

Zeb's Minerals Pty Ltd

ABN 53 167 761 113

Annual Report  
On  
Exploration Licence 10/2014

For the period

July 2015 – June 2016

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## Foreword

### Function of this Report

This Annual Report has been prepared as a public document for submission to Mineral Resources Tasmania (MRT). The report provides a summary of the exploration activities undertaken by Zebs Minerals Pty Ltd within Exploration Licence 10/2014 (EL 10/2014) during the reporting period July 2015 - June 2016.

### Role in the Regulation Process

This document fulfils the role of an Annual Report on EL 10/2014 for the period July 2015 to June 2016, as required under Section 28 of the *Mineral Resources Development Act 1995*.

### Datum

GDA 1994, MGA zone 55 has been used for this report unless stated otherwise.

Distribution: Zebs Minerals Pty Ltd x 2  
Mineral Resources Tasmania x 1

## Executive Summary

Zebs Minerals Pty Ltd holds the licence to EL10/2014 granted in July of 2014 for a period of 5 years and has the rights to ML 1/1976, an existing mining lease which expires in 2016 with a renewal application pending. It has also applied for three more EL's contiguous with the existing one. MRT has notified the company of its intention to grant the licences and we currently await the final documentation.

Contained within these leases are the Murray's Reward mine, the single largest producer of copper historically and the balance of the 35km strike length of the Balfour copper trend. This trend has been known since the early 1900's and worked as well as explored off and on by various individuals and companies over the last 100-plus years. High grade copper is known and has been mined at and near surface at numerous locations along this trend.

Exploration in the late 1990's by Rio Tinto Exploration Pty Ltd (CRA Exploration Pty Ltd) was the last major modern exploration effort in the area. Rio geologists formed an interpretative model on the origin of the copper based on the latest geological theories and technology at the time. They completed numerous geological and geophysical surveys culminating in the delineation of several targets. Rio drilled these targets with limited success suggesting that they had effectively tested their theory and though not disproving it satisfied themselves that a target large enough for Rio did not exist.

It should be noted that at this time Rio had made the decision to disband its exploration division and focus on the acquisition of deposits of a size suitable to be profitable to Rio.

Though the data collected by Rio and their predecessors was accurate, the technology did not exist at that time which is available today to effectively model the deposits. Zebs Minerals Pty Ltd, upon acquiring the ground, reviewed the data immediately relevant to the Murrays Reward site and took the decision to contract GHD to re-evaluate the geophysical data and to apply new software programs and computing power now available to analyse the data. The resulting studies, which are ongoing, have, to date, demonstrated the concept and confirmed the ideas that Rio had postulated.

Zebs Minerals Pty Ltd has now developed models demonstrating the potential for locating possible ore bodies at depth and during the year developed a drill program and submitted it to MRT for approval. The drill plan was approved by MRT and in October 2015 the company commenced its first drill hole. The hole was completed in November with logging and analysis being completed in the period January 2016 to March 2016. Sample analysis indicated only trace indications of economic minerals although it is believed the anomaly was intersected. Current thinking now suggests the potential ore body may sit further to the south. The company has ordered the purchase of the latest downhole EM equipment which it expects to take delivery of in July or August 2016. Once received and trained the company will complete a downhole EM survey of the hole and determine where to drill the next diamond hole.

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## 1 Introduction

### 1.1 Purpose of This Document

This document fulfils the role of an Annual Technical Report on the exploration activities carried out on EL 10/2014 during the reporting period July 2015 to June 2016 as required under Section 28 of the Mineral Resources Development Act 1995.

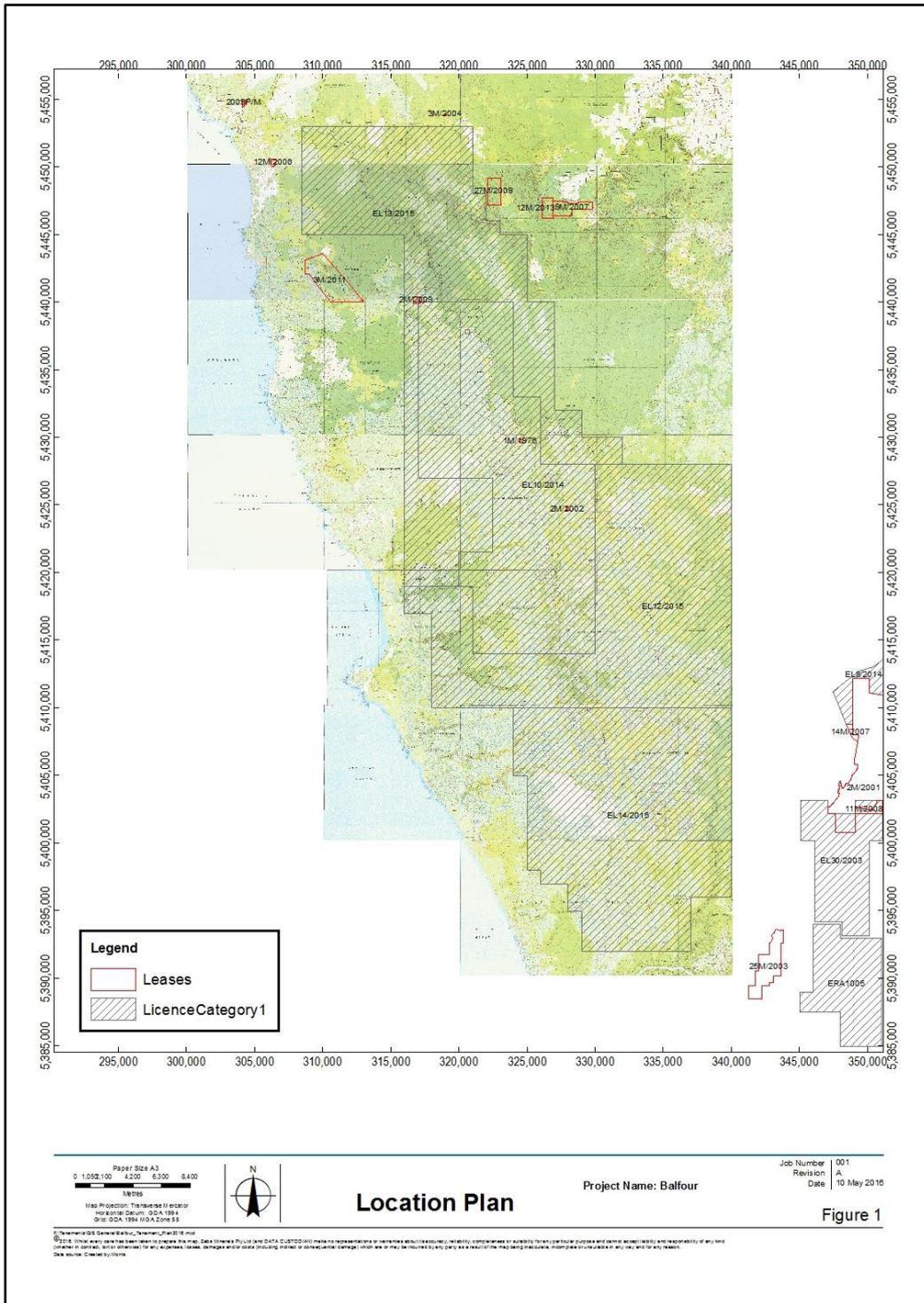
### 1.2 Licence Location and Operations

#### 1.2.1 Mineral Exploration Area

The Exploration area consists of Four Exploration licences and One Mining lease as given in the table below and is located approximately 49km due south of the town of Smithton in North Western Tasmania.

<b>Project</b>	<b>Licence</b>	<b>Location</b>	<b>Area sq km</b>	<b>Date granted</b>	<b>Period remaining</b>
Balfour	ML1/1976	Balfour	.005	01 Jan 1977	Currently under review for renewal
Balfour	EL10/2014	Balfour	219	01 July 2014	3 years
Balfour	EL12/2015	Balfour	247	Application	5 years
Balfour	EL13/2015	Balfour	248	Application	5 Years
Balfour	EL14/2015	Balfour	244	Application	5 Years

1.2.2 Site Location



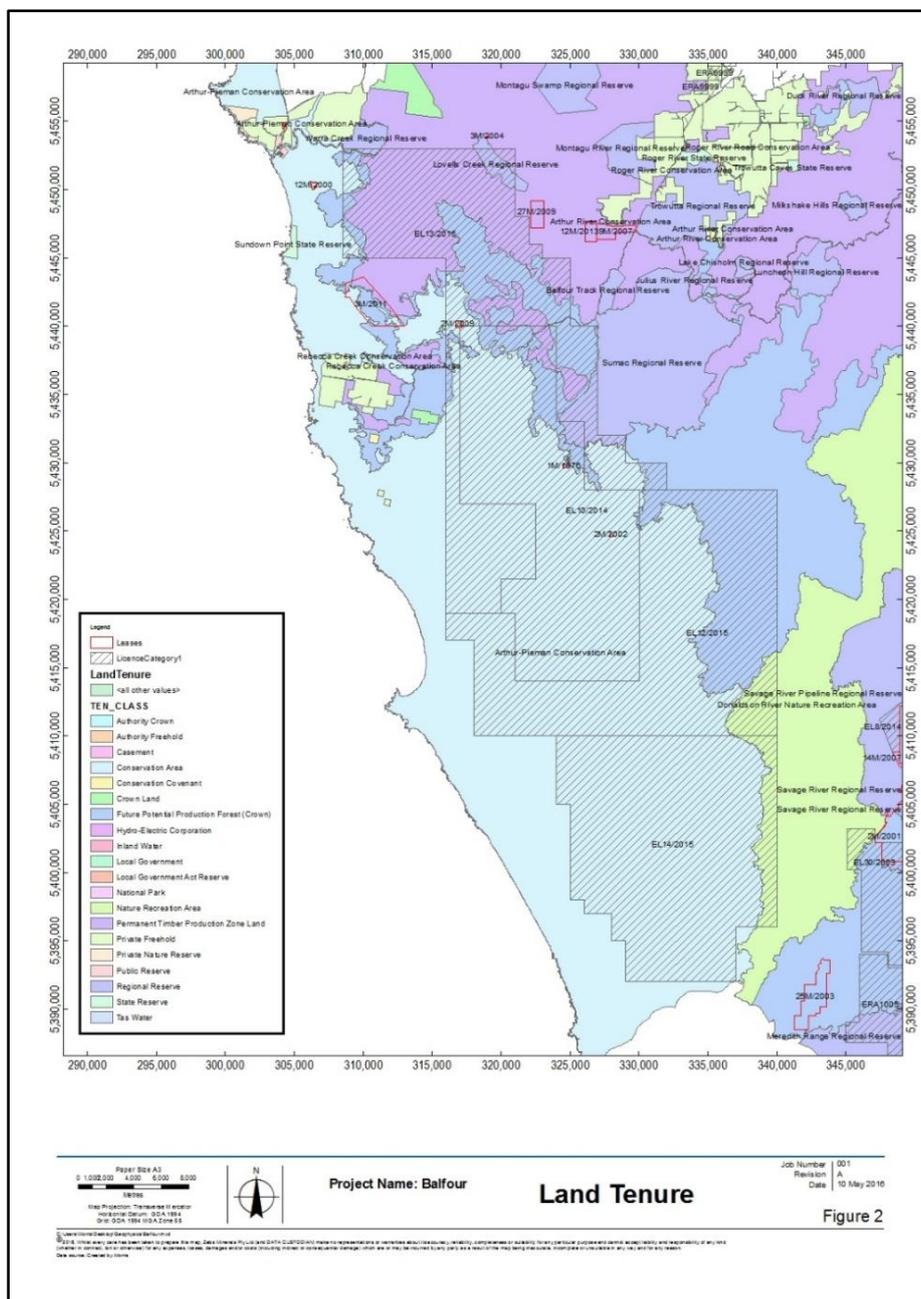
Access to the Project is via the Bass Highway to Smithton from Burnie and then on to Balfour via the Western Explorer Highway and the Balfour track. Access to the tenements is good with historical tracks throughout the tenements still in usable condition. The old highway, pre-Western Explorer, supplies access through most of the tenement from the northern edge through to the middle portion of the tenement ending near to the South Mine.

