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## **EL28/2001 Annual Report**

### **'Tyndall Creek'**

### **EL28/2001**

### **Vol. 1 of 1**

<b>HELD BY:</b>	<b>UNITY MINING LTD.</b>
<b>MANAGER &amp; OPERATOR:</b>	<b>UNITY MINING LTD</b>
<b>AUTHOR:</b>	<b>M. Blake</b>
<b>DATE:</b>	<b>May 2019</b>
<b>MAP SHEETS:</b>	<b>1:25k Tyndall (3835) Oceana (3635) 1:100k Sophia</b>
<b>GEOGRAPHIC COORDS (GDA94):</b>	<b>Min East: 379,100mE Max East: 382,100mE Min North: 5,356,200mN Max North: 5,360,200mN</b>
<b>COMMODITY(s):</b>	<b>Au, Basemetals</b>

## **Summary**

Work on EL28/2001 continues to test Henty-style gold targets. TC 11 was drilled into the interpreted intersection of a structure thought to influence gold mineralisation in Tyndall Creek and rocks of the Tyndall Group. Assays for the samples from this hole are pending but are not expected to return ore-grade gold.

Continued interpretation of structural mapping and aeromagnetic data has identified high strain zones which, if occurring in places of geological heterogeneity, have potential to provide the combination of dilation and shear required to host high grade gold. These areas will be targeted by exploration next year.

## Table of Contents

<b>Summary .....</b>	<b>2</b>
<b>1. Introduction.....</b>	<b>4</b>
1.1 Tenure .....	4
1.2 Location and Access.....	4
1.3 Regional and Local Geology, Alteration and Mineralisation and Previous Exploration.....	6
<b>2. Work Completed during the Reporting Period 2018 to 2019.....</b>	<b>6</b>
2.1 Diamond drilling .....	6
2.2 Results.....	9
2.3 Interpretation.....	9
<b>3. Environment.....</b>	<b>10</b>
<b>4. Conclusion .....</b>	<b>11</b>
<b>5. Planned Work - 2019/2020.....</b>	<b>12</b>
<b>6. Expenditure 2018/19 Reporting Period .....</b>	<b>13</b>
<b>7. Forecast Expenditure 2019/2020 .....</b>	<b>13</b>
<b>References.....</b>	<b>14</b>
<b>Appendix 1.....</b>	<b>15</b>
<b>Drill Hole Log.....</b>	<b>15</b>
<b>DDH TC11 .....</b>	<b>15</b>

## Table of Figures

Figure 1: Location of EL28/2001 (map in GDA 94 projection). .....	5
Figure 2: Topographic location of TC11 .....	6
Figure 3: Geology Drape EL 28/2001.....	7
Figure 4: Interpreted section, Tyndall Creek. MGA94 .....	8
Figure 5: Typical Comstock Formation domainally banded feldspar-quartz-magnetite rich crystal sandstones in DDH TC11 .....	9
Figure 6: Structures in the Tyndall Creek area interpreted by Aberfoyle Resources. ....	10
Figure 7: Rehab works at site for DDH TC8-9.....	11
Figure 8: Location of interpreted, untested, high strain zones (red circles) on EL28/2001. Henty Regional HW Composite aeromag. image on MRT 1:25,000 geology. ....	12

## Appendices

Appendix 1 Drill Hole log DDH TC11

## **1. Introduction**

This report details work completed by Unity Mining Limited (UML) on EL 28/2001 from 11<sup>th</sup> May 2018 until 10<sup>th</sup> May 2019.

The licence area consists of crown land and land vested in the HEC, both land uses coming under the Mines Act. The far western edge of the tenement is part of the Mt Dundas Regional Reserve (World Heritage Recommended Area for Protection). The far eastern extent, east of the HEC high-tension power lines is the Tyndall Regional Reserve. Any disturbances in these areas require notification and approval from the Mineral Exploration Working Group (MEWG). Further conditions of exploration are outlined in the Exploration Code of Practice (produced by Mineral Resources of Tasmania (MRT)).

