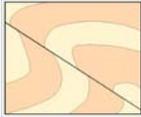




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**ANNUAL REPORT**  
**EL1/2006 DIAMOND HILL**  
**WESTERN TASMANIA**

**Prepared for: Stebbo's Diamond Drilling**

**Tim Callaghan, August 2013**

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## **MAP CONVENTIONS**

Coordinates in this report and in digital data associated with this report are recorded as GDA94 Zone 55.

RL's in this report are MSL.



## **EXECUTIVE SUMMARY**

This report covers exploration activities completed on EL1/2006 Diamond Hill. The EL forms part of a tenement package prospective for barite and gold mineralisation within the Yolande River sequence and intrusive felsic porphyries of the Cambrian Mt Read Volcanics.

Results were received for diamond hole MH06 drilled in August last year. MH06 intersected Yolande River Sequence volcanoclastic mass flows and vitric siltstones intruded by two felsic porphyries. The first porphyry was pervasively sericite-siderite altered with trace disseminated euhedral pyrite. The second porphyry was strongly albite altered with several zones of weak sericite-chlorite alteration. Minor quartz-carbonate-pyrite veining occurred locally within the porphyry. Fine disseminated pyrite to 0.5% was also locally observed. The sericite-siderite-pyrite alteration contains low grade gold mineralisation with most samples returning gold above detection. A maximum of 1.4g/t Au was associated with quartz-carbonate veining. It is apparent that the late quartz veining has locally remobilized and upgraded some of the gold mineralisation associated with the porphyritic intrusives.

One diamond drill hole for 99m and limited reconnaissance field work was completed on the Madam Howard's Prospect in 2013.

Drillhole MH08 was targeted 50m south along strike of the altered porphyry. As expected very similar geology was intersected in MH08. Assay results are pending.

The presence of weak gold mineralised associated with the porphyries is encouraging. The porphyries are the likely source of the alluvial gold in the locality which has been panned by prospectors for over 100 years. The intrusives and sub-cropping quartz veining located several hundred metres along strike NE of the northern Madam Howard's Plains barite lodes.

Future exploration will include compilation and interpretation of historic data, field mapping and possible diamond drilling of Madam Howard's and Diamond Hill.



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## 1 INTRODUCTION

EL1/2006 Diamond Hill consisting of 13km<sup>2</sup> is licensed to Stebbo's Diamond Drilling. The EL is in its final year of tenure and an application for a Term of Extension has been lodged with MRT. Following on from the encouraging results obtained in drill hole MH06 a further 5kms<sup>2</sup> EL1/2013 was granted east of EL1/2006.

The EL is located on the junction of the Murchison and Lyell Highway's with reasonable access on fire trails and the Lake Margaret Road. Foot access to the Diamond Hill gold prospect is via a cut track.

Most of the license is covered by moderately thick tea tree re-growth and low swamps. The area has seen repeated wild fires over the last 100 years, significantly modifying the local environment.

The licensee's consider the EL to be prospective for:

- High grade barite, suitable for specialist needs
- volcanogenic or metamorphogenic vein hosted gold deposits

The EL has been prospected and explored since the 1890's with historic mining activity consisting of costeans, adits and winzes evident at the Madam Howard's Plains Barite lodes, and the Diamond Hill gold prospect. Alluvial gold has been recovered from much of the area by local prospectors over the last 100 years.



## 2 LOCAL GEOLOGY

The Local geology of EL1/2006 is dominated by the Yolande River Sequence of the Cambrian Mt Read Volcanics (Figure 1). A major regional Fault, the firewood siding fault is located in the southern EL, separating the Cambrian volcanics from the younger Silurian Siliciclastics. The South Henty Fault is located just west of the EL.

Most of the EL is underlain by Yolande River Sequence felsic volcanoclastic sediments, mostly vitric siltstones and mass flows. The volcanoclastics are generally well bedded.

Several NNW trending felsic intrusive/extrusives are located in the northern EL. Quartz porphyry is located at diamond Hill and several kilometers to the north towards the Yolande River. The porphyries can be divided on modal hornblende and biotite (Morrison, 1997). The aphyric to feldspar phyrlic porphyries have a weak magnetic signature (Figure 2).

