

**ANNUAL REPORT FOR THE PERIOD 16/12/2010**  
**TO 16/12/2011**  
**MT.CAMERON EXPLORATION LICENCE**  
**EL 11/2008**

**COPIES:**

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## **ABSTRACT**

EL 11/2008 Mount Cameron was granted on 16th December 2008 .It is 50sqkm in area and was applied for to explore for the potential for open pittable disseminated tin, gold (and uranium) deposits that might in part be responsible for the extensive alluvial-colluvial deposits dredged in the drainages on the perimeter of the paleohigh to MT.Cameron.

This concept has been further evaluated during the research of Van Diemen Mining Reports on the Endurance and Endurance West ,and Monarch resources.

Work during the annual period comprised research and evaluation of the tenement at its southern boundary and in the perimeters of the Monarch Resource to the north.

Ground reconnaissance in the declared Prospecting area and Endurance Nth Perimeter was initiated.

The four broad possible primary metal source areas, identified in the previous reporting period in new satellite imagery ,were further evaluated in high resolution Google imagery and MRT radiometrics and magnetics.

Research was conducted to shed light on the character of cassiterite (and associated heavy mineral assemblages ) at Endurance, Monarch and the Prospecting exclusion verses the cassiterite in the more southerly Pioneer ,Blue Tier areas.

The possibility of the Clifton and other potential cassiterite positions near the toe of Mt Cameron being elluvial ,rather than perched terraces, remains a possibility.

The area along the toe of the Mt Cameron Massif (particularly along the intersection of large NNW –trending structures and the fertile Endurance Drainage /Structure) , in the hinterland of Monarch, and the extreme-SW toe of the Massif (where 2 significant paleodrainages intersect) continue to be potential given prevailing tin prices and modern sluicing/pumping technology .

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## **1.INTRODUCTION**

**Exploration Rational** – see previous reports.

**License**

**Tenement Number EL11/2008**

**Beneficial Holder**

The Tenement was applied for by James Stewart. P.O.Box 7298,Karawarra,PERTH 6152.The beneficial ownership is shared 50-50 with Mr. P.W.Askins, the whole subject to a formal transfer to Tin Dragon Pty Ltd. This will help to consolidate the resource potential areas along the northern perimeter of the old Endurance Dredging and the Monarch Resource area.

**Area**

The project area is currently encompassed by a 50 sq. km Exploration Licence, EL 11 / 2008. The current rental has been paid to extend the full 50sq.km of tenure to yr 2013.

Specifically:

**Date of Grant** 16 / 12 / 2008

**Date of Expiry** 16 / 12 / 2013

**Tenement Location**

The Mount Cameron Project is located in north east Tasmania approximately 85 kilometers north east of the City of Launceston .Mt Cameron is a Granite massif just west of the Pioneer to Gladstone Road. Access to the perimeter of the project area is excellent. However, access to the core of the tenement is extremely limited. An all weather sealed road services the townships of Gladstone and Pioneer and a well formed gravel track provides heavy vehicle access from that public road to the project site.

The Tenement is located over the land tenure known as private land, Crown land, Forest Reserve and State Forest.

Reporting Period is 16<sup>th</sup> December 2010 to 16<sup>th</sup> December 2011.

## **2.REVIEW OF PREVIOUS WORK**

**Prior to Current Tenement** – see previous Annual Report\_file11-2008/ 01

### **During Current Tenure**

To date there is still no evidence that modern exploration examined the Mt.Cameron massif for primary hardrock heavy mineral sources or “deflation lag” deposits capping preserved stanniferous portions of the massif.

**3.Regional Geology and Mineralisation** – see previous Annual Report file11-2008/02.

## **4.EXPLORATION COMPLETED DURING CURRENT REPORT PERIOD**

### **Prospect based exploration Activities**

A ***photo-structural analysis*** (utilizing techniques from North Queensland Cupola Exploration and classic Arizona Doming Criteria ) has been completed and targets interrogated for spectral and structural anomalies such as;

**a**-Domal features (shallow or deep) ;

-radial fractures

-concentric ring fracture arrays

-regional and parasitic sub-horizontal cooling fractures and joints

**b**-Intra “granite” Graben faults,

c-Alluvial/Colluvial/ Elluvial sluicings on Domal features or shedding from subhorizontal fracture arrays (cc Cinovec, Sailor-Nth Qld, Anchor)

**d**- Resistant “ledges” suggestive of subhorizontal or sub vertical zones of silicification / greisenisation.

**e**-Geomorphological and geobotanical evidence of specialized “granite” phases eg. aplitic, porphyritic .Sills, dykes stacked “horizons.

