Corona Minerals

Report on field trip to Bluff Mine area

EL25/2010

Granite Tor

Tasmania

24th January 2013 to 30th January 2013

By

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Table of contents

Introduction

A field trip to the Bluff River workings of EL 25/2010 was undertaken by Ian Rogers, Bill Cox and John Pemberton from the 24/1/2013 to the 30/1/2013 for Corona Metals.

Charles Hughes gave the following guidelines for the work:

1. Find the Bluff River workings - map and sample.
2. Creek mapping to the west and north and pan concentrate sampling.

The area is remote high country with alpine vegetation on the hill tops dropping off steeply through bauera, horizontal and rainforest to the gorges of the Bluff River and the newly named rivers and creeks (Two Terrys Rv, Charles Ck, Ians Ck, Bills Ck and Mags Ck – see sample map) surrounding the base camp on the ridge above the Bluff workings.

Using the maps supplied by Charles the creeks crossing the two tin soil anomalies were sampled. The southern anomaly is plotted as trending north north west but could also be interpreted as running in a more northerly direction.

Bluff Mine workings

The workings were rediscovered by following the water race for a short distance and then finding the old pack track. Ian cut this out giving us relatively rapid access down to the workings. The description of the area by Noldart and Jennings (1966) is most useful as the area is now covered in thick regrowth forest and moss. As the day of our visit was wet it was very dark.

Bluff workings

The area of workings covered approximately 100m north south by 50m east west. Channels or lobes of sluiced out leads run approximately north south up the slope and meet in the main channel. Water from the race was channelled and in one place piped (riveted pipe and cast flanges were visible in the original position). The map from Noldart and Jennings (1966) accurately portrays the workings