Just east of the EL is an andesitic intrusive. Several enigmatic Cambrian basalts are located close to the firewood siding fault to the south.

Known Mineralisation within the area includes:

**Madam Howards:** Approximately 1300t of barite was mined from two NE trending lodes at Madam Howard's Plains between 1910 and 1920. Groves (1964) describes the lodes as lenticular bodies, the southern group striking  $060^{\circ}$  magnetic and the northern group  $020^{\circ}$  magnetic. The main deposits are up to 4m wide and extend over 600m in length. In 1962 the mines department drilled three drillholes under the main workings but only intersected minor barite. Minor fluorite hematite and galena filled amygdals were observed along with numerous quartz-carbonate veins. The holes were analysed for Au by CMT in 1997 (Morrison, 1997). The holes were slightly anomalous with a peak value of 0.11g/t.

**Diamond Hill:** An E-W quartz vein in a pipe-like intrusive body was historically mined with evidence of alluvial workings in the nearby creeks and 4 small adits into the deposit. The prospect is defined by a pan concentrate anomaly and patchy but interesting rock chip samples (Max 18g/t).

**Raggedy Anne:** A gold bearing quartz lode hosted in the Silurian sediments near the firewood siding Fault. Further research is required.

The area has been consistently worked for minor amounts of alluvial gold over the last 100 years.