Limited ground reconnaissance was undertaken on the sub cropping southern margin of the Massif and although some finer grained granitic zones are indicated the evidence for elluvial cassiterite remains inconclusive.

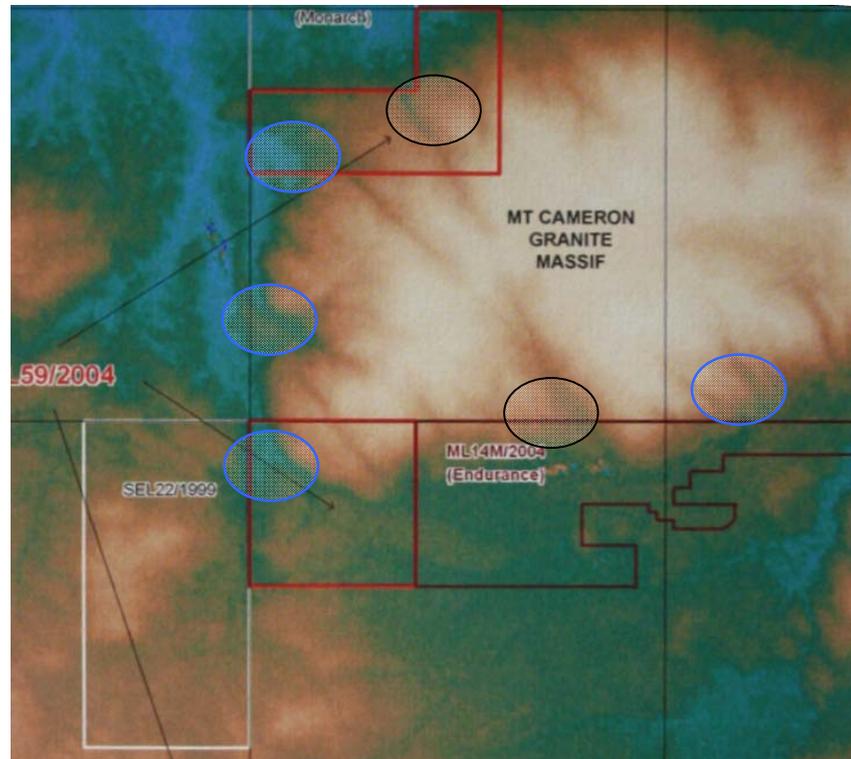
Further worked is aimed at ground verification of the spectral anomalies.

### ***Research of previous exploration and compilations (released to Open File in 2011)***

specifically related to the following areas;

-**Monarch**. Work by VDM refined the resource data of Blue Metals Mining Pty Ltd the Shallamar Creek deposit is a shallow position around 150metres wide. Cassiterite is poorly sorted and an elevation of 44-50m above sea level ,together

with miscellaneous shallow workings in near subcrop suggests a proximal hardrock source. The area requires ground reconnaissance work.



*Note the structural position of Monarch and Clifton (wedges of downward displaced granite and paleo cassiterite terraces or elluvials preserved ?). Blue circles indicate similar locations.*

- Clifton, New Clifton. These deposits are located in a seemingly perched position to the north of the Central Endurance historical deposit. Clifton seems to have produced 2,135 tonnes of tin conc. To 1970. For some time the ownership was separate to the main Endurance mineralisation. The cassiterite was reputedly well sorted (Yim 1990)?? and high grade (2,000 to 3,000 gm/cu m )

New Clifton contains tin of moderate sorting and with work conducted after the Clifton production period it is unsure at this stage just what resource is located there.

There would seem to be potential for further Clifton styled deposits along the toe of Mt Cameron for perhaps 2,000m to the west. For an E-W zone around 1km long , as well as in the topographic expression of the NNW trending Fault

Graben between Endurance and Monarch Fault , there is still the possibility of elluvial cassiterite shedding from bedrock within the Mt Cameron EL 11/2008?