### 1.2.3 Exploration Licence Tenure

The tenement, EL 10/2014 was granted to Zebs Minerals Pty Ltd on 1 July 2014 for a period of five years and applies to all Category 1 minerals. The licence covers 219 square kilometres and excluded areas include:

- Any land owned or leased by the Commonwealth of Australia;
- Mining Leases;
- Retention Licences; and
- Crown reservations.

The current land tenure in and around EL 10/2014 is provided in figure 2 below.



#### 1.2.4 Historical Setting

The first mineral discovery in the Balfour region occurred in the early 1880's with the discovery of alluvial Tin. Tin was worked on a small scale within several workings in and around the area to later be known as Specimen Hill. Alluvial tin was worked for a period of some twenty years prior to the discovery of copper in Cassiterite Creek in 1901 (Ward, 1911). Once discovery of copper was made the majority of future prospecting in the area for many years was centred on copper with only minimal tin prospecting and mining continuing over the period up until the 1980's.

Copper was prospected in the area extensively from 1901 to the early 1920's when the copper price dropped. Mining began in earnest in 1906 and peaked around 1917. The Murray's Reward mine (now within ML 1/1976) did not start production until 1910. The Murray's Reward mine is recorded as the largest producer in the Balfour field and along with the Balfour Central continued mining until around 1917, producing a recorded 6,380 tonnes of copper during its operating life. Thereafter, mining in Balfour was sporadic with only two other periods of recorded production being 1929 to 1941 with production of 3.8 tonnes of copper and most recently in 1990 where the lease holder at the time extracted 133 tonnes from a small open pit cut into the top of Murray's Reward (Taheri, J. & Bottrill, R.). The copper recovered was sold to Copper Mines of Tasmania in Queenstown at an average grade of 25% Cu (M. Lann, pers. Comm.).

Prospecting and mining was extensive over an area of approximately 17km in length during its peak in the Balfour field.

#### 1.2.5 Geological Setting

Geologically, the area consists of thick sequences of near vertical sedimentary material of Proterozoic age with minor patches of remnant overlying Tertiary basalt and sediments. Devonian Granite intrusions occur near the coast and are inferred to underlie the sediment package to the west. The area has been subjected to numerous episodes of structural deformation over time giving place to the faults and fractures required for fluid movement. The Tin and Tungsten of the Specimen Hill area was derived from the mineralising fluids generated during the intrusion of the granites. This same episode was the catalyst for the remobilisation and concentration of the copper, seen at surface and mined historically, which is predominately confined to a series of cross cutting faults along the main structural trend. The structural feature which dominates the area is the northwest-southeast trending Balfour thrust fault which has a strike length of approximately 35kms. The Balfour copper trend can be traced along this structure from the Mt Balfour copper mine in the north to the South Mine at the south of the trend at the least, with the potential to extend through to the Toner River and Interview River areas.

## 2 Summary of Previous Work

### 2.1 Previous Mining and Exploration

#### 2.1.1 Copper

Copper was first discovered in the Balfour region in 1901 in Cassiterite Creek whilst exploring for alluvial tin. This discovery point and the ground around eventually became the Murray's Reward

Mine. Since initial discovery copper has been explored for and mined on a small scale up to the late 1940's. The first modern exploration specifically for copper in the area didn't occur until the late 1960's.

ACI Ltd carried out the first concerted effort of modern exploration for copper over a period of six years, from 1968 – 1974 exploring the Balfour copper trend from The Clump (Mt Balfour Mine) in the North to Balfour South workings in the south.

Exploration was continued by a private company, Soloriens Mining Pty Ltd between 1988 -1992.

CRA Exploration Pty Ltd returned to the area for a four year period, 1993 – 1997, this time looking for large scale sedimentary hosted base metal copper deposits where previous exploration efforts had focused on the tin potential just to the west at Specimen Hill.

#### **ACI Ltd – 1968 -1974**

ACI Ltd carried out the most comprehensive exploration program over the entire strike length of the Balfour trend between Mt. Balfour (The Clump) and Balfour South over a period of approximately four and a half years. They began their exploration program in late 1969. By early 1970 they had completed several grids, geological mapping, geochemical sampling as well as an induced polarization survey completed by McPhar Geophysics.

The IP survey indicated several strong anomalies along the strike length. Further detailed work was focused in three main areas being;

- The Clump - 14 lines of IP
- The Blocks - 8 lines of IP
- Murray's Reward/Central Min - 14 lines of IP

At the Clump ACI recognised an anomalous area extending approximately 1,000m along strike and some 20-70m wide. They noted that graphite in the area probably influenced the results with regard to the potential strike and width but did not believe it was sufficient to discourage further work. At the Blocks prospect they found two anomalies, one classified as definite and another they thought probable, approximately 350m minimum in strike length and corresponding with existing historical copper workings.

Definite anomalies were found on all lines over the Murray's Reward/Central Mine prospect with a strike length of approximately 700m and correlating very well with existing historical copper workings, although again they estimate that graphite in the area could be exerting a minor influence (McIntyre, M.H.).

They also suggest that further work is required between the Blocks and the Clump prospects as there were several strong anomalies indicated.

ACI was fortunate enough to be able to access the old workings at the Clump, Murray's and Central and able to sample the underground workings. The results were summarised as;

The Clump Mine – Ore zone up to 20m in width with grades of Cu up to 3.53% and silver up to 22g/t.  
Murray's Reward - graded 7.9% Cu over 1.5m.

Central Mine – up to .27% Cu in the mineralised zone. Geological mapping and sampling of the underground workings indicated the potential to locate mineable grades and tonnes of copper in the area of the historical mines.

Between 1970 and 1973 the company drilled a total of 37 diamond drill holes into eight separate projects along a 17km strike length. Most holes hit the targeted ore zone and intersected copper mineralisation, though sub-economic, encouraging the company to keep exploring for another twelve months. Drilling was difficult particularly in the shallower holes and near to the expected ore zones.

During the period of exploration, it was suggested that the copper was derived from a sedimentary source but this potential source was never pursued and all drilling targeted shallow supergene enriched copper lodes near to existing historical workings. It is doubtful that any drill holes were targeted in the cross-cutting fault zones where the best opportunity for this deposit type could be located or that the drill holes had a close enough spacing to properly test the prospects.

#### **Soloriens Mining Pty Ltd – 1988-1992**

During their first year of operation, Soloriens completed a data review principally of ACI Ltd data for copper and CRA Pty Ltd for tin. They also completed a gravity survey in conjunction with the Tasmanian Government over the area with results assessed by Leaman Geophysics. It was determined that the gravity densities could represent a granite spine near to surface and that known mineralisation could be associated with it. No work was completed during year two and the company was actively seeking a joint venture partner.

During year three the company collected numerous samples including water and plant samples. These were tested and it was noted that the lichens and algae specific to the area had a tendency to concentrate Cu, Ag & Au, though in small amounts. Samples were also collected from the Murray's Reward mine and sent to the CSIRO labs to have an isotope study completed. The intention was to determine the age of the mineralising fluids. The results were inconclusive, however, the CSIRO study suggested it was unlikely that the copper mineralisation was of Devonian origin and more likely Cambrian, possibly Proterozoic in age indicating the copper originated from a deep seated source and was less likely to have been influenced much by the Devonian period.

Year four continued with research by CSIRO and the data now implies a possible Devonian origin for both the tin/tungsten and the copper. The argument being the copper is older Cambrian which has been affected by the later Devonian granitic intrusion leading to the deposition of both copper and tin/tungsten at Balfour. The company proposed a 5<sup>th</sup> year of work but no report exists and it is likely the ground was relinquished.

#### **Rio Tinto Exploration Pty Ltd – 1993-1997**

Rio Tinto (then CRA Exploration Pty Ltd) had explored the area of Specimen Hill for tin from 1977-1983. At that time no exploration for copper was undertaken in the Balfour region. In 1992, CRA applied for and was granted EL18/92. The sole purpose of this move back to north-western Tasmania was to explore for copper in the Balfour area. The company was targeting the potential source of the known and extensive copper mineralisation. They surmised, based on experience and studies of similar copper deposits around the world, that the source of the copper at Balfour was most likely stratiform or stratabound deep seated ore bodies potentially created by replacement of

pyrrhotite, in pyrrhotite rich sediments, with copper (Menpes, S.A.). Early work by CRA indicates that copper mineralisation postdates movement on the Balfour and Roger River faults. During the latter period of exploration CRA postulated a concept with regard to the source of the copper mineralisation as being multiple large bodies down dip of the Balfour fault which was given to have a near vertical dip slightly to the south west. CRA recognised the numerous east-west cross cutting faults and their relationship with the existing higher grade workings. They came up with the model exhibited in Figure 3.