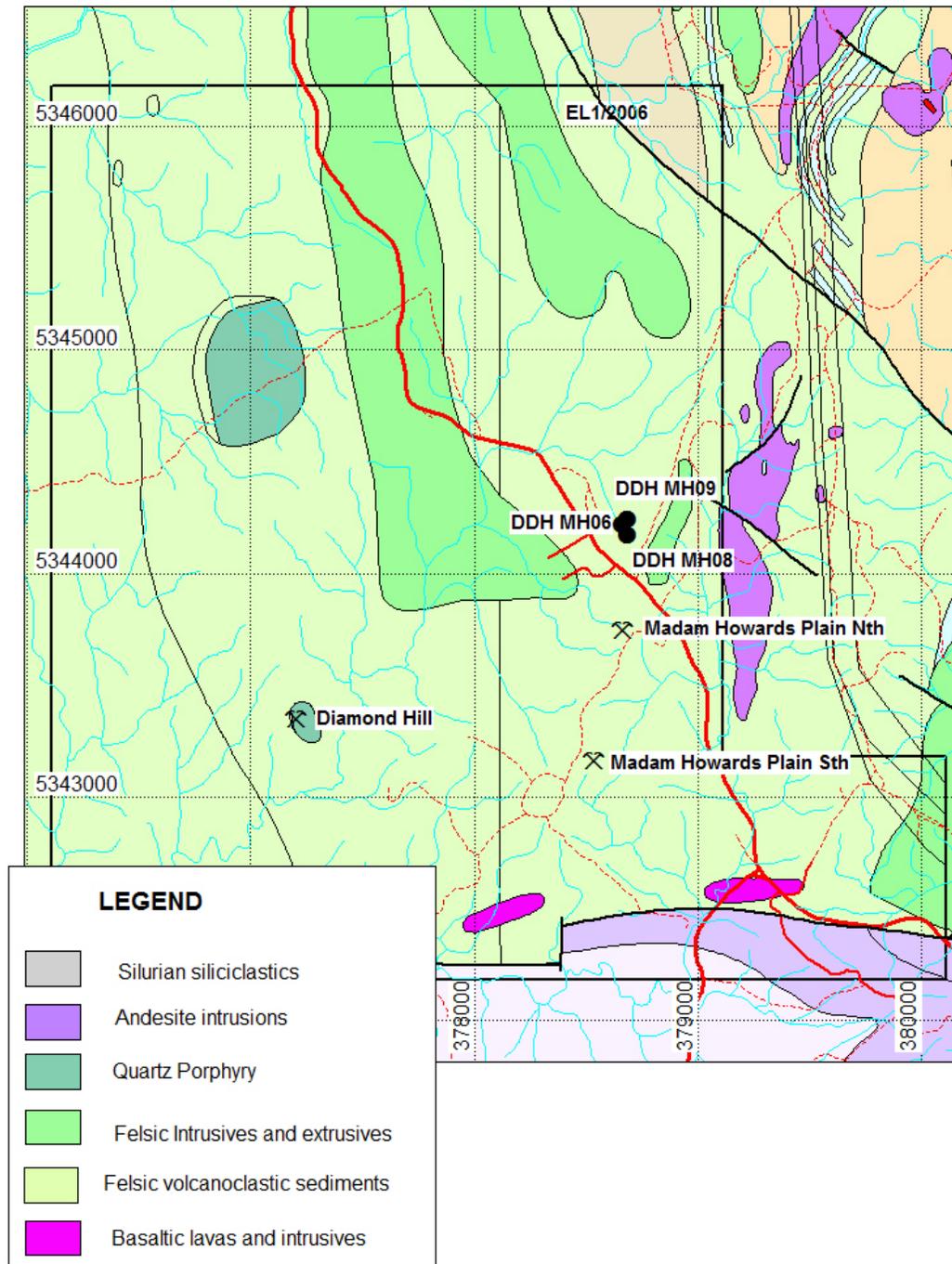


Figure 1. EL1/2006 Geology.