The land vested in the HEC includes Lake Newton and associated pump station, the Henty canal, the high-tension power lines and service tracks.

### **1.1 Tenure**

EL28/2001 was acquired in 2002 by Placer Dome Asia Pacific (formerly AurionGold Exploration and previously Goldfields Exploration) after a successful tender for ETA 552.

Barrick (Henty) Limited acquired the EL in January 2006, following the global takeover of Placer Dome by Barrick Gold Ltd.

In July 2009 Bendigo Mining Limited (BML) purchased the Henty Gold Mine and EL 28/2001 from Barrick Australia. BML subsequently applied for, and were granted, a variation to the tenement, which enlarged the area to the south by 1.4 sq km (Figure 1). BML changed its name to Unity Mining Limited on the 6<sup>th</sup> December 2010.

On 1<sup>st</sup> June 2016, after a protracted series of offers and counter-offers, UML was taken over by Diversified Minerals Ltd. UML remains an entity but has been de-listed from the ASX.

On 17<sup>th</sup> April 2018, EL 28/2001 was consolidated with the unrelinquished area of EL13/2011, and newly acquired area from EL12/2016 to create a combined tenement area of 18 sq km.

At the time of writing tenure expires on 10/5/2019.

### **1.2 Location and Access**

Lake Newton (EL28/2001) occurs midway between Queenstown and Tullah on Tasmania's West Coast. The EL's northern boundary abuts the Henty Gold Mine lease 5M/2002 (Figure 1). Local access to the tenement is off the Howards and Anthony Roads.