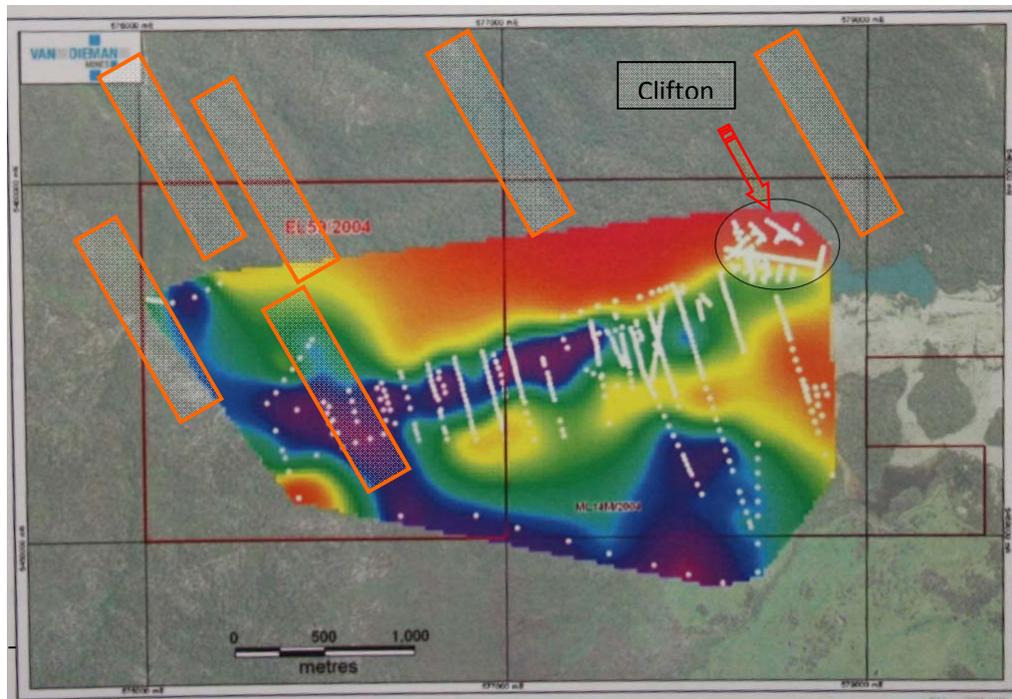
This Fault Graben is quoted by Yim (1990) and Kinnane (2002) as being post tin deep lead. However, whether pre or post , it has had a profound effect on the disposition and preservation of the alluvial cassiterite.



**Potential Clifton Analogue Structures?**

**Top:** Historical Tin areas in black Endurance to Pioneer

**Below:** Endurance West of Fault and toe Mt Cameron



**Endurance West.** The Endurance deposit was discovered in 1875. It produced **2,672 tonnes of Sn Concentrate** up until **1963** (1946-1959 1,22t Sn Conc. or 3.82 mill.cu meters grading 319gm/cubic meter; 1960-1966 70tonnes Sn conc. from ore grade of 237gm/cum; from 1968 BMI Mines and Triako etc generated resource indication of 1,697tonnes of Sn conc. in the area West of the NNW trending graben fault –referred to above).

Together with the Endurance Mine Central and **Western Endurance (western and eastern blocks referred to below)** is a WSW trending, structurally focused, paleo drainage roughly 250meters off the southern toe of the Mt Cameron Massif. The core mineralized deep lead/channel is roughly 200meters wide.

Roughly 826 drillholes were completed between 1940 and 1983 (Kinnane 2002 etc) .

The Graben Fault has a vertical displacement of 14 meters and perhaps 80meters laterally. This, combined with different lease ownership to the west, necessitated the treatment of the Eastern and Western Blocks (COLLECTIVELY the “Western Resource”) differently to the historically mined Endurance Central. The “Western Resource” has a higher waste to “ore” ratio- thus and was, thus, more difficult “reach” for sluices and pumps etc. Less of an issue in modern time?

Within the **Western Resource** area there is **another fault** corridor parallel to the Graben Fault referred to above. The **resource is thus referred to Eastern and Western Blocks** by Van Diemen .

Within the Western Resource area Kinnane (2002) and others estimated 814,896 kg Sn con (375g/mcu) for the western block and 857,221 kg Sn con (at “ore” grade of 262.5 gm/cum) for the Eastern Block. Totaling **1,697 tonnes of Sn conc.** Seemingly a reasonable calculation given the known volume and average SnO grades in the mined out Endurance Central).

