



**Mt Kershaw**

**EL 48/2004**

**ANNUAL REPORT  
FOR THE PERIOD ENDING 22nd OCTOBER 2014**

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## **1. SUMMARY**

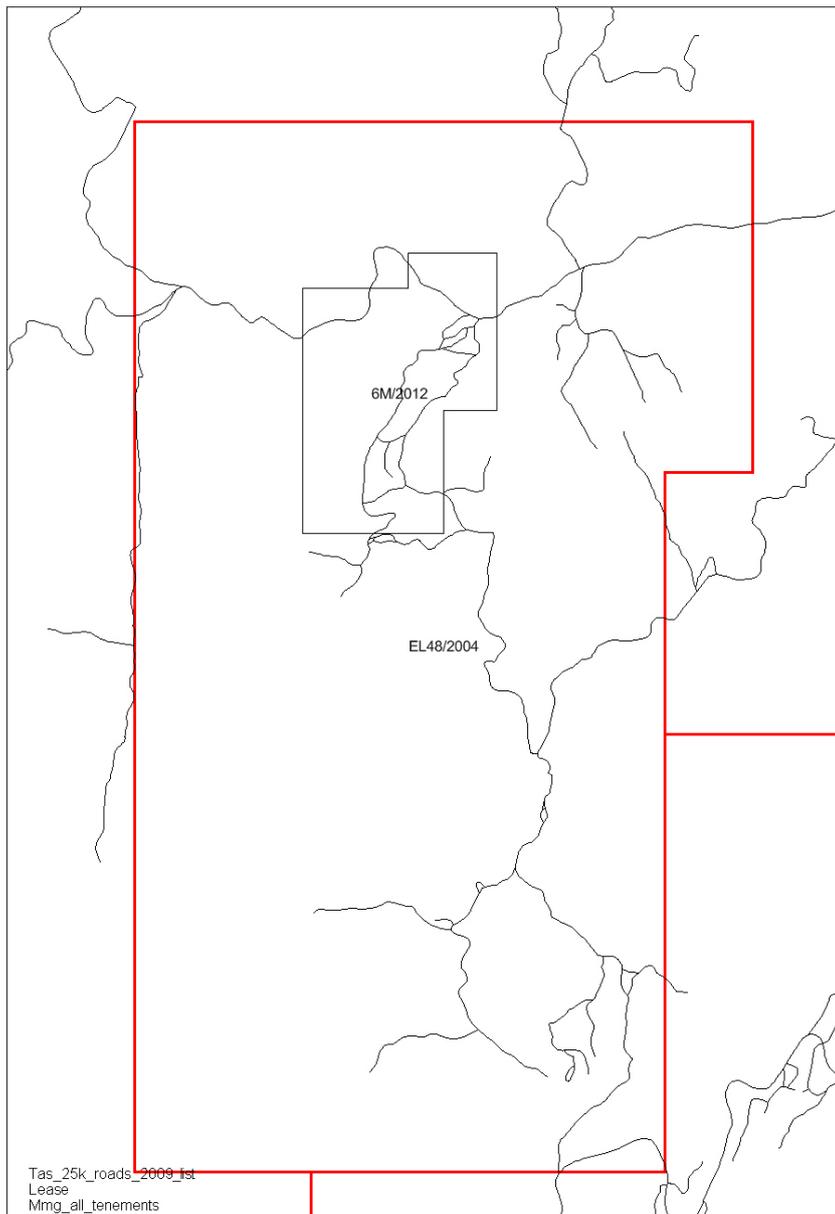
Activity conducted on EL48/2004 for the period was completed by MMG and Mancala with the Mancala groups work was constrained to the area of the proposed mining lease ML 6M/2012, wholly contained within EL48/2004.

MMG's work has concentrated on grid based soil sampling that has recently commenced. Mancala's work has concentrated on the granting of Mining lease MLA 6M/2012