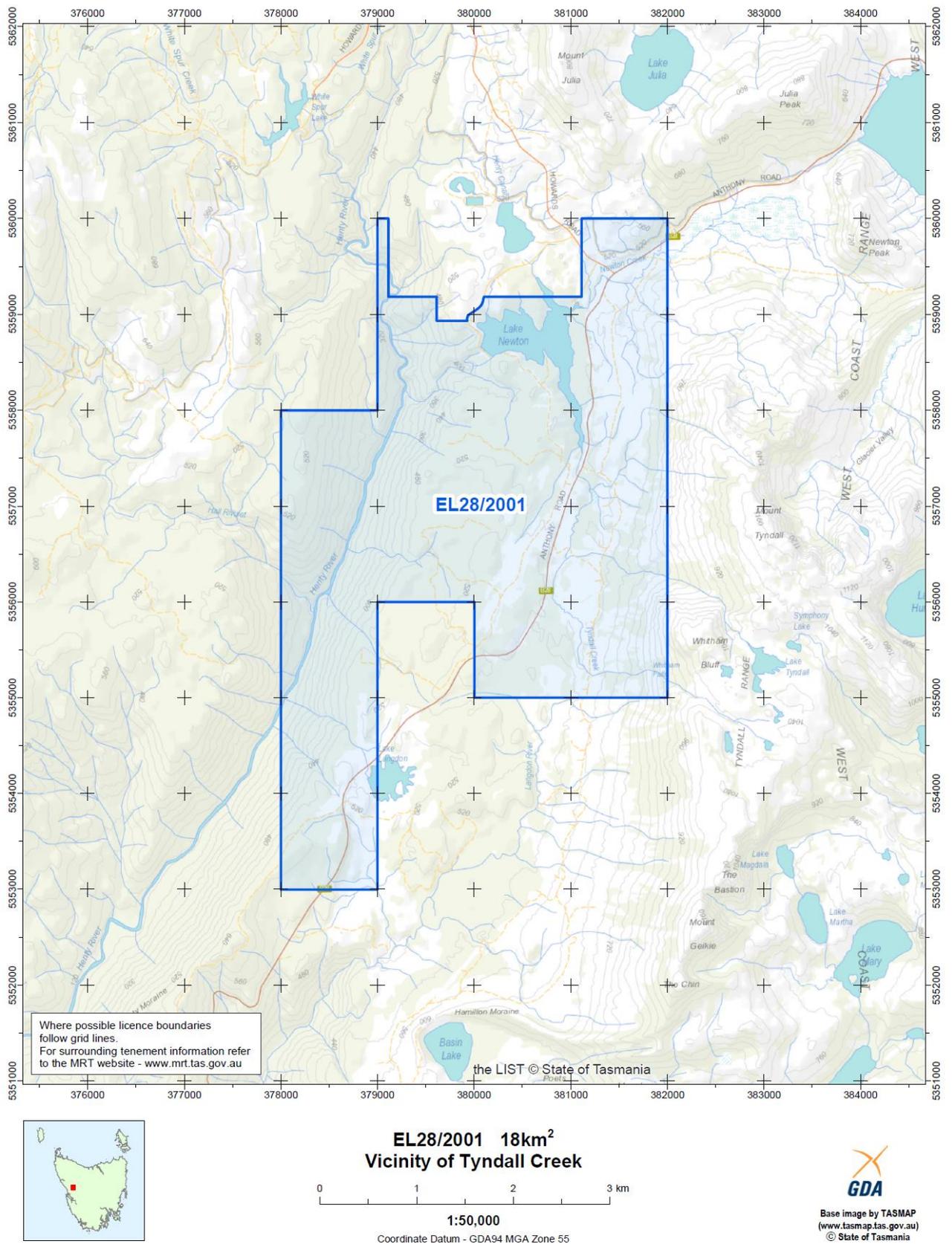


Figure 1: Location of EL28/2001 (map in GDA 94 projection).

### 1.3 Regional and Local Geology, Alteration and Mineralisation and Previous Exploration

Regional and Local Geology, Alteration and Mineralisation and Previous Exploration are detailed in the 2014 tenement report (Timms et al, 2014), and have been excluded from this report for succinctness.

## 2. Work Completed during the Reporting Period 2018 to 2019

### 2.1 Diamond drilling

One diamond drill hole, TC 11, was completed during the reporting period. The location and details of TC11 are shown in figures 2-3 and in Appendix 1.

The drilling program was undertaken by contractor Wholecore Drilling, using a track-mounted Cortech CSD 1800 diesel-hydraulic rig.