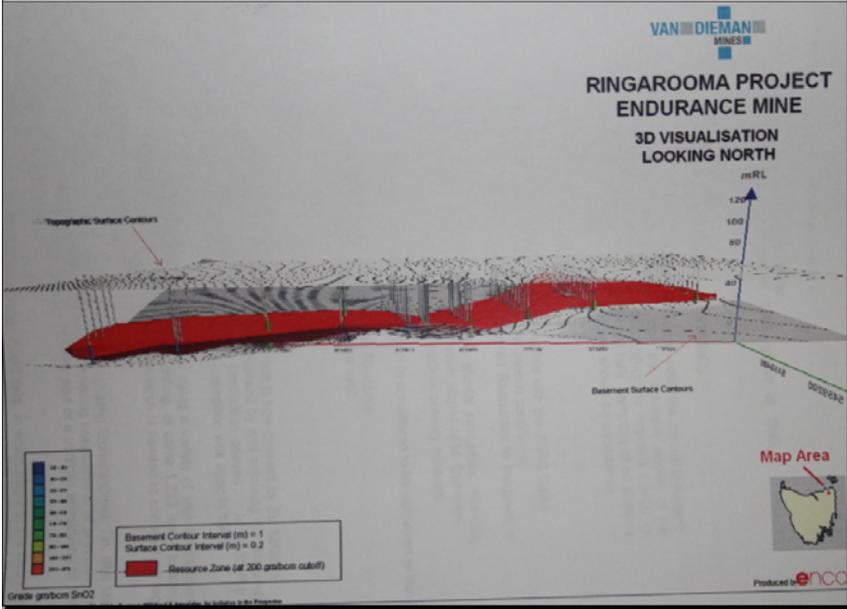
Further west again, and based upon the “mineralized channel” geometry from drillhole depth isopachs and seismic surveys, there may be in excess of 600,000 tonnes of SnO conc.

The source of this collective >5,000 tonnes of SnO (Endurance mine-Central PLUS Western Resource ) is ,classically, regarded as the Blue Tier and/or

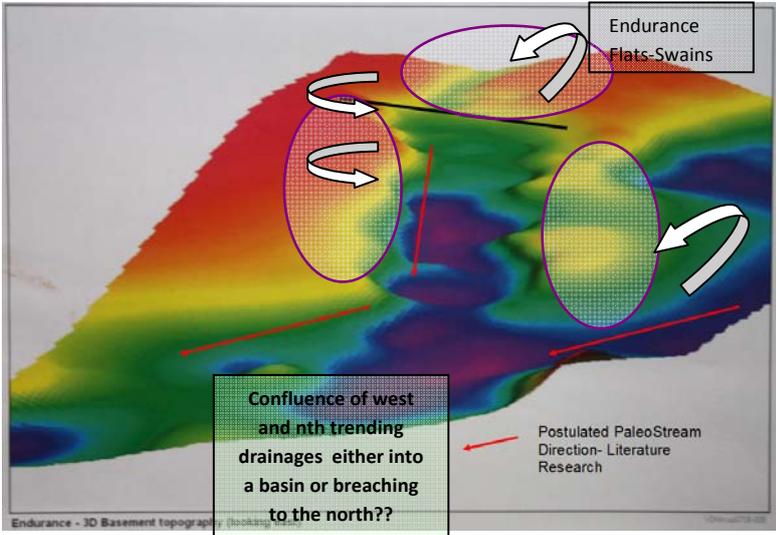
Pioneer areas .However the indicated trace element ratios and sedimentological characteristics of the SnO at Endurance indicates a separate provenance to the Blue Tier.

Given the presence of the Clifton and New Clifton deposits off the toe of the Mt Cameron massif (and perched off the flank of the granite) ,the mapping of mixed granitic phases along the southern toe ,the distribution of mineralization on the Monarch side of the Massif ,and the work of Dr Yim a protore source may be the southern flank of Mt Cameron and/or downfaulted blocks south (eg Dorset Flats-Pioneer etc?) and east (Endurance Flats, Swains etc?) of the Endurance Channel.

The potential in terms of EL 11/2008 , from the current research, suggests the possibility of elluvial and slumped elluvial sources on the southern flank of Mt Cameron. See diagram below (Van Diemen 2002 and 2007).



