalous area of rock chipping along a tourmalinised edge of an intrusive (trace pyritic) diorite. This is known as Gregories Road Prospect. An initially gold anomalous rock chip sample (Amax, 1983) could not be reproduced in rock chip sampling by Outukumpu (Herrmann, 1991), Auriongold (Callaghan, 2002) or Greatland (this study). Although 3 of 12 (various company) rock chip samples along the SW diorite margin are anomalous in lead (1000- 2340ppm).

The result of 100 grid soil samples covering the Gregories Road and Noranda drainage anomaly (Figure 4) returned no significant results except to confirm a weak elevated lead response to prior rock chipping near the Gregories Road Prospect (with nil anomalous gold or tungsten). No further work is recommended for these prospects. Roland Conglomerate sourced debris flow

and scree cover on Mt Read Volcanics limits the effective southern extent of soil sampling.

Prior to soil sampling the area was reconnaissance mapped with diorite proving to be more extensive than shown on published maps. The inferred limit of this diorite along with a contrast in outcrop nature of adjacent (trace pyritic) rhyolite/rhyodacite (Minnow Keratophyre) locates an inferred WNW trending fault along which these diorites are aligned.

#### **4.6 Asarco and East Gog**

The Asarco and East Gog Areas occur in the western extremity of EL31/2004, as weak stream anomalies. Sixteen of the 17 samples come from a single road traverse over 75m commencing east from 454170mE, 5405300mN, from a rhyolitic unit within generally uniform sediments, with no anomalous result. The separate locality grab sample (452604mE, 5406920mN) may deserve follow up (grab sample 07433 @ 0.22 g/t Au). No significant alteration was noted.

The East Gog (Amax) area includes anomalous drainage leading to the East Gog grid of Austamax (Vivian, 1984). None of the 8 rock chip grab samples taken within silty sediments were above detection for gold.

#### **4.7 Austamax**

This weak gold stream sediment anomaly detected by Asarco (1974) has been rock chip sampled by Australian Amax (Poltock, 1984) 3 samples, Outukumpu (Herrmann, 1991) 4 samples) and recently by Greatland (this period) 19 samples. No gold or significant alteration has been detected to date. No other analysed elements are anomalous. The lithology is dominated by weakly outcropping uniform shales. No further work is recommended on this prospect.

Opposite, on the east bank of the Mersey River, 6 samples from around a shallow prospecting pit on a quartz blow mapped by Comalco (Weste, 1978), or within a nearby weakly anomalous drainage, returned no significant result.

#### **4.8 Magog**

At the Magog Prospect inspection of the basalt hosted magnetite, results of 3 rock chips, and a review of past work resulted in the classification of this prospect as very low priority.

#### **4.9 Lobster Rivulet**

There is currently an inactive mining lease (15M/1994) for stone (quarry gravel) over part of this prospect. No recent operations are evident, but widespread Roland Conglomerate scree has been extracted in the past.

Comalco (1978) located minor workings in this area following up anomalous tin and tungsten stream sediment anomalies. A small area of shallow prospecting pits bearing massive magnetite was located (named as PK Pits). The area is extensively covered by thin Roland Conglomerate colluvium. Exposure of Mt Read Volcanics is limited largely to creeks, prospecting pits or quarry scrapes. Comalco (1978) completed detailed ground magnetic surveys and excavated three trenches, only one of which (adjacent to the pits) appears to have penetrated colluvium. Sampling revealed low levels of tin and tungsten. Gold was not analysed.

During this period a 20m long, a hand excavated deep trench trending 030 degrees with a connected 3m deep shaft, was located 170m to the west of the trenched workings. The shaft was located on 0.6m width of massive magnetite trending 120/76SW (Figure 6). Magnetite is bounded by well foliated chloritic mafic phyllite. Channel sampling of the magnetite returned 0.09 g/t Au and 2170ppm Cu. Adjacent magnetite bearing chloritic phyllite returned up to 1200ppm Cu. Ground magnetic surveys of Comalco (1978)

suggest the extent and width of magnetite is very limited. This trench and the PK Pits may test the same magnetite horizon.

Twenty nine soil samples in an irregular grid across 700m at the Lobster Rivulet Prospect only returned 2 samples with anomalous Sn (sample 07398 @ 20ppm; 07403 @ 10 ppm) and one sample adjacent to the historic PK Pits with 66ppm W. Copper in soil was relatively weak. Although not all samples penetrated the transported colluvium, results were generally disappointing. When considered in combination with the limited but poor rock chipping results and narrow width of magnetite, no further work can be justified on this prospect.

## **5.0 Conclusions**

Drilling of an additional 9 diamond holes this period at Firetower has increased confidence levels and established the style and continuity of gold mineralisation and lithology as a guide for further exploration. Drilling has shown both crudely stratabound and fault controlled stockwork vein hosted mineralisation occurs, across at least 450m of a fault bounded sequence of felsic volcanoclastic and volcanogenic sandstones and siltstones. High grade hypogene sulphide intersections such as 2m at 9.4 g/t Au from 87m in FTD022 (one of the deepest holes) is encouraging of further depth potential. Further drilling is proposed.

At Firetower West shallow percussion drill testing failed to enhance soil anomalies but drilling of two diamond holes (FTD032-033) returned encouraging results. FTD032 returned 1m at 2.65 g/t gold from 97m. FTD033 was broadly anomalous in copper, including 5m at 0.76% Cu from 57m. Host rock and alteration differs somewhat from the Firetower Prospect. The peak of the copper soil anomaly is yet to be drill tested. Further drilling is proposed.

Base metal anomalies with weak or spotty gold responses track along an IP chargeability zone for a further 2.5km east of Firetower. Anomalous lead in rock

chips is widespread near a tourmalinised diorite contact at Gregories Road Prospect. Weak copper bearing massive magnetite has been sampled within the tin-tungsten anomaly of the Lobster Rivulet Prospect. Rock chip sampling and reconnaissance mapping of areas further east have proven unsuccessful to date.

## **6.0 Environment**

The only new access track works during this period were those to Firetower West drill holes FTD032-033. Limited verge clearing to some existing access tracks was required for some percussion drill holes. These were all approved by Mineral Resources Tasmania (MRT) following the standard review process.

Soil sampling was GPS located, assisted by tape and compass. Minimal line clearing was required, never requiring chainsaw cutting. No grid pegs were placed. Some soil sampling utilised pre-existing (previous company) grids.

At the Firetower Prospect, no new access tracks were required this period. No in-ground drill sumps were required during diamond drilling. All hole sites and access was rehabilitated before the end of the period, except those leading to drill holes FTD019-021, retained for future use. At Firetower West the access tracks to drill holes FTD032-033 remain open for possible further use. Both holes intersected artesian water flows, with both being permanently plugged and back cemented on completion.

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