



**Mt Kershaw**

**EL 48/2004**

**ANNUAL REPORT  
FOR THE PERIOD ENDING 22nd OCTOBER 2013**

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## **1. SUMMARY**

Activity conducted on EL48/2004 for the period was done exclusively by the Mancala group and consisted of collection, compilation and preparation of data for the Burns Peak DPEMP and associated approvals. Work was constrained to the area of the proposed mining lease 6M/2012, wholly contained within EL48/2004

Total expenditure for the period amounted to \$217,000.

On ground work was restricted to routine water sample collection, consultant (ecological, mining and traffic management) site visits and geotechnical excavation works assessing the presence of suitable clay resources for impoundment construction (Jan/Feb 2013).

## 2. REGIONAL GEOLOGY

EL48/2004 is located in the northern portion of the Mt Read Volcanics approximately 10km north of Rosebery (Figure 1). The three known prospects in the area (Southern Trenches, Thomas's Tunnel and Brown's Tunnel) are intimately associated with a sedimentary sequence known as the Burns Peak Subgroup. Structurally, the sequence displays a complex history with local and regional cleavage recorded as trending north east. The northerly orientated Rosebery Thrust Fault is located to the west as a number of splays and to the east, the north easterly trending Pinnacles Shear forms the eastern boundary of the Subgroup (Figure 2).