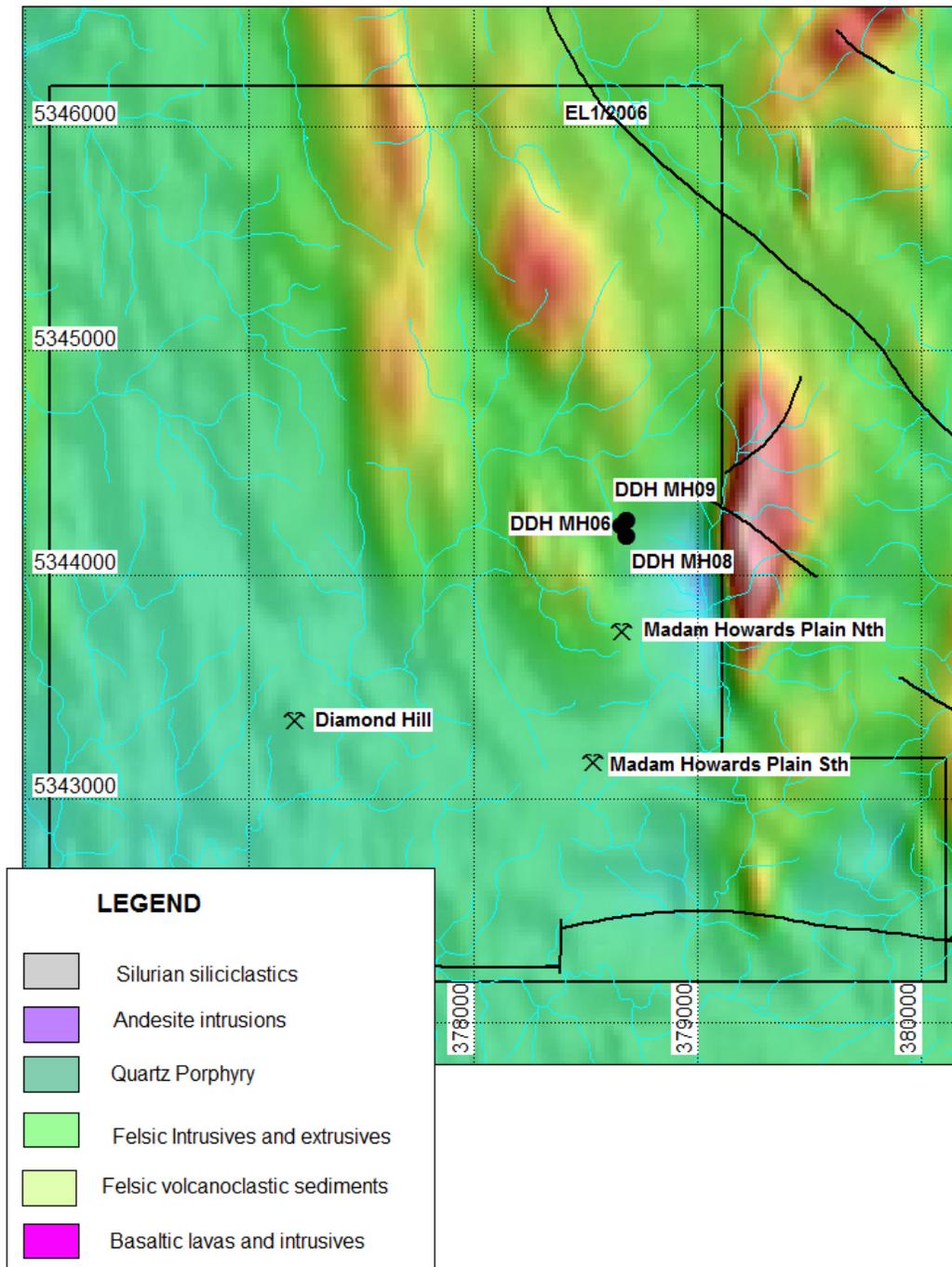


Figure 2. EL1/2006 Total Magnetic Intensity Image.



### 3 WORK COMPLETED

One diamond hole (MH08) for 99m was completed on the EL during 2013. A second hole was collared at the time of reporting and was down 44m. Assay results were received for MH06. Results are pending for MH08. Minor field reconnaissance and prospecting was completed on the Madam Howard's Prospect in 2012.

Assay results from MH06 were received during the past year. Results are located in the drill logs included in the appendices. Initially 4 samples were submitted for Au and Ba analyses. All samples returned anomalous gold associated with sericite-pyrite-siderite altered felsic porphyries. A maximum of 1.4g/t Au was returned associated with a quartz-carbonate-pyrite vein in the porphyries. A further 9 samples were submitted. Seven of the samples associated with the sericite-siderite-pyrite alteration returned Au above detection with a maximum of 0.7g/t Au. Two samples taken from the lower albite altered porphyry contained no Au mineralisation.

It is likely that the porphyries are the source of the Au in the district. Later quartz veining has locally upgraded the low level Au in the porphyries. The results are very encouraging as they demonstrate the presence of volcanogenic gold mineralisation in the locality.

Following the encouraging results received from last years drilling a further two holes were planned along strike from MH06. Preliminary exploration and drill sites were located by former license holder and prospector Rory Wray McCann.

Drilling was conducted by Stebbo's Diamond drilling, commencing in July 2013 and was still in progress at the time of reporting. The core was logged by contract geologist Tim Callaghan. A drill log of drillhole MH08 is located in Appendix 1. Drillhole MH09 was still in progress at the time of reporting. Drill collar details are:

MH08	378572E	5343983N	Azm 105°	Dip -50°	Length 99m
MH09	378576E	5344057N	Azm 105°	Dip -50°	Length 99m

MH08 intersected Yolande River Sequence volcanoclastic mass flows and vitric siltstones and two possibly extrusive or shallow level intrusive felsic porphyries. The first feldspar phyrific porphyry was pervasively siderite altered with trace disseminated euhedral pyrite. Fine disseminated euhedral pyrite to 0.5% was also locally observed.

The second aphyric to feldspar phyrific porphyry was strongly albite altered with several zones of weak pervasive sericite-chlorite alteration.

Minor late quartz-carbonate-pyrite veining occurred locally within the porphyries. Veins were generally small 2-10cm stockworks although one vein of 0.9m with pyritic selvage was intersected at 118.8m. Several samples have been sent for analysis with results pending at the time of reporting.



#### **4 PROPOSED WORK PROGRAM**

Future exploration should include compilation and interpretation of historic data, field mapping concentrating on the Madam Howard's Barite, Diamond Hill and Raggedy Anne Areas.

Follow up drilling on the siderite-pyrite-sericite altered porphyries is ongoing.

Diamond drilling of priority targets will follow at Madam Howard's and Diamond Hill.



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## **5 ENVIRONMENTAL**

The drill hole has been sealed and the site rehabilitated.



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## **6 EXPENDITURE**

A total expenditure of \$35 910 was completed on the EL for the year.



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## **References**

Groves DI 1964. Madam Howard Plains Barite deposit. *Tas Mines Department Technical Report No8.*

Morrison K C, 1997. Exploration Licence 27/95 – Yolande River Year 1 Annual Report. *Unpublished annual report for Copper Mines of Tasmania Pty Ltd*



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## **APPENDIX 1**

### **DRILL LOG MH06 and MH08**