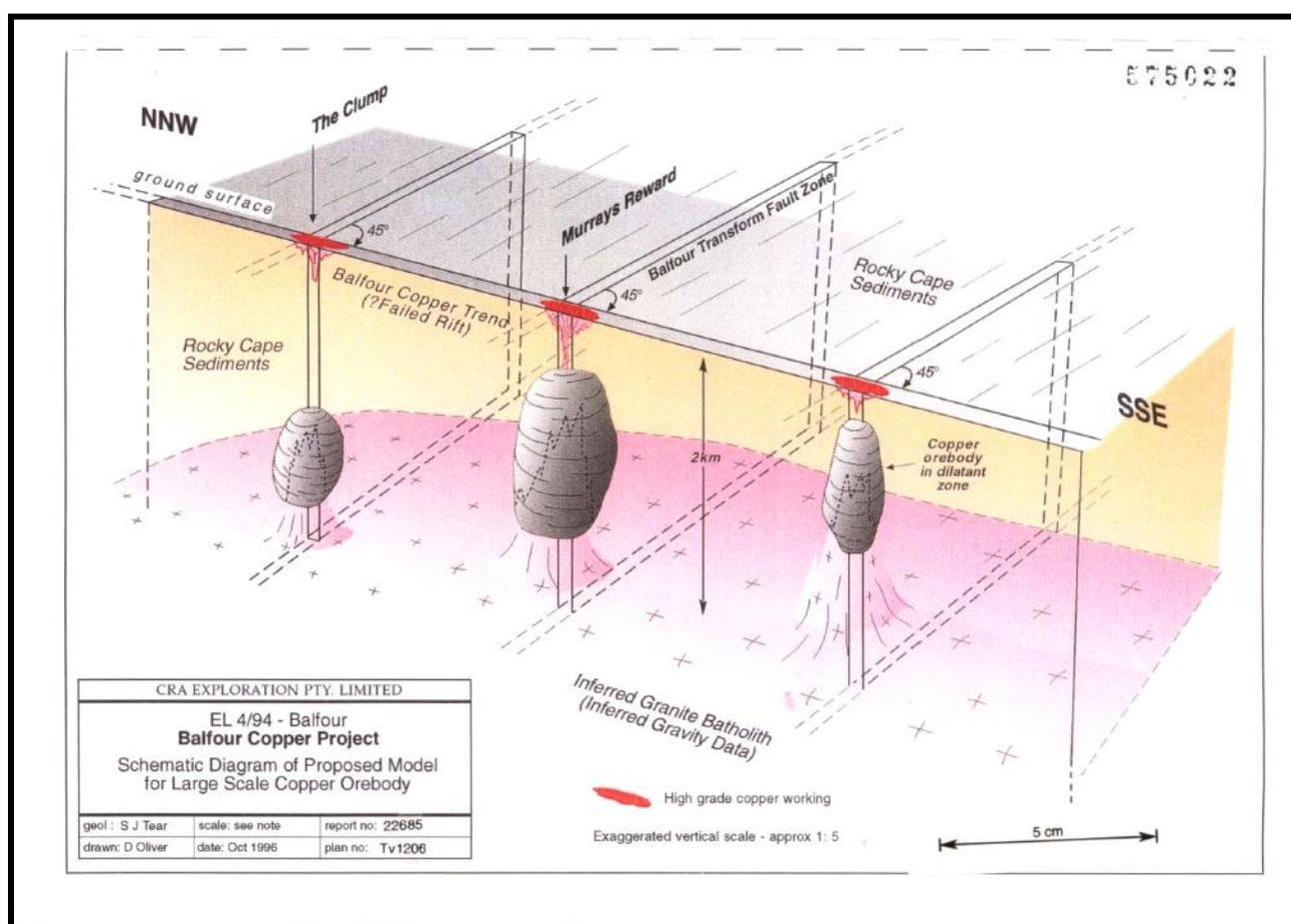


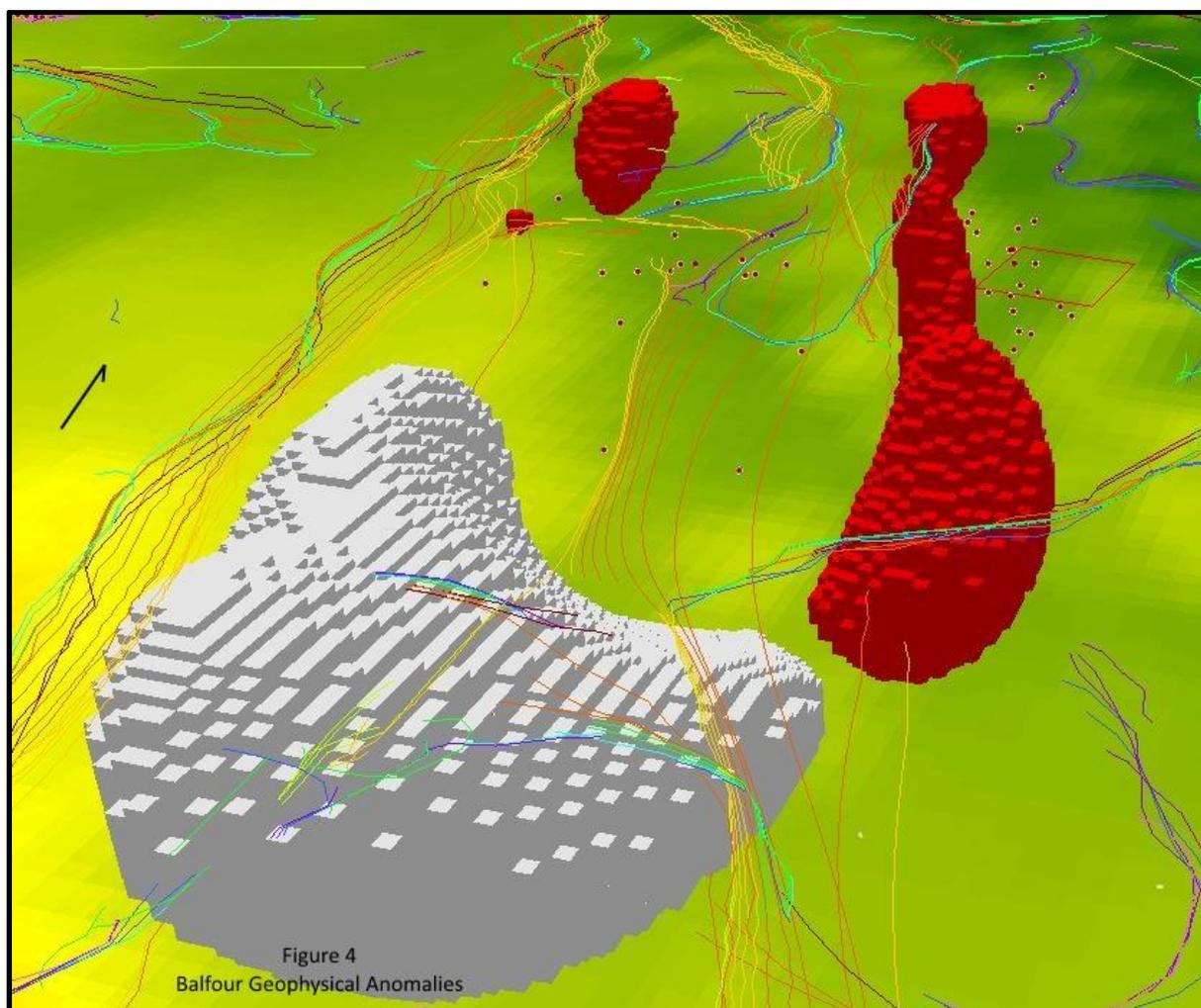
Figure 3: CRA Proposed Model of Copper ore body

CRA planned and drilled diamond drill hole DD97BC10 to test the theory of the deep seated ore bodies. The hole was planned to a depth of 500m. However, the hole was only drilled to 82.1m due to hydraulic lock of the drill rods forcing abandonment of the hole. A new drill hole, DD97BC11 was planned some 90m to the north east as a second attempt to intercept the gravity anomaly. This hole was completed at a depth of 464.5m. CRA determined that they had intersected the gravity anomaly at approximately 400m but noted the core was no different than anywhere else in the hole. They also noted that they had gone through a mineralised zone at 146.6m that was remarkably similar to the main Murray's Reward ore zone. The gravity anomaly which had been drilled, they believed to be east of the main mineralised zone on the Balfour trend. CRA failed to locate a substantial ore body and relinquished the tenements. It is worth noting that at this time CRA Exploration was disbanded and Rio Tinto discontinued exploration worldwide.

### Zeb's Minerals Pty Ltd – 2014-2015

Since acquiring the tenements Zeb's has focused on data research and acquisition. The company also spent time on the ground, re-locating old workings and making determinations on how best to progress the project.

It was determined that reassessment of the geophysical data available would provide the most relevant information with respect to the location of any deep seated target and GHD were contracted as consultants, to assess and report on the existing geophysical data. After the review of existing data by GHD it was determined that there was sufficient usable data available and that re-interpretation of the data and re-running of the data with current more powerful software was warranted. Zeb's proceeded to have GHD undertake the re-interpretation which was completed in three stages and reported in the 2014 annual technical report.



Upon completion of the studies, GHD was able to supply the company with a model of the likely targets (shown in figure 4 above). The model indicates several large potentially anomalous areas requiring follow up work and the structural complexities associated with the anomalies.

A 16 hole diamond drill program was planned to test the geophysical anomalies at depth and submitted to MRT for approval. The company made the decision to commence drilling the anomaly which showed the most potential closest to the existing mining lease. The company also applied for a further four tenements covering the entire strike length of the Balfour trend to explore for base

and precious metals as well as assess the graphite and quartzite potentials in the area. Graphite has been documented in areas, however, its extent and quality are yet to be assessed. Massive quartzite exists throughout the current licence and along strike in the newly applied for ground and the company expects to test the extent and quality with a view to commercialising the deposit if possible. These will take a secondary priority to the base metals but will be included within the exploration program to reduce costs and redundancies in exploration.

### 3. Current Exploration, 2015 – 2016

#### 3.1 Geology

The area of immediate interest as indicated by the re-interpreted geophysics appears to be within the Emmett's creek shale of the Balfour subgroup. The shale appears near vertical at the location of the first drill hole, 15BA001DD.

Diamond drill hole 15BA001DD was commenced on the 28<sup>th</sup> August 2015 and completed in October 2015 at a depth of 863.4m. The drill hole was completed without issue. This drill hole was the first to be drilled of a planned sixteen hole program approved by MRT. Proposed locations (appendix 1) are indicative of the expected locations of the various anomalies. The location of this hole was chosen based on the Geophysical targets generated by consultants GHD and discussion centring on which hole would have the best chance of producing results with the minimal drill depth. It appeared this location would give the shallowest intercept depth to the target at the centre of one of the largest anomalous zones.

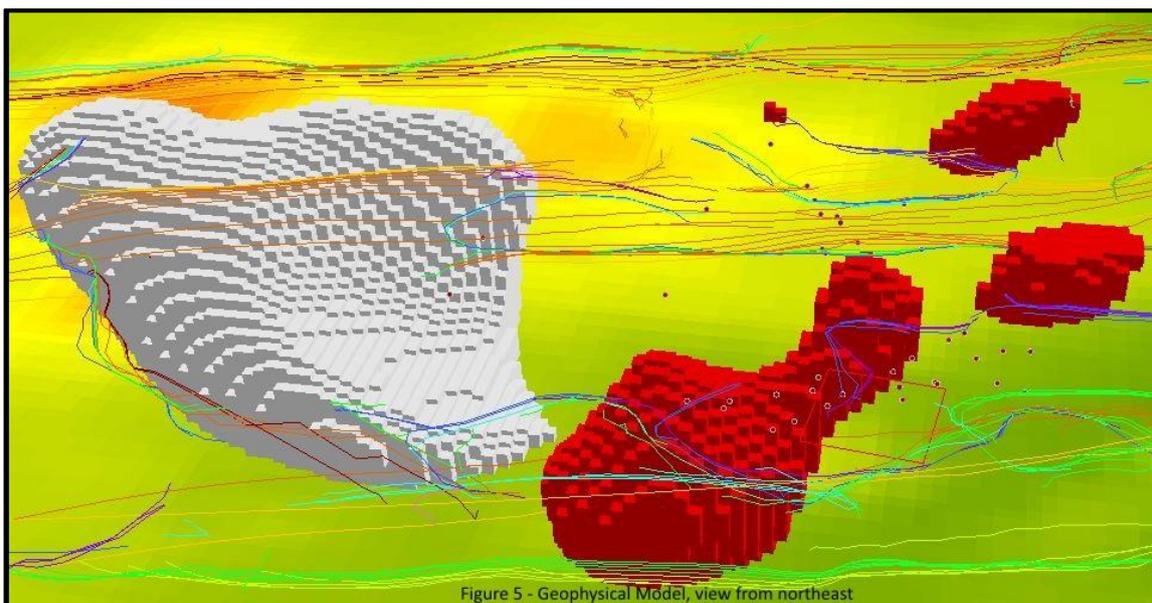
The hole was collared in a gray/green shale dipping steeply to the northwest. The hole was completed for 863.4m in the same sedimentary horizon. The ground proved to be competent and created little problems for the drill crew. The hole was commenced in PQ and drilled to 96.0m before changing over to HQ and then changing to NQ at 602.0m to end of hole. Minor deposits of various sulphides were found generally along small fracture zones and quartz veining either cross cutting or more often sub-parallel to the bedding.

Increasing sulphide, Pyrite primarily, continued with depth. A small massive zone was encountered at 461m in altered sheared sediment with visible chalcopyrite, galena and sphalerite. Analysis of the zone indicated average anomalous values in, copper - 313ppm over 4m, lead – 334ppm over 9m and zinc – 110ppm over 6m.

Reconnaissance work was also carried out near the South Mine at the southern end of the tenement. Significant fires during the summer months have affected the area enabling better access and visibility. More workings were located than the company had previously been aware of. Further work is planned for this area in the future.

#### 3.2 Geophysics

The geophysical modelling demonstrates the continuity of structures associated with the anomalies near to the historical Murrays Reward mine. The model shows several distinct anomalous zones near to and along strike from each other. The zones appear to shallow to the north and to the southwest in the southern most anomaly as can be seen in figure 5.



Diamond drill hole 15BA001DD appears to have intersected the geophysical anomaly. Current interpretation is that the drill hole has intersected the anomaly on its outer periphery. Based on that assessment the current drill program was suspended pending a downhole EM survey being completed. Geophysical contractors were contacted to ascertain costs and timing. Upon consideration it was decided that the company would pursue purchase of the latest technology in geophysical equipment and undertake training of employed personal to complete the survey, as it was expected that every hole drilled would require a survey completed and there was currently no skilled team or the equipment available in Tasmania, requiring cost prohibitive mobilisation of equipment and manpower from the mainland each and every time.