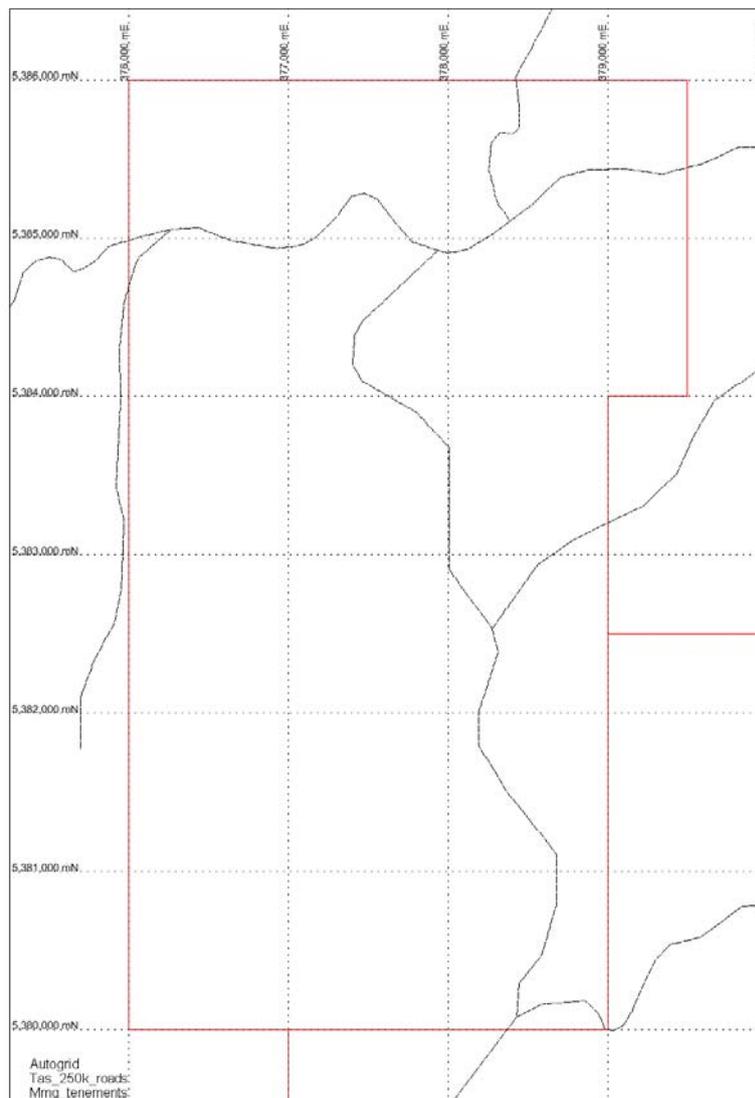
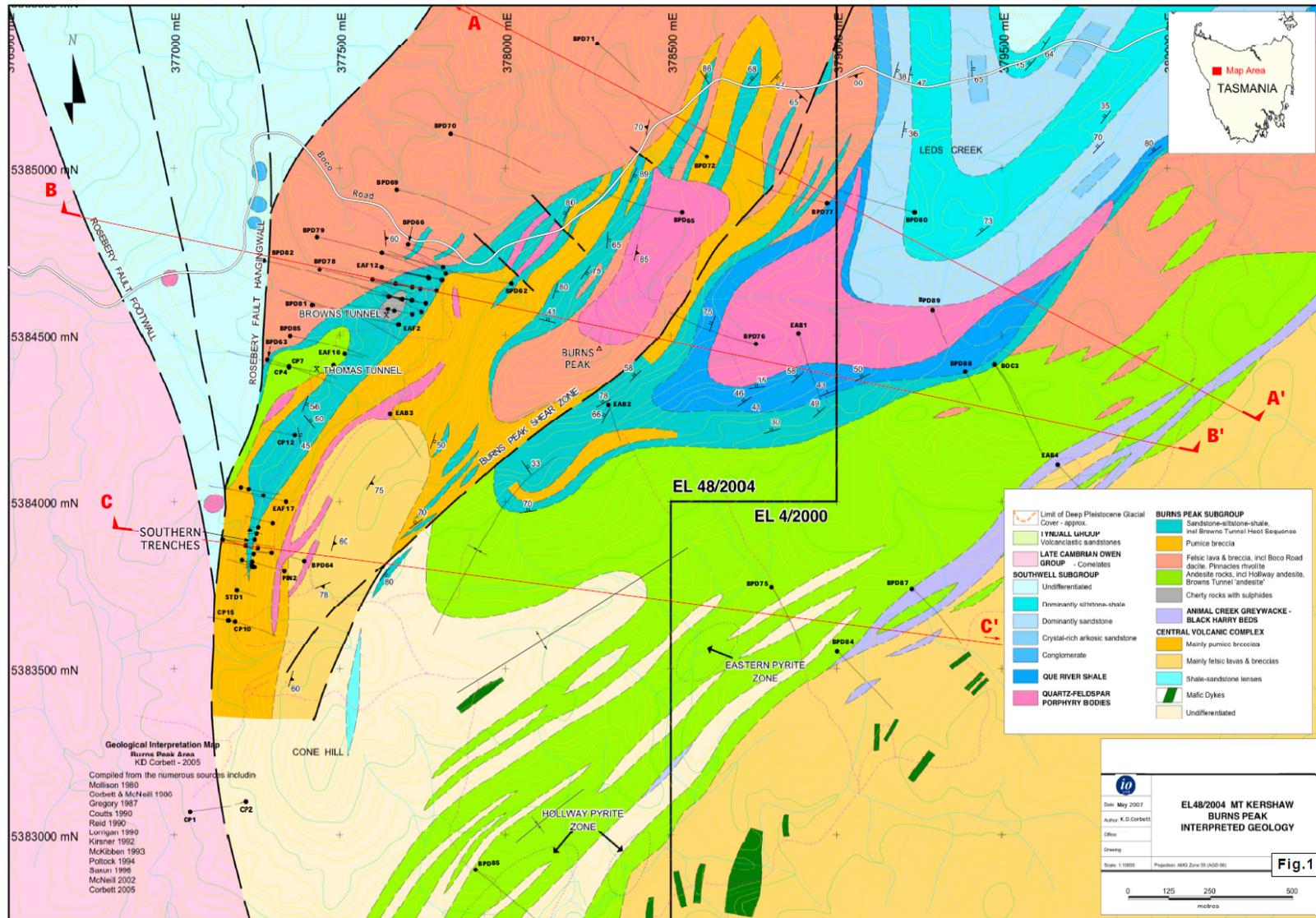


Figure 1. EL 48/2004 Location Diagram.