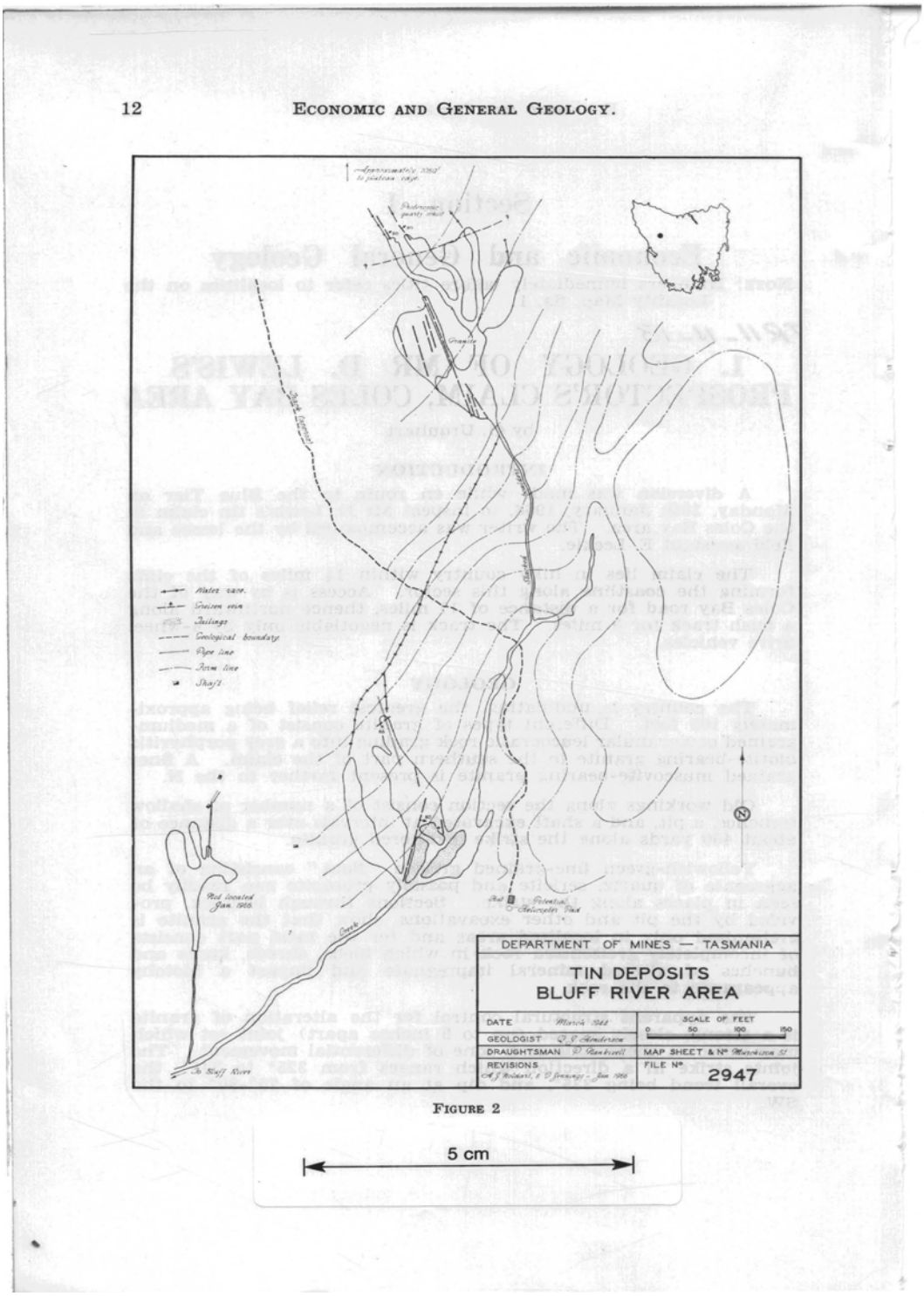
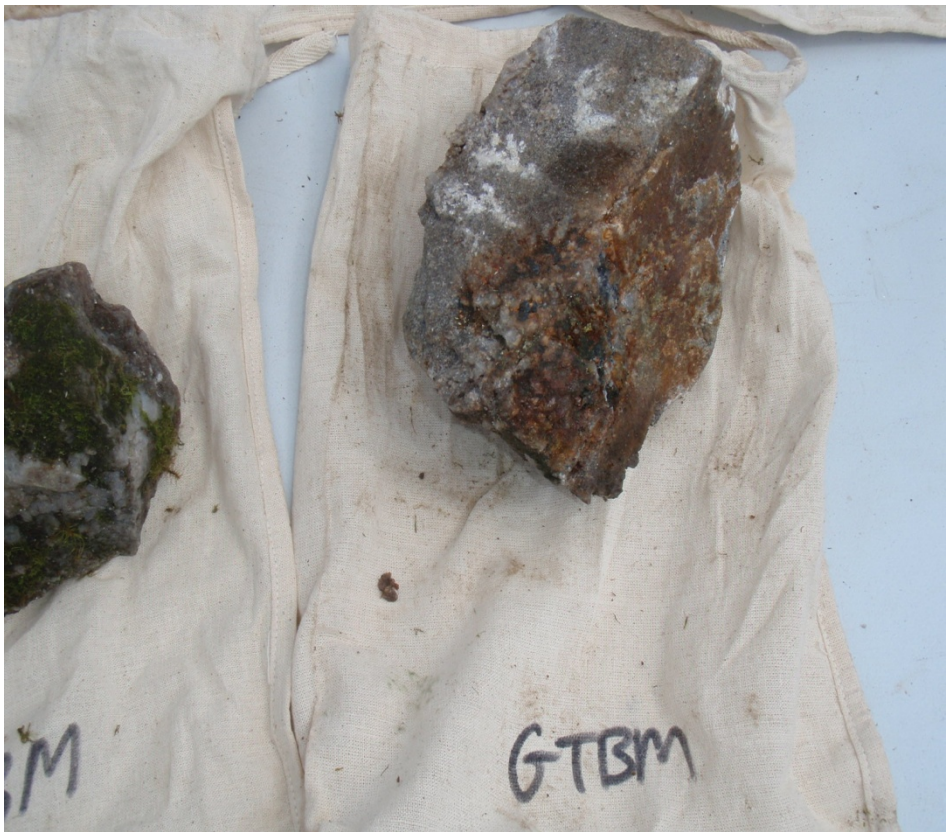


FIGURE 2

Weathered equigranular muscovite granite was seen in the lobes but was too weathered to sample. No greisens veins were found but the general moss cover and very low light made

