

D002-5

FINAL REPORT

EL20/2003

QUEENSTOWN – MT DARWIN PROJECT

For Period 27th May 2007 – 30th November 2007

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Distribution:

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DIGITAL FILES

EL20_2003_200711_01_Report.pdf (Report Text, Figure 1)
 EL20_2003_200711_02_Plan1.pdf (Plan 1)

SUMMARY

Newcrest Mining Limited commenced exploration for gold rich deposits on being granted EL20/2003 on the 27th June 2003. The tenement encompasses 149 square kilometers of prospective Mount Read Volcanics from Mt Owen just outside of Queenstown, south to Mt Darwin.

This relinquishment report reviews and summarises all exploration completed by Newcrest Mining Limited in EL 20/2003 during the period of license tenure.

Newcrest Mining Limited has explored EL 20/2003 for Au-rich Rosebery-style VHMS, Henty-style Au and Prince Lyell style Cu - Au mineralisation. The exploration model which has been applied involve focusing on the east side of the Tyndall Group – Central Volcanic Complex (CVC) contact, conducting widespread lines of Controlled Source Audio-Frequency Magnetotellurics across the east of the Tyndall – CVC contact. Geological mapping supported by multi-element soil, rock, stream sediment geochemistry. Any anomalies thus identified were tested by deep focused drilling.

Detailed exploration and drilling was undertaken at Lake Jukes, East Darwin, Nasty Nob, Mountain Maid, Mt Ellen and Garfield prospects.

Given that EL 20/2003 is scheduled to undergo compulsory relinquishment in May 2008, and a review of all advanced project areas failed to highlight any significant anomalies, it was therefore recommended that EL20/2003 be surrendered prior to the formal relinquishment date.

KEY WORDS

Exploration; Gold; Copper; Diamond Drilling; Geophysics; CSAMT; Mount Read Volcanics; Darwin 3832; Owen 3833.

1. INTRODUCTION

Newcrest Mining Limited is exploring for gold-rich deposits in the Mount Read Volcanics. This is the fifth annual and final report for EL20/2003 for the period 27th May 2007 to 30th November 2007.

1.1. Title

TENEMENT

EL20/2003 was granted on the 27th June 2003 to Newcrest Operations Limited for five years to 27th June 2008. The area was most recently held as two separate tenements (EL5/98 and EL16/98) by Copper Mines of Tasmania (CMT).

LOCATION

The tenement covers an area of 149 square kilometres over parts of the West Coast Range immediately south of Queenstown, down to the Bird River near the southern end of Macquarie Harbour. Refer to Figure 1 for location. Most of the area falls within the West Coast Regional Reserve. At the northern end of the tenement there is some Crown Land, State Forest, HEC land and Public Reserve.

Topographic map sheets covering the area are listed below.