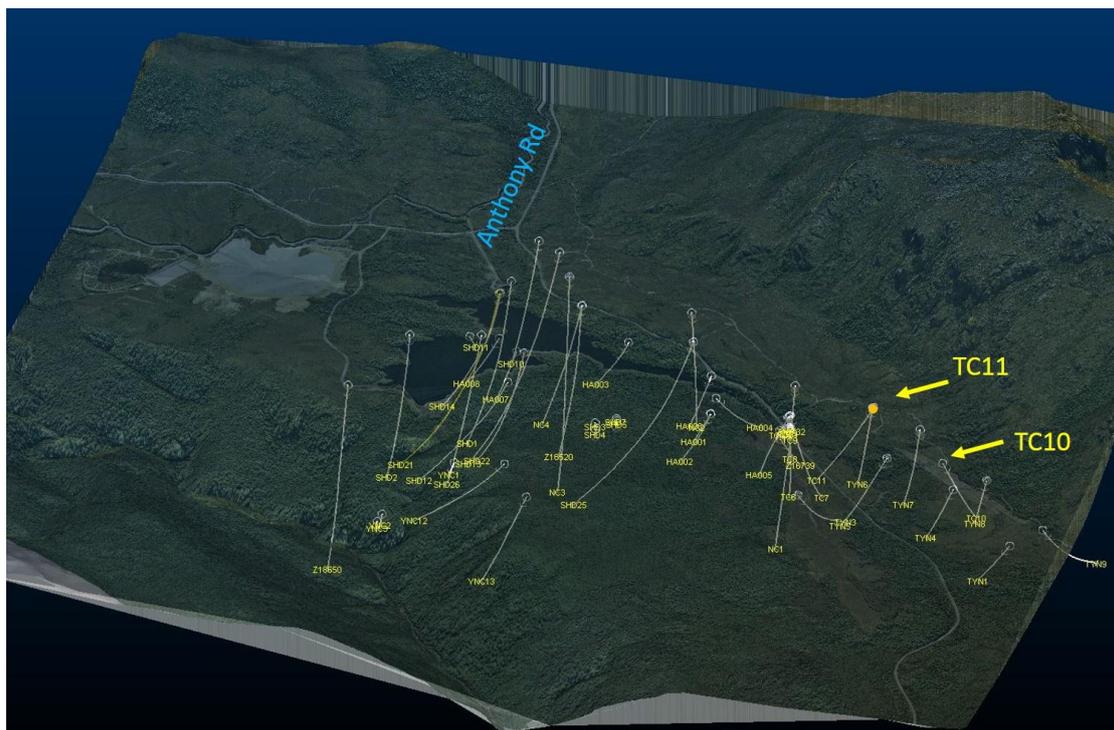


Figure 2: Topographic location of TC11

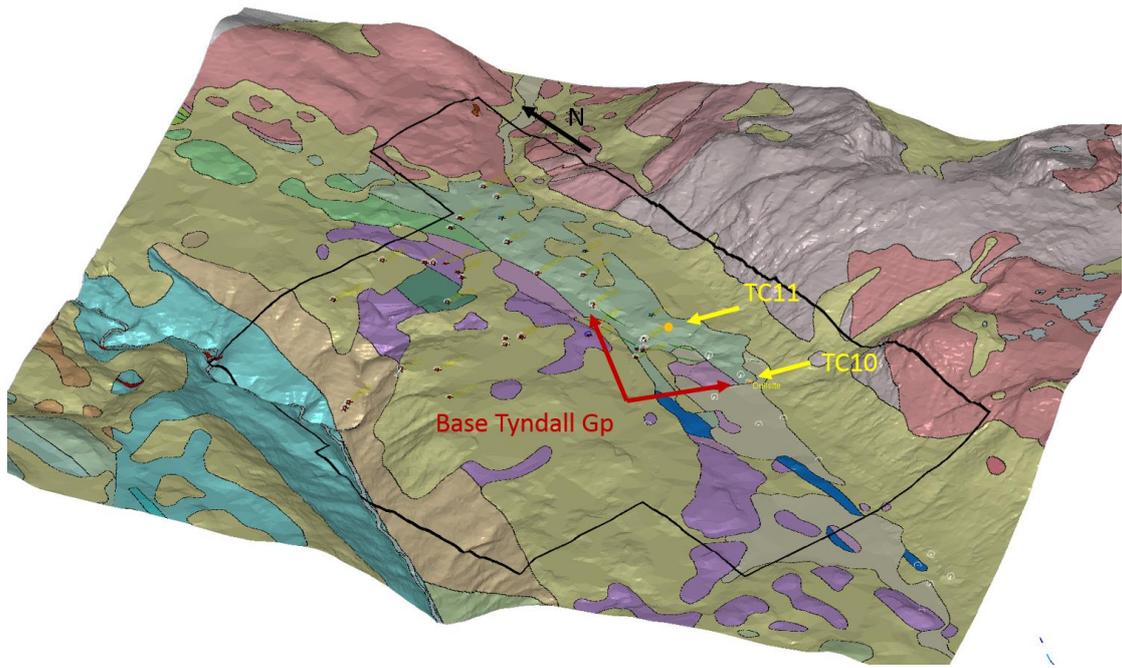


Figure 3: Geology Drape EL 28/2001



## 2.2 Results

TC11 was drilled in a north westerly direction from the same site as DDH TYN6, to test a deep domain to the south of the main Tyndall Creek Au occurrences. TC11 passed through a 234m sequence of quartz-feldspar-magnetite crystal rich sandstones, and pebbly sandstones to rhyolitic cobble conglomerate corresponding to Comstock Formation lithologies. Intervals of rhyolite were intersected at the base of the Comstock formation, passing to carbonate and carbonate altered andesitic to dacitic volcanoclastics, minor black shale and a rhyodacitic to andesitic mass flow sequence. TC11 ended at 434.5m in rhyodacitic sandstones.