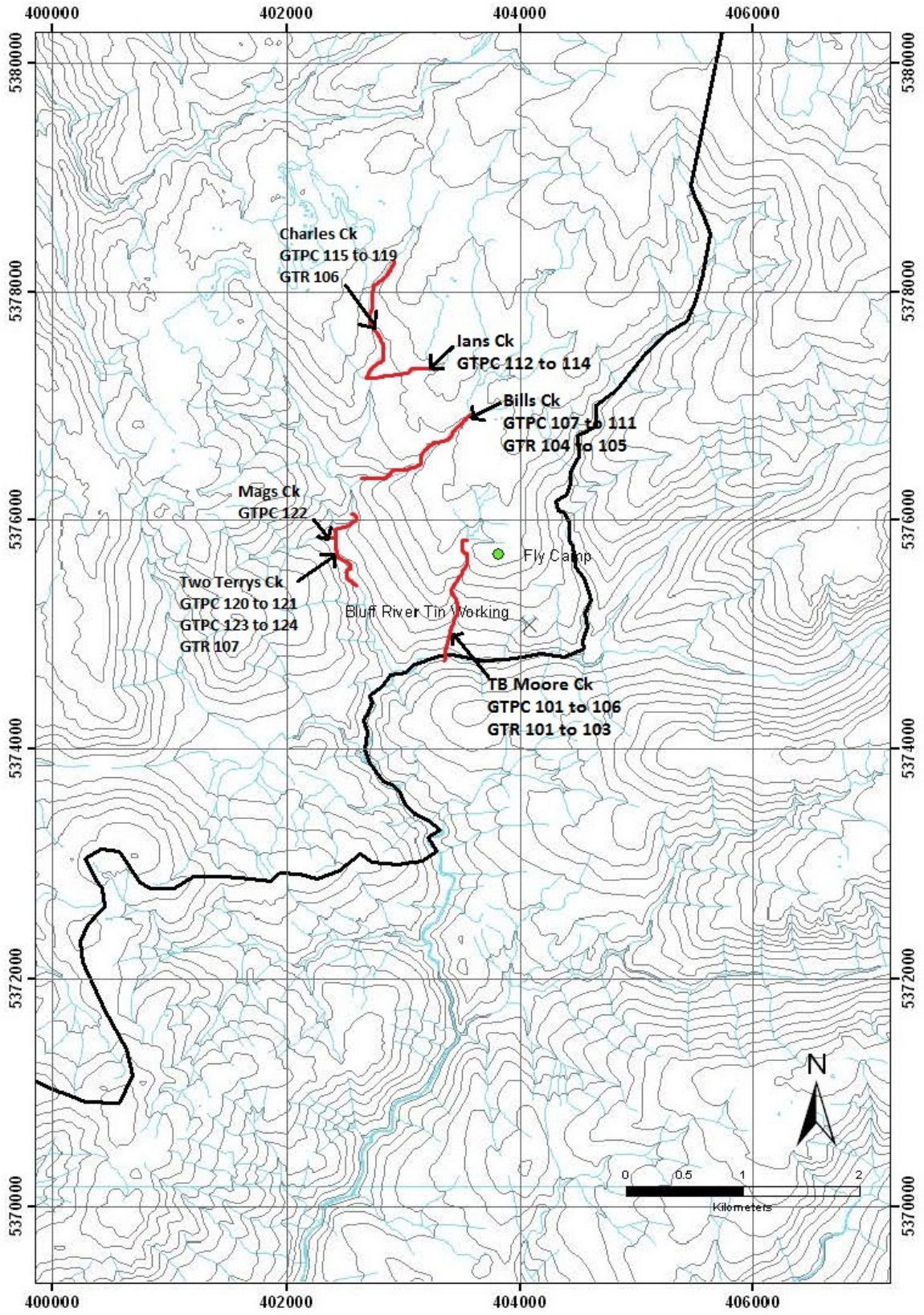
observation difficult. Samples were collected from the boulder piles between the worked out areas. Once in the light most of them appeared to be recrystallised quartzite or quartz rich greisens. Visible tourmaline and sulphide rich (pyrite and perhaps chalcopyrite) zones can be seen (see pics below). Samples were numbered GTBM 101 to 107 and were centred on GDA co ord 550404060E 5375100N.



The workings appear to be elluvial with the relatively flat area suggesting a perched terrace before the dramatic drop off to the Bluff River. If further work was contemplated then a small grid of approximately 300m by 300m with lines spaced at 50m intervals would allow accurate auger sampling and perhaps hand digging may uncover clean bedrock and the reported tin bearing greisens veins.