The company has ordered the equipment and expects delivery in late July or early August 2016.

#### 4 Discussion

Completion of the first drill hole has indicated that the drill hole intersected the geophysical anomaly which shows up locally as disseminated pyrite within beds and along bedding planes of the Emmett's creek shale. It is likely that this is the result of remobilised metals in solution due to the proximity of the granite intrusions. This likely accounts for the numerous high grade copper deposits along the entire strike length of the Balfour zone. It would appear that current geophysical anomalies have outlined the disseminated zone of mineralisation. Other sulphide mineralisation appears to be associated with crosscutting quartz filled fractures particularly in the upper portion of the hole. These crosscutting faults and fractures are likely the location and cause of the higher grade zones reflected in the various surface deposits and mines.

The current concept is that the drill hole intersection has occurred along strike from the primary source. It is now suspected that the source of mineralisation lies further to the south and perhaps west. The company has ordered new downhole equipment which it expects to take delivery of in July or August. Once received it is proposed to complete a downhole EM survey of the existing drill hole in an attempt to locate the main body. Once the downhole EM program is completed it is likely that the second drill hole will be relocated and drilling re-commenced.

## 5 Environment

Environmental disturbance on EL 10/2014 and ML 1/1976 during the company's tenure to date has been minor. All travel has been either on foot or restricted to existing tracks within the tenement areas except for the drilling program itself. All vehicular access was restricted to existing tracks. A track mounted drill rig and support unit were employed as an experiment. It was decided not to construct a track to the drill site but rather to pick a suitable route to walk the rig in. This was done with minimal disturbance except for clearance of bush and scrub immediately around the work space at the rig for safety. The original plan called for one route in and out. However, it was soon discovered that the practicalities of this was unworkable as turning of the support vehicle created more damage than planning another route out, creating a circular access reducing the damage to the area. Although the area exhibited more damage than planned once the program was completed it is expected that recovery of the natural environment will be relatively quick and possibly will not require any other rehabilitation work. This will be closely monitored over the next 12 to 18 months.

## 6 Recommendations

- Complete downhole EM survey of diamond drill hole 15BA001DD.
- Re-assess current drill plan once armed with interpreted data from the current EM survey.
- Continue drill program with the view to completing a downhole EM survey on each hole.
- Re-assess geophysical data and interpretation with aid of new data.

## 7 Expenditure

EL10/2014 Expenditure for the four quarters for 2015/2016 is presented below.

Table 1: Expenditure for 4 quarters

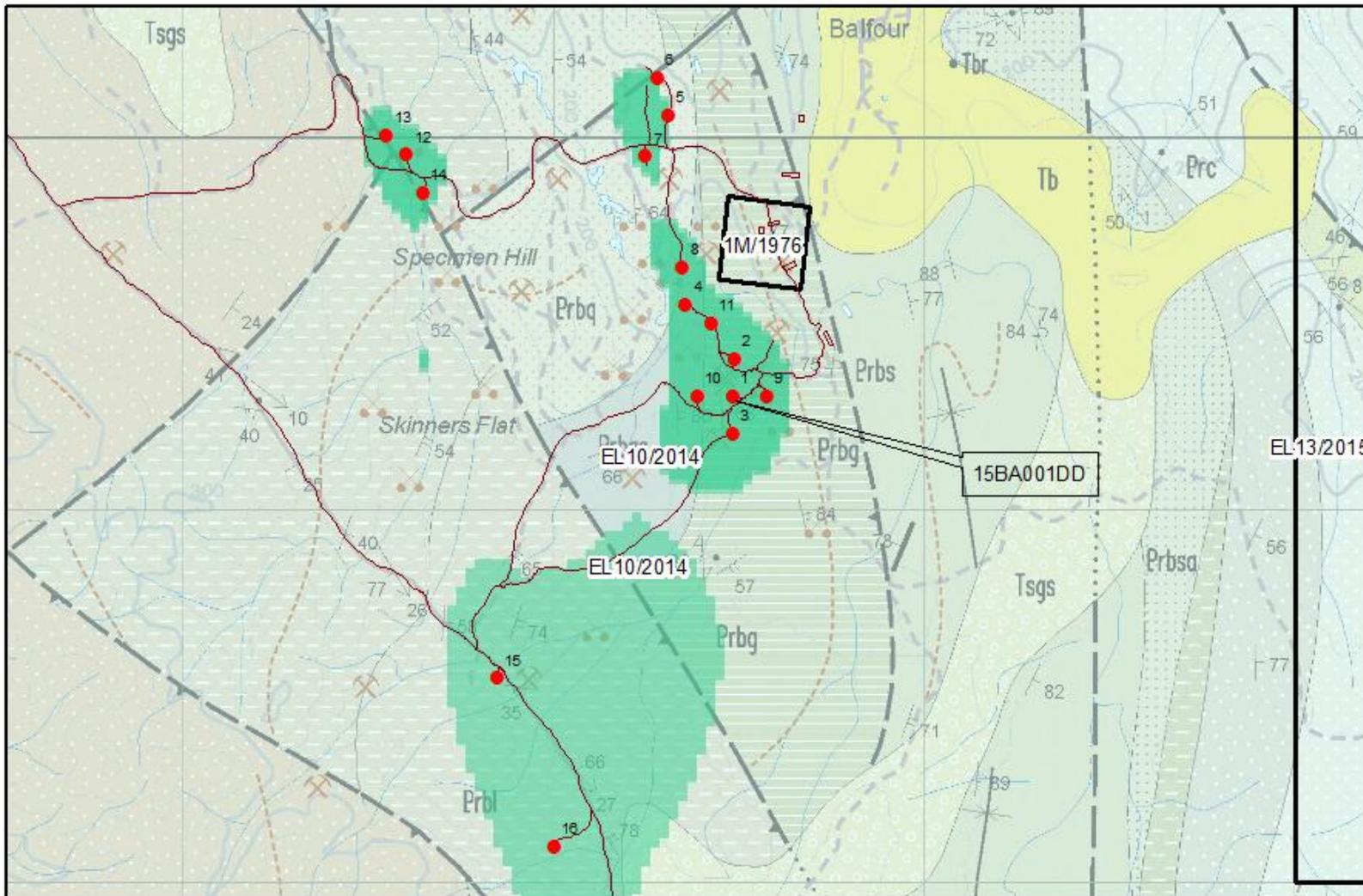
2015	Q3	\$ 177,000.00
	Q4	\$ 28,000.00
2016	Q1	\$ 12,400.00
	Q2	\$ 12,365.00
Total		\$ 229,765.00

## 8 References

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## Appendix 1

### Balfour Proposed Drill Hole Location Plan



- Legend
- Proposed\_drill\_holes
  - Track\_file
  - ▭ LicenceCategory1
  - ▭ Mining Lease (1M/1976)
  - Value
  - High : 198.75
  - Low : -326.25

**Balfour Project Area  
Proposed drill hole Plan  
Geophysical anomaly outline  
Geology 1:25:000**



Coordinate System: GDA 1994 MGA Zone 55  
Central Meridian: 147°0'0"E

## Appendix 2

### Drill Hole Log



## Downhole Surveys

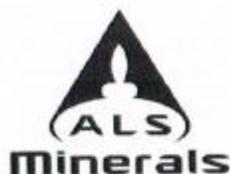
Depth	Azimuth	Dip	Azimuth tool
0	90	-85	Downhole Camera
50	89.5	-83	Downhole Camera
80	85.5	-85	Downhole Camera
110	86.5	-85.5	Downhole Camera
140	69.5	-86	Downhole Camera
170	56.5	-86	Downhole Camera
200	47.5	-86	Downhole Camera
230	39	-86	Downhole Camera
260	32	-86	Downhole Camera
300	30	-85.5	Downhole Camera
340	27	-85.1	Downhole Camera
370	31	-85	Downhole Camera
400	31	-85	Downhole Camera
430	27	-85	Downhole Camera
470	31	-85	Downhole Camera
500	36	-84.8	Downhole Camera
530	30	-84.8	Downhole Camera
560	25	-84.3	Downhole Camera
590	29	-84	Downhole Camera
655	32	-83	Downhole Camera
685	29	-81	Downhole Camera
715	29	-80.5	Downhole Camera
760	35	-80	Downhole Camera
790	49	-78.5	Downhole Camera
820	35	-78	Downhole Camera
850	39	-77	Downhole Camera
861	EOH		

## Downhole Surveys

Depth	Azimuth	Dip	Sum.Inc.	North.	East.	Elev.	G.Tf.	G.Vec.	C.Dir.	Bat.	Temp.	Azimuth tool
0	90	-84.99	-84.99	0	0	0	104.12	9.8	230.6	8.3	14.4	Devi-flex
3	88.31	-84.9	-85.11	0	0.26	-2.99	114.72	9.8	182.31	8.3	14.4	Devi-flex
6	88.25	-85.11	-85.23	0.01	0.53	-5.98	324.96	9.8	51.97	8.3	14.8	Devi-flex
9	90.82	-85.03	-85.05	0.01	0.78	-8.97	327.22	9.8	71.28	8.3	14.8	Devi-flex
12	92.22	-84.82	-85.01	0.01	1.05	-11.95	234.38	9.8	351.37	8.3	14.8	Devi-flex
15	92.07	-85.11	-84.92	0	1.31	-14.94	82.79	9.8	202.63	8.3	14.8	Devi-flex
18	91.46	-85.22	-85.04	-0.01	1.56	-17.93	48.67	9.8	51.72	8.3	14.8	Devi-flex
21	92.36	-85.12	-84.98	-0.02	1.82	-20.92	53.7	9.8	159.66	8.3	14.8	Devi-flex
24	94.42	-84.94	-85.4	-0.03	2.08	-23.91	176.36	9.8	116.81	8.3	14.8	Devi-flex
27	95.9	-85.11	-85.47	-0.06	2.34	-26.9	108.31	9.8	183.31	8.3	15.1	Devi-flex
30	95.77	-85.21	-85.66	-0.08	2.59	-29.89	318.29	9.8	77.88	8.3	15.3	Devi-flex
33	100.17	-84.97	-85.58	-0.12	2.84	-32.88	237.15	9.8	263.8	8.3	15.3	Devi-flex
36	97.4	-85.31	-85.6	-0.16	3.09	-35.87	36.67	9.8	167.69	8.3	15.3	Devi-flex
39	97.85	-85.08	-85.76	-0.19	3.34	-38.86	248.46	9.8	307.54	8.3	15.3	Devi-flex
42	96.77	-85.2	-85.69	-0.22	3.59	-41.84	155.36	9.8	237.51	8.3	15.6	Devi-flex
45	95.24	-85.51	-85.77	-0.25	3.83	-44.83	70.7	9.8	227.33	8.3	15.8	Devi-flex
48	94.97	-85.47	-85.79	-0.27	4.07	-47.83	324.6	9.8	25.24	8.3	15.8	Devi-flex
51	95.87	-85.18	-85.63	-0.29	4.31	-50.82	218.55	9.8	332.14	8.3	15.8	Devi-flex
54	95.14	-85.17	-85.51	-0.32	4.56	-53.8	197.28	9.81	275.33	8.3	15.8	Devi-flex
57	93.27	-85.3	-85.5	-0.34	4.81	-56.79	135.82	9.8	193.74	8.3	15.8	Devi-flex
60	92.86	-85.57	-85.63	-0.35	5.05	-59.79	21.87	9.8	126.28	8.3	15.8	Devi-flex
63	95.04	-85.39	-85.75	-0.37	5.29	-62.78	288.49	9.8	69.18	8.3	16	Devi-flex
66	95.93	-85.51	-85.72	-0.39	5.52	-65.77	109.55	9.8	201.45	8.3	16.3	Devi-flex
69	94.51	-85.75	-85.98	-0.41	5.75	-68.76	21.22	9.8	146.55	8.3	16.3	Devi-flex
72	95.03	-85.61	-86.04	-0.43	5.98	-71.75	310.41	9.8	34.61	8.3	16.3	Devi-flex
75	95.75	-85.43	-85.96	-0.45	6.21	-74.74	182.51	9.8	301.2	8.3	16.3	Devi-flex
78	93.75	-85.72	-85.86	-0.47	6.44	-77.73	73.97	9.8	202.79	8.3	16.3	Devi-flex
81	93.04	-85.56	-85.98	-0.48	6.67	-80.72	276.95	9.8	321.19	8.3	16.3	Devi-flex
84	91.67	-85.56	-85.84	-0.49	6.9	-83.71	217.07	9.81	289.29	8.3	16.3	Devi-flex
87	88.97	-85.94	-85.77	-0.49	7.12	-86.7	79	9.8	159.45	8.3	16.5	Devi-flex
90	89.47	-85.97	-85.86	-0.49	7.33	-89.7	324.91	9.8	64.09	8.3	16.7	Devi-flex
93	92.41	-85.79	-85.75	-0.49	7.55	-92.69	172.89	9.81	193.23	8.3	16.7	Devi-flex
96	92.3	-86.01	-85.79	-0.5	7.76	-95.68	290.32	9.8	349.15	8.3	16.7	Devi-flex
99	91.77	-85.89	-85.58	-0.51	7.97	-98.67	175.1	9.8	292.16	8.3	16.7	Devi-flex
102	88.25	-86.23	-85.47	-0.51	8.18	-101.67	39.72	9.8	7.94	8.3	16.7	Devi-flex
105	88.42	-85.91	-85.39	-0.51	8.39	-104.66	232.41	9.8	298.73	8.3	16.7	Devi-flex
108	85.06	-86	-85.25	-0.49	8.6	-107.65	135.93	9.8	251.28	8.3	17.2	Devi-flex
111	82.69	-86.15	-85.3	-0.47	8.8	-110.65	350.12	9.8	330.52	8.3	17.2	Devi-flex
114	82.27	-85.89	-85.25	-0.44	9.01	-113.64	216.94	9.81	330.59	8.3	17.2	Devi-flex
117	80.27	-86.18	-84.98	-0.41	9.21	-116.63	76.17	9.8	78.25	8.3	17.2	Devi-flex
120	80.64	-86.07	-84.97	-0.38	9.41	-119.62	317.3	9.8	91.61	8.3	17.2	Devi-flex