Trace vein related chalcopyrite, sphalerite and galena was noted toward the end of hole, and no significant mineralization or structure was found to provide explanation for mineralization found at Tyndall Creek.

Geochemical results were pending at the time of this report. A graphic log of the drill hole is provided in Appendix 1.



Figure 5: Typical Comstock Formation domainally banded feldspar-quartz-magnetite rich crystal sandstones in DDH TC11

## 2.3 Interpretation

The interpreted section is shown in figure 4.

Drilling at TC10, south east of Tyndall Creek was targeted at the intersection of lithologies of the basal Tydall Group with the Great Lyell Fault. Rationale was exploration for structurally remobilized gold mineralization.

Section interpretation of DDH TC10 shows a strongly volcanigenic architecture, dominated by coherent acid to intermediate volcanics and associated volcanoclastics. There is a strong association between carbonate and volcanic units, with highly irregular boundaries and distribution, suggesting that carbonate is alteration related to volatile de-gassing lavas or intrusives. In addition carbonates occur within volcanoclastic sequences that would have been a highly active environments where accumulation of large amounts of marine carbonate does not seem logical.

The drilling of DDH TC11, combined with other drilling in the Tyndall Creek area to date does not indicate an ore scale body of mineralization. Assays from this hole are still awaited and will be reported next year.

Early work by Aberfoyle at Tyndall Creek highlighted a series of W-E to NW-SE, and SW-NE structures consistent with faulting due to NE-SW compression. These structures are of similar nature to faulting observed nearby around the Henty Orebody. Nearby to Tyndall Creek, the Tyndall Mine lies close to the intersection point of Aberfoyle mapped structures. It is possible that Tyndall Creek Au mineralization lies at or near the junction of relatively late structures that host remobilized Au sourced from nearby Comstock formation volcanoclastics or andesitic sequence.

Although no Henty style siliceous mineralization and alteration envelope has been identified, it remains possible that high grade remobilized Au occurrences may be found in zones of dilation and high shear on the tenement.

Interpretation of extant aeromagnetic data has confirmed the NE-SW compression regime and enabled structural intersections, potential high-strain zones with shearing and accommodating dilation to be identified (figure 8).