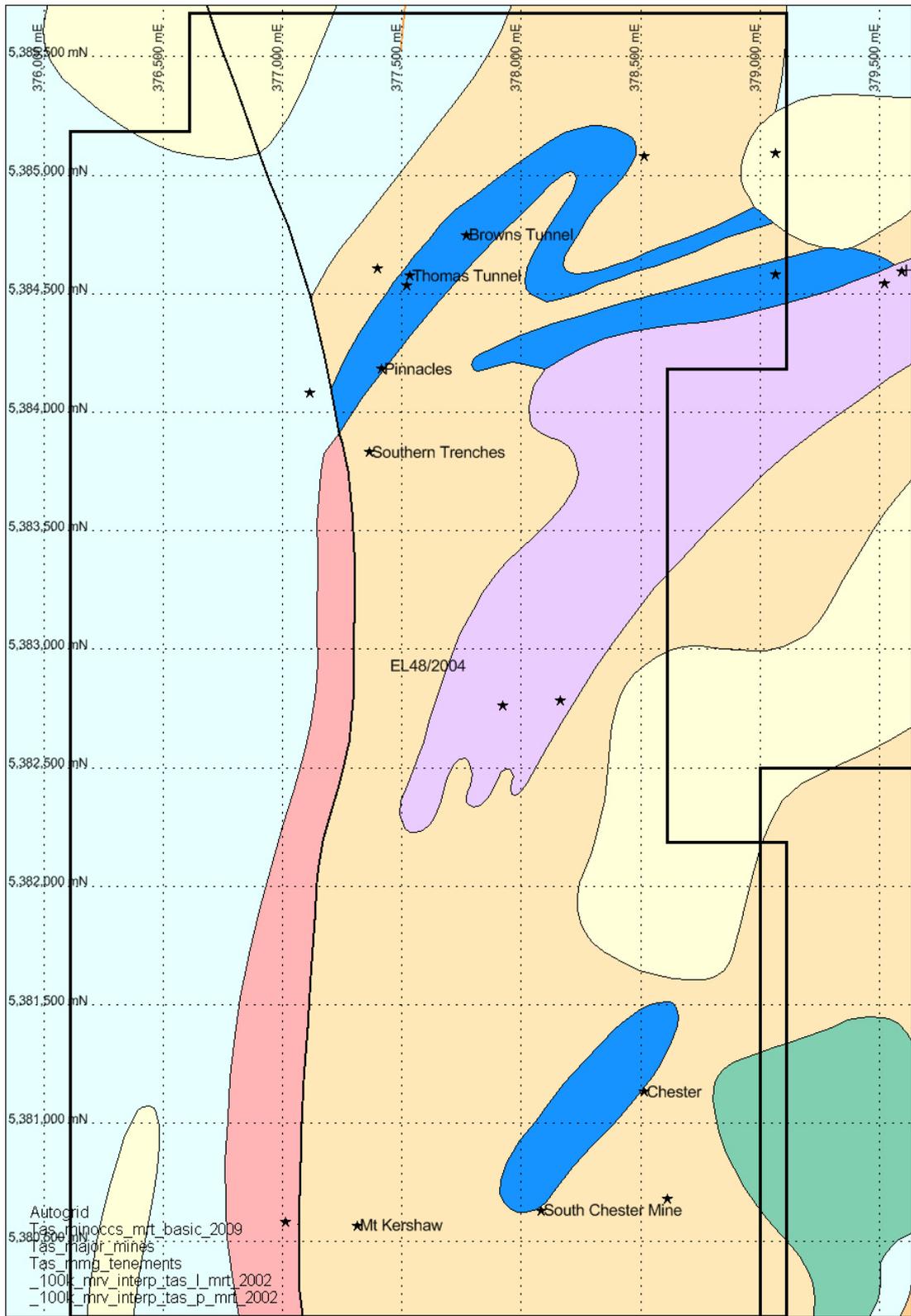
Total expenditure for the period amounted to \$94,159.

## 2. REGIONAL GEOLOGY

EL 48/2004 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. 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 - 2013 for further periods of 12 months, ending on the 22/11/2014. 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.

## 4. WORK COMPLETED

### 4.1 MANCALA

Activity conducted on EL48/2004 by Mancala consisted of collection, compilation and preparation of data for the Burns Peak DPEMP. Work was constrained to the area of MLA 6M/2012, wholly contained within EL/48/2004.

The DPEM was submitted to the Waratah Wynyard Council/EPA in May 2014 following three informal submissions to both the State and Federal Environmental Departments'. Feedback generated from the informal submissions prompted the consultant activities during the reporting period.

In August 2014, the EPA in response to the DPEMP documentation requested supplemental information which was supplied in September 2014. The EPA advice is that an approval decision will be made in December 2014 and that Federal approval would be made in January 2015.

Total expenditure during the reporting period amounted to \$83,674. Total expenditure to date by Mancala on the EL/MLA amounts to \$1,244,000.

On ground work was restricted to routine water sample collection, consultant (ecological, mining and traffic management) site visits.