## Appendix 3

### Sample Analysis Results



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### CERTIFICATE BU15170150

Project: Zebs Balfour  
P.O. No.: ZD002  
This report is for 21 Drill Core samples submitted to our lab in Burnie, TAS, Australia  
on 5-NOV-2015.

The following have access to data associated with this certificate:

ZEBB GEOLOGY  
GEOFF SOMMERS

LOTTAH LABWORK

ANDREW RAE

To: LOTTAH MINING PTY LTD  
ATTN: GEOFF SOMMERS  
17 MARINE TERRACE  
BURNIE TAS 7320

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as  
submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

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### SAMPLE PREPARATION

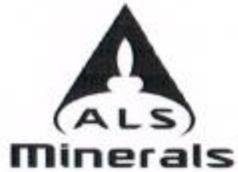
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LEV-01	Waste Disposal Levy
CRU-21	Crush entire sample >70% -6 mm
PUL-31b	Pulv. Lg split to >80% -75um
PUL-QC	Pulverizing QC Test

### ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
W-XRF05	Trace Level W XRF Analysis	XRF
Sn-XRF05	Sn-Trace Level XRF Analysis	XRF
ME-0G62	Ore Grade Elements - Four Acid	ICP-AES

Signature:

Shaun Kenny, Brisbane Laboratory Manager



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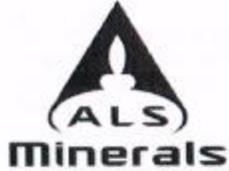
Project: Zebs Balfour

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**CERTIFICATE OF ANALYSIS BU15170150**

Sample Description	Method Analyte Units LOR	W-XRF05	WEI-21	PUL-CC	Sn-XRF05	ME-OG62	ME-OG62	ME-OG62	ME-OG62
		W ppm	Recvd Wt. kg	Pass75um %	Sn ppm	Cu %	Pb %	Ag ppm	Zn %
308561		170	3.33		1990	0.095	0.006	4	0.020
308562		1030	3.59		866	0.007	0.002	1	0.008
308563		110	3.12		350	0.006	0.002	1	0.009
308564		10	3.75		52	0.005	0.001	<1	0.009
308565		10	4.61		54	0.002	<0.001	<1	0.009
308566		20	2.66		216	0.014	0.001	<1	0.012
308567		10	3.98		<5	0.001	<0.001	<1	0.009
308568		20	3.16		792	0.044	0.005	2	0.162
308569		10	3.77		42	0.005	0.002	<1	0.010
308570		10	4.01		33	0.004	<0.001	1	0.009
308571		10	3.64		573	0.016	0.002	<1	0.123
308572		20	3.65		181	0.010	0.003	<1	0.009
308573		50	4.30		540	0.039	0.004	3	0.049
308574		<10	2.52		13	0.001	0.054	<1	0.124
308575		20	1.87		79	0.016	0.016	2	0.092
308576		10	4.12		5	0.002	0.002	2	0.013
308577		10	3.23		91	0.004	0.004	<1	0.023
308578		<10	3.64		<5	0.001	0.011	<1	0.005
308579		10	3.40		<5	<0.001	0.002	<1	0.005
308580		10	2.50	98.2	<5	<0.001	0.002	<1	0.005
308581		<10	3.80		<5	0.001	0.002	<1	0.006

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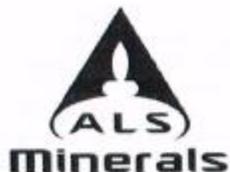
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Project: Zebs Balfour

**CERTIFICATE OF ANALYSIS BU15173846**

Sample Description	Method Analyte Units LOR	WJ-21	PUL-QC	ME-ICP61a												
		Recvd Wt. kg	Pass/Sum %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
308582		3.56		<1	9.10	<50	520	<10	<20	0.05	<10	20	90	30	4.53	<50
308583		4.21		<1	9.40	<50	570	<10	20	0.07	<10	10	90	20	3.85	<50
308584		3.79		1	8.17	80	460	<10	<20	0.06	<10	130	90	10	3.90	<50
308585		3.13		<1	7.99	<50	490	<10	<20	0.05	<10	10	70	10	3.22	<50
308586		3.42		1	7.91	<50	420	<10	<20	0.06	<10	20	70	10	3.71	<50
308587		4.48		<1	8.26	<50	410	<10	<20	<0.05	<10	10	70	20	4.98	<50
308588		4.15		<1	8.00	<50	420	<10	<20	0.22	<10	10	70	10	4.10	<50
308589		2.43		<1	8.91	<50	480	<10	<20	<0.05	<10	10	60	10	3.99	<50
308590		1.69		1	8.96	<50	490	<10	<20	<0.05	<10	10	60	10	3.89	<50
308591		4.75		<1	9.40	<50	480	<10	<20	<0.05	<10	<10	60	<10	5.01	<50
308592		4.43		<1	8.68	50	430	<10	<20	0.31	<10	10	60	30	5.89	<50
308593		3.50		<1	9.35	<50	480	<10	<20	0.13	<10	10	70	30	5.43	<50
308594		2.38		<1	8.91	<50	480	10	20	0.08	<10	10	60	30	4.11	<50
308595		3.21		1	7.90	<50	470	<10	20	0.05	<10	10	60	20	3.80	<50
308596		3.43		<1	8.05	<50	490	<10	<20	0.05	<10	10	60	20	3.70	<50
308597		4.38		<1	8.98	<50	460	<10	20	0.06	<10	10	70	30	4.70	<50
308598		3.95		<1	8.18	50	440	<10	<20	0.53	<10	<10	60	30	5.21	<50
308599		3.80		<1	7.99	<50	450	<10	<20	0.15	<10	10	70	10	3.89	<50
308600		3.45		<1	7.38	50	380	<10	<20	0.34	<10	10	60	20	4.64	<50
308601		3.87	95.8	<1	7.94	<50	440	<10	<20	0.13	<10	10	70	10	4.01	<50
308602		3.43		<1	8.03	<50	470	<10	<20	0.32	<10	10	60	10	3.76	<50
308603		3.78		<1	7.44	<50	450	<10	<20	0.41	<10	10	60	10	3.98	<50
308604		1.91		<1	8.08	<50	480	<10	<20	0.30	<10	10	60	10	4.21	<50
308605		2.09		<1	8.34	<50	500	<10	<20	0.34	<10	10	60	10	3.94	<50
308606		4.09		<1	8.51	<50	460	<10	<20	0.29	<10	10	60	10	4.44	<50
308607		4.52		<1	7.75	<50	380	<10	<20	0.06	<10	10	60	20	4.57	<50
308608		3.02		<1	8.19	<50	430	<10	<20	0.08	<10	10	60	20	4.74	<50
308609		4.15		<1	8.36	<50	450	<10	<20	<0.05	<10	10	50	20	4.15	<50

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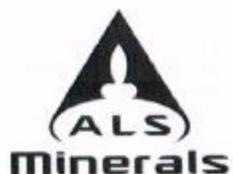
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 Account: LOTTAH

Project: Zebs Balfour

**CERTIFICATE OF ANALYSIS BU15173846**

Sample Description	Method Analyte Units LOR	ME-ICP61a														
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
308582		3.7	60	0.70	340	<10	0.16	30	210	40	0.09	<50	10	20	<50	0.28
308583		4.1	50	0.62	300	<10	0.19	40	250	20	0.07	<50	10	20	<50	0.38
308584		3.0	<50	0.65	340	<10	0.28	50	190	170	0.08	<50	10	10	<50	0.35
308585		3.5	50	0.60	350	<10	0.13	20	140	20	<0.05	<50	10	10	<50	0.31
308586		2.6	<50	0.69	440	<10	0.11	20	290	200	0.22	<50	10	20	<50	0.27
308587		2.8	50	0.91	440	<10	0.10	40	170	<20	0.10	<50	10	10	<50	0.25
308588		2.8	50	0.85	420	<10	0.11	30	140	20	0.22	<50	10	10	<50	0.27
308589		2.9	50	0.91	340	<10	0.12	30	120	30	0.13	<50	10	10	<50	0.30
308590		3.2	50	0.90	320	<10	0.12	20	90	<20	0.08	<50	10	20	<50	0.30
308591		3.2	60	1.13	460	<10	0.11	30	170	30	0.06	<50	10	10	<50	0.37
308592		2.7	50	1.24	1580	<10	0.10	20	430	140	0.42	<50	10	10	<50	0.29
308593		3.4	<50	1.13	1310	<10	0.11	20	150	30	0.40	60	20	10	<50	0.29
308594		3.2	<50	0.85	920	<10	0.11	20	170	40	0.41	<50	10	<10	<50	0.30
308595		3.2	<50	0.63	420	<10	0.11	20	150	160	0.44	<50	10	10	<50	0.35
308596		3.7	<50	0.61	380	<10	0.12	20	170	40	0.60	<50	10	<10	<50	0.36
308597		3.0	50	0.82	420	<10	0.13	30	200	20	0.16	<50	10	10	<50	0.29
308598		3.0	<50	0.90	690	<10	0.11	20	450	20	0.32	<50	10	10	<50	0.29
308599		3.0	<50	0.68	430	<10	0.12	30	210	30	0.11	<50	10	20	<50	0.29
308600		2.8	50	0.75	500	<10	0.19	20	160	20	0.29	<50	10	20	<50	0.25
308601		2.7	<50	0.70	340	<10	0.11	30	190	20	0.13	<50	10	10	<50	0.29
308602		3.3	<50	0.66	350	<10	0.24	20	190	30	0.26	<50	10	20	<50	0.27
308603		3.3	<50	0.69	380	<10	0.29	20	240	20	0.33	<50	10	30	<50	0.27
308604		3.3	50	0.71	380	<10	0.29	30	190	30	0.39	<50	10	30	<50	0.32
308605		3.5	<50	0.71	350	<10	0.30	20	200	40	0.15	<50	10	20	<50	0.30
308606		3.3	50	0.79	490	<10	0.25	30	170	20	0.09	<50	10	20	<50	0.31
308607		1.7	<50	0.90	490	<10	0.10	20	240	160	0.41	<50	10	10	<50	0.25
308608		2.9	<50	0.82	460	<10	0.12	30	320	200	0.44	<50	10	20	<50	0.27
308609		3.1	<50	0.77	270	<10	0.15	20	180	<20	0.33	<50	10	20	<50	0.28