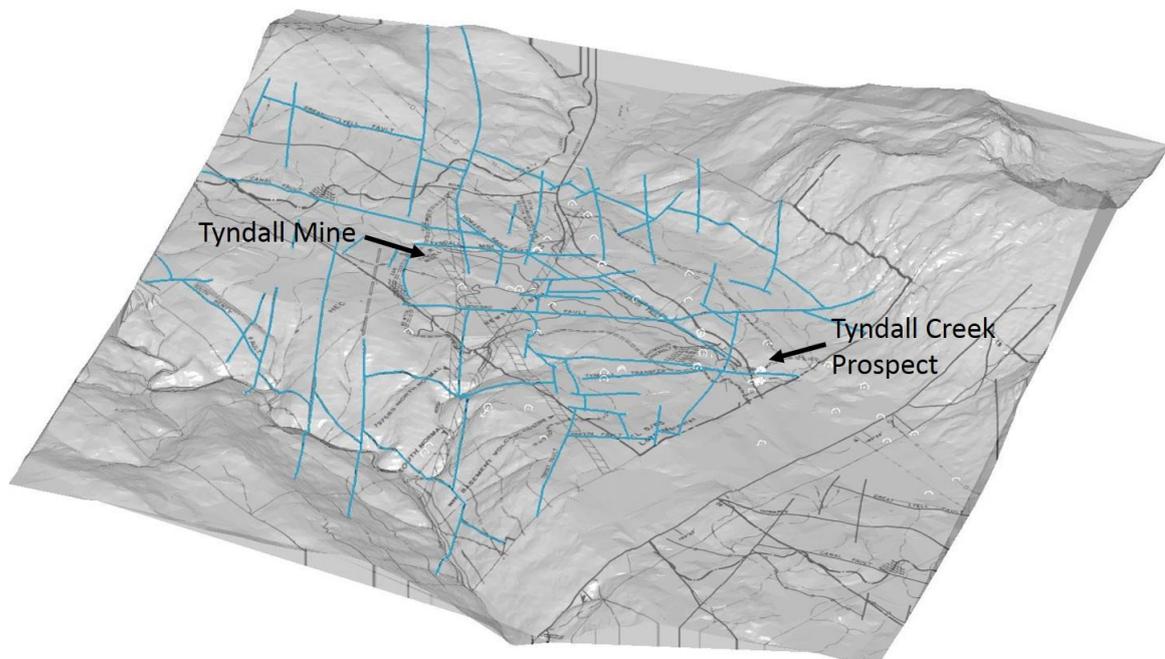


Figure 6: Structures in the Tyndall Creek area interpreted by Aberfoyle Resources.

### 3. Environment

The drill site for TC8-9 adjacent to the Tyndall Creek gate has been fully rehabilitated and re-contoured.

The site of DDH TC10 was treated with slash coverage obtained from nearby ti-tree. Regrowth on the site is progressing, though slowed by an unusually dry summer period in 2018-19.



Figure 7: Rehab works at site for DDH TC8-9

#### 4. Conclusion

Although assays are still pending from TC11 it is unlikely that the drill hole intersected significant mineralisation.

Work on the tenement will continue to be governed by a search for Henty-style gold. It will focus on areas of high strain impacting heterogeneous rock packages between the Great Lyell and Henty Faults. These areas are thought to offer the best combination of dilation and shearing required for deposition of ore-grade gold. The location of interpreted high strain zones is shown in figure 8, below.