1:25,000 TASMANIA TOPOGRAPHIC MAPS

ENGINEER	3831
DARWIN	3832
OWEN	3833
GORMANSTON	3834
TEEPOOKANA	3632

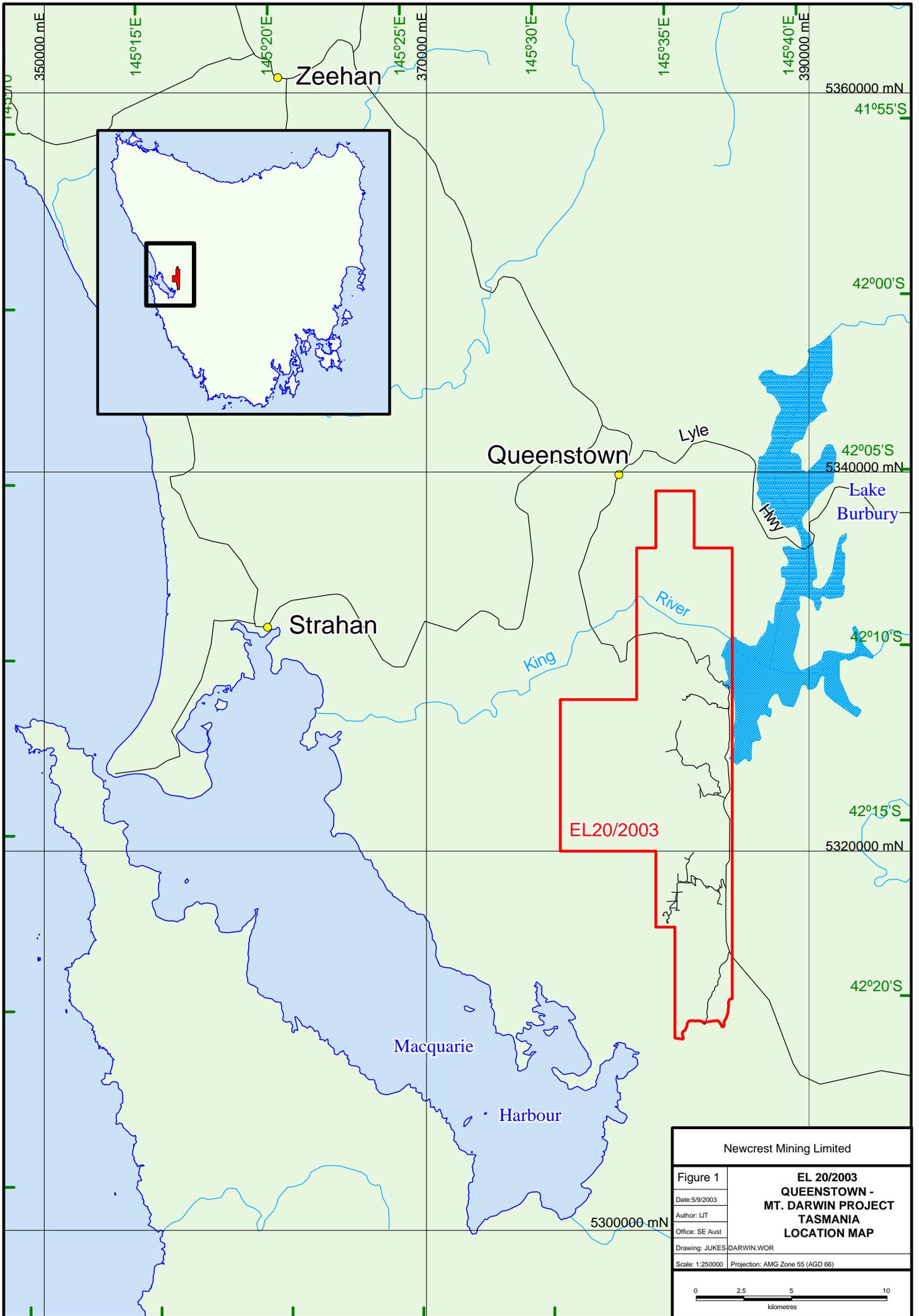
DATUM

All AMG (Australian Map Grid) references are to AGD66_Zone 55.

2. EXPLORATION STRATEGY

Target

The primary exploration targets are Mt Lyell and Jukes Proprietary style copper-gold deposits. However, exploration tools used can potentially find any one of a range of gold-only (Henty-style) and / or gold-rich polymetallic (Rosebery-style) deposits that occur in the Mount Read Volcanics.



Newcrest Mining Limited	
Figure 1	EL 20/2003 QUEENSTOWN - MT. DARWIN PROJECT TASMANIA LOCATION MAP
Date: 5/9/2003	
Author: IJT	
Office: SE Aust	
Drawing: JUKES-DARWIN.WOR	
Scale: 1:250000	Projection: AMG Zone 55 (AGD 66)

An assumption was made that the target does not outcrop and is going to be relatively deep.