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Project: Zebs Balfour

CERTIFICATE OF ANALYSIS BU15173846

Sample Description	Method Analyte Units LOR	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a
		Tl ppm 50	U ppm 50	V ppm 10	W ppm 50	Zn ppm 20
308582		<50	<50	90	<50	60
308583		<50	<50	100	<50	60
308584		<50	<50	80	<50	50
308585		<50	<50	80	<50	50
308586		<50	<50	80	<50	50
308587		<50	<50	70	<50	60
308588		<50	<50	70	<50	50
308589		<50	<50	80	<50	50
308590		<50	<50	80	<50	40
308591		<50	<50	90	<50	60
308592		<50	<50	80	<50	200
308593		<50	<50	90	<50	100
308594		<50	<50	90	<50	70
308595		<50	<50	80	<50	100
308596		<50	<50	90	<50	50
308597		<50	<50	80	<50	50
308598		<50	<50	80	<50	60
308599		<50	<50	80	<50	40
308600		<50	<50	70	<50	50
308601		<50	<50	80	<50	40
308602		<50	<50	80	<50	40
308603		<50	<50	80	<50	50
308604		<50	<50	90	<50	50
308605		<50	<50	90	<50	50
308606		<50	<50	80	<50	60
308607		<50	<50	70	<50	70
308608		<50	<50	80	<50	110
308609		<50	<50	70	<50	60

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**CERTIFICATE BU16004093**

Project: Zebs Balfour  
P.O. No.: ZD004  
This report is for 53 Drill Core samples submitted to our lab in Burnie, TAS, Australia on 11-JAN-2016.

The following have access to data associated with this certificate:

ZEBB GEOLOGY  
GEOFF SOMMERS

LOTTAH LABWORK

ANDREW RAE

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LEV-01	Waste Disposal Levy
CRU-21	Crush entire sample >70% -6 mm
PUL-31b	Pulv. Lg split to >80% -75um
PUL-QC	Pulverizing QC Test

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61a	High Grade Four Acid ICP-AES	ICP-AES

To: LOTTAH MINING PTY LTD  
ATTN: GEOFF SOMMERS  
17 MARINE TERRACE  
BURNIE TAS 7320

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:

Shaun Kenny, Brisbane Laboratory Manager



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Project: Zebs Balfour

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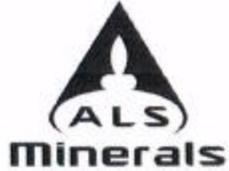
Finalized Date: 25-JAN-2016

Account: LOTTAH

**CERTIFICATE OF ANALYSIS BU16004093**

Sample Description	Method Analyte Units LOR	WEI-21 Recod Wt. kg 0.02	PUL-QC Pass75um % 0.01	ME-ICP61a Ag ppm 1	ME-ICP61a Al % 0.05	ME-ICP61a As ppm 50	ME-ICP61a Ba ppm 50	ME-ICP61a Be ppm 10	ME-ICP61a Bi ppm 20	ME-ICP61a Ca % 0.05	ME-ICP61a Cd ppm 10	ME-ICP61a Co ppm 10	ME-ICP61a Cr ppm 10	ME-ICP61a Cu ppm 10	ME-ICP61a Fe % 0.05	ME-ICP61a Ga ppm 50
308610		4.17		<1	5.72	<50	380	<10	<20	<0.05	<10	10	50	20	3.57	<50
308611		3.89		<1	5.42	<50	350	<10	<20	0.51	<10	10	50	30	3.97	<50
308612		3.73		<1	4.69	<50	300	<10	<20	<0.05	<10	10	40	20	3.59	<50
308613		4.16		1	4.24	<50	230	<10	<20	1.04	<10	10	30	10	2.15	<50
308614		3.60		1	3.70	<50	380	<10	<20	<0.05	<10	<10	40	20	2.72	<50
308615		4.49		1	3.17	<50	320	<10	<20	0.05	<10	<10	50	20	2.35	<50
308616		3.42		1	3.95	<50	300	<10	<20	<0.05	<10	10	40	10	3.14	<50
308617		3.72		<1	3.56	<50	240	<10	<20	0.05	<10	<10	40	20	3.11	<50
308618		3.70		<1	4.15	<50	340	<10	<20	0.05	<10	10	40	10	3.16	<50
308619		1.72	92.8	<1	5.66	<50	370	<10	<20	<0.05	<10	10	50	10	3.52	<50
308620		2.19		1	4.71	<50	380	<10	<20	<0.05	<10	10	50	10	3.09	<50
308621		3.04		1	5.15	<50	290	<10	<20	0.05	<10	10	40	10	3.67	<50
308622		2.87		<1	4.04	<50	290	<10	<20	0.05	<10	<10	50	30	2.93	<50
308623		2.82		1	4.26	<50	340	<10	<20	0.08	<10	10	40	10	3.11	<50
308624		2.12		1	4.45	<50	290	<10	<20	0.08	<10	10	30	10	4.75	<50
308625		2.00		<1	4.86	<50	320	<10	<20	<0.05	<10	10	30	<10	4.49	<50
308626		2.54		2	4.32	80	220	<10	<20	<0.05	<10	10	30	120	5.49	<50
308627		3.91		3	5.83	<50	300	10	<20	2.36	<10	10	30	740	12.65	<50
308628		3.52		1	5.77	<50	410	<10	<20	<0.05	<10	10	50	20	3.91	<50
308629		3.56		2	5.18	120	160	10	<20	0.30	<10	10	40	370	10.50	<50
308630		3.07		<1	5.65	<50	430	<10	<20	0.05	<10	10	50	10	3.96	<50
308631		3.09		1	5.00	<50	470	<10	<20	0.05	<10	20	60	<10	2.99	<50
308632		2.84		1	4.47	<50	510	<10	<20	<0.05	<10	10	60	<10	2.48	<50
308633		3.25		<1	4.31	<50	510	<10	<20	<0.05	<10	10	50	<10	2.16	<50
308634		2.39		<1	5.17	<50	490	<10	<20	<0.05	<10	10	50	<10	2.57	<50
308635		1.60		<1	4.86	<50	470	<10	<20	0.05	<10	20	50	20	2.92	<50
308636		2.85		1	4.49	<50	470	<10	<20	<0.05	<10	10	50	40	2.76	<50
308637		3.76		1	4.49	<50	500	<10	<20	<0.05	<10	10	50	20	2.54	<50
308638		3.13		<1	4.50	<50	440	<10	<20	<0.05	<10	10	40	40	2.83	<50
308639		3.08		<1	4.40	<50	460	<10	<20	<0.05	<10	10	40	10	2.15	<50
308640		3.16		1	5.01	<50	490	<10	<20	<0.05	<10	10	60	10	2.23	<50
308641		4.11		<1	5.45	<50	450	<10	<20	<0.05	<10	10	50	10	2.83	<50
308642		3.94		<1	5.25	<50	390	<10	<20	0.06	<10	10	40	10	3.39	<50
308643		3.06		<1	5.66	<50	460	<10	<20	0.08	<10	10	50	20	3.51	<50
308644		3.91		<1	5.53	<50	500	<10	<20	<0.05	<10	10	60	10	3.31	<50
308645		3.48		1	4.45	<50	360	<10	<20	0.29	<10	10	40	10	3.29	<50
308646		3.26		<1	5.56	<50	410	<10	<20	0.80	<10	20	50	40	3.73	<50
308647		3.40		<1	5.56	<50	390	<10	<20	0.38	<10	10	50	10	4.09	<50
308648		3.79		<1	5.17	<50	520	<10	<20	0.24	<10	20	50	<10	3.02	<50
308649		2.55		1	6.37	<50	440	<10	<20	0.97	<10	20	50	<10	3.83	<50

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 Finalized Date: 25-JAN-2016  
 Account: LOTTAH

Project: Zebs Balfour

**CERTIFICATE OF ANALYSIS BU16004093**

Sample Description	Method Analyte Units LOR	ME-ICP61a														
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
308610		3.1	<50	0.77	250	<10	0.09	20	180	20	0.12	<50	10	10	<50	0.18
308611		2.9	<50	0.89	460	<10	0.08	10	110	<20	0.66	<50	10	20	<50	0.16
308612		2.6	<50	0.54	200	<10	0.11	20	110	20	0.84	<50	10	10	<50	0.16
308613		1.7	<50	0.55	710	<10	0.35	10	120	60	0.28	<50	10	20	<50	0.18
308614		2.8	<50	0.58	200	<10	0.45	10	140	<20	0.35	<50	10	10	<50	0.18
308615		3.1	<50	0.53	180	<10	0.78	10	130	<20	0.18	<50	10	10	<50	0.21
308616		2.6	<50	0.68	200	<10	0.65	10	220	<20	0.28	<50	10	10	<50	0.17
308617		2.1	<50	0.78	420	<10	0.68	10	180	<20	0.73	<50	10	10	<50	0.18
308618		2.8	<50	0.84	430	<10	0.68	20	170	<20	0.44	<50	10	10	<50	0.20
308619		2.9	50	0.96	310	<10	0.60	10	100	<20	0.87	<50	10	10	<50	0.21
308620		3.1	<50	0.88	280	<10	0.08	20	100	<20	0.42	<50	10	10	<50	0.20
308621		2.2	<50	0.88	680	<10	0.10	10	90	<20	1.29	<50	10	10	<50	0.17
308622		2.9	<50	0.85	610	<10	0.29	10	130	190	0.65	<50	10	10	<50	0.21
308623		2.9	<50	0.51	460	<10	0.08	20	180	150	2.07	<50	10	10	<50	0.23
308624		2.6	<50	0.63	510	<10	0.07	20	150	470	3.96	<50	10	10	<50	0.17
308625		3.2	<50	0.84	280	<10	0.08	10	130	80	3.79	<50	10	10	<50	0.17
308626		2.3	<50	0.57	260	<10	0.07	20	140	410	4.90	<50	10	10	<50	0.18
308627		2.6	<50	1.25	14000	<10	0.15	20	100	1420	5.52	<50	10	70	<50	0.18
308628		3.5	<50	0.70	380	<10	0.10	20	130	100	2.08	<50	10	10	<50	0.22
308629		3.0	<50	0.58	2650	<10	0.09	20	90	160	7.96	<50	10	10	<50	0.16
308630		3.6	<50	0.68	650	<10	0.37	10	140	30	1.29	<50	10	10	<50	0.17
308631		3.7	<50	0.59	450	<10	0.27	20	130	<20	0.45	<50	10	20	<50	0.18
308632		4.0	<50	0.47	350	<10	0.19	10	130	<20	0.14	<50	10	10	<50	0.21
308633		4.3	<50	0.40	340	<10	0.16	10	120	<20	0.19	<50	10	10	<50	0.21
308634		4.2	<50	0.44	360	<10	0.11	10	120	<20	0.12	<50	10	10	<50	0.20
308635		3.9	<50	0.51	460	<10	0.11	10	220	<20	0.46	<50	10	10	<50	0.20
308636		4.0	<50	0.47	470	<10	0.11	10	130	<20	0.63	<50	10	10	<50	0.18
308637		4.5	<50	0.44	300	<10	0.12	10	170	<20	0.19	<50	10	10	<50	0.20
308638		3.9	<50	0.53	270	<10	0.10	20	120	<20	0.27	<50	10	10	<50	0.20
308639		3.9	<50	0.43	250	<10	0.11	10	130	<20	0.11	<50	10	10	<50	0.20
308640		4.2	<50	0.40	220	<10	0.12	20	130	<20	0.26	<50	10	10	<50	0.21
308641		3.7	<50	0.44	240	<10	0.13	10	110	<20	0.32	<50	10	20	<50	0.21
308642		3.0	<50	0.54	330	<10	0.11	10	180	<20	0.36	<50	10	10	<50	0.18
308643		3.7	<50	0.62	400	<10	0.12	20	390	<20	0.19	<50	10	10	<50	0.21
308644		4.2	<50	0.63	410	<10	0.12	10	120	20	0.29	<50	10	10	<50	0.20
308645		2.9	<50	0.55	510	<10	0.20	10	130	<20	0.74	<50	10	10	<50	0.19
308646		3.2	<50	0.72	840	<10	0.19	20	160	<20	0.44	<50	10	20	<50	0.16
308647		3.1	<50	0.76	960	<10	0.09	20	150	<20	0.34	<50	10	10	<50	0.17
308648		3.9	<50	0.63	610	<10	0.11	20	170	<20	0.27	<50	10	10	<50	0.20
308649		3.4	<50	0.74	2370	<10	0.10	10	120	<20	0.34	<50	10	20	<50	0.17