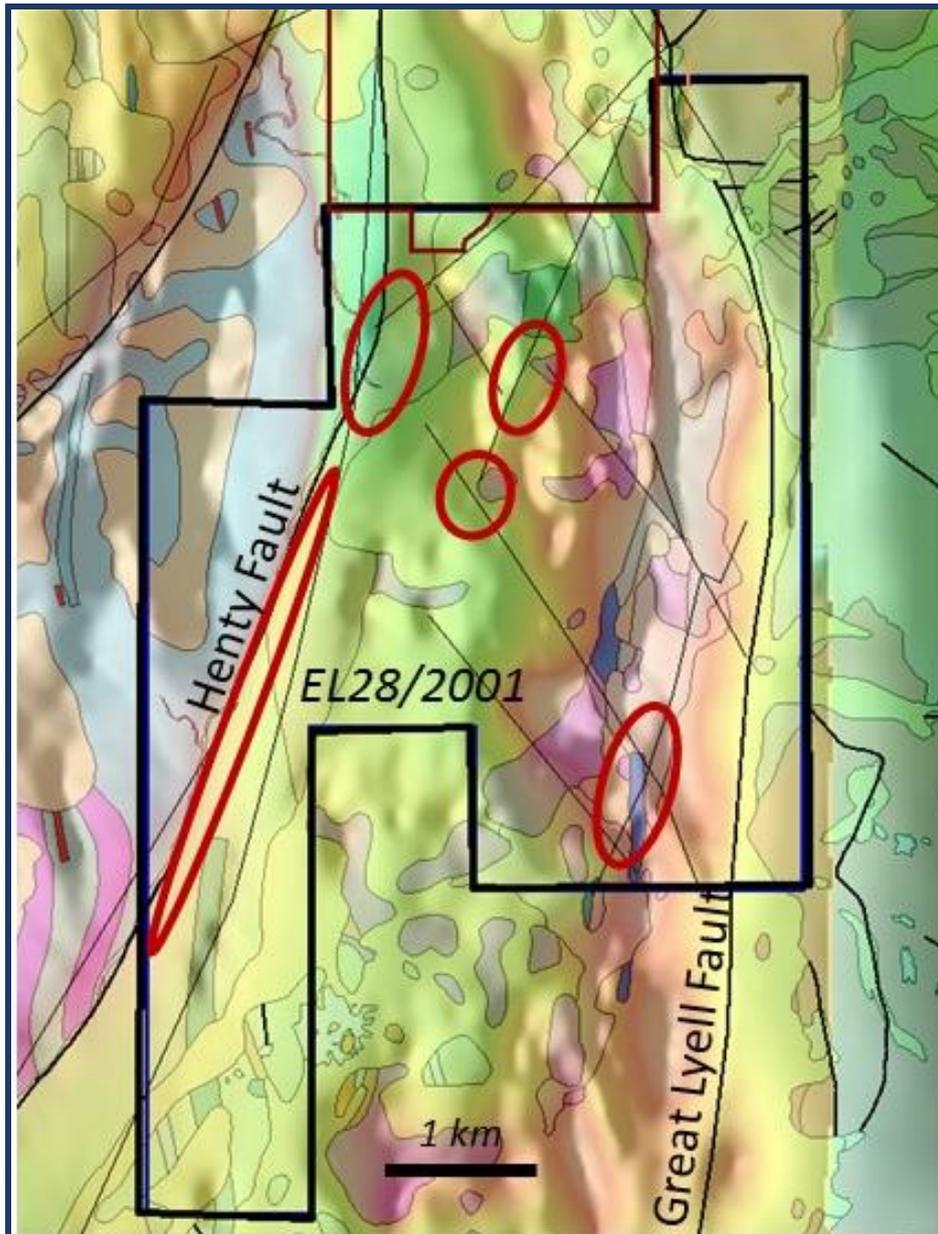


Figure 8: Location of interpreted, untested, high strain zones (red circles) on EL28/2001. Henty Regional HW Composite aeromag. image on MRT 1:25,000 geology.

## 5. Planned Work - 2019/2020

The plan for future exploration will rest upon the selection of Henty-style targets. The high strain zones already selected will be visited and the rocks intersected in nearby drill holes will be searched for the combination of ductile and brittle deformation which arises within heterogeneous rock packages in high strain settings. Indications of gold mineralisation will also be sought. The better zones will be tested with drilling.

## 6. Expenditure 2018/19 Reporting Period

Total Expenditure for the 2018/19 Reporting Period (excl. GST) was:

<b>EL28/2001 Expenditure 2018-19</b>	
	\$
Geology	40,100
Geochemistry	
Geophysics	
Remote sensing	
Gridding	
Drilling	67,217
Land access	
Rehabilitation	780
Other (rent, 50% MapInfo, site prep. survey)	5,345
Administration (office, vehicle, fuel, safety)	11,344
<b>Total</b>	<b>124,787</b>

Table 1: E28/2001 Tyndall Creek Exploration Expenditure 2018/19.

## 7. Forecast Expenditure 2019/2020

Forecast expenditure for the following year is as follows:

<b>EL28/2001 Planned expenditure 2019-20</b>	
	\$
Geology	45,000
Geochemistry	5,000
Geophysics	
Remote sensing	
Gridding	10,000
Drilling	75,000
Land access	
Rehabilitation	800
Other (rent, 50% MapInfo, site prep. survey)	5,000
Administration (office, vehicle, fuel, safety)	1,200
<b>Total</b>	<b>142,000</b>

Table 2: E28/2001 'Tyndall Creek' Exploration Budget Forecast 2019/20

## **References**

Timms, C. et al 2014. EL 28/2001 Annual Report 'Tyndall Creek' May 2014. Unity Mining Ltd, Australia (Unpublished).

Lorrigan, A. 2017. EL 28/2001 Annual Report 'Tyndall Creek' June 2017. Unity Mining Ltd, Australia (Unpublished).

Sharpe, R. 1993, Lake Margaret EL 5/85 Technical Progress Report for the period September 1992 – September 1993 (Unpublished).

## **Appendix 1**

### **Drill Hole Log DDH TC11**