Exploration targets were defined on the basis of geochemical and geophysical anomalies that may reflect the outer edge of a mineralised alteration system. Mineralised systems are often centralised within a much wider, though possibly structurally deformed alteration envelope and these can be detected by geological mapping, geochemistry or geophysics. Common features of Mount Read Volcanic style, gold rich deposits that are being used to help define drill targets include the following:

- 1) Deposits tend to be hosted near the top of the Central Volcanic Complex (CVC) stratigraphy and/or base of Tyndall Group.
- 2) Adjacent to major Cambrian structures that form boundaries to packages of CVC.
- 3) Alteration envelopes commonly of silica-sericite-pyrite±chlorite and/or chlorite-quartz-pyrite-sericite±carbonate, strongly deformed into schists.
- 4) Pods of polymetallic massive sulfides, cherts or silica associated with and/or adjacent to mineralisation.
- 5) Anomalous gold, copper, lead, zinc, barium, manganese elements and minerals such as magnetite.
- 6) Chargeable and resistive geophysical anomalies.

Strategy

The basic exploration strategy was to compile previous geological mapping and geochemical work, combine with additional selective geochemical and geophysical surveys and interpret to define drill targets.

Newcrest utilised CSAMT surveys which can provide wide coverage to significant depths to locate either resistive zones (silica-chert bodies) or chargeable zones responding to chalcopyrite rich altered schist. These surveys were conducted in areas where surface exploration has revealed anomalous geochemical results but not enough to warrant drilling.

Much of the tenement explored during the period of tenure has dozens of historic workings and prospects but very few have been drill tested, and where drilled, the holes are generally short. Some of these prospects were considered worthy of follow-up.

3. PREVIOUS EXPLORATION

Previous exploration is documented in Tedder *et al.*, 2004 and will only be briefly summarised herein. The Mt Lyell Mining and Railway Company, EZ, BHP, RGC, Goldfields and CMT have all held part of the current tenement area. Exploration programs completed include:

- extensive phases of mapping;
- recent airborne geophysics (magnetics, radiometrics, partial EM);
- various phases of regional stream, rock, soil and historic workings geochemistry;
- various phases of mostly analogue-era ground geophysics (ground magnetics, IP, old EM methods);
- large grids of blanket-coverage fixed-loop TEM; and drilling of seven prospects for a total of 26 holes (Garfield 12, Jukes Propriety 5, East Darwin 3, Snake Spur 2, Lake Jukes 2, Mt Huxley 1, and Prince Darwin 1).

A summary of work carried out in the Queenstown-Mt Darwin area by Newcrest Mining Limited during the life of EL20/2003 is presented in Table 1.

Table 1: Previous exploration completed on Queenstown-Mt Darwin EL20/2003 by Newcrest Mining Limited

Date	Exploration Activities	Results
2003 / 2004 (Tedder <i>et al.</i> , 2004)	<p>19.25 kilometres of a controlled source audio-frequency magnetotellurics (CSAMT) survey was completed over 16 gridlines in the Mt Jukes-Mt Darwin area.</p> <p>Diamond drill hole NCT001 completed to 545m at Lake Jukes.</p> <p>Diamond drill hole NCT002 completed to 489.5m at East Darwin.</p> <p>10 reconnaissance pan concentrate stream sediment samples collected in the Intercolonial Spur area.</p> <p>23 rock chip samples collected at road cuttings and mullock dumps at the Lake Jukes prospect and from some CSAMT lines.</p>	<p>The initial exploration concept tested by Newcrest Mining Limited is the idea that the Tyndall Group rocks east of the Central Volcanic Complex may cover mineralisation, particularly along the West Coast Range stretching from Mt Jukes to Mt Darwin.</p> <p>In order to test this concept, 19.25 kilometres of CSAMT survey was completed on wide spaced east-west grid lines. From this work two weak anomalies were identified.</p> <p>One drill hole NCT001 was completed to 545m at Lake Jukes on a conductive anomaly, and a second NCT002 on a resistivity target south of the East Darwin prospect.</p> <p>NCT001 did not intersect any mineralisation. The conductive CSAMT anomaly was attributed to a thin shale horizon intersected between 509.9-517.1m. At East Darwin, drilling of NCT002 failed to determine the source of the resistive anomaly, and the hole failed to reach recognisable CVC rocks. Significant Mineralisation intersected included 6m @ 0.31 g/t Au, 0.15% Pb, 0.26% Zn, 44 ppm As and 178 ppm Cu, and is associated with strongly foliated volcanic breccia intervals dominated by fine-grained, sericite-pyrite altered volcanoclastic fragmentals, that may have been derived from a VHMS deposit.</p>