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Project: Zebs Balfour

**CERTIFICATE OF ANALYSIS BU16004093**

Sample Description	Method Analyte Units LOR	ME-ICP61a	ME-KCP61a	ME-ICP61a	ME-ICP61a	ME-KCP61a
		Ti ppm 50	U ppm 50	V ppm 10	W ppm 50	Zn ppm 20
308610		<50	<50	70	<50	60
308611		<50	<50	60	<50	50
308612		<50	<50	40	<50	40
308613		<50	<50	40	<50	30
308614		<50	<50	60	<50	30
308615		<50	<50	70	<50	30
308616		<50	<50	60	<50	40
308617		<50	<50	50	<50	40
308618		<50	<50	50	<50	30
308619		<50	<50	60	<50	40
308620		<50	<50	60	<50	30
308621		<50	<50	50	<50	40
308622		<50	<50	60	<50	120
308623		<50	<50	60	<50	60
308624		<50	<50	50	<50	270
308625		<50	<50	50	<50	70
308626		<50	<50	40	60	50
308627		<50	<50	60	100	90
308628		<50	<50	80	<50	50
308629		<50	<50	60	<50	40
308630		<50	<50	70	<50	40
308631		<50	<50	90	<50	30
308632		<50	<50	90	<50	30
308633		<50	<50	90	<50	20
308634		<50	<50	80	<50	30
308635		<50	<50	80	<50	40
308636		<50	<50	80	<50	40
308637		<50	<50	90	<50	30
308638		<50	<50	70	<50	30
308639		<50	<50	80	<50	20
308640		<50	<50	80	<50	20
308641		<50	<50	70	<50	30
308642		<50	<50	60	<50	30
308643		<50	<50	80	<50	40
308644		<50	<50	90	<50	50
308645		<50	<50	60	<50	40
308646		<50	<50	70	<50	40
308647		<50	<50	70	<50	60
308648		<50	<50	80	<50	40
308649		<50	<50	70	<50	50

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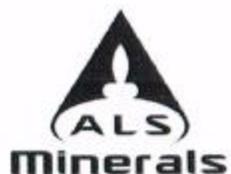
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Project: Zebs Balfour

**CERTIFICATE OF ANALYSIS BU16004093**

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	PUR-QC Pass7Sum %	ME-ICP61a Ag ppm	ME-ICP61a Al %	ME-ICP61a As ppm	ME-ICP61a Ba ppm	ME-ICP61a Be ppm	ME-ICP61a Bi ppm	ME-ICP61a Ca %	ME-ICP61a Cd ppm	ME-ICP61a Co ppm	ME-ICP61a Cr ppm	ME-ICP61a Cu ppm	ME-ICP61a Fe %	ME-ICP61a Ga ppm
		0.02	0.01	1	0.05	50	50	10	20	0.05	10	10	10	10	0.05	50
308650		2.41		<1	5.81	<50	410	<10	<20	0.27	<10	10	50	<10	3.67	<50
308651		3.66		1	5.56	<50	470	<10	<20	0.10	<10	10	50	<10	3.10	<50
308652		3.88		1	5.96	<50	460	<10	<20	0.37	<10	10	50	<10	3.92	<50
308653		3.20		<1	6.12	<50	440	<10	<20	0.14	<10	20	50	<10	3.31	<50
308654		4.04		1	4.54	<50	420	<10	<20	0.22	<10	10	50	<10	2.74	<50
308655		4.20		1	5.63	<50	470	<10	<20	0.08	<10	10	60	<10	3.68	<50
308656		4.12		1	5.21	<50	380	<10	<20	0.13	<10	20	50	<10	3.64	<50
308657		3.35		1	5.37	<50	420	<10	<20	0.25	<10	10	50	<10	3.34	<50
308658		3.95		<1	5.93	<50	360	<10	<20	0.15	<10	20	50	20	4.72	<50
308659		3.19	91.6	<1	5.89	<50	390	<10	<20	0.17	<10	20	50	10	4.37	<50
308660		3.69		1	6.29	<50	420	<10	<20	0.12	<10	10	50	80	4.72	<50
308661		3.08		<1	6.15	<50	410	<10	<20	0.22	<10	10	50	20	4.12	<50
308662		3.94		1	7.17	<50	350	<10	<20	0.11	<10	20	50	170	6.68	<50

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Project: Zebs Balfour

**CERTIFICATE OF ANALYSIS BU16004093**

Sample Description	Method Analyte Units LOR	ME-ICP61a														
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
		0.1	50	0.05	10	10	0.05	10	50	20	0.05	50	10	10	50	0.05
308650		3.3	<50	0.75	740	<10	0.09	20	100	<20	0.18	<50	10	10	<50	0.16
308651		3.6	<50	0.60	470	<10	0.10	20	160	<20	0.14	<50	10	10	<50	0.18
308652		3.6	<50	0.74	820	<10	0.10	20	220	<20	0.30	<50	10	20	<50	0.16
308653		3.6	<50	0.61	650	<10	0.11	20	160	<20	0.09	<50	10	20	<50	0.19
308654		3.5	<50	0.55	600	<10	0.16	10	170	<20	0.11	<50	10	10	<50	0.18
308655		4.0	<50	0.78	410	<10	0.16	20	160	<20	0.21	<50	10	10	<50	0.18
308656		3.3	<50	0.88	390	<10	0.16	20	200	<20	0.26	<50	10	10	<50	0.17
308657		3.5	<50	0.76	410	<10	0.12	20	170	<20	0.17	<50	10	10	<50	0.17
308658		2.9	<50	0.80	460	<10	0.17	20	270	<20	0.37	<50	10	20	<50	0.13
308659		3.2	<50	0.80	430	<10	0.15	20	370	<20	0.26	<50	10	20	<50	0.15
308660		3.4	<50	0.71	440	<10	0.27	10	450	<20	0.39	<50	10	20	<50	0.15
308661		3.2	<50	0.67	430	<10	0.31	20	290	<20	0.09	<50	10	20	<50	0.15
308662		2.7	<50	1.01	720	<10	0.39	30	500	<20	0.48	<50	10	20	<50	0.12

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CERTIFICATE OF ANALYSIS BU16004093

Sample Description	Method Analyte Units LOR	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a
		Tl ppm 50	U ppm 50	V ppm 10	W ppm 50	Zn ppm 20
308650		<50	<50	70	<50	60
308651		<50	<50	70	<50	50
308652		<50	<50	80	<50	60
308653		<50	<50	70	<50	50
308654		<50	<50	70	<50	40
308655		<50	<50	90	<50	40
308656		<50	<50	80	<50	40
308657		<50	<50	80	<50	30
308658		<50	<50	70	<50	40
308659		<50	<50	70	<50	40
308660		<50	<50	80	<50	40
308661		<50	<50	80	<50	50
308662		<50	<50	70	<50	70

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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Finalized Date: 25-JAN-2016  
Account: LOTTAH

Project: Zebs Balfour

CERTIFICATE OF ANALYSIS BU16004093

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia. NATA Accreditation does not cover the performance of ALS Brisbane Sample Preparation which is processed at 41 Yarraman Place, Virginia, QLD, Australia

Applies to Method:

ME-ICP61a

Processed at ALS Burnie located at 39 River Road, Burnie, TAS, Australia.

Applies to Method:

CRU-21

LEV-01

PUL-31b

PUL-QC

WEI-21



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Total # Pages: 2 (A - C)  
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Finalized Date: 5-FEB-2016  
This copy reported on 7-MAR-2016  
Account: LOTTAH

**CERTIFICATE BU16012216**

Project: Zebs Balfour  
P.O. No.: ZD005  
This report is for 15 Drill Core samples submitted to our lab in Burnie, TAS, Australia on 29-JAN-2016.

The following have access to data associated with this certificate:

ZEBB GEOLOGY

GEOFF SOMMERS

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LEV-01	Waste Disposal Levy
CRU-21	Crush entire sample > 70% -6 mm
PUL-31b	Pulv. Lg split to > 80% -75um
PUL-QC	Pulverizing QC Test

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61a	High Grade Four Acid ICP-AES	ICP-AES

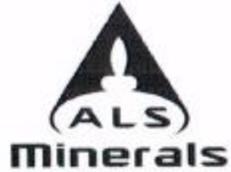
To: LOTTAH MINING PTY LTD  
ATTN: GEOFF SOMMERS  
17 MARINE TERRACE  
BURNIE TAS 7320

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:

Shaun Kenny, Brisbane Laboratory Manager



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 Account: LOTTAH

Project: Zebs Balfour

**CERTIFICATE OF ANALYSIS BU16012216**

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	PUL-QC Pass/Sum %	ME-ICP61a Ag ppm	ME-ICP61a Al %	ME-ICP61a As ppm	ME-ICP61a Ba ppm	ME-ICP61a Be ppm	ME-ICP61a Bi ppm	ME-ICP61a Ca %	ME-ICP61a Cd ppm	ME-ICP61a Co ppm	ME-ICP61a Cr ppm	ME-ICP61a Cu ppm	ME-ICP61a Fe %	ME-ICP61a Ga ppm
		0.02	0.01	1	0.05	50	50	10	20	0.05	10	10	10	10	0.05	50
308663		3.87		<1	5.52	<50	470	<10	<20	0.05	<10	10	60	170	3.92	<50
308664		3.75		<1	5.30	<50	420	<10	<20	0.18	<10	10	60	150	4.30	<50
308665		2.24		<1	5.07	<50	450	<10	<20	0.15	<10	10	50	20	4.03	<50
308666		2.45		<1	5.70	<50	450	<10	<20	<0.05	<10	10	60	10	3.88	<50
308667		3.59		<1	5.36	<50	470	<10	<20	0.13	<10	10	60	<10	3.30	<50
308668		3.92		<1	5.13	<50	410	<10	<20	0.12	<10	20	50	<10	3.58	<50
308669		3.89		<1	3.83	<50	500	<10	<20	0.10	<10	10	60	<10	2.34	<50
308670		4.24		<1	5.71	<50	490	<10	<20	0.56	<10	20	60	<10	3.44	<50
308671		3.31		<1	6.51	<50	420	<10	<20	0.14	<10	10	50	<10	3.50	<50
308672		3.08	97.8	<1	4.18	<50	440	<10	<20	0.05	<10	10	60	<10	2.56	<50
308673		3.91		<1	5.55	<50	440	<10	<20	0.06	<10	20	60	40	3.74	<50
308674		3.41		<1	5.29	<50	440	<10	<20	0.07	<10	10	60	10	3.26	<50
308675		3.22		<1	6.14	<50	420	<10	<20	0.17	<10	10	50	<10	3.70	<50
308676		3.44		<1	7.28	<50	410	<10	<20	0.07	<10	20	60	50	6.41	<50
308677		2.30		<1	6.18	<50	470	<10	<20	0.05	<10	10	60	130	4.42	<50