Figure 2. Burns Peak Interpretative Geology.



The stratigraphic sequence in the area is analogous to the sequence exposed in and around the Rosebery Mine. The prospects are hosted by the Browns Tunnel Formation, a complex suite of volcanoclastics, interbedded sediments, dacitic and andesitic intrusives. The Browns Tunnel Formation can be broadly correlated with the upper portion of the Central Volcanics Sequence, which at this location, is overlain by the Pinnacles Rhyolite and the White Spur Formation (Southwell Subgroup). Interbedded within the lower portions of and underlying the Browns Tunnel Formation is the feldspar phyric dacitic pumice breccia and dacite lava/intrusives of the Central Volcanic Sequence.

At Southern Trenches, both the hanging wall and footwall of the host rocks are pumice breccias while further north at Thomas's Tunnel dacitic tuffs and andesite form the hanging wall sequence. Further north at Browns Tunnel, the Thomas's Tunnel hanging wall sequence becomes the footwall sequence.

Hosting the massive sulphides at Burns Peak is a locally discontinuous, although regional (500m -1,500m) continuous zone of syn-volcanic sediments and volcanoclastics. Lithology's range from discontinuous beds of chert, tuffaceous sediments, siltstone, and shale to epiclastics and debris flow units. Vesicular andesite cross cuts and/or intrude sedimentary units in places.

Alteration of the host units, and to a lesser degree the hanging wall and footwall lithology's is ubiquitous. Intense siliceous and pyrite alteration surrounds the massive sulphide lenses, while chlorite, carbonate and sericite alteration (+/- pyrite) is found throughout the host units. Low tenor sericite and carbonate alteration of non-host rocks is sporadically developed.

### **3. EXPLORATION HISTORY**

The Burns Peak area (aka Pinnacles after the initial prospect discovery) has long been known to be prospective for Rosebery style VHMS deposits owing to the similar stratigraphic succession and structural setting. The Burns Peak area is known as 'the second best address' after Rosebery, a status which has prompted extensive exploration activity over more than a century with expenditure in the 10's of millions of dollars. Notwithstanding the persistence of past explorers, the three prospects discovered at the turn of the 20th century (Brown's and Thomas's Tunnel and Southern Trenches) remain the only identified areas of coherent mineralisation.

#### 4. LAND TENURE

Exploration Licence 48/2004 was granted to Zinifex Australia Limited on the 23<sup>rd</sup> November 2005 for a period of 5 years. Following corporate restructuring and divestment, beneficial ownership of the Licence resides with MMG Australia Limited. The licence was renewed in late 2010 and 2011 for further periods of 12 months, ending on the 22/11/2012. Mancala Resource have been granted by MMG the right to apply for a depth limited (150m) mining lease on a portion of EL 48/2004 in accordance with the terms of a Heads of Agreement between MMG and Mancala.

On the EL, all land is Crown Land gazetted as State Forest, informal reserves, portions of the Burns Peak and Mt Kershaw Forest Reserves and some HEC reserves. The proposed Mining Lease is contained wholly within the Burns Peak Forest Reserve.

#### 5. EXPENDITURE

Expenditure of \$217,041 was completed during the reporting period of November 2012 to September 2013.

A summary for the year and project to date (by Mancala) is presented in Table 1

Month	Labour (\$)	Materials (\$)	Sub- Contractors (\$)	Equipment (\$)	Admin (\$)	Total (\$)
current period	41,323	983	153,578	1,425	19,731	217,041
project to date	235,985	107,370	590,452	117,038	109,391	1,160,236

**Table 1. Expenditure on EL48/2004 for the current period and project to date by Mancala.**

## **6. PROPOSED PLAN FOR 2013**

Continued exploration for small high grade deposits using electrical geophysical techniques and drilling where appropriate, a minimum expenditure of \$50,000 is proposed.