The old hut site was located with rough cut timber and a fire place plus rusted spades, cross cut saw and bottles.

Stream sampling



GTPC = Granite Tor Pan Con sample

GTR = Granite Tor Rock sample

Sample co ords (GDA):

TB Moore Ck

PC samples

GTPC 101
55 G 0403525E
5375837N

GTPC 102
55 G 0403517E
5375693N

GTPC 103
55 G 0403495E
5375478N

GTPC 104
55 G 0403438E
5375277N

GTPC 105
55 G 0403430E
5375026N

GTPC 106
55 G 0403346E
5374852N

Rock samples

GTR 101
55 G 0403528E
5375689N
Quartzite cut by griesen vein

GTR 102
55 G 0403500E
5375481N
Granite

GTR 103
55 G 0403345E
5374859N
Pyrite bearing float on steep slope

Bills Ck

PC Samples

GTPC 107
55 G 0403575E
5376949N
GTPC 108
55 G 0403373E
5376756N
GTPC 109
55 G 0403224E
5376662N
GTPC 110
55 G 0403119E
5376491N
GTPC 111
55 G 0403005E
5376422N

Rock samples

GTR 104
55 G 0403575E
5376930N
Quartz tourmaline vein to 1cm cutting granite
GTR 105
55 G 0403224E
5376662N
Equigranular medium grained quartz, feldspar muscovite granite

Ians Ck

PC samples

GTPC 112
55 G 0403146E
5377322N
GTPC 113
55 G 0402938E
5377273N
GTPC 114
55 G 0402745E
5377238N

Charles Ck

PC samples

GTPC 115
55 G 0402733E
5377254N
GTPC 116
55 G 0402832E
5377436N
GTPC 117
55 G 0402777E
5377656N
GTPC 118
55 G 0402702E
5377656N
GTPC 119
55 G 0402772E
5378057N

Rock sample

GTR 106
55 G 0402777E
5377656N
Equigranular granite

Two Terrys Ck

PC samples

GTPC 120
55 G 0402537E
5375496N
GTPC 121
55 G 0402452E
5375692N
GTPC 123
55 G 0402416E
5375903N
GTPC 124
55 G 0402561E
5376011N