<p>2004 / 2005 (Tedder and Morrison, 2005)</p>	<p>Reconnaissance geological mapping at Nasty Nob, Mountain Maid and Mt Ellen prospects.</p> <p>At Mt Ellen, a 2km access walking track was cut and a 100 x 100 metre loop track was cut through the area of known workings.</p> <p>Three vertical channels were cut into the north wall of the main open cut workings and 12 samples collected. Five pan concentrate samples were also collected from the main alluvial workings.</p> <p>Scan Logs completed on diamond drill holes (GAR001-004) completed by RGC on the Garfield prospect.</p> <p>A three hole (NCT003-005) diamond drilling program was completed for 2,148.7m.</p> <p>Peterological reports were received for 12 core samples from diamond drill hole NCT002, five core samples from NCT001, five core samples from NCT003 and one grab sample from the Nasty Nob prospect.</p>	<p>Encouraging evidence of mineralisation was observed in the form of stratbound manganese and iron oxides over a minimum strike length of 400m at the Nasty Nob prospect. Stratigraphically controlled pyrite, galena and arsenopyrite was also evident in fine-grained volcanoclastic siltstones. NCT003 drilled just south of Nasty Nob to test the northern end of this surface anomalism failed to intersect any gold mineralisation, but returned modest intervals of low-grade zinc and lead mineralisation including 24m @ 0.55% Zn and 0.37% Pb from 533m in weakly mineralised pumiceous rich breccias.</p> <p>NCT004 was drilled on a 200 x 300m zone of silica-pyrite-sericite+/-pyrophyllite altered cherty volcanoclastic siltstones and volcanoclastic sandstones at the Mountain Maid. The hole was designed to test down-dip of low-grade gold anomalism and a subsequent gradient array IP anomaly beneath the surface alteration (Halley <i>et al.</i>, 1996). Alteration within NCT004 tested to 749.3m was minimal, with best result – 1m @ 2 g/t Au from 413m.</p> <p>Diamond drill hole NCT005 centred on the historic Mt Ellen gold prospect that had previously returned gold anomalous rock chip samples collected by various parties including Newcrest Mining Limited. NCT005 drilled a massive unit of weak sericite altered feldspar-(quartz) phyric rhyolites. Magnetite destruction occurs in a zone between 490 – 540m, and is associated with low-grade gold mineralisation: 44m @ 0.23 g/t Au from 496m.</p>
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<p>2005 / 2006 (Tedder <i>et al.</i>, 2006).</p>	<p>9.5 line kms of CSAMT surveys completed across eight lines at Mt Owen – Mt Huxley and Mt Jukes prospects.</p> <p>3.9 line kms of CSAMT surveys were completed over 4 grid lines at the Garfield prospect.</p> <p>One diamond drill hole (NCT008) was completed for 701.2m at the Garfield prospect.</p> <p>34 pan concentrate samples and 47 C-horizon soil samples were collected and analysed in the Intercolonial Spur – East Darwin area.</p> <p>A ground magnetic survey was completed over 3.9 line kms at the Mt Ellen prospect.</p>	<p>Results of CSAMT surveys were disappointing, only delineating very shallow conductivity over known mineralisation at the Garfield prospect. The main mineralisation zone intersected at depth in hole GAR002 was not ‘seen’ by the CSAMT survey. A weak conductive anomaly on line 19806 suggested that the Garfield mineralisation is offset as previously interpreted by RGC (Halley <i>et al.</i>, 1996)</p> <p>Diamond drill hole NCT008 was drilled on the Garfield prospect to test a conductive target interpreted from the results of the CSAMT survey. The source of the 200m–wide anomaly identified from surface to in excess of 350m down-dip was not determined as NCT008 passed along the lower margins of the anomaly. Minor disseminated and vein hosted chalcopyrite occurs throughout the hole. The best anomalous zone intersected contains 2m @ 0.15 g/t Au and 0.21% Cu.</p> <p>47 C-horizon soil samples collected on previously prepared CSAMT grid lines at East Darwin show Au, As, Cu, Mo, Bi, Tl anomalism across two lines (lines 15 and 16) within Tyndall group rocks. The anomaly is open to the east and appears to be closed off to the north.</p>
<p>2006 / 2007 (Kitto, 2007*)</p>	<p>Cutting, C-horizon soil sampling of 2.8 kilometre grid at East Darwin. Collection and analysis of 135 samples.</p> <p>Collection and analysis of 130 C-horizon soil samples collected over 3.9 kilometres at Mt Ellen.</p>	<p>A total of 135 C-horizon soil samples were collected on four new grid lines and an extension to line 16 to provide an improved understanding on the controls and source of geochemical anomalism identified on lines 15 and 16. Additionally the program was designed to close off / extend the soil anomaly and ascertain whether the anomaly is sourced from Tyndall Group correlates or from the up-slope erosion of CVC rocks. The results showed a much stronger coincident Au, Cu and As anomaly located on the western portion of line 16.</p> <p>At the Mt Ellen prospect 130 collected over the historic Mt Ellen workings indicated a small gold-rich surface anomaly (120 x 150m). Soil sampling failed to delineate any significant strike extent to the gold anomalism.</p>