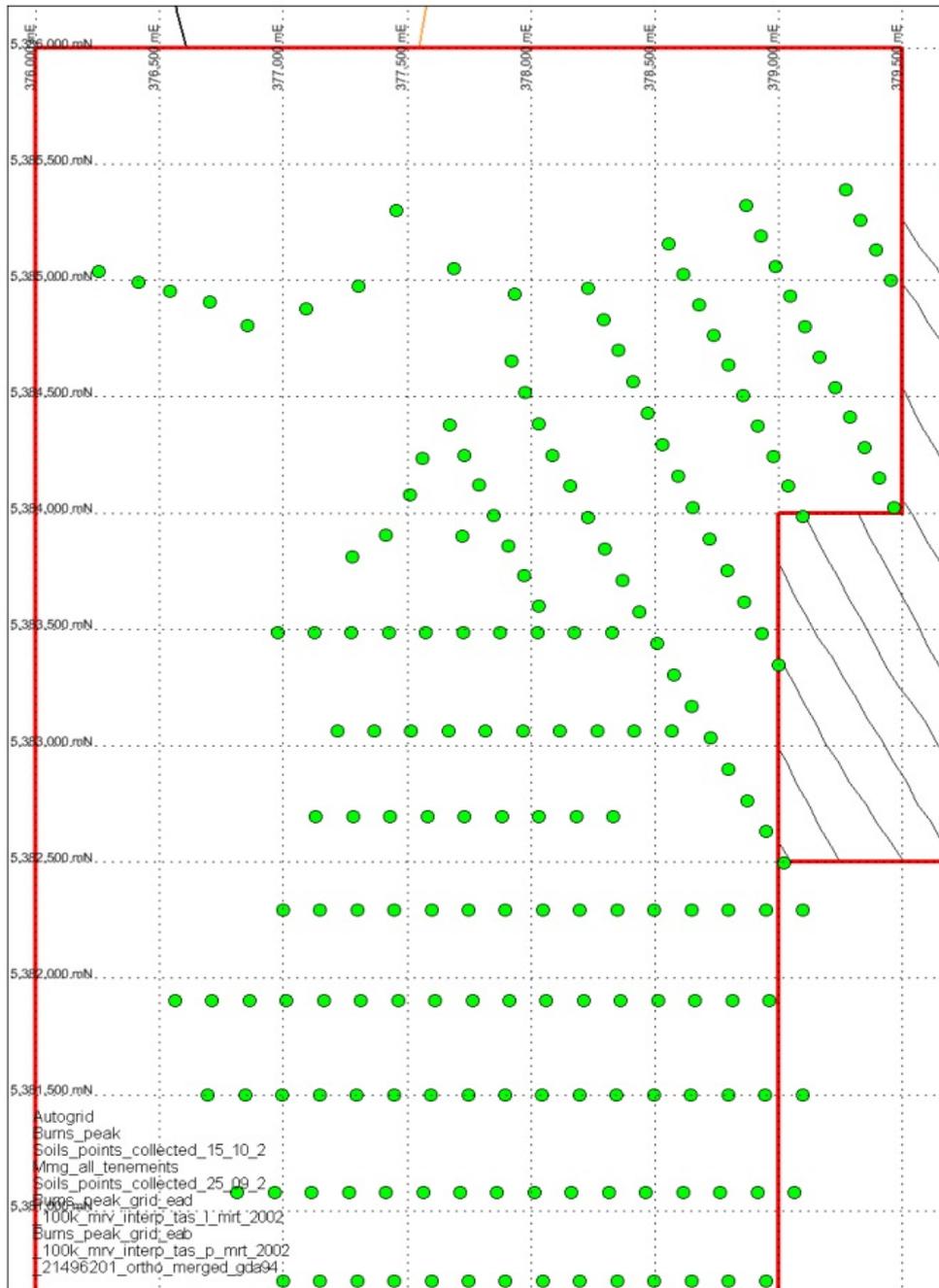
Desktop/site inspection studies were carried as detailed in Table 1.

<b>Consultant</b>	<b>Activity</b>	<b>Period (from)</b>	<b>Period (to)</b>
Aquatic Science	Routine water sample collection and contribution to DPEMP water management section.	Oct. 13	Feb. 14
Caloundra Environmental	Preparation of DPEMP and consultant management	Oct. 13	Jul. 14
Geoton	Revision of pre-construction dam reports	Oct. 13	Sept. 14
Northbarker Ecosystems Service	On site ecological surveys and contribution to DPEMP documentation	Oct. 13	Jan. 14

**Table 1. Consultants activity on ML 6M/2012. November 2013 to October 2014.**

## 4.2 MMG

A major soil sampling program using ICP-MS has commenced on this tenement. To date 54 samples out of total of 220 have been collected. Samples are collected on a nominal 400 x 150m spacing (Figure 3) and will be analysed using ICP-MS techniques.



**Figure 3: Proposed sampling on EL 48/2004**

## 5. EXPENDITURE

Expenditure of \$94,159 was completed during the reporting period of November 2013 to September 2014.

### Mancala Expenditure

LABOUR	\$44,663
SUB-CONTRACTORS	\$29,815
ADMINISTRATION	\$9,195
<b>TOTAL</b>	<b>\$83,674</b>

### MMG Expenditure

PERSONNEL	\$6,454.41
GEOCHEMICAL & ASSAYING	\$1,618.81
STORES & SUPPLIES	\$35.37
LAND & ENVIRONMENT	\$1,839.03
ADMINISTRATION	\$953.00
<b>TOTAL</b>	<b>\$10,485.02</b>

## 6. PROPOSED PLAN FOR 2014-15.

The work program proposed for 2014-15 is to finalise collection of soil samples and amalgamate the results from this work with the results collected for the entire MMG tenement package.

Estimated expenditure for 2014-15 is \$50,000 with approximately \$10,000 of that completed to date.