Rock sample

GTR 107
55 G 0402522E

5375623N
Carbonate – dolomite ? float

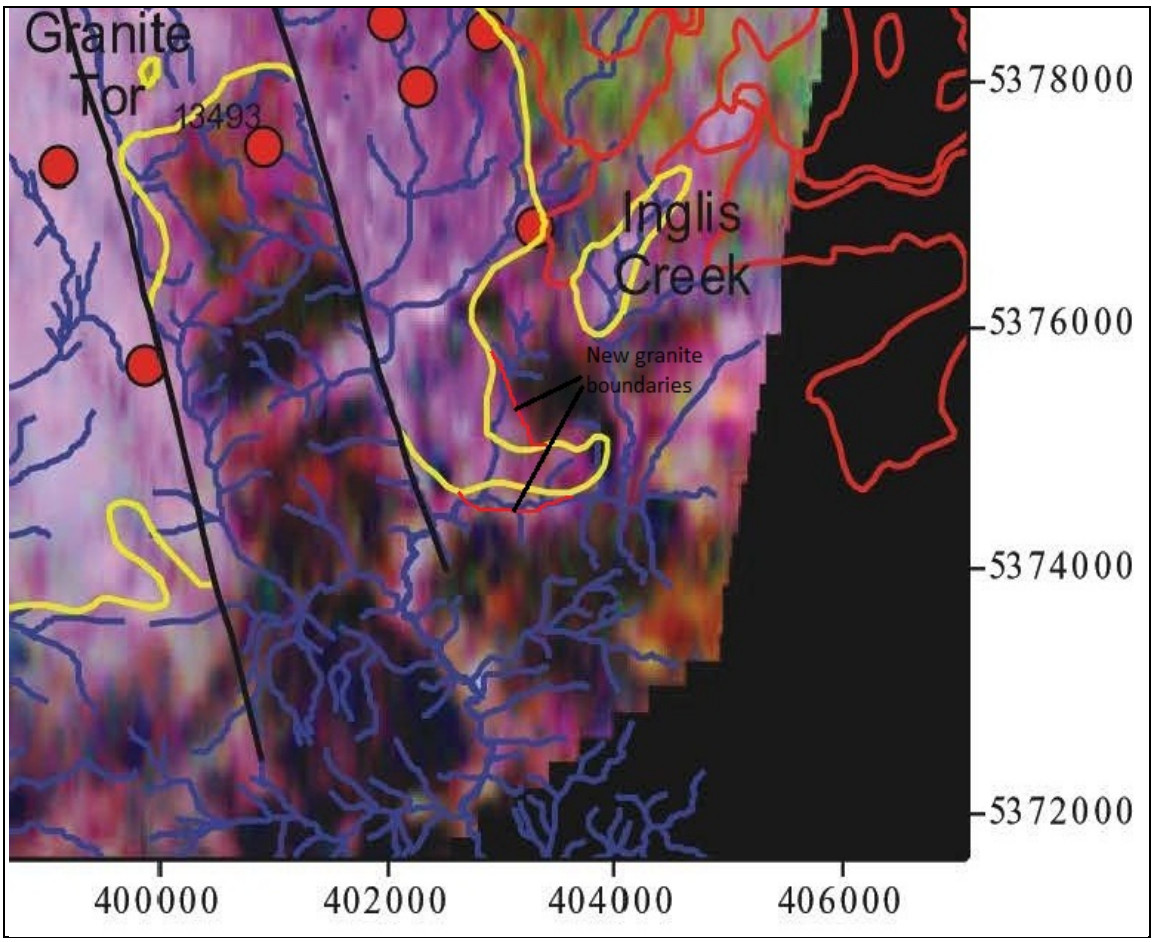
Mags Ck

PC sample

GTPC 122
55 G 0402389E
5375869N

Geology

The Devonian Granite Tor Pluton is adamellite to granite in composition and is a fractionated S-type intrusion (McClenaghan, 2003). Fractionated S-type granites are enriched in incompatible elements and can produce tin and tungsten greisen and skarn deposits. In a reinterpretation of the granite boundaries McClenaghan (2003) used magnetics and radiometrics to produce the map below.



Mapping of TB Moore Ck and up the Bluff River has refined the granite boundaries as illustrated on the map above.

While doing the traverse up Two Terrys Ck a carbonate/dolomite boulder approximately 0.5m in diameter was sampled. No other carbonate float was seen. The major NNW striking eastern graben fault was parallel to Two Terrys Ck but approximately 50m up slope to the east. The creek is in Tyennan quartzite which is folded and in place strongly sheared parallel to the fault.

Where mapped the granite is equigranular to porphyritic with quartz, feldspar and muscovite to 5mm. One rosette of tourmaline was seen and one 5cm wide quarts

tourmaline vein outcropped in Bills Ck near GTPC 108 – the granite was too rounded to sample.

In TB Moore Ck an interesting tor of granite with the top leaning backwards to form an arch was seen.

The jointing pattern allowed the blocks to slip out from the main body of granite to create the arch.

Conclusions

The logistics of doing on ground exploration in this area requires careful planning to increase the efficiency of the time spent on the ground. The final traverse to the west from the camp over to the graben to sample Two Terrys Ck took 2:30 hours to do 1.3kms.

Pre-cut access lines to areas of interest such as the graben creeks or mag anomalies would increase the sampling rate. A series of strategically placed camps would reduce the bush bashing time. The area covered in this program with 5 days on the ground stretches about 2km from the camp and allowed about six pan cons to be collected at 200m spacing in a day. An alternate approach is daily flights in and out from Tullah with two sample crews of two and a pre-cutting crew working ahead. This increases efficiency but the helicopter costs may make negate the advantages (plus the potential safety issues associated with the weather).

The excellent camp logistics and bush skills provided by Ian and Bill ensured that this work could be done in the time available and in a safe and positive manner. My thanks to them for the massive support they gave me during some rough traverses and for furthering my education with the many ways you can keep occupied during the evenings when divorced from the internet and TV!!.

References

McClenaghan, M.P., 2003. Ground truthing of Western Tasmanian Regional Mineral Program geophysical data in the Granite Tor area. (ur2003_10.ground truthing.geophys).

Noldart, A. J., and Jennings, D. J., 1966. Bluff River Tin Deposits. Unpublished technical report for Tasmania Mines Department. MRT report number: TR11_13_15.