2007/2008 (Kitto, 2007)	No fieldwork was completed	No results to report
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4. WORK COMPLETED IN THE CURRENT REPORTING PERIOD

No fieldwork was completed during the reporting period. Previously it had been proposed that a coincident Au-Cu-As geochemical anomaly identified by Kitto (2007) at East Darwin be tested by ground EM and (or) subsequent diamond drilling. Drilling of a conceptual target was also proposed by Kitto (2007) to test the down plunge potential of moderate quartz-albite alteration and associated low-grade gold mineralisation (44m @ 0.23 g/t Au) intersected in NCT005 at the Mt Ellen prospect. This work was not completed.

5. ENVIRONMENTAL DISTURBANCE AND REHABILITATION

No environmental disturbance or rehabilitation was undertaken during the reporting period.

6. CONCLUSIONS AND RECOMMENDATIONS

No fieldwork was completed by Newcrest Mining Limited on EL 20/2003, Queenstown-Mt Darwin, in the period 26 May 2007 to 30 November 2007. The lack of fieldwork completed in the final year of reporting was a direct result of a review that failed to highlight any significant anomalies that could potentially meet Newcrest's criteria of providing a sustainable long-life mining operation.

The lack of high priority targets for follow-up on EL 20/2003 Queenstown-Mt Darwin coupled with the impending compulsory relinquishment of the exploration license in May 2008, has led to a recommendation that the tenement be relinquished.

7. EXPENDITURE**EL20/2003
QUEENSTOWN – MT DARWIN PROJECT****For Period 27th May 2007 – 30th November 2007**

ITEM	EXPENDITURE
SALARIES*	10,361
FIELD COSTS	9,824
MISCELLANEOUS OFFICE COSTS	4,489
TRAVEL/ACCOMMODATION	5,722
OTHER LAND AND LEGAL	5,472
TOTAL EXPENDITURE	\$35,868

* Salary expenditure reflects costs arising from activities carried out during the previous reporting period and coded during this current period.

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