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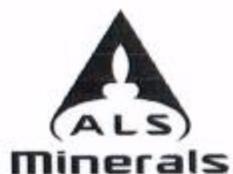
Project: Zebs Balfour

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Plus Appendix Pages  
Finalized Date: 5-FEB-2016  
Account: LOTTAH

**CERTIFICATE OF ANALYSIS BU16012216**

Sample Description	Method Analyte Units LOR	ME-ICP61a														
		K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti
		%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
		0.1	50	0.05	10	10	0.05	10	50	20	0.05	50	10	10	10	0.05
308663		3.7	<50	0.66	400	<10	0.30	20	240	<20	0.15	<50	10	10	<50	0.24
308664		3.5	<50	0.62	520	<10	0.19	30	270	<20	0.20	<50	10	10	<50	0.19
308665		3.3	<50	0.72	470	<10	0.21	20	350	<20	0.10	<50	10	10	<50	0.20
308666		3.5	<50	0.67	350	<10	0.12	20	100	<20	0.17	<50	10	10	<50	0.21
308667		3.7	<50	0.61	360	<10	0.23	20	140	<20	0.09	<50	10	10	<50	0.21
308668		3.2	<50	0.67	380	<10	0.17	20	160	<20	0.24	<50	10	10	<50	0.22
308669		4.4	<50	0.47	290	<10	0.28	20	160	<20	0.11	<50	10	20	<50	0.24
308670		3.8	<50	0.63	610	<10	0.20	20	170	60	0.42	<50	10	20	<50	0.20
308671		3.1	<50	0.55	440	<10	0.29	30	190	20	<0.05	<50	10	20	<50	0.27
308672		3.8	<50	0.40	250	<10	0.13	30	140	<20	<0.05	<50	10	10	<50	0.29
308673		3.6	<50	0.57	380	<10	0.14	30	180	20	0.12	<50	10	10	<50	0.25
308674		3.6	<50	0.54	280	<10	0.34	30	210	<20	0.08	<50	10	20	<50	0.24
308675		3.3	<50	0.65	350	<10	0.37	20	170	<20	0.19	<50	10	20	<50	0.21
308676		3.2	<50	0.98	440	<10	0.13	20	460	<20	0.22	<50	10	10	<50	0.16
308677		4.0	<50	0.71	310	<10	0.14	20	270	<20	0.24	<50	10	10	<50	0.20

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 Finalized Date: 5-FEB-2016  
 Account: LOTTAH

Project: Zebs Balfour

CERTIFICATE OF ANALYSIS BU16012216

Sample Description	Method Analyte Units LOR	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a
		Tl ppm 50	U ppm 50	V ppm 10	W ppm 50	Zn ppm 20
308663		<50	<50	80	<50	40
308664		<50	<50	80	<50	40
308665		<50	<50	80	<50	40
308666		<50	<50	80	<50	30
308667		<50	<50	80	<50	30
308668		<50	<50	70	<50	30
308669		<50	<50	90	<50	30
308670		<50	<50	80	<50	290
308671		<50	<50	70	<50	40
308672		<50	<50	80	<50	30
308673		<50	<50	80	<50	50
308674		<50	<50	80	<50	50
308675		<50	<50	80	<50	40
308676		<50	<50	90	<50	60
308677		<50	<50	90	<50	50

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Finalized Date: 5-FEB-2016  
Account: LOTTAH

Project: Zebs Balfour

**CERTIFICATE OF ANALYSIS BU16012216**

**CERTIFICATE COMMENTS**

**LABORATORY ADDRESSES**

Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia. NATA Accreditation does not cover the performance of ALS Brisbane Sample Preparation which is processed at 41 Yarraman Place, Virginia, QLD, Australia  
ME-ICP61a

Applies to Method:

Processed at ALS Burnie located at 39 River Road, Burnie, TAS, Australia.

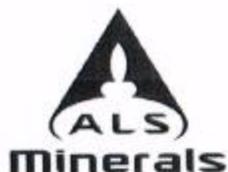
Applies to Method:

CRU-21  
WEI-21

LEV-01

PUL-31b

PUL-QC



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Total # Pages: 2 (A)  
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Finalized Date: 12-FEB-2016  
This copy reported on 7-MAR-2016  
Account: LOTTAH

**CERTIFICATE BU16015236**

Project: Zebs Balfour  
P.O. No.: ZD006  
This report is for 16 Drill Core samples submitted to our lab in Burnie, TAS, Australia on 3-FEB-2016.

The following have access to data associated with this certificate:  
ZEBS GEOLOGY      GEOFF SOMMERS

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LEV-01	Waste Disposal Levy
CRU-21	Crush entire sample >70% -6 mm
PUL-31b	Pulv. Lg split to >80% -75um
PUL-QC	Pulverizing QC Test

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
Sn-XRF05	Sn-Trace Level XRF Analysis	XRF

To: LOTTAH MINING PTY LTD  
ATTN: GEOFF SOMMERS  
17 MARINE TERRACE  
BURNIE TAS 7320

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\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:

Ricky Gelston, Laboratory Manager, Burnie



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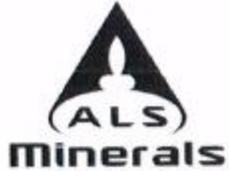
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 Total # Pages: 2 (A)  
 Plus Appendix Pages  
 Finalized Date: 12-FEB-2016  
 Account: LOTTAH

Project: Zebs Balfour

CERTIFICATE OF ANALYSIS BU16015236

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	PUL-QC Pass7Sum % 0.01	ME-OC46 Cu % 0.001	Sn-XRF05 Sn ppm 5	Au-AA25 Au ppm 0.01
308678		1.98		0.002	<5	<0.01
308679		1.25		0.002	9	0.01
308680		1.26		0.001	<5	<0.01
308681		1.62		0.001	5	<0.01
308682		1.32		0.003	<5	<0.01
308683		2.27		0.002	<5	<0.01
308684		1.98		0.001	<5	<0.01
308685		1.99		0.015	<5	<0.01
308686		2.16		0.021	<5	<0.01
308687		2.52	97.2	0.001	<5	<0.01
308688		2.30		0.026	<5	<0.01
308689		2.27		0.001	<5	<0.01
308690		1.67		<0.001	<5	<0.01
308691		2.33		0.001	<5	<0.01
308692		1.99		<0.001	<5	<0.01
308693		0.74		0.001	<5	<0.01

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 Finalized Date: 12-FEB-2016  
 Account: LOTTAH

Project: Zebs Balfour

**CERTIFICATE OF ANALYSIS BU16015236**

**CERTIFICATE COMMENTS**

**ACCREDITATION COMMENTS**

Applies to Method: NATA Accredited. Corporate Accreditation No: 825, Corporate Site No: 818. The Technical Signatory is Samantha Profke, ICPAES Supervising Chemist  
 ME-OG46

**LABORATORY ADDRESSES**

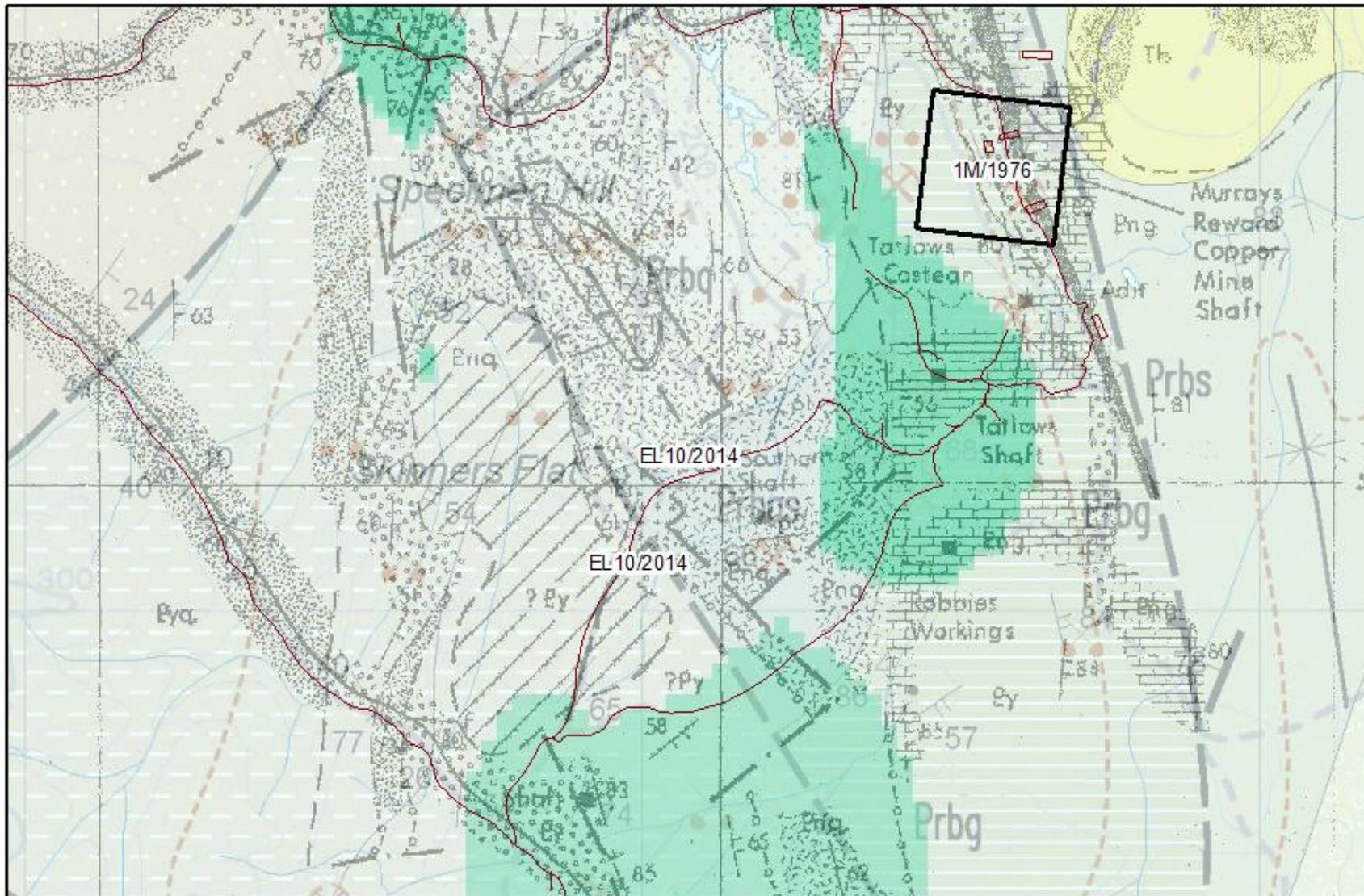
Applies to Method: Processed at ALS Brisbane located at 32 Shand Street, Stafford, Brisbane, QLD, Australia. NATA Accreditation does not cover the performance of ALS Brisbane Sample Preparation which is processed at 41 Yarraman Place, Virginia, QLD, Australia  
 ME-OG46 Sn-XRF05

Applies to Method: Processed at ALS Burnie located at 39 River Road, Burnie, TAS, Australia.  
 Au-AA25 CRU-21 LEV-01 PUL-31b  
 PUL-QC WEI-21

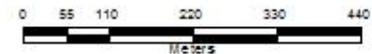
Plan A

Balfour Project Area  
Geology after CRA Exploration Pty Ltd &  
1:25,000 Geology with Density anomaly overlay

Balfour Region - Western Tasmania



**Balfour Project Area**  
**Geology after CRA Exploration Pty Ltd &**  
**1:25,000 Geology with Density anomaly overlay**



Coordinate System: GDA 1994 MGA Zone 55  
 Central Meridian: 147°0'0"E