3 D Visualization of Endurance Western Resource Area (excluding the Endurance Mine and Picketts Plain)  
View almost due North  
(after VDM)



Possible SnO source areas  
Image of "Greater Endurance" Stanniferous Channel (from Picketts Plain ) based upon basement isopachs from drilling  
View almost due East.  
Red arrows indicate VDM postulated paleo stream direction

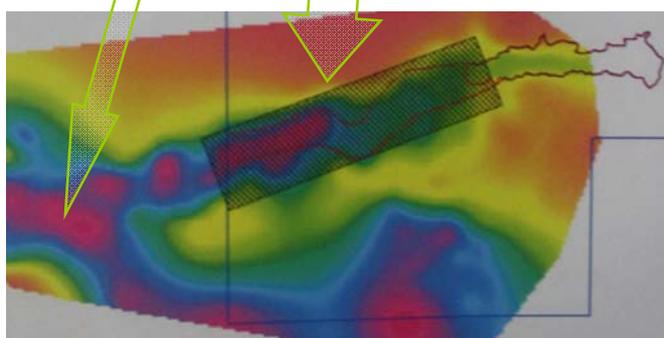
- **Picketts Plain**. Newly researched open file reports related to Monarch and Endurance ,and historical maps from the MRT storage facility , suggest that previous explorers considered the possibility of the Endurance Channel fanning outward to the West – off the SW margin or flank of the currently known Mt Cameron Massif.

More recently ,and as a result of extensive GIS work on all the historical data available, Van Diemen postulated paleochannel stream directions to the west and north ,coalescing in the area historically know as Pickett s Plain – Little Boobyalla Creek .Kinnane (2002) suggested that the Endurance Mineralised System may well open up in this western area – partly encompassed by EL 11/2008.

The confluence of west and nth trending paleodrainages either into a basin or breaching to the north would generate a potentially significant exploration target and assemblage of significant cassiterite, sapphire, gold concentrations/traps ??the geometry of this area could be unraveled with detailed gravity surveys and a low impact ,systematic, detailed seismic grid. Further review of data at MRT is required to evaluate the extent of previous exploration on Picketts Plain, aside from several sparse drill lines.



Area referred to as **Picketts Plain** ,the confluence of the westerly and northerly directed paleodrainages. Critical to work on EL11-2008 is whether this is an isolated basin or if drainage penetrated to the north and what trap sights were available.??



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- Sextus Creek, Ruby Creek, Whatts, Sapphire Creek. Work pending.
- Gold. Production sketches and other research has shown that gold may be a not insignificant by product of the Endurance heavy mineral system.

## **5.DISCUSSION OF RESULTS**

Regional structural compilation utilizing Landsat imagery was completed. number of potential target areas have been identified by fracture analysis of Landsat imagery and Google Earth Imagery Interrogation. This work is being integrated with newly acquired open file data.

Assessment of newly released and detailed data from Van Diemen Mines was undertaken to determine the relationship between the highly endowed Endurance Tin System and the Sth, Nth ,and SW Flanks of the Mt Cameron massif on EL 11-2008.

Potentially important target sites have been postulated.

## **6.CONCLUSIONS**

### **Recommendations and Proposed Future Exploration**

Detailed examination of all historical drilling and mining activity in the “Greater Sth Cameron Area” as it interacts with the outcropping toe of the Mt Cameron massif on EL11-2008.

Interpretation of this data together with identified structural features (anomalous geomorphological and lithostructural , inside the Mt Cameron massif ,related to concentric upward doming and sub vertical dilation/sheeting intragranite graben collapse ) to locate **elluvial or other unmined tin “sheets”** .

That is tracking of flanking alluvial operations for evidence of possible hardrock tin sources and previously subeconomic sheets of mineralisation.

Ground checking for evidence of high level “granite” phases preserved in the 4 target areas.

Scoping out the possibility of attracting significant funding for systematic seismic and gravity survey in the SW Flank area.

## **7.ENVIRONMENT**

**Surface Disturbing Operations;** No surface disturbing operations conducted during the period.

### **Surveys**

**Rehabilitation;** Not Applicable during the reporting period

## **8.EXPENDITURE**

Expenditure on exploration for the period 16December 2010 to 11November 2011;

**TOTAL \$40,900**

## **9.REFERENCES**

Yim,W.S.Wyss.,1990 heavy Mineral Provenance and the Genesis of Stanniferous Placers in NE Tasmania. unpublished PhD Thesis ,University of Tasmania.

Kinnane , N.R 2002. Mineral Holdings Pty Limited .The Endurance Project EL 11/2000 Preliminary Re assessment of the Western Resource Area.

Kinnane , N.R 2003. The Endurance Project EL 11/2000 .Mt Cameron, Gladstone District NE Tasmania – Reassessment for van Diemen Mines Pty Ltd